

FY2021

STRATEGIC BASIC RESEARCH PROGRAMS

(CREST/PRESTO/ACT-X)

< 1st Term >

Call for Research Proposals

[Application Guidelines]

Application Call Period

Tuesday March 23th ~ 12:00 (noon, Japan time) on Tuesday, May 18th : CREST

Tuesday March 23th ~ 12:00 (noon, Japan time) on Tuesday, May 11th : PRESTO, ACT-X

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 Innovation Research
Japan Science and Technology Agency

March 2021

The 2021 CREST, PRESTO, and ACT-X research proposal application call (1st Term) is based on the approval of the 2021 fiscal budget by the Diet. Therefore, the content and schedule may change depending on the budget status.

Overview of the Call for Research Application

(1) Research Areas calling for Proposals

FY2021 application call and selection of research proposals are for research areas started in FY2019 and FY2020 (hereinafter referred to as existing research areas) and new research areas to be started in 2021 (hereinafter referred to as new research areas). And, the period is divided into two as <1st Term> and <2nd Term>. This application guideline <1st Term> is for research proposals in existing research areas listed in the research area table for which research proposals are called this fiscal year.

In addition, those who have applied for the Research Proposals <1st Term> cannot apply for the Research Proposals <2nd term>. So, researches can only apply for one research area. Please also refer to the Guidelines for Application for the <2nd Term>, which will be published in mid-April, for research proposals.

In the <1st Term>, research proposals are called from the existing research areas: CREST... 8 areas, PRESTO... 11 area, and ACT-X... 4 areas.

○ CREST

Research Areas	Strategic Objectives	Since
Precise Arrangement towards the Functionality of Molecular Systems (Research Supervisor: Nobuo Kimizuka)	Precise arrangement toward functionality	FY2020
Integrated Devices and Systems Utilized by Information Carriers (Research Supervisor: Toshiro Hiramoto)	Information carriers and innovative device	FY2020
Core Technologies for Trusted Quality AI Systems (Research Supervisor: Akiko Aizawa) (*A) AIP	Trusted AI	FY2020
Spatiotemporal Dynamics of Intracellular Components (Research Supervisor: Toshiya Endo)	Functional dynamics in the cell	FY2020

<p>Elucidation of Macroscale Mechanical Properties Based on Understanding Nanoscale Dynamics for Innovative Mechanical Materials (Research Supervisor: Kohzo Ito) (*B) Japan-France Joint Proposal is called</p>	<p>Elucidation of macroscale mechanical properties based on an understanding of nanoscale dynamics</p>	<p>FY 2019</p>
<p>Creating Innovative Optics and Photonics Based on Creative Principles (Research Supervisor: Satoshi Kawata)</p>	<p>Creation of innovative fundamental technologies based on state-of-the-art optics and photonics</p>	<p>FY 2019</p>
<p>Creating Information Utilization Platform by Integrating Mathematical and Information Sciences, and Development to Society (Research Supervisor: Naonori Ueda) (*A) AIP (*B) Japan-France Joint Proposal is called</p>	<p>Creating information utilization platform by integrating mathematical and information sciences, and development to society</p>	<p>FY 2019</p>
<p>Development of Technology Platforms for Quantitative Analysis of Spatiotemporal Multicellular Interaction (Research Supervisor: Michiyuki Matsuda)</p>	<p>Development of core technology platforms for understanding spatiotemporal multicellular interaction</p>	<p>FY 2019</p>

*A. In the Research Areas which belong to AIP network lab above, JST will support cooperative activities across the Research Areas to create innovation. See “5.1.4 About AIP project and AIP network laboratory” for details.

*B. Call for joint research with ANR (France) within the framework of JST-CREST program

In the above-mentioned research areas belonging to the Japan-France joint proposal, within the framework of France's ANR (National Research Organization) and CREST, support the Japan-France collaborative research projects. For details, please refer to “5.1.6 Japan-France joint proposal for strategic research promotion project CREST with France ANR”.

○ PRESTO

Research Areas	Strategic Objectives	Since
Precise Arrangement of Atoms and Molecules and Its Properties and Functions (Research Supervisor: Hiroshi Nishimura)	Precise arrangement toward functionality	FY2020
Information Carriers and Their Integrated Materials/Devices/Systems (Research Supervisor: Hitoshi Wakabayashi)	Information carriers and innovative devices	FY2020
The Fundamental Technologies for Trustworthy AI (Research Supervisor: Hiroki Arimura) (*A) AIP	Trusted AI	FY2020
Function and Regulation of Plant Molecules (Research Supervisor: Kazuhiko Nishitani)	Design of plant-derived molecules building up the foundation for plant synthetic biology	FY2020
Dynamic Supra-Assembly of Biomolecular Systems (Research Supervisor: Hiroyuki Noji)	Functional dynamics in the cell	FY2020
Nanoengineering on Mechanical Functions of Materials (Research Supervisor: Takayuki Kitamura)	Elucidation of macroscale mechanical properties based on an understanding of nanoscale dynamics	FY 2019
Creating State-of-the-Art Science by Innovative Optics and Photonics (Research Supervisor: Koichiro Tanaka)	Creation of innovative fundamental technologies based on state-of-the-art optics and photonics	FY 2019
Technological Foundation of Advanced Quantum Computing and Information Processing (Research Supervisor: Akihisa Tomita)	Creation of Quantum Computational Foundation	FY 2019
Elucidating Mathematical Structures in Real/Virtual World Objects and Their Utilization (Research Supervisor: Takashi Sakajo) (*A) AIP	Creating information utilization platform by integrating mathematical and information sciences, and development to society	FY 2019
Future Led by IoT (Research Supervisor: Hideyuki Tokuda) (*A) AIP	Fundamental technologies for next-generation IoT (Internet of Things) to create a future smart society	FY 2019

Dynamics of Cellular Interactions in Multicellular System (Research Supervisor: Yoshiko Takahashi)	Development of core technology platforms for understanding spatiotemporal multicellular interaction	FY 2019
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*A. In the Research Areas which belong to AIP network lab above, JST will support cooperative activities across the Research Areas to create innovation. See “5.1.4 About AIP project and AIP network laboratory” for details.

○ ACT-X

Research Areas	Strategic Objectives	Since
AI powered Research Innovation / Creation (Research Supervisor: Yasuo Kuniyoshi) (*A) AIP	Establishment of environmentally-adaptive-plant design systems for stable food supply in the age of climate change	FY2020
	Creation of integration technology to enable utilizations of diverse and massive data using Artificial Intelligence core technologies rapidly growing in sophistication and complexity	
	Construction of revolutionary material development methods through fusion among experiments and theory/data science	
	Fundamental technologies for next-generation IoT (Internet of Things) to create a future smart society	
	Development of core technology platforms for understanding spatiotemporal multicellular interaction	
	Trusted AI	
Environments and Biotechnology (Research Supervisor: Nobuhiko Nomura)	Establishment of environmentally-adaptive-plant design systems for stable food supply in the age of climate change	FY2020
	Establishing Technologies for Genome-scale DNA Synthesis and Functional Expression, and Creating Technology Seeds for Material Production and Medical Care	
	Design of plant-derived molecules building up the foundation for plant synthetic biology	
Frontier of mathematics and information science (Research Supervisor: Ken-ichi Kawarabayashi) (*A) AIP	Creating information utilization platform by integrating mathematical and information sciences, and development to society	FY2019
	Creating Innovative Computing Technology That Will Underpin Society5.0 (FY 2018)	

Life and Chemistry (Research Supervisor: Mikiko Sodeoka)	Development of core technology platforms for understanding spatiotemporal multicellular interaction	FY2019
	Establishing Technologies for Genome-scale DNA Synthesis and Functional Expression and Creating Technology Seeds for Material Production and Medical Care (FY 2018)	
	Creating Innovative Reaction Technologies for Establishing New Production Processes Conducive to Achieving a Sustainable Society (FY 2018)	
	Establishment of environmentally-adaptive-plant design systems for stable food supply in the age of climate change (FY 2015)	

*A. In the Research Areas which belong to AIP network lab above, JST will support cooperative activities across the Research Areas to create innovation. See “5.1.4 About AIP project and AIP network laboratory” for details.

(2) Call and Selection Schedule

The FY2021 schedule for the acceptance and selection of research proposals is shown in the following table. Note that application deadline of CREST and PRESTO/ACT-X is different.

	CREST	PRESTO/ ACT-X
Research proposal acceptance begins	<u>March 23rd (Tue), 2021</u>	
Application deadline (Deadline for submitting applications through the e-Rad system)	<u>12:00 (noon, Japan time) on Tuesday, May 18th (No delays accepted)</u>	<u>12:00 (noon, Japan time) on Tuesday, May 11th (No delays accepted)</u>
Document screening period	Middle June – Early July	
Notification of document screening results	Late June – Mid July	
Interview screening period	Early July – Middle July	
Notification/announcement of selected Research Projects	Middle September	
Research Start	After October	

*The underlined dates are final, but all others are expected dates. They are subject to change.

*The schedule of explanatory meeting, document screening and the interview selection will be announced on the following website as soon as determined:

<https://www.jst.go.jp/kisoken/boshuu/teian-en.html>

Applicants proceeding to interview-screening are noticed by email within a week after the document-screening of Research Proposals conducted by the Research Supervisor and are requested to prepare ‘materials for the review’ (The notice would not be sent in written document). The notice will be sent to the e-mail addresses of the applicants registered in the e-Rad system, therefore, please make sure that your registered e-mail address works properly being in a status capable of receiving an e-mail from JST. To applicants, where research proposals are regrettably rejected as a result of the document-screening, the result will be sent in in written document from JST after approximately a week after the document-screening as a standard. Applicants who have high possibility to pass the interview review will be noticed by phone or email by August 17th (Tue) from JST to check the availability to conclude contract with your institute and JST.

(3) Submission of Research Proposal

Please download the documents needed for research application including application form from the “Call for Research Proposals” website. Some of the application forms are customized according to the Research Area so please make sure that you have downloaded the application form from the website of Research Area which you are going to apply.

Research proposal applications are processed by the e-Rad system (<https://www.e-rad.go.jp/>). 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, 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 allocation forms of a research proposal, which may be caused by any reasons before submission deadline, regardless of its status of receipt. JST asks, 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.

Please refer to the following website and Chapter 8, 9 and 10 of this application guideline regarding submission of research proposal and items to be considered in application.

- Strategic Basic Research Programs: Call for Research Proposals > Call for Proposals

<https://www.jst.go.jp/kisoken/boshuu/teian/en/top/ryoiki.html>

- The way to apply the Research Proposal :

e-rad user manual; https://www.e-rad.go.jp/en/manual/for_researcher.html

- The items to be considered in application:

“Chapter 8 Key Points in Submitting Proposals” and

“Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs.”

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Chapter 1. Introduction to the Call for Research Proposals

1.1 Purpose and Overview of Strategic Basic Research Programs

1.1.1 Purpose of the Programs

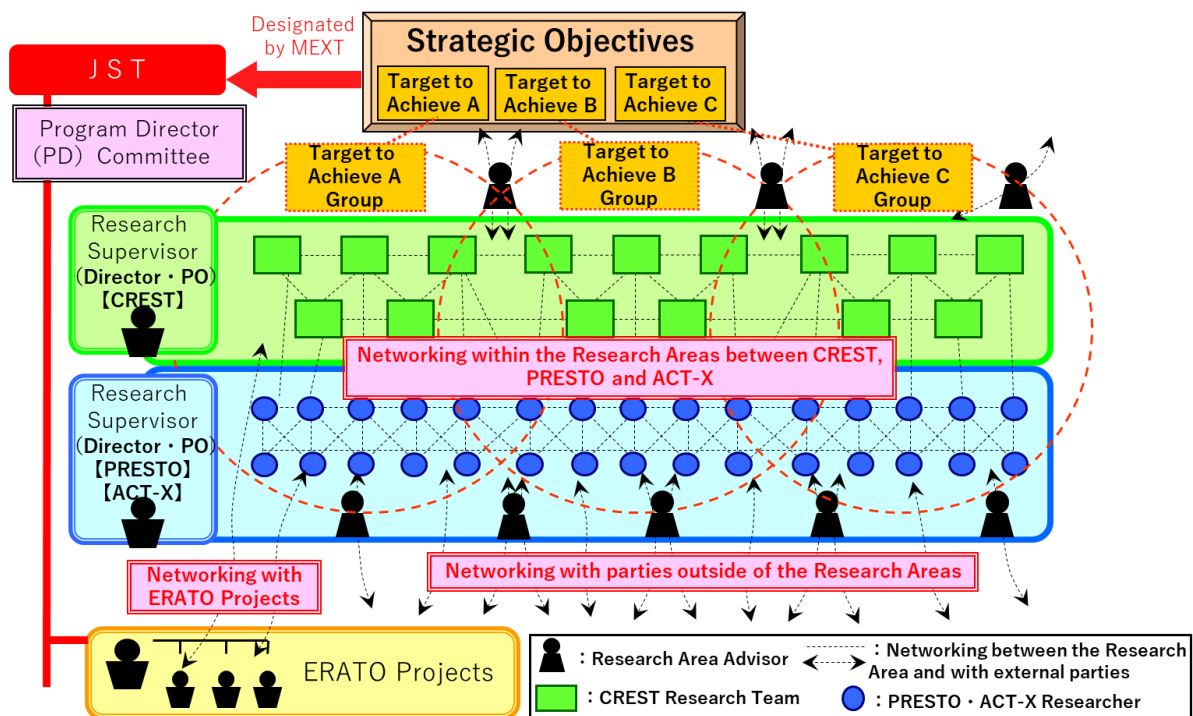
The purpose of Strategic Basic Research Programs is to advance strategic basic researches and create the seeds of innovative technologies, based on new scientific knowledge which will give rise to scientific and technological innovations leading to the social and economic transformation. We are eagerly awaiting applications and participation of researchers, who are valiantly undertaking their challenging research creating top innovation from excellent basic science, in our programs.

1.1.2 Overview of the Programs

Based on the national government's science and technology policies and social and economic needs, under "Strategic Objectives" prescribed by the Ministry of Education, Culture, Sports, Science and Technology, JST establishes Research Areas to pursue and assigns Research Supervisors (Program Officers) to lead the Research Area. The Research Supervisor pursues strategic basic research aiming at creating the seeds of innovative technologies that will give rise to science and technology innovations leading to the achievement of solutions for the Strategic Objectives.

Research Supervisors of JST consider and propose management policies and system reforms for each Strategic Basic Research Program. For "CREST" (Research projects pursued by research teams led by Research Directors), "PRESTO" and "ACT-X" (Research projects pursued by individual researchers), JST establishes Research Areas and assigns Research Supervisors (Program Officers) based on prior evaluations by Program Directors.

The Research Supervisor oversees his/her Research Area as a "research institute." More specifically, the Research Supervisor acts as the lab director, builds a finite-period system for conducting research by organizing a research project and constructing an optimal organization connecting researchers from existing institutions and research fields—from industry, academia, and government— and, enlisting the cooperation of Research Area Advisors and others, oversees work in the Research Area to achieve Strategic Objectives. CREST Research Directors and PRESTO/ACT-X Individual Researchers are obliged to conduct research projects proposed by them under the Research Area management policy of their Research Supervisor, while being supported by him/her, and to have dialogs with their Research Area Advisors and build communication networks of researchers, domestically and internationally, to find a possible scheme of developing their research science and technology innovations.



Standard Model for CREST/PRESTO/ACT-X “Research Institute”

- Strategic Objectives
 - The National Government (Ministry of Education, Culture, Sports, Science and Technology) prescribes Strategic Objectives based on national science and technology policies and social/economic needs.
 - Approx. three “Targets to Achieve” are presented for realizing each Strategic Objective
 - Program Director Committee
 - Presentation and sharing of research institutes’ cross-program operational policies
 - Preliminary evaluations of new Research Areas and Research Supervisors
 - Determine most appropriate distribution of resources and promotes/coordinates collaborations across Research Areas
- *Set the Research Area within the coverage of CREST, PRESTO, or ACT-X (include two or more or compound areas).
- Research Supervisor (Program Officer)

With the aims of creating innovation and achieving Strategic Objectives,

 - Formulates and shares operational policies for Research Areas and manages the Research Area in cooperation with the Research Area Advisors (including selection/evaluation of research projects);
 - Provides leadership and support to create networks inside/outside his/her Research Area to promote science and technology innovation.

1.2 For Researchers Considering Applying or Participating in the Programs

1.2.1 Proactive Participation and Contribution to the Programs by Young Researchers

Dear Researchers Applying for PRESTO, ACT-X, or CREST

This program aims to create outstanding new technological seeds that contribute to scientific and technological innovations. The creation is expected to activate the society and improve people's lives. For sustainable science and technology innovations, it is becoming increasingly important to expand opportunities for young researchers to perform research and development at universities, research organizations, and business firms.

“Sakigake” (PRESTO) promotes researches proposed and planned by young researchers. Research Supervisors and Area Advisors of the Research Areas are expected to play the role of “mentors” to plan interchanges among researchers and create platforms for stimulating each other. To nurture creativity in research and development and develop science and technology continually, young researchers need to work with great enthusiasm. We are awaiting for applications of active young researchers to the PRESTO program.

"ACT-X" is a program we have founded for fiscal year 2019 to support young researchers in accomplishing excellent achievements, and thus, "in establishing an individual." The students in a master's or doctoral course are also included in our possible applicants. The graduate school students who have started their research and are full of will, the young researchers who have just begun their careers as researchers, and the young researchers working for a company are encouraged to use "ACT-X" and go for the research to embody the concepts on their own.

“CREST” is a program for team-based research lead by a Research Director. Many young researchers have already participated in the program. We ask our Research Directors to nurture young researchers in your team so that they are enabled to conduct their research independently and achieve good results and also being encouraged to play active roles in various fields in the future. JST will continue to contribute to the development of young researchers with various approaches including researcher interchanges in Japan and overseas, for example.

We hope young researchers to take the advantage of this program to take on challenging research and development and further, to expand their field of activities.

Yoshimasa GOTO
Executive Director

Japan Science and Technology Agency (JST)

1.2.2 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.

Michinari HAMAGUCHI

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.

○For SDGs, the endeavors of JST, etc., access the following website.

<https://www.jst.go.jp/sdgs/en/actionplan/index.html>

 **SUSTAINABLE DEVELOPMENT GOALS**



1.2.3 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 Strategic Basic 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 the Strategic Basic Research Programs.

Michinari HAMAGUCHI

President, Japan Science and Technology Agency (JST)

We Are Waiting for Your Application!

JST is promoting diversity in research, based on our perspective that the diversity is for understanding of other researchers having ideas different from yours, and for creation of new values by combining your and their ideas. The diversity thus has potentials to give solutions not only to the domestic problems but also to problems common in all nations across the world. Therefore, JST is undertaking the societal problem of the globe such as the Sustainable Development Goals (SDGs), through the promotion of diversity in research, collaborating with foreign institutions.

JST is promoting the diversity by ensuring the activities of women researchers, of course young researchers, and foreign researchers having foreign citizenship. To ensure that each researcher is fully able to exercise his/her skills, JST is providing continual supports for childbirth, childcare, and homecare of elderly relatives, and also endeavoring to maintaining a balanced membership composition in committees and alike. JST especially welcomes the application of women researches to our program, from whom we cannot have so many research proposals in previous years, to realize environments where various kinds of researcher can work, cooperating and competing with each other. Through these activities, JST is pursuing the creation of new values.

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

Miyoko WATANABE

Deputy Executive Director and Director of the Office for Diversity and Inclusion

Department of Strategic Planning and Management

Japan Science and Technology Agency (JST)

JST is implementing supportive measures to assist researchers to balance between their research work and life events (childbirth, childcare, care giving, etc.) with the aim of enabling researchers to continue their R&D work without interrupting their careers due to a life event (gender equality, expenses assistance that can be used to advance R&D being conducted by the researcher in question or to reduce his or her financial burden) or temporarily suspend their careers, enabling them to resume their R&D activities as soon as it becomes possible for them to do so. JST also presents role models for female scientists. For details, please refer to the websites below.

Activities to promote diversity in CREST and PRESTO

<https://www.jst.go.jp/kisoken/crest/nadeshiko/index.html>

Guidelines for operating research funds in the event of a life event for the principal investigator, etc.

<https://www.jst.go.jp/kisoken/crest/nadeshiko/index.html> (In Japanese)

Childbirth / child-rearing / long-term care support system

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

Furthermore, we accept applications for the research environment preparation cost at the time of selection or during a research period so that the PRESTO researchers can continue their research autonomously. Details will be announced after the selection.

1.2.4 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.

Michinari HAMAGUCHI

President, Japan Science and Technology Agency (JST)

1.2.5 Open Access and Data Management Plan

JST announced its policy on Open Access to research publications and research data management in April 2017. The policy cover the basic concepts of allowing access to papers on research achievements, as well as the archiving, management, and disclosure of research data.

In principle, researchers participating in CREST, PRESTO, or ACT-X are mandated to produce documents on research achievements available to the public via repository organizations or publications for open access.

Researchers are also requested to prepare a data management plan (DMP). This DMP should contain details on policies and plans for archiving, managing, and publishing (or non-disclosure) of research data in development as achievements. Researchers must submit the DMP, along with the research plan document, to JST. It is also mandatory for researchers to undertake the archiving, management, and publication of research data based on this plan.

The data management plan you submit will be used by JST for analysis to improve our support to the researchers in the future and to examine and/or promote our endeavors for the retention, management, and disclosure of the research data, including the review of this principle. Moreover, the statistic data acquired through our analysis may be disclosed as necessary. We, however, will not disclose any information on specific research activities or an information that may help identify an individual researcher.

Please see the following for details:

- JST Policy on Open Access to Research Publications and Research Data Management
<https://www.jst.go.jp/EN/about/openscience/index.html>
- Policies for undertaking data management in a strategic basic research program project
https://www.jst.go.jp/kisoken/crest/en/manual/data_houshin_en.pdf

Chapter 2 CREST Program

2.1 CREST

2.1.1 CREST Overview

Key points and characteristics of CREST are described as follows.

- a. CREST is a network-type research (team type) for the purpose of promoting unique fundamental research at an internationally high level for overcoming important problems facing Japan and producing creative, conspicuous, and innovative technology seeds (new technology seeds) to contribute highly to the science and technology innovation, which will renovate the society and economy. Under the management principles in the Research Area selected by the Research Supervisor, the best teams led by top-level researchers in Japan, also selected by the Research Supervisor, conduct research to achieve the Strategic Objectives and train the young researchers participating in a team while advancing research.
- b. The Research Supervisor manages a network type research institute with lead joint researchers from industrial, academic, or government institutions. The Research Supervisor manages a Research Area as a research institute. The Research Supervisor, in his/her role as director of a research institute, enlists the cooperation of Research Area Advisors and others in managing his/her Research Area through the following activities.
 - Specification of a management direction for his/her Research Area
 - Research projects selection
 - Refinement and approval of research plans (including research costs and assembly of the research team)
 - Participate in Research Area meetings at which Research Directors report on their research progress and have their results discussed, visits to labs where research is being performed, and have other opportunities to communicate with Research Directors and provide them with advice and guidance on their efforts.
 - Research project evaluation
 - Other necessary activities
- c. A Research Director can bring multiple researchers together in a team that is optimal for pursuing the Research Director's proposed research initiative. A Research Director advances research that will contribute to the overall purposes of the Research Area, while bearing full responsibility for the research project he/she is leading.

2.1.2 CREST Research Team Organization

A Research Director can assign multiple researchers to organize an optimal research team.

- a. The person proposing a research project, i.e. the Research Director, is able to organize a research team – the Research Director's Group – consisting of individuals from only his/her research lab, and when pursuing a research initiative that requires it, a research team can include a group ("joint research group") of researchers or other personnel from research labs or research institutions other than his/her research lab.
- b. Among researchers comprising a research team, those representing a "joint research group" are referred to as "Lead Joint Researchers."

c. When necessary for the pursuit of research, researcher staff, research assistants, and other personnel may be employed within the research budget and allowed to participate as members of the research team.

※ For more details on research team organization requirements, please refer to "2.2.6 Proposal Submission Requirements."

2.1.3 CREST Flow from Research proposal to Selection

(1) Call and Selection of Proposals

JST calls for research proposals for individual Research Areas specified among the Strategic Objectives designated by the national government. Selection of proposals is made by the Research Supervisor, with the cooperation of Research Area Advisors and others, for individual Research Areas.

※ For more details, please refer to "2.2 Call and Selection of Proposals" and "5.1 Common Issues in the Call and Selection of Proposals".

(2) Research Plan Preparation

Once a research proposal has been selected, the Research Director prepares an overall research plan covering the entire period of the research project. The Research Director also prepares annual research plans for each year of the project.

Research plans cover budgets and research team composition.

※ For more details, please refer to "5.2.1 Research Plan Preparation."

(3) Collaborative Research Agreement

Once a research proposal has been accepted, JST will enter into Collaborative Research Agreement with the research institutions with which the Research Director and Lead Joint Researchers are affiliated.

※ For more details, please refer to "5.2.2 Collaborative Research Agreement"

2.2 Call and Selection of Proposals

2.2.1 Eligible Research Proposals

- (1) Research proposals are called for the 8 Research Areas mentioned in the section, “(1) Research Areas calling for Proposals” in “Overview of the Call for Research Application”.
- (2) Carefully read the “Research Area Outline” for each of the Research Areas mentioned in “Chapter 6 Policy of Research Areas Calling for Proposals” and the “Research Supervisor’s Policy on Calls for Application, Selection and Management of the Research Area” before proposing a research proposal appropriate for one of the Research Areas.
- (3) Be certain to confirm important common items described in “Chapter 5 Common Issues in the CREST, PRESTO, and ACT-X Programs.”

2.2.2 Submission Period

Tuesday, March 23rd to 12:00 (noon, Japan time) on Tuesday, May 18th, 2021 (No exceptions).

For information on schedules for calls for proposals, etc., please refer to "(2) Call and Selection Schedule" in “Overview of the Call for Research Application”.

2.2.3 Research Period

The research period will be five and a half years or less, starting in October 2021 and ending in March 2027 (i.e. end of 6th fiscal year) or earlier.

※ Actual research periods depend on research project plans. For more details, please refer to “5.2 Common Issues in Post-selection: Procedure of Research Work”.

2.2.4 Research Budgets

The budget for one research team basically ranges from 150 million yen to 500 million yen (for entire research periods up to five and a half years). In some cases, the Research Areas may have independently established budget ranges, so be certain to refer to “Chapter 6 Policy of Research Areas Calling for Proposals” for details. In addition, JST, under Collaborative Research Agreement, pays research institutions funds up to 30% of the research budget (direct cost) to cover overhead (indirect cost).

※ Proposed research budgets are examined in the selection process. Actual research budgets are determined through examination and approval of research project planning. For more details, please refer to “5.2 Common Issues in Post-selection: Procedure of Research Work”.

2.2.5 Number of Research Projects

Three to eight research projects shall be selected for each Research Area. (The number for any particular Research Area will vary depending on research intent, conditions with regard to research proposals, and budget limitations.)

2.2.6 Proposal Submission Requirements

Proposal submission requirements are as presented below in items (1), (2) and (3).

Please ensure you understand these requirements for your submission.

- ※ In principle, if the determination is made that a submission does not meet the requirements by the time of selection, the research proposal will either not be accepted or not be selected.
- ※ If a research proposal is selected, the research project must maintain its qualified status as per the submission requirements for the entire duration of the period of research. If the research project fails to meet the requirements during the research period, the research project will in principle be completely or partially suspended (i.e. be terminated early).

When submitting a proposal, please understand the following the points (1) through (3) below, and described in “Chapter 8 Key Points in Submitting Proposals” and “Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs”.

(1) Requirements for Research Project Applicants

a. Research project applicants, who will be the Research Director, must be affiliated with a domestic Japanese research institution, where they will organize and pursue the proposed research (The nationalities of research project applicants are not considered.)

※ The following types of individuals may also submit research project proposals.

- Researchers who have foreign citizenship, but who are affiliated with a domestic Japanese research institution.
- Researchers who are not currently affiliated with a research institution, or are affiliated with an overseas research institution, and, if selected as a Research Director, will be able to organize and pursue research as a researcher affiliated with a domestic Japanese research institution. (Nationality will not be considered.)

※ This also covers those affiliated with private sector companies and other non-university research institutions.

b. Researchers who are able to bear overall responsibility for a research project as the party responsible for the research team throughout the entire research period.

※ For more details, please refer to “5.2.7 Responsibilities of the Research Director, Lead Joint Researchers and Individual Researchers following Approval.”

c. The applicant must either: have already completed the educational program for research integrity at his/her affiliated research institution, or complete the JST- designated educational program by the application deadline.

※ For details, refer to “8.27 Enrolling in and Completing the Educational Program on Research Integrity.”

d. The applicant must pledge to the following four items upon submission.

- Understand and comply with the “Guidelines for Responding to Misconduct in Research” (decided 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)” (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised February 18, 2014).
- If the research proposal is selected, the Research Participants (Research Director, Lead Joint Researchers, Researches to proceed the research, Engineers, Research Assistants, Students and etc.) must not engage in misconduct in their research (fabrication, falsification, and plagiarism) nor in inappropriate and unlawful use of research funds.
- No misconduct in research occurred as part of past research achievements mentioned in the submitted research proposal.

※ The pledges above will be confirmed in the submission process through e-Rad.

(2) Requirements for Organizing a Research Project

The following requirements must be met. Please refer to item (1) in “5.1.3 Selection Perspective”.

- a. A research team is optimally organized for pursuing the research initiatives of the research project applicant, who will be the Research Director.
- b. When a joint research group is organized to work with the research team, the joint research group is essential for pursuing research initiatives and can contribute significantly to achievement of the research objectives.
- c. Researchers who are presently PRESTO, ACT-I (Acceleration Phase), ACT-X, PRIME* Researchers are ineligible to be a Lead Joint Researchers. For more details, please refer to “Section 9 Limitations on the Multiple Application within the Strategic Basic Research Programs”.

※ We strongly welcome participation by research groups overseas in the CREST program. However, the research costs of the groups belonging to an institute overseas, are, in principle, not funded by JST; therefore, their research costs may need to be funded by themselves.

* This is an Advanced Research and Development Program for Medical Innovation with the Strategic Basic Research Programs carried out by the Japan Agency for Medical Research and Development (AMED). PRIME (solo type) is a program in which Research and Development Directors promote research on their own.

If it is recognized that it is essential for a research institute overseas to participate in a research as a joint research group (a researcher belonging to the research institution overseas participates in the research as a joint researcher) to fulfill the concept of the research, the research cost of the research group can be funded by JST. If you want to compose a research team involving a research institute overseas (which requires approval by the research supervisor), describe the reasons that the joint researcher belonging to a research institute overseas is required in your research proposal (CREST - Form 4-2). Further, even in a proposal that assumes that JST funds the research cost, separately describe a plan for cooperation with the group in the proposal (CREST - Form 4-2) in case where a contract is not concluded.

In addition, the research institutions overseas must, in principle, enter a contract with JST based on the terms and conditions presented by JST. Please fill-in (CREST - Form 11) the contact information about the responsible person at the research institution overseas who is in charge of contracts. Additionally, submit the Form of Consent by the date of your interview, to check if the main terms and conditions of the contract are accepted.

Form of Consent

https://www.jst.go.jp/kisoken/boshuu/teian/koubo/2021form_of_consent_en.docx

See also "5.2.8 Responsibilities of Research Institutions". It will be necessary to share the information about intellectual property rights created by CREST, including the research institution overseas. If a research contract is not concluded and the plan for cooperation is not foreseeing, we may cancel our selection.

※For the template of the research contract for organizations overseas, access the following website.

<https://www.jst.go.jp/kisoken/boshuu/teian/en/top/ryoiki.html>

(3) Research Institution Requirements

Research Institutions must fully understand that the research funds are public funding, ensure compliance with related law, and make efforts to conduct the research effectively. Research Institutes that cannot accomplish the tasks described in "5.2.8 Responsibilities of Research Institutions" will not be enjoined to implement research; thus, when applying, prior consent of the Research Institution at which the implementation of research is planned must definitively be obtained.

Chapter 3 PRESTO Program

3.1 PRESTO

3.1.1 PRESTO Overview

Key points and characteristics of PRESTO are described as follows.

- a. PRESTO is a network-type research (individual type) for promoting the unique and challenging fundamental research with leading purposes estimated to develop into an internationally high level for overcoming important problems facing Japan and producing creative and innovative technology seeds (new technology seeds) to be a source for the science and technology innovation, which will renovate the society and economy as a world-wide precursor. Under the management principles in the Research Area selected by the Research Supervisor, the young researchers selected by the Research Supervisor form a network with researchers in different Research Areas to promote a challenging individual-type research that is only accomplished by such young researchers.

- b. The Research Supervisor manages individual researchers and oversees the Research Area in a research institute.

The Research Supervisor, in his/her role as director of a research institute, enlists the cooperation of Research Area Advisors and others in managing his/her Research Areas through the following activities.

- Specification of a management direction for his/her Research Area
- Research project selection
- Refinement and approval of research plans (including research costs)
- Holding Research Area meetings at which Individual Researchers report on their research progress and have their results discussed, visit to labs where the research is being performed, and has other opportunities to communicate with Individual Researchers and provide them with advice and guidance on their efforts.
- Research project evaluation
- Other activities necessary to support research activities in various ways

- c. Individual Researchers, in pursuing the research initiatives they have proposed, and taking responsibility for implementing their own research projects, pursue research that will contribute to the overall purposes of the Research Area.

3.1.2 PRESTO Research Organization

- a. The researcher will pursue his/her research as an individual (alone). (However, if necessary, a research assistant may be appointed and paid for within the research budget.)
- b. JST conducts activities necessary for research such as improvement of research environments, research-related public relations and outreach activities.
- c. Researchers are requested to conduct research at their affiliated institutes in principle. It is possible to perform research work outside of their affiliated research institute and for this case, JST will conclude a contract with the institute which expends the research budget (individual researchers are requested to prepare place to conduct

research with permission of both the researcher's affiliated institution and the research performing institution concerning these matters as prerequisite).

- d. If researchers with no affiliation could find out a host institution and prepare research environment to conduct their research, JST will employ them as a "PRESTO-Researcher (JST employed)" and permit to perform research activity at the host institution (only Japan Domestic Research Institute) after strict review process of JST. These researchers are requested to conclude a pre-permission with host institution that they are employed by JST as "PRESTO-Researcher (JST employed)" and the host institution is required to conclude job assignment contract with JST.

If the applicant is a member of CREST/ERATO/ACCEL research (except Research Director, Lead Joint Researcher), they are permitted to continue their CREST/ERATO/ACCEL research after review of JST.

It is requested to refer to "5.2.3 PRESTO and ACT-X Researcher Appointment Types" for detail condition.

3.1.3 PRESTO Flow from Research proposal to Selection

(1) Call and Selection of Proposals

JST calls for research proposals for Individual Research areas specified in the Strategic Objectives designated by the national government. Selection of proposals is made by the Research Supervisor, with the cooperation of Research Area Advisors and others, for individual Research Areas.

※ For more details, please refer to "3.2 Call and Selection of Proposals", "5.1 Common Issues in the Call and Selection of Proposals".

(2) Research Plan Preparation

Once a proposal has been selected, the researcher prepares an overall research plan covering the entire period of the research project. The researcher also prepares annual research plans for each year of the project. Research plans cover budgets and research approach.

※ For more details, please refer to "5.2.1 Research Plan Preparation."

(3) Collaborative Research Agreement

In advancing a research project, JST will enter into a Collaborative Research Agreement with the research institution

where the researcher will pursue research work.

※ For more details, please refer to "5.2.2 Collaborative Research Agreement".

3.2 Call and Selection of Proposals

3.2.1 Eligible Research Proposals

- (1) Research proposals are called for the 11 Research Areas mentioned in the section, “(1) Research Areas calling for Proposals” in “Overview of the Call for Research Application”.
- (2) Carefully read the “Research Area Outline” for each of the Research Areas mentioned in “Research Supervisor’s Policy on Calls for Application, Selection and Management of the Research Area” of “Chapter 6 Policy of Research Areas Calling for Proposals” before proposing research appropriate for one of the Research Areas.
- (3) It is requested to confirm important common items described in “Chapter 5 Common Issues in the CREST, PRESTO, and ACT-X Programs.”

3.2.2 Submission Period

Tuesday, March 23rd to 12:00 (noon, Japan time) on Tuesday, May 11th, 2021 (No exceptions).

For information on schedules for briefings, calls for proposals, etc., please refer to "(2) Call and Selection Schedule" in “Overview of the Call for Research Application”.

3.2.3 Research Period

The research period will be three and a half years or less, starting in October 2021 and ending in March 2025(i.e. at end of fourth fiscal year) or earlier.

※ Actual research periods depend on research project plans. For more details, please refer to “5.2 Common Issues in Post-selection: Procedure of Research Work.”

3.2.4 Research Budgets

The budget for one research project basically ranges from 30 million yen to 40 million yen (for entire research periods up to three and a half years, refer to Chapter 6 for detail budget information). In addition, JST, under Collaborative Research Agreement, pays research institutions funds up to 30% of research budget (direct cost) to cover overhead cost (indirect cost).

※ Proposed research budgets are examined in part of the selection process. Actual research budgets are determined through examination and approval of research project planning. For more details, please refer to “5.2 Common Issues in Post-selection: Procedure of Research Work.”

3.2.5 Number of Research Projects

Approximately, 10 research proposals are planned to be selected for each Research Area.

※ The number of proposals selected may vary depending upon budgetary and other factors.

3.2.6 Proposal Submission Requirements

Requirements for those submitting proposals are discussed below.

Please ensure you understand these requirements for your submission.

- In principle, if the determination is made that a submission will not fulfill the requirements by the time of selection, the research proposal will either not be accepted or not be selected.
- If a research proposal is selected, the Research Project must maintain its qualified status as per the submission requirements for the entire duration of the period of research. If the Research Project fails to meet the requirements during the research period, the Research Project will in principle be completely or partially suspended (i.e. be terminated early).

When submitting a proposal, please proceed it with following the points (1) through (3) below and description in “Chapter 8 Key Points in Submitting Proposals” and “Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs.”

(1) Requirements for Research Project Applicants

- a. A research project applicant must be a person himself/herself who is going to be an Individual Researcher.
- b. A research project applicant must be a proposer of the subject research initiative and be the researcher who will independently perform research work in pursuit of the research initiative.
 - ※ Researchers who, because of responsibilities as the head of a research lab, or for other such reasons, cannot devote themselves to the pursuit of proposed research may be excluded from consideration.
 - ※ A researcher who can adequately undertake individual research in accordance with the purpose of PRESTO research qualifies as an applicant even if the researcher is affiliated with a laboratory of a business firm.
 - ※ Students who are graduating next March can apply. They are requested to conduct research activity at their new position in the institution they will be hired, or otherwise, as a “PRESTO-Researcher (JST employed)” after review process of JST.
- c. Research project applicants must hold Japanese citizenship or be a foreign researcher who will pursue research work within Japan.
 - Researchers holding Japanese citizenship:

For proposals to perform research work at an overseas research institution, it must be possible for the subject research institution to enter into a Collaborative Research Agreement with JST, and, when JST specifies expenditure guidelines, it must be possible to properly undertake expenditures in accordance with the specified expenditure guidelines. For more details, please refer to the next item (3) and the Q&A section at the end of this volume.
 - Foreign researchers who will pursue research work within Japan:

Once selected, it will be necessary to perform the proposed research work at a domestic Japanese research institution and it must be possible to perform the proposed research work at a domestic

Japanese research institution through the conclusion of PRESTO research. It will also be required that administrative tasks be handled in the Japanese language (or that the researcher's working environment allow for this.)

- ※ Japanese researchers who will perform their research work at an overseas research institution and foreign researchers who will perform their research work at a domestic Japanese research institution needs to pay attention to the items below;
 - Visas, visa renewals, visa changes, etc. should be arranged by each researcher. Failure of a researcher to properly meet visa requirements may result in the rejection of a research proposal or the suspension of his/her research project.
 - In the event that an Individual Researcher is subject to the export restriction due to the Foreign Exchange and Foreign Trade Act, measures will be taken including the non-adoption of his/her research proposal or the cancellation of the research project etc.
- d. The researcher is a person who can take responsibility for his/her PRESTO research project throughout the entire research period overseeing it to its completion.
 - ※ For more details, please refer to “5.2.7 Responsibilities of Research Director, Lead Joint Researchers, and Individual Researchers following Approval”.
- e. The applicant must either: Have already completed the educational program for research integrity at his/her affiliated research institution; or completed the JST-provided educational program by the application deadline.
 - ※ For more details, please refer to “8.27 Enrolling in and Completing the Educational Program for Research Integrity”.
- f. The applicant must pledge following four items upon submission.
 - Understand and comply with “Guidelines for Responding to Misconduct in Research” (decided by the Minister of Education, Culture, Sports, Science and Technology on August 26, 2014).
 - Understand and comply with “Guidelines on Management and Audit of the Public Research Expenses in Research Institutions (Implementation standards)” (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised February 18, 2014).
 - If the research proposal is accepted, the Individual Researcher must not engage in misconduct in their research (fabrication, manipulation, and plagiarism) nor in inappropriate usage of research funds.
 - The research project applicant must not have engaged in misconduct in the past to achieve the research results that are mentioned in the submitted research proposal.
- ※ The above verification will be part of the e-Rad Submission Information Entry screen.

(2) Requirements for Research Institutions Conducting PRESTO Research

- a. Research institutions conducting PRESTO research (research institutes with which the selected Individual Researchers are affiliated or the research institutions with which Individual Researchers (JST employed) are pursuing their projects) must fully recognize that the research funds are public funding, ensure compliance with related law, and make efforts to implement the research effectively. Research institutes that cannot accomplish the tasks described in “5.2.8 Responsibilities of Research Institutions” will not be enjoined to implement research; thus, when applying, a prior consent of the research institution at which the implementation of research is planned shall definitively be obtained. (As for “PRESTO-Researcher JST employed”, your host institution will be requested to conclude job assignment contract with JST. A pre-permission of your host institution is required concerning this matter. When you are going to ask for an approval in advance, fill in a separate form, "PRESTO-Researcher (JST employed)," and submit it from e-Rad when you submit your application form. Please also refer to “5.2.3 PRESTO and ACT-X Researcher Appointment Types”.)

(3) Requirements for Performing Research Work at an Overseas Research Institution

- a. Need to be a joint appointment researcher
- b. Reason for carrying out research in overseas research institution (PRESTO-Form 7)

In the case that research is carried out at an overseas research institution etc., you are requested to complete Form 7 in the research proposal, stating the reasons why you wish to carry out the research overseas. In the case that approval of the Research Supervisor cannot be obtained during the screening period, Measures will be taken including the non-adoption of the research proposal or the cancellation of the research project etc. (These measures may be taken even after the approval of research proposal according to the decision of the Research Supervisor or JST.)

1. The necessity in realizing the research concept of the researchers
2. The necessity of using the overseas research institution in question

- c. The research contract forms stipulated by JST

In principle, research institutes shall conclude research contracts with content proposed by JST. The research institutions overseas must, in principle, enter a contract with JST based on the terms and conditions presented by JST. For that purpose, describe the contact information about the manager at the department or division of the research institution overseas in charge of contracts and submit another form* (see the below), by the date of your interview, that states whether an approval has been made in advance. If a research contract is not made and the plan for cooperation is not foreseeing, we may cancel our adoption.

*another form (Manager’s approval in advance)

https://www.jst.go.jp.kisoken/boshuu/teian/koubo//2021form_of_consent_en.docx

Regarding this matter, please submit a letter of prior consent by person in charge of contract in the foreign institute based on JST format (provided later) to JST before interview phase.

※ Please refer following URL for a format of research contract with foreign institutes.

<https://www.jst.go.jp/kisoken/boshuu/teian/top/ryoiki.html>

Please also refer to “5.2.8 Responsibilities of Research Institutions” for the detail of conclusion of Collaborative Research Agreement.

Chapter 4 ACT-X Program

4.1 ACT-X

4.1.1 ACT-X Overview

Key points and characteristics of ACT-X are described as follows.

- a. ACT-X is a network-type research (individual research) for finding and developing superior young researchers who can find solutions to important problems facing Japan. Based on management of the Research Area defined by the supervisor, we pursue researchers who have unique and stimulating ideas. We give aid to studies that aim for the creation of new values leading to innovations in science and technology. With advice and guidance from the Research Supervisor and area advisor, young researchers advance their research studies according to their unique ideas. As they communicate and form networks with researchers from different fields in and out of their Research Area, young researchers try to establish themselves in the field.

- b. For our program this fiscal year, we invite individual researchers who meet the following criteria

Researchers who have held a doctoral degree for less than eight years as of April 1, 2021

Researchers who earned their bachelor's degrees less than 13 years ago (as of April 1, 2021) if they have not acquired doctoral degrees.

*This includes researchers who satisfy the described terms and conditions when the period of maternity or paternity leave taken after acquiring the degree is excluded.

Graduate school students are also invited to our program regardless of the terms and conditions described above. We are expecting proactive applications from graduate school students and young researchers employed by companies.

- c. For the independent realization of the research, individual researchers take responsibility for the implementation of their research challenges and advancing their research to contribute to the common objectives of the Research Area. If a student who does not have the authority to execute contract research funds and cannot become a party to the Collaborative Research Agreement under the regulations of the institution (research location institution), the supervisor will be responsible for the contract. For more information, refer to "4.2.6 Proposal Submission Requirements (1) Requirements for Research Project Applicants" On the other hand, if a non-student who does not have the authority to execute contract research funds under the regulations of the institution (research location institution), first coordinate with the supervisor and the institution (research location institution) so that he or she have the authority to execute research and become a party to the Collaborative Research Agreement.
- d. The Research Supervisor oversees individual researchers, while Research Area advisors are assigned to each of the researchers to play the role of a mentor; thus, Research Areas are managed in a "network-type research institute." A Research Supervisor plays the role of head of this research institute and manages the Research Area by the following means with help from area advisors and others:
 - Formulates principles of management in the Research Area
 - Selects the research challenges
 - Arrangement and approval for research plans (including plans for research budgets)

- Hosts Research Area meetings for each individual researcher to report on and discuss the progress of the research; gives advice and/or guidance to individual researchers by visiting places of research implementation and/or other venues for exchanging views
- Evaluates research challenges
- Gives a variety of support to research activities and/or provides any other necessary resources

4.1.2 ACT-X Research Organization

- a. The researcher will pursue his/her research as an individual (alone). (However, if necessary, a research assistant may be appointed and paid for within the research budget.)
- b. JST conducts activities necessary for research including preparation of research environments, research-related public relations and outreach activities, and support for patent applications.
- c. Individual researchers are requested to conduct research at their affiliated institutes in principle. It is possible to perform research work outside of their affiliated research institute and for this case, JST will conclude contract with the institute which expends the research budget (individual researchers are requested to prepare place to conduct research with permission of both the researcher's affiliated institution and the research performing institution concerning these matters as prerequisite).
- d. The program is open to student researchers in master's and doctoral education programs. For more details, please see "4.2.6 Proposal Submission Requirements" in the Application Guidelines.

4.1.3 ACT-X Flow from Research proposal to Selection

(1) Call and Selection of Proposals

JST calls for research proposals for individual Research Areas specified in the Strategic Objectives designated by the national government. Selection of proposals is made by the Research Supervisor, with the cooperation of Research Area Advisors and others, for individual Research Areas.

Note: For more details, please refer to "4.2 Call and Selection of Proposals", "5.1 Common Issues in the Call and Selection of Proposals".

(2) Research Plan Preparation

Once a proposal has been selected, the researcher prepares an overall research plan covering the entire period of the research project. The researcher also prepares annual research plans for each year of the project. Research plans cover budgets and research approach.

Note: For more details, please refer to "5.2.1 Research Plan Preparation."

(3) Collaborative Research Agreement

In advancing a research project, JST will enter into a Collaborative Research Agreement with the research institution where the researcher will pursue his/her research work.

Note: For more details, please refer to "5.2.2 Collaborative Research Agreement".

4.2 Call and Selection of Proposals

4.2.1 Eligible Research Proposals

- (1) Research proposals are called for the Research Area mentioned in the section, “(1) Research Areas calling for Proposals” in “Overview of the Call for Research Application”.
- (2) Carefully check the “Overview” and “Research Supervisor’s Policy on Calls for Proposals, Selection and Management of the Research Area” mentioned in “Chapter 6 Policy of Research Areas Calling for Proposals” for individual Research Area before proposing your research appropriate for one of the Research Areas.
- (3) Be certain to confirm important common items described in “Chapter 5 Common Issues in the CREST, PRESTO, and ACT-X Programs.”

4.2.2 Submission Period

Tuesday, March 23rd to 12:00 (noon, Japan time) on Tuesday, May 11th, 2021 (No exceptions).

For information on schedules for briefings, calls for proposals, etc., please refer to “(2) Call and Selection Schedule” in “Overview of the Call for Research Application”.

4.2.3 Research and Development Period

The research period is, in principle, two years and six months from October 2021 to ending in March 2024(research can be continued at the end of the fiscal year of the third year).

This period is a standard ACT-X research period; and for the successful applicant’s requests, additional form of support called the "acceleration phase" may be added, which will continue for one year. The general standard regarding the number of research challenges for which an eligible candidate may receive acceleration phase support is defined in each Research Area (see also Chapter 6). We give precedence to research challenges from which we can expect further achievements by providing continuous support. Successful applicants must determine whether they challenge for this acceleration phase until the evaluation of their research progress, which is conducted about two years after the start of research. A new contract will be signed for the acceleration phase, which is effective on the day following the termination date of the research. It is for a maximum of one year.

Note: Actual research periods are determined after a detailed examination and approval of the plan for the research challenge. For more information, see “5.2 Common Issues in Post-selection: Procedure of Research Work”.

* If you apply for PRESTO or PRIME during the course of ACT-X research and your application is selected, you can conduct PRESTO or PRIME (called Early graduation). If you apply for PRESTO or PRIME* during the course of ACT-X research, please notify the Research Supervisor and JST.

* You cannot apply for PRESTO or PRIME at the same time as applying for ACT-X. You cannot also become a principal co-researcher of CREST or a group leader of ERATO during ACT-X research. Please refer to “Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs.”

4.2.4 Research Budgets

The budget for a research challenge is, in principle, several million yen for the research period of two years and six months or shorter (for direct expenditures). Details of the budgets (including budgets for support during the acceleration phase, if applicable) are defined differently based on the Research Area (see also Chapter 6).

According to the contract for consigned research, in addition to the research budget (for direct expenditures), JST provides the research institution with aid for indirect expenditures up to, in principle, 30% of the direct expenditures as the budget for consigned research.

Note: The research budget requested is examined in the course of our selection process. Actual research budgets are determined after a detailed examination and approval of the plan for a research challenge.

For more information, see “5.2 Common Issues in Post-selection: Procedure of Research Work”.

4.2.5 Number of Research Projects

This solicitation round is projected to select a maximum of approximately 30 projects.

※ The number of proposals selection may vary depending upon budgetary and other factors.

4.2.6 Proposal Submission Requirements

Requirements for those submitting proposals are discussed below.

Please make sure that you understand these requirements for your submission.

- ※ In principle, if the determination is made that a submission does not meet the requirements by the time of selection, the research proposal will either not be accepted or not be selected.
- ※ Once a research proposal is selected, the Research Project shall maintain its qualified status as per the submission requirements for the entire duration of the period of research. If the Research Project fails to meet the requirements during the research period, the Research Project will in principle be completely or partially suspended (i.e. be terminated early).

* This is an Advanced Research and Development Program for Medical Innovation with the Strategic Basic Research Programs carried out by the Japan Agency for Medical Research and Development (AMED). PRIME (solo type) is a program in which Research and Development Directors promote research on their own.

When submitting a proposal, please proceed it with followings, and the description in “Chapter 8 Key Points in Submitting Proposals” and “Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs”.

(1) Requirements for Research Project Applicants

- a. The applicant and individual researcher must be the same person.
- b. Each applicant must satisfy the following conditions:

Researchers who have held a doctoral degree for less than eight years* as of April 1, 2021.

- Researchers who earned their bachelor’s degrees less than 13 years ago* (as of April 1, 2021) if they have not acquired doctoral degrees.
- (*) These include researchers who satisfy the described terms and conditions when the period of maternity or paternity leave taken after acquiring the degree is excluded.

Graduate school students are also invited to our program regardless of the terms and conditions described above. See also Chapter 9, “Limitations on Multiple Applications within the Strategic Basic Research Programs”.

- c. The applicant must write his/her research proposal as a person who suggested the idea and undertake such research independently, to bring the idea into reality. The ACT-X program is open to researchers affiliated with corporations and other entities, so long as they are deemed fully capable of conducting individual research in accordance with the ACT-X policy.
- d. Applications by students in master’s and doctorate programs will be required to submit via e-Rad, of a memorandum of confirmation on requirements. More specifically, in this memorandum, academic supervisors will be held responsible for the following items:

- The applying student’s affiliated academic institution is capable of entering into a Collaborative Research Agreement with JST as described in the Application Guidelines.
- The student applicant will, as “research practitioner” in the Collaborative Research Agreement, be the main person to conduct contract research.
- The applying student’s academic supervisor will, as “research implementation manager” in the Collaborative Research Agreement, supervise the project and be held responsible for its terms and conditions.
- The student applicant’s academic institution will agree to the necessity of an agreement between the institution and the student, governing intellectual property that will likely emerge as products of the research project.

※”The memorandum of confirmation” form can be downloaded from the “How to apply” section of the webpage below. Both, the student applicant and his/her academic supervisor are required to sign and upload the document via e-Rad. <https://www.jst.go.jp/kisoken/boshuu/teian/top/ryoiki.html>

※ If the researchers have already selected by or are applying for research funds of an institution other than JST, please ask each institution about the eligibility of the duplication with ACT-X.

e. If a non-student who does not have the authority to execute contract research funds under the regulations of the institution (research location institution), first coordinate with the supervisor and the institution (research location institution) so that he or she have the authority to execute research and become a party to the Collaborative Research Agreement. As a result, if you are unable to have the authority to execute, both you and the supervisor must sign and submit a Memorandum of Confirmation through e-Rad indicating that you have confirmed the following items. The supervisor will be responsible for the following items in the Memorandum of Confirmation.

- A Collaborative Research Agreement specified in the application guidelines must be concluded between the institution (research location institution) and JST.
- The research applicant must conduct the contract research as the “Researcher in charge” in the Collaborative Research Agreement.
- The supervisor must take responsibility for the Collaborative Research Agreement as the “Research Leader” who oversees the contract research.
- The affiliated institution agrees that the researcher and the institution will negotiate intellectual property rights resulting from research.

※”The memorandum of confirmation” form can be downloaded from the “How to apply” section of the webpage below. Both, the student applicant and his/her academic supervisor are required to confirm and upload the document via e-Rad. <https://www.jst.go.jp/kisoken/boshuu/teian/top/ryoiki.html>

※If you have already used or are applying for a non-JST institution, please ask each institution about the eligibility of duplication with ACT-X and the non-JST institution.

※After the selection, even if the institution (research location institution) does not have executive authority, a position in the institution (research location institution) is required to conclude a Collaborative Research Agreement. If a position is not granted, a Collaborative Research Agreement cannot be concluded and ACT-X research may not be conducted.

f. An individual researcher must have participated in a study at a research institute in Japan as of the date that his or her proposal is adopted, and he or she must be able to continue research in Japan until the ACT-X research is completed. Please note the following:

- If a graduate school student is to graduate in the 2.5-year period of the ACT-X research, to apply for our program, he or she must make the best effort to satisfy the terms and conditions above in order to continue the ACT-X research after graduation.
- Individual researchers can be of any nationality; however, it is required that they are able to manage clerical processes in Japanese (or be in an environment in which they are able to do so).
- In the ACT-X program, in principle, Japanese is used in Research Area meetings and for other processes after a proposal is adopted. Therefore, you need to be able to communicate to an extent in Japanese.

- A researcher who is not a Japanese national and is engaged in a study at a research institute in Japan must know the following:

- ※ The researcher must acquire a visa, extend the period of stay, renew the residency status, and follow any other necessary procedures independently as necessary. If the researcher fails to satisfy the requirements in relation to his or her residency status, we cannot adopt his or her proposal for research and will cancel the research challenge (or take similar measures).

- ※ If the Foreign Exchange and Foreign Trade Act is applicable to an ACT-X research study and bans the export depending on the status, etc., of an individual researcher, we cannot adopt his or her proposed research and will cancel the research challenge (or take similar measures).

g. The researcher must be personally responsible for the ACT-X research challenge throughout the research period.

- ※ For more details, please refer to “5.2.7 Responsibilities of Research Director, Lead Joint Researchers, and Individual Researchers following Approval”.

h. The applicant must either: Have already completed the educational program for research integrity at his/her affiliated research institution; or have completed the JST-provided educational program by the application deadline.

- ※ For more details, please refer to “8.23 Enrolling in and Completing the Educational Program on Research Integrity”.

i. The applicant must pledge following four items upon submission.

- Understand and comply with “Guidelines for Responding to Misconduct in Research” (decided by the Minister of Education, Culture, Sports, Science and Technology on August 26, 2014).
- Understand and comply with “Guidelines on Management and Audit of the Public Research Expenses in Research Institutions (Implementation standards)” (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised February 18, 2014).
- If the research proposal is accepted, the Individual Researcher must not engage in misconduct in their research (fabrication, manipulation, and plagiarism) nor in inappropriate usage of research funds.
- The research project applicant must not have engaged in misconduct in the past to achieve the research results that are mentioned in the submitted research proposal.

- ※ The above verification will be part of the e-Rad Submission Information Entry screen.

(2) Requirements for Research Institutions

a. Research institutions (with which the selected Individual Researchers are affiliated) or research location institution must fully recognize that the research funds are public funding, ensure compliance with related law, and make efforts to implement the research effectively. Research institutes that cannot accomplish the tasks described in “5.2.8 Responsibilities of Research Institutions” will not be enjoined to implement research; thus, when applying, a prior consent of the research institution at which the implementation of research is planned shall definitively be obtained.

4.2.7 Additional Expense Support as Research Assistant (RA) for ACT-X Student (Doctor / Master) Researcher

Only when a student (doctor / master) makes a research proposal at ACT-X, JST can support additional expenses as RAs according to the time of the student engaged in ACT-X research. This is an add-on expenses to the expense for the research proposal. After you are selected, please consult with your supervisor and decide whether to apply or not for this additional support, then submit the confirmation form described in "4.2.6 Proposal Submission Requirements."

In order to receive this additional support, the affiliated institution must have applicable regulations for RA expenditures based on engagement time, and the supervisor must be responsible for the execution and submit the form agreeing to the following: (The details of the form will be informed when the application is selected)

- If the position of the student changes during the academic year, contact JST immediately.
- Prepare and maintain evidence documents based on the Collaborative Research Agreement administration manual and the regulations of the affiliated institution, and submit a specified report within 60 days after the end of the additional support period.
- If the balance is 10% or less of the additional support, it can be diverted to the budget of the main task, but if it exceeds, the balance will be refunded in full.
- Share the details of the application for additional support among the student, the contract and accounting staff at the institution.

JST will decide whether or not to approve additional support applications (it may not be approved).

If the application for additional support is approved, the relevant indirect costs in addition to commissioned research expenses will be added and paid to the student's institution (research location institution, that is, the institution of the supervisor). (Engagement time is at most 1000 hours per year due to school work. If the institution's prescribed hourly unit price is 2,000 yen, it is about 2 million yen per year and the equivalent consumption tax equivalent and indirect expenses).

Please note the following three matters.

- * Please do not include this additional support amount in the research expenses in the proposal to ACT-X.

(If it is selected, we will inform you about this additional support again, accept the additional support application, and decide whether it is acceptable).

- * This additional support is to additionally support the student's own expenses as RA when a student makes a research proposal to ACT-X and is selected. It does not provide additional support for RA expenses for assistants etc. under the applicant. Please consider within. If you need RA expenses or rewards for assistants who provide research assistance, please consider within the research expenses applied for in the research proposal.

* Only if the ACT-X researcher is a student, we will provide additional support for his / her own RA expenses. If the ACT-X researcher is a non-student including a specially-appointed assistant professor, we will not be able to support their labor costs. If the ACT-X researcher is a non-student, refer to "5.2.4 Research Costs".

(Reference) The Integrated Innovation Strategy 2019 (Cabinet decision on June 21, 2019) stated that "goals and measures to increase the number of doctoral graduates and international students abroad" (including the significance of doctors and financial support for doctors and young researchers with various financial resources) were declared. Improve research ability reform 2019 (April 2019 Ministry of Education, Culture, Sports, Science and Technology) calls for "implementation of financial support (for doctoral and master students) utilizing various financial resources".

Integrated Innovation Strategy 2019 (Cabinet decision on June 21, 2019) p.8

https://www8.cao.go.jp/cstp/togo2019_honbun.pdf

Research Ability Improvement Reform 2019 (April 2019 MEXT) p.3

https://www.mext.go.jp/a_menu/other/_icsFiles/afieldfile/2019/04/25/1416069_01.pdf

Chapter 5 Common Issues in the CREST, PRESTO, and ACT-X Programs

5.1 Common Issues in the Call and Selection of Proposals

5.1.1 Conflicts of Interest Involving Research Project Applicants and the Research Supervisor

Research Projects Applicants, hereafter referred as “applicants”, to the Strategic Basic Research Programs of JST cannot have conflicts of interest with the Research Supervisor of the Research Area to which they submit their Research Proposals. Applicants, who have any possibility to have conflicts of interests concerning item a to c described as follows, or any unsure matters, please download the Enquiry Form from the following web site, and fill and send it to the e-mail address indicated below.

URL of the Enquiry Form download: <https://www.jst.go.jp/kisoken/boshuu/teian/koubo/inquiry.docx>

Email: rp-info@jst.go.jp

※ Please identify your email title as “[Conflict of Interest] [CREST/PRESTO/ACT-X (Choose one), Name of the Research Supervisor] [Your name and affiliation]

- a. The research project applicant is a relative of the Research Supervisor.
- b. The research project applicant and the Research Supervisor are both affiliated with the same smallest organizational unit (i.e., same research lab) of a university, national, or other national government-funded research and experiment institution. Or, the research project applicant and the Research Supervisor are affiliated with the same company.
- c. The research project applicant and the Research Supervisor are presently working in close cooperation on the same joint research project. Or, have done so within the past three years.

(Existence of close cooperation will be judged by the fact that, for example, the research project applicant and the Research Supervisor are working together on the same research project, are performing different parts of the same research project, or are co-authors of a research paper. If you have any questions, please contact JST.)

- ※ For Research Areas in which Deputy Research Supervisors have been established, the same provisions shall apply.
- ※ For enquiries submitted by April 20, 2021, JST will answer about whether there are any conflicts of interests between the enquirers and the Research Supervisor in question by the deadline of Research Proposal submission. For inquiries submitted after that date, there may be cases that JST cannot answer by the deadline. If a conflict of interest is found between an applicant and the Research Supervisor after the deadline of Research Proposal Submission, there may be cases that the acceptance of his/her Research Proposals is cancelled.

Please make use of the following Pre-submission Check Sheets to examine whether there are any conflicts of interests between you and the Research Supervisor under consideration before submitting your Research Proposal.

- ※ (CREST- Attachment) Pre-Submission Check Sheet “Conflict of interests with Research Supervisor.
- ※ (PRESTO- Attachment) Pre-Submission Check Sheet “Conflict of interests with Research Supervisor.
- ※ (ACT-X- Attachment) Pre-Submission Check Sheet “Conflict of interests with Research Supervisor.

5.1.2 Selection Method

For the schedule of Research Proposal Selection, please refer to “(2) Call and Selection Schedule” in the “Overview of the Call for Research Application” section of this document.

(1) Selection Process

The Research Supervisor of each CREST, PRESTO, and ACT-X Research Area conducts the document- and interview-based selections of Research Proposals submitted by applicants to his/her Research Area, with assistance of Research Area Advisors. External reviewers from outside of the Research Area may also enlist for the selections if necessary.

There may be cases which additional “preliminary selection” of the Research Proposals before the document-based selection would be conducted, considering the total number of submitted Research Proposals and other factors. In the preliminary selection, each submitted Research Proposal is reviewed from the view whether Research Proposals are suitable for the CREST or PRESTO program and also for the subject Research Area, whether the proposal will contribute to the achievement their objectives. In the case of a preliminary selection of Research Proposals being conducted in a Research Area, the document-based selection of Research Proposals, is conducted only for those which have cleared the preliminary selection. Whether a preliminary selection of Research Proposals is conducted in each area is not announced to applicants.

Another investigation of Research Proposals may be performed, separately, during the document- and interview-based selection if necessary. In addition, applicants to CREST Research Directors, CREST Lead Joint Researchers, and PRESTO/ACT-X Individual Researchers, are requested to submit financial statements if they are affiliated with profit-making institutions.

Names of Research Advisors of new Research Areas established in this fiscal year will be announced in the following website as soon as the names become available.

<https://www.jst.go.jp/kisoken/boshuu/teian/en/top/ryoiki.html>

(2) Conditions for those with conflict of interest

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.

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’ (CREST Research Director or PRESTO/ACT-X Individual Researcher). In CREST, in some cases, mainly concerning Lead Joint Researchers, the following persons or parties who have conflicts of interest may be excluded from the selection process. If you have any suspicion about conflicts of interest between you and persons and parties involved in the selection process of your Research Proposal, please describe it specifically in the Notice section of the application forms(CREST: Form 11, PREST: Form 7, Act-X: Form 7).

- a. Persons, who are relatives of research project applicants:
- b. Persons or parties who are affiliated with the same department, specialty, or research laboratory at a university, a national institute, or a national experiment institution, or a company with which research project applicants are affiliated. Here, “same department, specialty, or research laboratory” means a group one rank above a laboratory, a research team, or another group which is the smallest research unit.
- c. 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 Research Participant or a Lead Joint 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.)
- d. Persons in a close teacher-student relationship, or in a direct employer-employee relationship.
- e. Persons in relationships of direct competition with research project applicants.
- f. Persons in other relationships judged by JST to representing conflicts of interest with research project applicants.

② Conflict of Interest with Research Director

It will be judged as a conflict of interest with Research Director when a Research Director appoints Joint research group that is related to Research Director (organizations etc. established based on R&D achievements by the research representative etc.) and allocate research fund of JST to these institutes. Unambiguously, Research Director’s affiliated institution would be in charge to manage the conflict of interest of Research Director, additionally, JST is in charge of allocating public research fund where equitability and transparency of decision making is required. Therefore, management for conflict of interest between Research Director and his/her related institution would be conducted in the light of necessity, rationality, affordability in the decision-making process to secure the accountability.

“An organization that is related to the Research Director” refers to any of the organizations that fall under the following categories. Items “a” and “b” are applicable not only to the Research Directors but also to the spouse and the relatives in the first degree of the Research Director (hereinafter referred to as “the Research Director etc.”).

a. An organization established based on R&D achievement of the Research Director etc.

(Including the case in which the Research Director etc. is not directly involved in the business management but is merely given a title such as technical consultant and the case in which the Research Director etc. has stocks.)

b. An organization in which the Research Director etc. is a director (including a CTO but excluding a technical consultant)

c. An organization whose Research Director has stocks

d. An organization whose Research Director is rewarded for implementation

For a research proposal in which a researcher who belongs to the related organization of the Research Director, is assigned as a Lead Joint Researcher, it will be strictly judged from the view point of requirement, rationality, and relevance.

In this case, declare that a researcher who belongs to the related organization of the Research Director, is included as a Lead Joint Researcher in the "special remarks (CREST: Form 11)".

Additional documents may be requested in order to judge conflicts of interest with the Lead Joint Researcher.

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 the CREST, PRESTO, or ACT-X 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.

With respect to the proposals made by a researcher who belongs to an invested company of JST, we assess the necessity, rationality, and adequacy of the applicable invested company.

For that purpose, if a researcher who belongs to an invested company of JST is regarded as a proposer, fill in the "special remarks (CREST: Form 11; PRESTO: Form 7; ACT-X: Form 7)" to declare that a researcher who belongs to the applicable invested company is included in the proposers.

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 the CREST, PRESTO, or ACT-X program. You are asked to be cooperative in JST's management of conflicts of interest.

(3) Interview-Based Selections and Notification of Selection Results

a. Research project applicants, whose research proposals have cleared the document-based selection, and are nominated for the interview-based selection, are notified of their success by email. The notice also provides the information on the overview of the interview-based selection, its schedule, supplemental documents requested to be additionally submitted (the notification will be sent by email, not in writing, to the email address registered in the e-Rad system so please make sure the email address is accessible). In the interview-

based selection, the applicants may be requested to submit a financial statement if they or their Lead Joint Researcher are affiliated with a profit-making institute. Persons, who are regrettably not succeed in the document-based selection, will be informed the result in writing in one week after the document-based selection session as a standard.

The schedule of the interview-based selection will be announced at the following website as soon as it becomes available.

<https://www.jst.go.jp/kisoken/boshuu/teian-en.html>

b. In the interview-based selection session, each applicant is requested to give a presentation explaining the idea and scope of his/her research proposal. Japanese is the official language of the session in principle, however if impossible, English can be used as an alternative for the purpose in the CREST, PRESTO and ACT-X interview-based selection session.

c. Applicants rejected in either the document- or interview-based selection will be informed their results in writing after the end of selection.

d. Applicants, whose research proposals are selected for adoption, will be notified of their success and be informed of their selection in writing and provided with the procedure of starting their research.

* JST will contact applicants, whose Research Proposals are likely to be selected with high possibility as a result of the interview-based selection, to confirm the availability of conditions necessary for concluding a Collaborative Research Agreement between their affiliated research institute and JST, by Tuesday, August 11, 2020 (by e-mail or phone).

5.1.3 Selection Perspective

(1) Selection Standards (Preliminary Evaluation Standards)

Common selection standards for CREST, PRESTO and ACT-X are described in the following table. (All the standards described in a. through d. or a. through e. must be met.)

CREST	PRESTO	ACT-X
<i>a.</i> Contributes to the achievement of a Strategic Objective.		
<i>b.</i> Consistent with the Research Area purpose (Refer to Supplement 1., 2.)		
<i>c.</i> Basic research that is unique, highly appreciated internationally, and expected to produce outstanding results (Refer to Supplement 3.) that contribute greatly to scientific and technological innovation.	<i>c.</i> Basic research that is unique, challenging, internationally expected to be developed to an advanced level, and expected to produce groundbreaking results (Refer to supplement 3.) that lead to scientific and technological innovation.	<i>c.</i> Proposals that are original, challenging, innovative, and expected to attain high-quality basic researches by international standards over the coming decades and generate new values necessary for scientific and technological innovations.
<i>d.</i> Meets all the following conditions -The research project applicant has produced research results for achieving the research objectives. -Promising preliminary results have been obtained for pursuing the research project. - The research proposals is clearly specifying (i) the background of the research project (its necessity and importance), (ii) the research record of the research project applicant; and (iii) the research initiative and plan, separately. -An optimal research organization is proposed. -The research project applicant will exercise strong leadership and bear responsibility for the entire research team, and, if there will be Lead Joint Researchers, they are essential for to the pursuit of the research project, and a collaboration framework sufficient for enabling significant contributions	<i>d.</i> The research project applicant can be expected to contribute to the overall development of the subject PRESTO or ACT-X Research Area and to the ongoing development of relevant research fields through the content of the proposed research, the applicant's research approach, and the applicant's efforts to engage with other researchers in discussions and activities on mutual inspire.	
	<i>e.</i> Meets all the following conditions - The originality of the research project is based on the applicant's own idea. - Some clues for realizing the research project objective have already been obtained	<i>e.</i> Meets all the following conditions - The originality of the research project is based on the applicant's own idea. -Costs of the research project is suitable in size as that of Individual based Research.

<p>toward the achievement of research objectives is provided</p> <p>-Research budget planning is necessary and sufficient for pursuing the research project.</p> <p>-The research institutions with which the research project applicant and Lead Joint Researchers are affiliated have R&D capabilities and other technical foundations in the subject research field.</p>	<p>-Costs of the research project is suitable in size as that of Individual based Research.</p>	
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Supplement

1. Regarding item *b*. “Research Area purpose,” please refer to the “Overview” and the “Research Supervisor’s Policy on Calls for Application, Selection, and Management of the Research Area” of individual Research Areas in “Chapter 6 Policy of Research Areas Calling for Proposals.” Contained therein are discussions of selection perspectives and policies, management directions, etc. for each Research Areas.
2. Whether the research project fits with a desired research project portfolio to optimize the entire Research Area under the policies and directions discussed above is another selection perspective.
3. The “results” sought for Strategic Basic Research Programs are new technologies.
“New technologies” are scientific and technological R&D results that are viewed as significant for the nation’s economy but have not yet entered commercialization development (have not undergone commercial-scale testing nor used in commercial production).
※ “New technologies” and “commercialization development” are terms used (as rendered in Japanese) in the Act on the Japan Science and Technology Agency, National Research and Development Agency.

(2) Whether research budgets are characterized by “unreasonable duplication” or “excessive concentration” is an important selection criterion. For more details, please refer to “8.1 Measures against Unreasonable Duplication and Excessive Concentration.”

5.1.4 About AIP Project and AIP Network Laboratory

AIP project (Advance Integrated Intelligence Platform Project) stated from FY2016, aim to build a “super smart society” that will lead the world in establishing base technologies to collect, process, and control large amounts of data in an intellectual, integrated, and secure manner when responding to various situations and demands. The project also aims to establish technologies that improve the efficiency of existing services and the creation of new services that are applicable to various sectors of the real society. This project greatly improves productivity and economic growth that contributes to making a people-friendly society a reality.

For the promotion of AIP project, RIKEN has established the “Center for Advanced Intelligence Project (※)” as a core research and development facility for innovative artificial intelligence. JST undertakes “AIP network

laboratory” which is a program to support researchers to develop new pathways to innovation by promoting collaboration among the AIP Research Areas of Strategic Basic Research Programs.

※AIP network laboratory <https://www.jst.go.jp/kisoken/aip/en/index.html>

5.1.5 Feasibility Study of Specific Research Proposal (for CREST or PRESTO Programs)

- (1) In the case of a research proposal that is rejected but is expected to be more accurately evaluated by the review committee in the next fiscal year if additional data is provided within a short period of time given limited financial support, the Research Supervisor may request a Feasibility Study for the proposal to the applicant, in addition to and apart from the regular accepted proposals process.
- (2) The applicant may conduct his/her Feasibility Study only after agreeing to the condition to re-submit the proposal that is the subject of the Study in the next fiscal year to the same Research Area that was the target of the current year’s submission. The re-submitted proposal is treated along with other research proposals without preference.
- (3) A Feasibility Study of Specific Project Investigation cannot be applied for directly.
- (4) In case of a project included in the research in specific projects, the names and other information will **be posted on our website** in the same manner as the other adopted projects. Further, the successful applicants are supposed to participate in, and finish, specified units in the "APRIN (ex-CITI Japan) e-learning program." (Excluding those who have finished the specified units in the "APRIN (ex-CITI Japan) e-learning program at the organization they belong to or at the JST office.)

5.1.6 Japan-France joint call for proposal with French ANR in Strategic Basic Research Program “CREST”

In December 2017, the Japan Science and Technology Agency (JST) and the French National Research Agency (Agence Nationale de la Recherche; “ANR”) concluded a Framework Agreement to foster Japan-France collaboration in scientific research. Based on this agreement, the JST will support Japan-France joint research projects by Japanese and French researchers within the framework of the JST-CREST program.

In the call for proposals of CREST in FY2021, in addition to regular research proposals in two Research Areas described in “Overview (1) Research Areas Calling for Proposals”, JST also calls joint research proposals by Japan-France joint research groups.

For details, please refer to the pages of the Research Areas calling for Japan-France joint proposals from the item “Invitation for Japan-France Joint Research Proposals” at the Call for Research Proposals website shown below.

<https://www.jst.go.jp/kisoken/boshuu/teian/top/ryoiki.html>

5.2 Common Issues in Post-selection: Procedure of Research Work

5.2.1 Research Plan Preparation

- a. Once the proposal is selected, the CREST Research Director or Individual Researcher and PRESTO Individual Researchers are requested to design an overall research plan covering the entire period of their research. The CREST standard research period is five and a half years, but the duration can differ depending on the Research Area. The research period for PRESTO is three and a half years and that for ACT-X is two and a half years. The research plan describes the research budget, and, in the case of CREST, the team composition and structure. The proposed budgets are examined throughout all review processes. The actual budget of a selected proposal is determined by the Research Supervisor following the Supervisor's examination and confirmation at the stage of the research plan design.
 - b. Research plans become official once they are examined and approved by the Research Supervisor. The Research Supervisor will offer advice and coordination assistance on the research plan, and provide instructions when necessary, based on information the Research Supervisor gains through, for example, the project selection process, discussions with Research Directors or Individual Researchers, regular progress updates, and the results of research evaluations.
 - c. The Research Supervisor, in approving research project plans to achieve objectives, including the achievement of the overall objectives of a Research Area, 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 Strategic Basic Research Program budget conditions, Research Area management actions taken by the Research Supervisor, or factors like results of research evaluations.

5.2.2 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 Research Director, Lead Joint Researcher, and Individual Researcher 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 "5.2.8 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. However, this rule does not apply to foreign research institutions.
- ※ The latest sample of research agreement is available from the following website.

(To be released on April 1, 2021)

<https://www.jst.go.jp/contract/download/2021/2021kisokens201keiya.pdf>

[Important Note]

When an Individual Researcher is employed by JST as part of an exclusive appointment, the standard Collaborative Research Agreement as well as job assignment contract is concluded between JST and the research institution receiving the researcher.

* Regarding appointment type of PRESTO and ACT-X individual Researchers, please refer to "5.2.3 PRESTO and ACT-X Researcher Appointment Types."

5.2.3 PRESTO and ACT-X Researcher Appointment Types

PRESTO Researchers, whose research proposals applied to PRESTO have been approved, conduct their respective PRESTO projects in either Joint Appointment or Exclusive Appointment described below.

Persons who are selected as Individual Researchers in ACT-X will be affiliated with the institution with which collaboration is planned during the Research Period. (Such persons will not be affiliated as Joint Researchers from JST, and will not have the status of Exclusive Appointment). In case an Individual Researchers selected in ACT-X is a student or other person who is a party to a Collaborative Research Agreement but does not have operating authority for collaborative research costs due to the regulations of their affiliated institution (institution conducting research), their affiliation with JST is not Joint or Exclusive Appointment status, and JST concludes a Collaborative Research Agreement with the institution with which the student or other person is affiliated (institution conducting research) as provided in “5.2.2 Collaborative Research Agreement” (see “4.2.6 Proposal Submission Requirements”).

a. Joint appointment (for PRESTO)

This appointment type is for Individual Researchers conducting their PRESTO research at their affiliated institutions and concurrently receiving a commission from JST as a joint appointment researcher (※). The institutions are those with which they were affiliated at the time their research proposal was selected or other institutions if their affiliation has changed. Prior to beginning their PRESTO research, JST and the affiliated institutions conclude a contract as described in “5.2.2 Collaborative Research Agreement”. For PRESTO only, JST pays a fixed amount of salary, monthly, to Individual Researchers for their work, based on JST regulations. Individual Researchers are covered by the social insurance service of their affiliated institutions.

※ April 2022 and after, the Joint appointment as concurrently working for JST will be discontinued. Along with that, monthly salary payment will also be abolished.

b. Exclusive appointment (for PRESTO)

This appointment type is for Individual Researchers who are not affiliated with either a research institution or a company, or who must resign their current positions to conduct research. In this appointment, JST employs individuals as “exclusive appointment PRESTO researchers”. JST and the research institutions receiving the Individual Researchers conclude a job assignment contract as of the start date of their employment, as a general rule. In addition, JST and the research institutions conclude a contract Collaborative Research Agreement based on the description in “5.2.2 Collaborative Research Agreement”.

From the viewpoint of safety and health management, Exclusive appointment researchers are limited only from domestic research institutions, and not from overseas research institutions. Currently, researchers who belong to overseas research institutes can apply for environmental maintenance expenses in addition to their usual research

expenses if it is necessary to prepare the research environment for conducting PRESTO research at domestic research institutions. Details will be announced after adoption.

Exclusive appointment PRESTO Individual Researchers are obliged to conduct their research with a working effort of 100% as a standard, except in the case that they are also participating in other CREST, ERATO, or ACCEL research with a working effort of less than 20%. It is possible that they are entitled to continue any CREST, ERATO, or ACCEL research (not as Research Director nor as Lead Joint Researcher) they have been conducting since before they apply to PRESTO Research Areas. Based on the "Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds" (February 12, 2020, Agreement of the Liaison Meeting of Related Government Bodies on Competitive Research Funds), if an exclusive appointment PRESTO researcher is judged that it will not hinder the progress of a project but help it, and permission is obtained from the research institution with which the researcher is affiliated, the exclusive appointment PRESTO researcher is able to use some of their efforts pursuing PRESTO research for self-motivated research activities and/or activities that will improve their research and management capabilities, while using funds from PRESTO for personnel expenses. Please see the following for more information.

- "Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds (contact)" (April 10, 2020)

<https://www.jst.go.jp/osirase/2020/pdf/20200414.pdf>

- Measures for Strategic Basic Research Programs (CREST, PRESTO, ACCEL, ACT-X) related to the "Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds" (April 14, 2020)

https://www.jst.go.jp/kisoken/crest/manual/senjukanwa_houshin.pdf

To become an exclusive appointment researcher, it is mandatory to pass a JST examination into the necessity of the exclusive appointment and to **conclude a contract of employment between the researcher and JST (see Note 1)**, and, if eager to be another program researcher in addition to PRESTO research, **examination of eligibility for engagement work (see Note 2)**.

Note that the examination is carried out by the JST Department of Innovation Research, based on the results of the interview with JST after the presentation/interview review session; the applicant does not need to attend the examination.

The salary amount paid to exclusive appointment researchers by JST is determined based on the job assignment contract.

Note 1. The JST examination is conducted based on the following "Terms and Conditions for Exclusive Appointment Research," points (1) through (6). An individual who wishes to benefit from an exclusive appointment is requested to obtain confirmation and permission of the receiving research institution, especially with respect to (2). JST also provides confirmation and permission at the interview-based selection session. An individual who requests to

continue his/her another program research in addition to the subject PRESTO research, is requested to submit the “Application for Side Engagement Work” within the period specified by JST prior to the interview session. The application form can be downloaded from the following website:

[https://www.jst.go.jp/kisoken/boshuu/teian/koubo/2021supplementarydocument presto tagyoumu.xlsx](https://www.jst.go.jp/kisoken/boshuu/teian/koubo/2021supplementarydocument_presto_tagyoumu.xlsx)

【Terms and Conditions for Exclusive Appointment Researchers】

- (1) Exclusive Appointment Researchers must be fully recognized by JST that to conduct their PRESTO research, they have no choice but resigning their current full-time position and have no next position.
- (2) It must be possible that research institutes receiving Exclusive Appointment Researchers conclude a Collaborative Research Agreement as well as job assignment contract with JST, to begin with their PRESTO research, and that they are assigned to a position eligible to execute their research budget at the institutes.
- (3) Following the aim of the contract of employment in Exclusive Appointment, Exclusive Appointment Researchers are obliged to conduct their PRESTO research at a working effort of over 80% (Refer to (4) for detailed conditions when conducting "other work" other than individual research with an effort of 20% or less remaining). An exception is the case that an ACT-I Exclusive appointment researcher is selected as a PRESTO Individual Researcher and he/she wants to continue their ACT-I research, concurrently conducting his/her PRESTO research, until his/her ACT-I research is concluded. However, in this case, it must be recognized by JST that the working effort of his/her exclusive research is reasonable and appropriate.
- (4) If an Exclusive Appointment Researcher wishes to conduct research, other than the work specified in the Researcher’s employment contract with funding by a Grant in Aid for Scientific Research or etc., he/she must meet all of the following three conditions.
 - ① Being a voluntary research activity, etc. desired by the Exclusive Appointment Researcher
 - ② Research activities that contribute to the promotion of individual research, and are approved by the receiving institution and JST (specifically, after making the necessary notifications to the receiving institution and obtaining approval, and apply to JST and get approval)
 - ③ Within the range that does not hinder the promotion of individual research (up to one day a week for other work, and 80% or more of effort for personal research in all work).
- (5) Exclusive Appointment Researchers are requested to understand that their appointment by JST is temporary and to make any efforts to find a permanent position for them at research institutes, and if they are employed at a research institute, they are obliged to change their appointment from Exclusive to Joint appointment.
- (6) Travel expenses for Exclusive Appointment Researchers to carry out individual research (PRESTO / ACT-I) should be paid from PRESTO / ACT-I research expenses. On the other hand, travel expenses incurred in connection with other work (including research participation in CREST / ERATO / ACCEL projects) should be paid from the research expenses of each other work.

5.2.4 Research Costs

JST pays the costs of a contract research, to the research institution that have concluded a contract of 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. As for some items of expenditure, JST has implemented handling rules and guidelines specific to the Strategic Basic Research Programs, based on the Collaborative Research Agreement, official administration manuals, and the “Cross-ministerial Expenses Handling Partitioned Table”. There may be cases where the treatment is different between universities and others (universities, public research institutes, non-profit making incorporated associations, and others identified by JST) and private companies other than universities. Please refer to the official administration manual of the latest version and others for the details.

Documents for Research Contract of Strategic Basic Research programs (To be released on April 1, 2021).

- Universities, etc.: <https://www.jst.go.jp/contract/kisoken/2021/kisokena.html>

- Companies, etc.: <https://www.jst.go.jp/contract/kisoken/2021/kisokenc.html>

(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 Research Director, Lead Joint Researchers, and other Research Participants (not Research Director nor Lead Joint Researcher) listed on the research plan and Individual Researchers.
- c. Personnel Expenses: Salaries for Research Participants (not Research Director, Lead Joint Researchers, nor Individual Researchers (*2)) and honorariums.
- d. Other Expenses: Costs of the presentation of research results (research paper submission fees, etc.), costs for leasing and transferring of equipment, etc.

*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 “8.11 Promotion on Effective Use of Research Facilities and Equipment”.

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, based on commissioned research contracts, administrative manuals, and the cross-ministerial expenses handling table, etc. Also, handling may differ between universities, etc. (universities, public research institutes, public interest corporations, etc. accepted by JST) and companies, etc. (mainly research institutes other than universities, etc., such as private enterprises). For detail, refer to JST official administration manuals on the abovementioned URL.

*2 In principle, in a university, etc., the person serving as the Principal Investigator (hereinafter referred to as the "PI") of a project receiving JST competitive research funds can use the funds for personnel expenses and/or the costs of someone carrying out duties other than research (buyout costs), as long as certain requirements are met. The necessary requirements are set out below; please check these.

○ "Review of the Possibility of the Use of Direct Costs for Someone to Carry Out Duties Other Than Research (Introduction of Buyout System) and for Principal Investigator (PI) Personnel Expenses (contact)" (September 17, 2020)

<https://www.jst.go.jp/osirase/2020/pdf/20200917.pdf>

○ "Measures for Strategic Basic Research Programs (CREST, PRESTO, ACCEL, ACT-X) related to a use of Direct Cost for agency expenses for jobs other than research activity (Buyout System)" (December 1, 2020)

https://www.jst.go.jp/kisoken/crest/manual/buyout_houshin.pdf

○ "Measures for Strategic Basic Research Programs (CREST, PRESTO, ACCEL, ACT-X) Related to the "Use of Direct Costs for Principal Investigator (PI) Personnel Expenses"" (December 1, 2020)

https://www.jst.go.jp/kisoken/crest/manual/pi_houshin.pdf

NOTE: In hiring research staffs, please give a consideration of supporting their career paths (CREST case only) and consider "Improvement of Treatment of Doctoral Course (later stage) Students." For more details, please refer to "5.2.7 Responsibilities of Research Directors, Lead Joint Researchers, and Individual Researchers following Approval" and "8.13 Career Paths for Young Research Staff with Doctoral Qualifications (for CREST)".

NOTE: The PRESTO and ACT-X Individual Researcher can register up to five research assistants (engineer / research assistant employed by a research institution or non-employment-related undergraduate and graduate students) as persons responsible for research assistance work (experiments, data acquisition, analysis, etc. based on the instructions of individual researchers), and personnel expenses and rewards can be recorded according to the regulations of the research institution.

Hiring and employment of an individual, who conducts the research proactively in the same way is not permitted.

(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 July 18, 2019), 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) Multiple-year Contract and Carryover

From the perspective of the effective and efficient use of research expenses to maximize research results and prevent unauthorized use, to be capable of carrying over research expenses and procurement contracts in subsequent financial years, JST has made into multiple-year contracts available. Regarding the carry over, universities and profit-making companies are treated differently. In addition, there may be cases where concluding a multi-year contract and making a carryover of research expenses are impossible at some institutions because their official administration systems are unsuitable for the purpose. However, please note that the carryover procedure is not applicable in case of single-year contracts such as contracts with foreign research institutes.

5.2.5 Project Evaluations

(1) In CREST, the Research Supervisor shall familiarize himself/herself with research project progress and results, and, with the cooperation of Research Area Advisors and others, he/she is going to conducting interim and ex-post research project evaluations. For a project with a research term of five and a half years, the interim evaluation of a research project is going to be conducted at around three years after the beginning of the project, and the ex-post evaluation immediately after or before the conclusion of research activities, considering the nature and progress stage of the research project.

(2) In PRESTO, the Research Supervisor conducts the ex-post evaluation of completed research projects of his/her Research Area, collaborating with Research Area Advisors, as soon as possible after the completion, or at a proper time before the completion, considering the nature and progress stage of the completed or completing research projects.

(3) In ACT-X, the Research Supervisor conducts the ex-post evaluation of completed research projects of his/her Research Area, collaborating with Research Area Advisors, as soon as possible after the completion, or at a proper time before the completion, considering the nature and progress stage of the completed or completing research projects. Also, the Research Supervisor conducts a progress evaluation of research projects for the researchers of which are requesting an ACT-X acceleration phase research for a maximum of one years, additionally, at a time of approximately two year after the beginning of the research projects, to determine research projects which will receive the additional supports.

- (4) Additional research project evaluations may be conducted when they are determined to be necessary by the Research Supervisor.
- (5) In CREST, the Research Supervisor will request the research plan revision of research projects, and make research resource reallocations between the projects, including increases or decreases of their research budgets, changes of the research team organization, based on the result of the interim and additional evaluation of the research projects. Occasionally, the Research Supervisor also takes measures such as a merger of or a reorganization between different research projects, or a termination of a research project, on the basis of the result.
- (6) At a certain time after the completion of a research projects, JST will conduct a follow-up investigation on the research project, examining matters on the development and application of the research result and the activity of researchers participated in the research project. On the basis of the follow-up investigation, external experts assigned by JST will then conduct a following-up evaluation of the research project.

5.2.6 Research Area Evaluation

Apart from the research project evaluations mentioned in “5.2.5 Project Evaluations,” Research Area Evaluation will be conducted to evaluate Research Areas and the Research Supervisors. The Research Area evaluations include interim and post-completion evaluations. The evaluations focus on matters on the status of progress of a Research Area toward the achievement of the relevant Strategic Objective and the status of management of the Research Area.

5.2.7 Responsibilities of Research Director, Lead Joint Researchers, and Individual Researchers following Approval

- (1) CREST Research Directors, Lead Joint Researchers, and PRESTO/ACT-X Individual Researchers are obliged to conduct their research, honestly and effectively, fully understanding that their research is funded by precious tax revenues collected from citizens.
- (2) 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.
- a. Comply with application guidelines and other requirements.
 - b. 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.
 - c. 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)) and let them to enroll in and complete the program. For details, refer to “8.23 Enrolling in and Completing the Educational Program on Research Integrity”.

Note that failure to complete the Educational Program on Research Integrity in c. would result in the suspension of the research budget until the completion has been confirmed by JST.

(3) The Research Director, the Lead Joint Researchers, and other Research Participants of CREST, Individual Researchers, and research assistants of PRESTO and ACT-X, and the academic advisor in cases where a student or other person who is not a party to the Collaborative Research Agreement and does not have operating authority for research budget due to the regulations of their affiliated institution (institution conducting research) is an Individual Researcher (see“4.2.6, Proposal Submission Requirements”), are required to complete the Educational Program on Research Integrity (eAPRIN (ex-CITI Japan)) designated by JST to prevent research misconduct (fabrication, falsification, and/or plagiarism). For details, refer to “8.27 Enrolling in and Completing the Educational Program on Research Integrity”.

(4) Pursuing and Managing Research

a. (CREST)The Research Director is held responsible for the whole research team, with responsibilities that include the preparation and implementation of his/her research plan.

b. (PRESTO and ACT-X) Individual Researchers are responsible for arranging research conducting locations and environments necessary for pursuing their research. If serious weaknesses in these are found, the research project may be cancelled.

c. Research Directors and Individual Researchers are responsible for submitting research reports and other required documents to JST and their Research Supervisors 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 the Research Supervisor on his/her request as well as for regularly submitting a semiannual report to him/her.

d. Conflict of Interest Issues between the Research Supervisor and Researcher

Research Supervisor is responsible not only for the selection of research proposals but also for advancing the research and evaluating the achievements. Therefore, to perform the advancement and evaluation properly, the Research Supervisor of a research project cannot have a conflict of interest with a CREST Research Director or PRESTO/ACT-X Individual Researcher of the Research Area. Thus, the CREST Research Directors and PRESTO/ACT-X Individual Researchers are continuously requested not to be involved in conflicts of interest with their Research Supervisor as described in “5.1.1 Conflicts of Interest Involving Research Project Applicants and the Research Supervisor. If a conflict of interest is recognized by JST between a Research Director or an Individual Researcher and his/her Research Supervisor, unless a reasonable explanation is given, JST may take measures to suspend his/her research.

- (5) CREST Research Directors, together with research institutions, shall appropriately manage (expenditure planning, monitoring, etc.) overall research budgets for research teams. Lead Joint Researchers, together with research institutions, shall appropriately manage (expenditure planning, monitoring, etc.) research budgets for their own research team. PRESTO and ACT-X Individual Researchers shall be responsible for matters including oversight of the expenditure and management of funds, performance of administrative procedures, management of research assistants, and matters related to travel. In case an ACT-X Individual Researcher is a person who is not a party to the Collaborative Research Agreement and does not have operating authority for research budget due to the regulations of their affiliated institution (institution conducting research), the Researcher's academic advisor or other related person is asked to bear responsibility as the "research implementation manager" in the Collaborative Research Agreement with JST (see "4.2.6, Proposal Submission Requirements)."¹ For example, if the student engages in misconduct or the like, the responsibility for that act shall be borne not only by the student, but also by the academic advisor, etc.
- (6) CREST Research Directors and Lead Joint Researchers must be mindful of research and working environments and conditions for their own group's Research Participants, and especially research staff and others whose employment is being funded by CREST research funds.
- (7) In the research project selection interview, research project applicants will be asked about plans¹ for supporting the development of varied domestic and international career paths for research staff who have recently completed doctoral programs and will be employed with research budget funds. It is recommended that CREST Research Directors and Lead Joint Researchers actively support this. In addition, in interim and post-completion evaluations, questions will be asked regarding the status of career path assistance efforts and the post-completion career paths of the research staffs who are the subject of career path assistance efforts. Responses to these questions will be positively evaluated.
- ※ Please refer to the details in "8.15 Career Paths for Young Research Staff with Doctoral Qualifications (for CREST)".
- (8) PRESTO and ACT-X Individual Researchers are obliged to participate in Research Area meetings with the Research Supervisor and Research Area Advisors (twice annually) and engage in activities such as reporting on research results. PRESTO and ACT-X values active discussion and interaction at Research Area meetings with Research Supervisors and Research Area Advisors, as well as the networking of younger researchers through competition and mutual inspiration, to promote researcher cooperation in the future. In ACT-X, the Research Supervisor determines the Area Advisor in charge of each individual researcher considering the whole picture, and provides advice and guidance on the content of and approach to individual research through site visits and other occasions.

(9) Handling of Research Results

¹ Part of the activities in these plans can be included in research efforts.

- a. 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.
 - b. When reporting on research results through research papers or other media, please acknowledge that the research results were obtained by the Strategic Basic Research Programs (CREST, PRESTO, ACT-X).
 - c. 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.
 - d. 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 researchers are affiliated.
- (10) Researchers are requested to actively engage citizens in discussions of science and technology to promote citizens' understanding and support of science and technology. Especially in CREST, efforts on the engagement of citizens will be positively evaluated at both interim and post-completion evaluations of research project
 ※Please refer to the guideline details in “8.17 Dialogue and Collaboration with Public Stakeholders.”
- (11) Researchers shall abide by Collaborative Research Agreement entered by JST and research institutions, and shall abide
 by JST's various rules.
- (12) It should be noted that JST will provide research project names, names of researchers, 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. (“8.23 Handling of Information Provided in Research Proposals, etc.”)
- (13) Researchers are requested to working together with JST, for conducting Research evaluations, JST accounting examinations, accounting audits by the national government, and other similar activities.
- (14) Researchers are requested to providing various types of information, responding to interviews, etc., for the follow-up evaluation that will be performed sometime after the completion of research project.

5.2.8 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 institutions that cannot accomplish the tasks described below will not be enjoined to implement research. Researchers are requested to obtain a consent of pursuing the tasks from their research institutions where their research is going to be implemented before the research implementation.

(1) For Domestic Institutions

- 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 process manual, and research plan approved by the Research Supervisor and 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 research contract agreement is available to the following website (To be released on April 1, 2021).

<https://www.jst.go.jp/contract/download/2021/2021kisokens201keiya.pdf>

- 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 (8.20 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 (8.21 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 the Strategic Basic Research Programs. (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 researchers 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 researchers 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 conducting 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 researchers, who take parts of newly selected research projects and who also are affiliated with a research institution, to enroll in and complete the educational program on research integrity (The procedures required for enrollment will be handled by JST). Research institutions are responsible to supervise, without

fail, their enrollment in and completion of the program by the relevant persons.

In the case that the relevant researchers 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.

(2) For Overseas Institutions

- a. In principle, research institutions are required to conclude research contracts with the content presented by JST (In some cases, the text of contractual items may be adjusted when a rational reason is recognized, considering the special characteristics of the research or the like). Further, research institutions are responsible for properly implementing the Research in accordance with the research contract and research plan. When a contract cannot be concluded between the research institution and JST, or when it is judged by JST that the research at the research institution will not be properly implemented, the implementation of the research at the research institution shall not be admitted.

※ The latest sample of research contract agreement is available to the following website.

<https://www.jst.go.jp/kisoken/boshuu/teian/top/ryoiki.html>

- b. Research institutions are responsible for properly disbursing and managing research expenses for which they are responsible based on the research contract, guiding principles, etc. When JST designates guiding principles, etc. separately, they are responsible for creating and reporting expense details (for domestic organizations, this corresponds to accounting books) in English. Research institutions shall respond to various investigations related to implementation status per JST request in the period of the contract.
- c. Intellectual property rights resulting from research shall be transferred to JST or shared equally with JST. In the case of equal sharing, it is obligatory to bear the expenses necessary for application and maintenance of intellectual property rights equally with JST. (Japanese version of the Baugh-Dole Act) is not applicable to non-Japanese institutions.) Pursuant to this, inventions, etc. with the potential to become intellectual property rights must be reported promptly to JST (within 10 business days).

- ※ From the viewpoint of Security Export Control, JST may not conclude joint Collaborative Research Agreement with such institutions as announced in the “Foreign User List²” (or “End User List”) by Japanese Ministry of Economy, Trade and Industry (METI).
- ※ ACT-X cannot conduct ACT-X research in overseas institutions.

² METI has issued the “Foreign User List” with the aim of strengthening the effectiveness of a catch-all control on goods related to weapons of mass destruction. <https://www.meti.go.jp/policy/anpo/englishpage.html>

Chapter 6 Policy of Research Areas Calling for Proposals

As for Research Areas calling for Research Proposals in fiscal year 2019, please refer to “(1) Research Areas calling for Proposals” in the section “Overview of the Call for Research Application” of this document.

Details including “Abstract of Research Area” and “Research Supervisor’s Policy on call and selection of Research Proposals and Management of Research Area” of each Research Area of the Strategic Basic Research Programs are given in the following website.

<https://www.jst.go.jp/kisoken/boshuu/teian/en/top/ryoiki.html>

※Please click the name of Research Area which you are going to apply.

Chapter 7 Strategic Objectives

As for the titles of Strategic Objectives relevant to Research Areas calling for Research Proposals, please refer to section “(1) Research Areas calling for Proposals” in the section “Overview of the Call for Research Application” of this document.

Details of the Strategic Objective of each Research Area are given in the following website.

<https://www.jst.go.jp/kisoken/boshuu/teian/en/top/ryoiki.html>

※Please click the name of Research Area which you are going to apply.

Chapter 8 Key Points in Submitting Proposals

8.1 Measures against Unreasonable Duplication and Excessive Concentration

○ Measures against “Unreasonable Duplication”

- 1) “” 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 funding and proposal-based research funding (hereinafter referred to as “competitive funds”)) is unnecessarily receiving multiple competitive funds from the national government or independent administrative agencies (including national research and development agencies, which are included hereinafter), and any of the following applies, the researcher may no longer be eligible for selection for these programs, the selection of their research project may be withdrawn, or their budget may be reduced (hereinafter referred to as “withdrawal of research project selection”). In the case that simultaneous proposals have been submitted for multiple competitive research funds and duplicate approval granted for essentially the same research project (including cases in which there is a considerable degree of research content duplication; hereinafter the same shall apply).
- 2) In the case that a duplicate application is made for funding of a research project that is essentially the same as another research project that has already been selected and has already received competitive research funding.
- 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 funding programs, etc. If a research project is selected by another competitive funding program, report this promptly to JST at the contact address given at the end of this document (rp-info@jst.go.jp). If reporting is omitted, the approval decision for the research project may be revoked.

○ 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 funding program, 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 any of the following applies, selection of the research project under this program may be withdrawn.

- 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*) allocated to the research project.

- 3) In the case that highly expensive research equipment is purchased unnecessarily.
- 4) Other cases equivalent to the above.

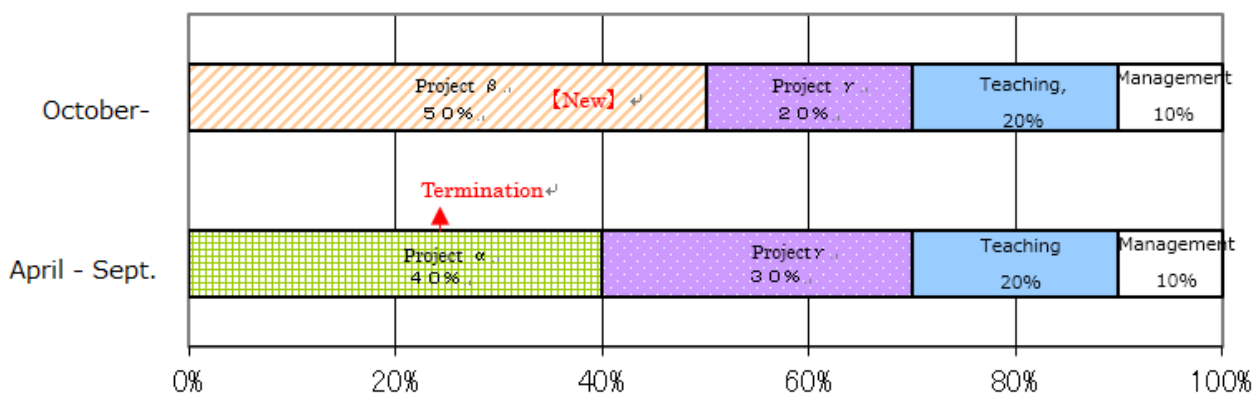
For this reason, if you submit proposals to other competitive funding programs, after submitting your application to this program, and the research project is selected by another competitive funding program, or if any information provided on your application changes, please report this promptly to JST at the contact address given at the end of this document. If reporting is omitted, the approval decision for the research project may be revoked.

*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 “effort” should be understood

Definition of “effort”

- According to the Third Science and Technology Basic Plan, “effort” is defined as “the distribution of time during which an individual engaging in a research copes with a research, education, and management.”
- When a researcher makes a proposal for a research project, he/she needs to describe the percentage of his or her time required to implement the research relative to the time that is taken for his/her total work.”*
- Note that the total work time includes not only the time for research activities but also the time taken for teaching and management activities.
- Accordingly, the amount of “effort” may vary depending on a review or an assessment of a research.
Ex. Project α is canceled halfway in the fiscal year and Project β is adopted. The state of the percentage of the total work time is as shown here. (Project γ continues for one year.)



- In this example, Project α is canceled at the end of September (40% effort distributed) and Project β is started as a new one from October (50% effort distributed). The “effort” in Project γ varies from 30% to 20%.

*”Guideline for Proper Implementation of Competitive Funds” (an agreement at the liaison committee of relevant governmental bodies concerning competitive funds, revised on June 22, 2017)

○ 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.

8.2 The State of Acceptance of Applications for Other Competitive Funds Including Other Governmental Bodies

○ If you are receiving Grants-in-Aid for Scientific Research or other competitive research funding operated by the national government or independent administrative agencies (including national research and development agencies), or other research grants (including funding for which applications have been submitted), please provide information of this funding in the research proposal in the prescribed format (CREST Form 9, PRESTO Form 5, ACT-X Form 5).

Based on information on the content of the research proposal and effort (research time allocation rate), if either unreasonable duplication or excessive concentration of competitive funding has formed, the research proposal may not be selected, or selection may be withdrawn, or research funding may be reduced. Furthermore, the research proposal may also not be selected, or selection may be withdrawn, or research funding may also be reduced in the case that the information provided in the research proposal is found to be false.

○ In order to eliminate an unreasonable duplication or an excessive concentration of competitive funding if a researcher is receiving other competitive funding operated by the national government or independent administrative agencies (including national research and development agencies), or other research grants, or if researcher has been selected for such funding, the researcher may not submit proposals to this program for research with the same project name or content.

○ If an applicant is scheduled to receive 100 million yen or more from research funding under other programs or research grants, etc. in FY2021 or FY2022, in view of the purpose of eliminating unreasonable duplication and excessive concentration, as a general rule, final selection of the research project and its budget amounts are decided in an integrated manner. In the case that the applicant is scheduled to receive a total of 100 million yen or more from multiple funding systems/grants, he/she is given a consideration individually in the selection process.

Although not relevant for research projects at the application stage, the research proposal may be removed from the selection process of this program or the selection decision of the proposal withdrawn, depending on its outcome of selection for other competitive funding or research grants.

8.3 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 Eligibility¹

Restriction measures set out in the table below, depending on the levels of inappropriate usage, are taken against the application and participation eligibility of researchers² (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.

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	
1. 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.	① Impact of the misconduct on the society is substantial and maliciousness of the misconduct is judged to be high	5 years
		② Neither ① or ③	2-4 years
		The impact of the misconduct on the society is small and the maliciousness of the misconduct is judged to be low.	1 year
2. A researcher who used a fabrication and other dishonest means to receive a competitive research fund or etc. and a researcher who was		5 years	

¹ “Application and participation” refer to the proposal, subscription, and application of a new project; participation in research as a new joint researcher; and participation in an ongoing research project as a research director or a joint researcher.

² “Researchers who violate due care” refer to those whose involvement in inappropriate usage is not proven but who violated the duty of due care of product manager they should exercise.

in conspiracy with the person who committed this misconduct		
3. 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

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

*1: 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.

*2: In case of item 3, the influence over the society, as well as the malignancy of the act, is minor.

*3: 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 funds¹ 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 researcher, name of program, name of affiliated institution, fiscal year of research, details of misconduct, details of measures taken) will be disclosed in principle by JST. At the same time, information of outline of their misconduct will be disclosed in principle by MEXT.

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

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".

8.4 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 system¹ 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 2021 fiscal year and those that finished before the 2020 fiscal year.

¹ Also refer to <https://www8.cao.go.jp/cstp/compefund/>
Research proposal funding system will be published soon.

8.5 Majors taken to the Violation of Related Guidelines

Violation of the guidelines provided in this chapter or any other inappropriate behavior may result in withdrawal of approval for the research project or cancellation of the research; return of all or part of the project's research funding, and measures taken to publicize the facts of the matter.

Violation of related laws or guidelines, etc., in conducting research may result in penalties and sanctions being applied to persons and organizations that committed the violation, and the suspension or cancellation of research funding.

8.6 Storage of Receipts and Report of Actual Usage of Overhead Costs (Indirect Costs)

Institutions who received overhead costs are required to manage the costs appropriately and store the receipts as an 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 funds, report all indirect costs accompanied by such competitive 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/>).

8.7 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.

8.8 Cross-ministerial Expenses Handing Partitioned Table

The expense items of research costs specific to the Strategic Basic Research Programs are determined on the basis of "Cross-ministerial Expenses Handing Partitioned Table." As for research expenditure, refer to the "Cross-ministerial Expenses Handing Partitioned Table" as well as JST official administration manual on the website (<https://www.jst.go.jp/contract/index2.htm>).

Currently, in response to the "Integrated Innovation Strategy 2019" and the "Comprehensive Package for Strengthening Research Capabilities and Supporting Young Researchers", the system for competitive research funding is being improved. Based on this, in this project, it is possible to spend personnel expenses of the research representative of the project (hereinafter referred to as "PI") expenses related to agency work other than research

(buyout expenses) from direct expenses. And, when spending expenses (buyout expenses) related to agency work other than research and PI personnel expenses, the following requirements need to be checked.

- "Review of the Possibility of the Use of Direct Costs for Someone to Carry Out Duties Other Than Research (Introduction of Buyout System) and for Principal Investigator (PI) Personnel Expenses (contact)" (September 17, 2020)
<https://www.jst.go.jp/osirase/2020/pdf/20200917.pdf>
- "Measures for Strategic Basic Research Programs (CREST, PRESTO, ACCEL, ACT-X) related to a use of Direct Cost for agency expenses for jobs other than research activity (Buyout System)" (December 1, 2020)
https://www.jst.go.jp/kisoken/crest/manual/buyout_houshin.pdf
- "Measures for Strategic Basic Research Programs (CREST, PRESTO, ACCEL, ACT-X) Related to the "Use of Direct Costs for Principal Investigator (PI) Personnel Expenses"" (December 1, 2020)
https://www.jst.go.jp/kisoken/crest/manual/pi_houshin.pdf

8.9 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% or 5 million JPY of the total direct costs.

Note that you are not allowed to exchange direct cost and overhead (indirect) cost.

8.10 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) The research institutes and researchers must submit the notification of the completion as a work product of the project in a prompt manner when a project is finished. 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.

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.

8.11 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, "Introduction of a New Research Facility/Equipment Sharing System Integrated with the Management of Research Institutes" (Advanced Research Platform Group, Council for Science and Technology, November 2015) requires the operation of a "system to share research facilities/equipment in research organization units" (hereinafter, "equipment sharing system") in universities, National Research and Development Agencies, and similar institutions.

Furthermore, the "Research Ability Improvement Reform 2019" (23 April 2019, Ministry of Education, Culture, Sports, Science and Technology of Japan) and the "Comprehensive Package for Enhancing Research Capability and Supporting Young Researchers" (January 23, 2020, Council for Science, Technology and Innovation) also require the promotion of the development and sharing of research equipment and facilities.

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 equipment sharing system in the affiliated institution or organization. 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, in addition to the above-mentioned equipment sharing system, 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 Institute for Molecular Science, National Institutes of Natural Sciences, and the sharing system constructed thanks to the Program for Supporting Introduction of the New Sharing System and the Facility Support Center Development Project in each university.

○ "Introduction of a New Research Facility/Equipment Sharing System Integrated with the Management of Research Institutes" (Advanced Research Platform Group, Council for Science and Technology, November 2015), in Japanese.

https://www.mext.go.jp/component/b_menu/shingi/toushin/_icsFiles/afieldfile/2016/01/21/1366216_01_1.pdf

○ "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

○ Unification of usage rule of competitive research funds (April 20, 2017), in Japanese.

https://www8.cao.go.jp/cstp/compefund/shishin3_siyouuruu.pdf

○ "The Purchase of Shared Facilities Using Multiple Research Fund Systems (Use of Combined Total)"

(March 31, 2020, Agreement between the institutions allocating funds and the relevant supervising government bodies)

https://www.mext.go.jp/content/20200910-mxt_sinkou02-100001873.pdf

- Inter-University Network for Common Utilization of Research Equipment, in Japanese.

<https://chem-eqnet.ims.ac.jp/>

- Unified rules for various administrative procedures in competitive research funds

(March 5, 2021, Meeting of related ministries and agencies regarding competitive research funds)

https://www8.cao.go.jp/cstp/compefund/toitsu_rule_r30305.pdf

8.12 Improvement of Treatment of Doctoral Student Participants

The "5th Science and Technology Basic Plan" sets a numerical target, "aiming for about 20% of doctoral students to be able to receive an amount equivalent to the cost of living" so as to give financial support to graduate students, in particular doctoral students, in order to attract excellent students and members of the general public from Japan and from other countries. It is also necessary to improve the treatment of doctoral students, and to increase the employment of doctoral students as TAs (Teaching Assistants) and RAs (Research Assistants) in universities and research and development agencies. Moreover, the "Comprehensive Package for Enhancing Research Capability and Supporting Young Researchers" (January 23, 2020, Council for Science, Technology and Innovation) aims to ensure that "in the future, aspiring doctoral students can receive a salary amount corresponding to their living expenses," and has set out the "promotion of securing an appropriate salary level for RAs and other researchers on competitive research funds and joint research funds" as one of its concrete measures. Additionally, in "The ideal graduate school education towards 2040: Measures to improve the structural composition for the development of human resources as societal leaders" (deliberation summary) (January 22, 2019, Central Council for Education University Subcommittee) and the "Development of science, technology and innovation policy towards knowledge-based value creation: Becoming a world leader country with the realization of Society 5.0; Final Report" (March 26, 2020, Special Committee on General Policy, Council for Science and Technology), it is stated that there is a need to provide support that utilizes various financial resources, including competitive funds and joint research with corporations. This demands the proactive employment of doctoral students as RAs, improved treatment of doctoral students, more TAs, and the reduction of the teaching load of teaching staff by actively introducing TAs as a measure to secure sufficient research time.

If a doctoral student assists work as an RA or similar, he or she must be paid reasonable compensation for that assistance work.

Moreover, in relation to doctoral students, the "Guidelines for the Employment and Training of Postdoctoral Researchers" (December 3, 2020, Committee on Human Resources, Council for Science and Technology) note that "while they are students, they also possess aspects of researchers, and so it is a key obligation of universities that train researchers to guarantee their treatment and maintain an environment in which they can carry out research activities"; "it is particularly important to treat them based on appropriate evaluations of their contributions, including paying them according to the hours they have worked under appropriate work management by determining compensation commensurate with the nature and content of their duties"; and "in your application for competitive research funds, there is a need to include the costs required if you are employing an RA in a university, and you should review the university's rules to ensure that you can pay your RA(s) an appropriate level of compensation."

Based on the above, in these programs, please actively employ doctoral students who are necessary for the execution of your research as RAs and TAs, and pay them according to the hours they have worked under appropriate work management by setting a unit price commensurate with the nature and content of their duties, while aiming for the salary level to be equivalent to the cost of living. In addition, when applying for these programs, please apply with a financial plan that also takes into account the costs of the above-mentioned doctoral students.

- With regard to the salary level equivalent to living expenses (around 1.8–2.4 million yen per year), the "5th Science and Technology 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.
- With regard to the treatment of doctoral students who have been hired to carry out a research project, the "Guidelines for the Employment and Training of Postdoctoral Researchers" state that "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."
- 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 employing students as RAs, etc., please pay attention so they do not work excessive hours, and consider the balance between work time and the doctoral students' own research and study time.

8.13 Securing Independent and Stable Research Environments for Young Researchers

The "Research Ability Improvement Reform 2019" (23 April 2019, Ministry of Education, Culture, Sports, Science and Technology) and the "Development of science, technology and innovation policy towards knowledge-based value creation: Becoming a world leader country with the realization of Society 5.0; Final Report" (March 26, 2020, Special Committee on General Policy, Council for Science and Technology) point out the importance of ensuring a period of employment of around five years or more for fixed-term posts for specially-appointed teaching staff and postdoctoral researchers, as short-term employment periods can be a major obstruction to career development.

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 (around five years or more) by making use of indirect costs, basic costs, donations, etc. from external funds.

8.14 Self-motivated Research Activities by Young Researchers Employed to Carry Out Projects

With regard to young researchers employed in these programs, based on the "Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds" (February 12, 2020, Agreement of the Liaison Meeting of Related Government bodies on Competitive Research Funds), if the Principal Investigator, etc. judges that it will not hinder the progress of a project but help it, and permission is obtained from the research institution with which they are affiliated, researchers may use some of their efforts working on these programs for self-motivated research activities and/or activities that will improve their research and management capabilities, while using program funds for personnel expenses. Please see the following for more information.

- "Self-motivated Research Activities by Young Researchers Employed to Carry Out Projects (contact)" (April 10, 2020)
<https://www.jst.go.jp/osirase/2020/pdf/20200414.pdf>
- Measures for Strategic Basic Research Programs (CREST, PRESTO, ACCEL, ACT-X) related to the "Implementation Guidelines for Self-motivated Research Activities by Young Researchers Employed with Competitive Research Funds" (April 14, 2020)
https://www.jst.go.jp/kisoken/crest/manual/senjukanwa_houshin.pdf

8.15 Support for Diverse Career Paths for Young Researchers with Doctoral Qualifications (for CREST)

The "Basic Policy of the Ministry of Education, Culture, Sports, Science and Technology for Supporting Diverse Career Paths for Young Researchers with Doctoral Qualifications Employed with Public Research Funds" (December 20, 2011, Council for Science and Technology, Committee on Human Resources) calls for "active efforts to support public research institutions and Research Directors that employ young researchers with doctoral qualification with public research funds, with the aim of securing diverse career paths in Japan and other countries for young researchers with doctoral qualifications.

" 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.

See also “5.2.7 Responsibilities of the Research Director, Lead Joint Researchers and Individual Researchers following Approval.”

8.16 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 (*) are imposed based on the Foreign Exchange and Foreign Trade Act (Act No. 228 of 1949; hereinafter, “Foreign Exchange Act”). 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.

(*) Based on international agreements, etc., Japan’s security export control system currently consists mainly of two systems: (1) List control, under which a license from the Minister of METI is necessary in principle in order to export (provide) good (technologies) that have specifications or functions of a certain level or higher (for example, carbon fiber or numerically-controlled machine tools) and (2) catch-all control, under which a license from the Minister of METI is necessary in order to export (provide) goods (technologies) that do not fall under list control, but do satisfy certain other conditions (application conditions, end-user conditions, and notification conditions).

In addition to the export of goods, technology provision is also subject to control under the Foreign Exchange Law. When a technology which is subject to list control is to be provided to a non-resident of Japan or a foreign country, advance approval for provision of that technology is necessary. “Technology provision” includes provision of technical information such as design drawings, specifications, manuals, samples, prototypes, etc. in paper form, by email, and by CDs, DVDs, USB memory devices and other memory media, and also includes the provision of operational knowledge through technical guidance and technical training, technical support through seminars, etc. Receiving international students from other countries and conducting joint research activities, etc., may also include numerous exchanges of technology that could be subject to control under the Foreign Exchange Act.

Detailed information on security export control has been published at the website of the Ministry of Economy, Trade and Industry (METI), etc. For details, please see the following.

- 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 (METI): Security Export Handbook (in Japanese)
<https://www.meti.go.jp/policy/anpo/seminer/shiryo/handbook.pdf>
- Center for Information on Security Trade Control: <http://www.cistec.or.jp/english/index.html>
- Guidance on machine technology control in relation to security export control (for universities/research institutions, in Japanese):
https://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03.pdf

8.17 Dialogue and Collaboration with Public Stakeholders

According to “Promotion of Dialogue on Science and Technology with the Public (a Basic Approach Policy)” (June 19, 2010, decision of the Minister of State for Science and Technology Policy and expert committee), if a proposal is selected in this call and receives an allocation of public research funds (competitive funds or project research funds) in an amount of 30 million yen per year or more for one project, it is considered essential to have an attitude in which excellent achievements in science and technology are constantly produced, and achievements in science and technology are returned to the public in order to further develop science and technology in Japan, and science and technology are advanced jointly with the understanding and support of the public through “Dialogue on Science and Technology with the Public.” In addition, the 5th Science and Technology Basic Plan (Cabinet decision of January 22, 2016) calls for deepening the conventional relationship, in which science and technology and society are opposed, into a relationship of dialogue and cooperation by various stakeholders, i.e., researchers, citizens, the media, industry, and policymakers, in other words, a relationship that promotes “co-creation.” From these viewpoints, efforts to explain the content and results of research activities to society and the public in easily-understood terms, and efforts to promote dialogue and cooperation among various stakeholders are demanded. Based on this, we ask that program participants make active efforts in connection with these activities, including holding public lectures and symposiums on research achievements, continuously posting information on research achievements on the internet, and holding roundtable meetings with various stakeholders.

Please refer to 5.2.7 Responsibilities of Research Director, Lead Joint Researchers, and Individual Researchers following Approval and followings.

(Reference) “Promotion of Dialogue on Science and Technology with the Public, (A Basic Approach Policy)”

https://www8.cao.go.jp/cstp/stsonota/taiwa/taiwa_honbun.pdf

(Reference) “The 5th Science and Technology Basic Plan”

<https://www8.cao.go.jp/cstp/kihonkeikaku/5honbun.pdf>

8.18 Data disclosure from The National Bioscience Database Center

The National Bioscience Database Center (NBDC) (<https://biosciencedbc.jp/>) was established in the Japan Science and Technology Agency (JST, a Japanese National Research and Development Agency) in April 2011 to promote the integrated use of databases in the life sciences field created by various research institutions and others. In “Progress and Future Direction of the Integration of Life Science Database Project” (January 17, 2013), the object projects that receive provision of data and databases are to be expanded, centering on the NBDC.

Based on these points, program participants are asked to cooperate in disclosure by the NBDC of the following types of data and databases obtained from this program.

No.	Type of Data	Place of Disclosure	URL
1.	Overview of databases constructed for disclosure	Integbio Database Catalog	https://integbio.jp/dbcatalog/?lang=en
2.	Copies of data in connection with results published in paper presentation, etc. or copies of databases constructed for disclosure	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/

< Contact >

National Bioscience Database Center of Japan Science and Technology Agency

TEL: +81-3-5214-8491

e-mail: nbdc-kikaku@jst.go.jp

8.19 Reform of Competitive Research Funds

At the present time, the government has received the "Research Ability Improvement Reform 2019" and the "Comprehensive Package for Enhancing Research Capability and Supporting Young Researchers," and is holding discussions about improving systems related to competitive research funds so as to enable the more efficient and effective use of research funds. If, within the period of this call for submissions, policies common to all competitive research fund projects are announced regarding the improvement of funding systems and the use of funds, you will be notified about these policies when they apply to submissions for these programs and the use of program funds.

8.20 Consideration on “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 on February 15, 2007; revised on February 1, 2021).¹ There is a need for research institutions, having implemented a system for managing and auditing public research funds, to take

¹ 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.htm

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.

(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 organization¹ 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).

After April 1st 2021, it is necessary for a research organization to use the research and development management system (e-Rad) common to ministries in order to submit the checklist in the form given on the website below to the Competitive Fund Coordination Office, Promotion Planning Section, Promotion Bureau, Ministry of Education, Culture, Sport, Science and Technology by the specified date before the conclusion of the Collaborative Research Agreement. While a program is being implemented, each fiscal year, research institutions must submit a checklist for the year in question by a fixed date. Institutions that are not receiving competitive funds from the Ministry of Education, Culture, Sports, Science and Technology or administrative agencies under the jurisdiction of the Ministry of Education, Culture, Sports, Science and Technology do not have to submit a checklist.

See the website of the Ministry of Education, Culture, Sports, Science and Technology below for details of the method for checklist submission.

https://www.mext.go.jp/a_menu/kansa/houkoku/1301688.htm

* Note: A perfect environment for using e-Rad is necessary for checklist submission. Note that it usually takes about two weeks. See the URL below in addition to the URL given above for details of the procedure related to the use of e-Rad.

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

Since the said guidelines encourage the “promotion of issuing and sharing information,” please provide the checklist at the websites of research organizations to proactively use the information.

¹ In the case of “CREST,” the research organizations include not only those with which a Research Director is affiliated but also those with which Lead Joint Researchers are affiliated to whom research expenses are distributed.

8.21 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”¹).

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. The “whole competitive fund” includes all financing distributed by the MEXT and independent administrative agencies under the jurisdiction of the MEXT

(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 organizations² 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).

It is necessary for a research organization to use the research and development management system (e-Rad) common to ministries in order to submit the checklist in the form given on the website below to the Office of Equitable Research Promotion, Human Resources Section, Academic Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology by the specified date before the conclusion of the Collaborative Research Agreement. However, there is no need to submit a checklist of inappropriate research conduct, if it has already been submitted on a different occasion after April 2021³. If a Research Misconduct Checklist has been submitted on a separate occasion, it is not needed to submit a new one this time. While a program is being implemented, each year, research institutions must submit a checklist of inappropriate research conduct for the year in question by a fixed date. Further, it is not needed to submit the application if the organization is not engaged in research activities, or in the case where the organization is engaged in such activities, if it does not accept budgets or funds from the Ministry of Education, Culture, Sports, Science and Technology (MEXT) or an incorporated administrative agency under its jurisdiction.

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.

¹ Refer to the following webpage for the guideline (in Japanese)

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

² In the case of “CREST,” the research organizations include not only those with which Research Director is affiliated but also those of Lead Joint Researchers to whom research expenses are distributed. However, if the institute does not receive funding from MEXT or MEXT affiliated organization, the institute do not need to submit the checklist.

³ Note that checklist has been changed since 2018.

https://www.mext.go.jp/a_menu/jinzai/fusei/1374697.htm

*Note: 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>

(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.

Classification of person ineligible to apply to competitive research funds, being involved in specific research misconduct	Degree of maliciousness in specific research misconduct	Ineligible period of application. The period starts from the beginning of next fiscal year after the time when misconduct is identified ¹		
Person who was involved in a research misconduct	1. Especially malicious person, who, from the beginning of research, had an intention to commit a specific research misconduct		10 years	
	2. The author of a research paper, which is a product of a research where a specific research misconduct was committed	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.	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.	5-7 years
			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	3-5 years
		The authors of the paper other than those described above.		2-3 years
	Persons who conducted a specific research misconduct other than those of 1 and 2.		2-3 years	
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.	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.	2-3 years		
	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	1-2 years		

¹ Also ineligible in the fiscal year which misconduct is 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.

(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).

The said guidelines state that a research organization announces the survey result immediately. Each organization is requested to handle the case accordingly.

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

8.22 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 Research Director and Individual Researchers, to receive training on research ethics education and compliance education and submit a document to confirm their understanding of the contents of the training.

8.23 Handling of Information Provided in Research Proposals, etc.

- Information in the documents for application will be used for review during the selection process. JST may use information in selected research proposals to advance research. Furthermore, information necessary for statistics or trend analysis of R&D described in “Form 2 (CREST Form2-1, PRESTO Form2-1, ACT-X Form 2)” will be utilized by JST as an anonymized data. To protect the interests of applicants, and from the viewpoint of the “Act on the Protection of Personal Information Held by Independent Administrative Agencies” and other related laws,

the research proposals submitted by applicants are not disclosed or used for any purpose other than the review purpose. Confidential information of research proposal shall be strictly maintained.

Law Concerning Protection of Personal Information Held by Independent Administrative Institutions

https://elaws.e-gov.go.jp/search/elawsSearch/elaws_search/lsg0500/detail?lawId=415AC0000000059

- Within the range necessary to eliminate duplication and excess, some information contained in applications, etc. may be provided to departments with responsibility for other competitive funds, etc., including other government ministries and agencies.
- To the extent necessary to confirm the duplicate applications described in “Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs” Some information may be provided.
- Handling of Information on the e-Rad system

Information of individual projects that have been selected for adoption (name of funding program, name of research project, name of affiliated research institution, name of Research Director, budget amount, implementation period, etc.) shall be deemed to be “information that is scheduled to be made public” as prescribed under Article 5, Paragraph 1, Item (a) of the “Act on Access to Information Held by Independent Administrative Agencies” (Act No. 140 of 2001).

The name of the researcher, name of the affiliated research institution, name of the research project, and the research project overview summary are scheduled to be made public. In addition, the research proposals of selected applicants may be used by JST to promote the research after the proposal’s approval.

- Provision of the e-Rad system to the Cabinet Office

The 5th Science and Technology Basic Plan attempts to complete the registration of funds for public solicitation for science and technology innovation policies based on objective evidences in a research to perform evaluation and analysis. Information registered in e-Rad is utilized for properly evaluating research and development using the nation’s funds and for planning effective, efficient, and comprehensive strategies. To this end, CSTI and relevant ministries have decided to complete registration of achievements and accounting, such as papers and patents, in e-Rad in order to connect output and outcome related information to inputs to the publicly solicited research fund system.

Information on research achievements and accounting and use of indirect expenses related to the competitive fund for selected projects shall be input in e-Rad every year. The information necessary for macroscopic analysis, including information on research achievements and accounting performance, will be provided to the Cabinet Office.

8.24 Registration of researcher information to researchmap

JST Strategic Basic Research Programs (CREST, PRESTO, ACT-X) plan to utilize a database operated by JST for researcher information (researchmap). Researchmap is a master database of achievement information in various areas, including future achievement reports. In addition, the community function of researchmap is used for project management, including distribution of various files and event notices. Since registration in researchmap of Researchers, Research Directors and Lead Joint Researchers whose proposals have been selected for interview is mandatory for this purpose, those who have not yet registered are recommended to register as soon as possible until interview selection.

The information in researchmap is utilized effectively for surveying national academic or science and technology plans, as well as for statistical purposes. Registration at researchmap and updating of achievement information are requested.

(※1) Researchmap (<https://researchmap.jp/?lang=english>) is one of the largest researcher information databases as a comprehensive list of researchers in Japan, and can also be published via the Internet. In addition, Researchmap is linked with e-Rad and faculty databases of many universities, and the registered information can be used in other systems, so researchers can use various application forms and databases many times, and Researchmap eliminates the need to register the same achievements.

(※2) R3 (R Cube) is an electronic application system for research plans and results reports that is used by researchers selected for the Strategic Basic Research Program.

For new registrations, method to confirm your registration status, method to login or to reissue your password, please see the Quick-start Guide for Registration and login to the following website:

https://researchmap.jp/outline/rr_manual/quickguide.pdf (in Japanese)

<https://researchmap.jp/public/account/?lang=en> (in English, for new registration only)

For methods to register or update of your achievement information or to output your information on researchmap, refer to the following website (in Japanese):

<https://researchmap.jp/public/FAQ-1/>

When the first usage of R3 (R-Cube) after selection, you need to agree to the R3 Terms of Service and R3 Privacy Policy.

- R3 Terms of Service <https://r3.jst.go.jp/termsAndConditions.html>
- R3 privacy policy <https://r3.jst.go.jp/privacyPolicy.html>

8.25 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 researcher 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.

8.26 Research Support Services Partnership Accreditation System

The "Development of science, technology and innovation policy towards knowledge-based value creation: Becoming a world leader country with the realization of Society 5.0; Final Report" (March 26, 2020, Special Committee on General Policy, Council for Science and Technology) states that "with regard to research support given by the government through public programs and giving research outcomes back to society, new collaborative structures between the government and the private sector should be formed in light of the fact that start-ups operated by businesses with strong ideas and passion have begun to appear."

In this context, the Ministry of Education, Culture, Sports, Science and Technology established the "Research Support Service Partnership Accreditation System" in 2019. The objectives of this system are to improve research environments for researchers, accelerate the promotion of science and technology and the creation of innovation in Japan, and support the development of a variety of research support service initiatives by having the Minister of Education, Culture, Sports, Science and Technology accredit research support services provided by private business operators that meet certain requirements as "Research Support Service Partnerships."

For more information about each accredited service, please look at the Ministry of Education, Culture, Sports, Science and Technology’s website below, and make use of these services.

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

8.27 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 (For the CREST program, enrollment in and completion of the research integrity educational program by the time of application is not a prerequisite for Lead Joint Researcher applicants).

To enroll in the Educational Program on Research Integrity and to submit a declaration of completion, follow either procedure (1) or (2) below. For application instructions using e-Rad, refer the e-Rad user manual.

(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 e-learning program at the 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) in a JST program.

Applicants who have in the past completed eAPRIN (ex-CITI Japan) in a JST program by the time of their application are requested to make the completion 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) 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 enter the number of the completion confirmation sheet (7 figures number + ARD) in the e-Rad application information input screen.

* If the course completion date is before August 2019, the number will start from Ref #.

■ 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

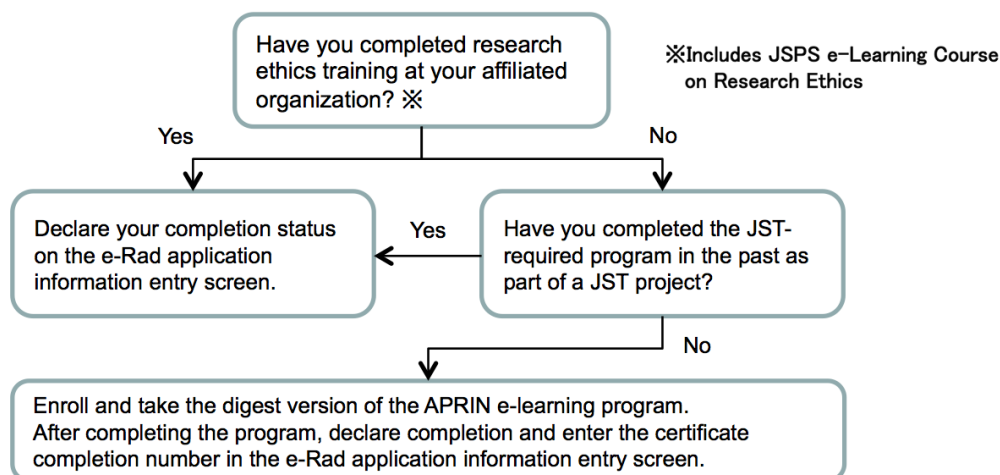
Japan Science and Technology Agency

Department of Innovation Research

Email: rp-info@jst.go.jp

* Include the program name, research applicant name, and project name in the body of email.

<Flow chart for Reporting Completion of Research Ethics Education Programs>



JST requires researchers of CREST, PRESTO, and ACT-X research projects to enroll in and complete designated units¹ of the eAPRIN (ex-CITI Japan) e-learning program. All researchers of an accepted proposal, including CREST Lead Joint Researchers, are required to complete the designated units of the eAPRIN (ex-CITI Japan) e-learning program (excluding those who have already completed the seven designated modules at their institution or in another JST program).

8.28 Measures for Protecting Civil Rights and Complying with Laws and Regulations

In the case that, in implementing a research initiative, the initiative involves a research requiring the consent/cooperation of other parties, research requiring particular care in handling personal information, research requiring bioethical or safety measures to be taken, and other researches requiring procedures subjected to laws and regulations, be sure to carry out the necessary procedures, such as obtaining the approval of an external and internal ethics committee of a research institution. If research activities are conducted overseas or collaborative research activities with institutions overseas are conducted, please confirm the regulations and laws in advance, and adhere to them.

With regard to life science-related research in particular, there are cases in which the main law prescribed by each ministry are being revised, and there are also cases in which different laws are being applied, depending on the content of experiments. Please confirm the latest laws and ordinances related to your research. Note that undertaking research that violates the related law, ordinances, and/or guidelines prescribed by the government and ministries, may result in the suspension of research funding or the cancellation of funding.

For MEXT activities on bioethics and bio-hazard protection, visit the following website (in Japanese):

¹ Please refer to the following website for JST designated units.
<https://www.jst.go.jp/researchintegrity/shiryo/e-learning.pdf>

<https://www.lifescience.mext.go.jp/bioethics/index.html>

In the case that the research plan includes research or surveys that require consent/cooperation of other parties and/or social consensus, be sure to take appropriate measures for protecting civil rights and interests prior to applying to this program.

8.29 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 150,000 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.

8.30 Results of JST's Development of Systems and Technology for Advanced Measurement and Analysis Program

○JST implements a wide variety of research and development programs ranging from basic research to industry-academia collaborations and so on, and a great deal of these research results have already been put into practical use.

○Among these, the development of systems and technology for an advanced measurement and analysis program, which seeks to build and develop a basic research and development platform, has resulted in the practical use of many research and development tools.

○It would be a pleasure to know if a researcher notices a research and development tool that can be newly examined for the promotion of research and development.

Visit the Advanced Measurement website (<https://www.jst.go.jp/sentan/en/index.html>) for details.

研究成果展開事業
【先端計測分析技術・機器開発プログラム】

JST 国立研究開発法人 科学技術振興機構
文字サイズ変更 大 中 小
サイト内検索 検索

▶ サイトマップ ▶ 交通アクセス ▶ リンク集 ▶ 新着情報 ▶ お問い合わせ ▶ ENGLISH

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JSTトップ > 先端計測分析技術・機器開発プログラム

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機器開発タイプ
実証・実用化タイプ**
開発成果の活用・普及促進

本プログラムは、最先端の研究・ものづくり現場でのニーズに応えるため、将来の創造的・革新的な研究開発に資する先端計測分析技術・機器及びその周辺システムの研究開発を推進します。

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先端計測分析技術・機器開発プログラムでは、幅広い分野から実用的に利用できる成果を輩出しています。実用化された成果の一部は、開発成果DBに登録することができ、一部は製品として購入することができます。それぞれの製品の購入については「開発成果DB(データベース)」を参照ください。

また、これまで開発してきた成果のうち、また実用化に近づいた、将来有望な成果を「成果集」として公開しています。最新の成果集については、こちらを御覧ください。

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製品化している: 製品化している 製品化していない

この条件で検索

開発成果の一覧

成果名	開発課題名	分野	製品
放射線分析用無鉛鉛筆線検出器	放射線環境検出器の開発	放射線計測	
超微細液体抽出/超微細液体クロマトグラフシステム(Nexera UC)	微量分析用超微細液体抽出/分離装置の開発	ライフ計測	
放射線分析用無鉛鉛筆線検出器 (フレック状、従属型)	放射線環境検出器の開発	放射線計測	
高分解能定定量プロブ顕微鏡SPM-8000FH	大気中・液中で動作する原子分解能分析顕微鏡	材料計測	
青色カルシウムプロブ [CaTM-2™/CaTM-2™ AM]	次世代型蛍光プロブの創製を旨とした新規蛍光団の開発	環境計測	

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TOPICS

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Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs

In Prior to the call of Research Proposals to the CREST, PRESTO, and ACT-X programs in the fiscal year of 2021, JST and AMED have clearly stated their policies on the limitation of multiple application to different funding programs of the Strategic Basic Research Programs as follow. JST will take certain measures to exclude duplicate applications to different research funding programs, to both described and those not described in this chapter, if it is identified by JST that the applications are unreasonably duplicating and correspond to applications leading to excessive concentration of research funds to some individuals. For details, please refer to (5) of this chapter and “8.1 Measures against Unreasonable Duplication and Excessive Concentration.”

*** The limitation on multiple applications within the Strategic Basic Research Programs has been changed from FY2020.**

- (1) An applicant may submit only one Research Proposal to one of Research Areas of the CREST, PRESTO, ACT-X, AMED-CREST*¹, or PRIME*² program which calls for application in FY2021.

While, those who applied for the research proposal solicitation (1st term) cannot apply for the research proposal solicitation (2nd term). If a person who applied for the research proposal solicitation (1st term) applies for the research proposal solicitation (2nd term), the application for the research proposal solicitation (2nd term) will not be accepted.

- (2) **In the following cases, the application will be rejected.**

- Applicants in the position of a to i currently, cannot apply for CREST, PRESTO, or ACT-X as a research proposer (Except for CREST and PRESTO area ending at fiscal year 2021 or CREST or PRESTO applications during ACT-X (early graduation)).
- If applicants are in the position of a to c or e to h in the past, they cannot apply for "ACT-X".

- a. Research Supervisor or Deputy Research Supervisor of ERATO in the Strategic Basic Research Program

*^{1, 2} These are Advanced Research and Development Programs for Medical Innovation with the Strategic Basic Research Programs carried out by the Japan Agency for Medical Research and Development (AMED). AMED-CREST (unit type) promotes research in units led by Research and Development Directors, and PRIME (solo type) is a program in which Research and Development Directors promote research on their own.

- b. Research Director of CREST in the Strategic Basic Research Program
 - c. Individual Researcher of PRESTO in the Strategic Basic Research Program
 - d. Individual Researcher of ACT-I in the acceleration phase in the Strategic Basic Research Program
 - e. Research Director of AIP acceleration subject in the Strategic Basic Research Program
 - f. Research and Development Director of AMED-CREST in the Strategic Basic Research Program (Advanced Research and Development Programs for Medical Innovation)
 - g. Research and Development Director of PRIME in the Strategic Basic Research Program (Advanced Research and Development Programs for Medical Innovation)
 - h. Research and Development Director of FORCE, LEAP in the Strategic Basic Research Program (Advanced Research and Development Programs for Medical Innovation)
 - i. Individual Researcher of ACT-X in the Strategic Basic Research Program
- (3) In the CREST program, the Lead Joint Researcher and other Research Participants of a Research Proposal are subjected to the following limitations.
- a. Multiple applications by an applicant, made by switching his/her position from Research Director to Lead Joint Researcher, or *vice versa*, are not allowed. This restriction will be applied across the Research Areas of CREST. From FY2020, this restriction will also be applied for Research and Development Directors and Sharers of AMED-CREST.
 * This restriction will not be applied if a part of the formation of project team differs, however, JST may judge that the applications are unreasonable duplication or excessive concentration and take necessary measures. Please refer to “8.1 Measures against Unreasonable Duplication and Excessive Concentration” for details.
 - b. If an applicant has made one Research Proposal application as the Research Director, Lead Joint Researcher or other Research Participants while he/she has made another Research Proposal application as Lead Joint Researcher or other Research Participants, and both of the Research Proposals has become candidates of new research projects of the program, there may be cases where some adjustments are taken, including the reduction of research budget, or forced to select one project among the Research Proposals, based on a consideration on the contents of the Research Proposals and the size of cost of each Research Proposal. From FY2020, similar adjustments may be applied for AMED-CREST, PRIME, FORCE, LEAP, and ERATO. Please refer to “Chapter 9 Table 2: Possible / Impossible SIMULTANEOUS Applications to the CREST, PRESTO and ACT-X programs”.
 - c. In cases that an applicant, who is currently a Lead Joint Researcher or other Research Participants of a CREST research project, has made a Research Proposal application to the program, and the Proposal

becomes a candidate of new research projects of the program, adjustments similar to those described in b may be applied. From FY2020, similar adjustments may be applied for AMED-CREST, PRIME, FORCE, LEAP, and ERATO. Please refer to “Chapter 9 Table 1: Possible / Impossible Applications to the CREST, PRESTO, and ACT-X Programs”.

- (4) PRESTO, ACT-I acceleration phase, or ACT-X Individual Researchers cannot participate in a research project of the program as a Lead Joint Researcher for CREST at the same time. However, this condition does not apply to Individual Researchers whose project is going to be finished before March 31, 2022. From FY2020, similar condition will be applied for PRIME individual researchers, research and development sharer of AMED-CREST, FORCE, LEAP, and group leader of ERATO.
 - a. Currently-active PRESTO, ACT-X, ACT-I acceleration phase Researchers, and PRIME Research and Development Director cannot be included in a CREST Research Proposal as a Lead Joint Researcher, except those whose research projects will be ended on or before March 31, 2022.
 - b. A currently-active CREST Lead Joint Researchers or AMED-CREST Research and Development Sharers are able to apply to the PRESTO, ACT-X or PRIME program, however if they are nominated as a candidate for a new PRESTO, ACT-X or PRIME project as a result of the selection of Research Proposal for adoption, they will be requested to choose to withdraw their Research Proposal application or resign as CREST Lead Joint Researcher and become a Research Participant of their CREST project (PRESTO, ACT-X Individual Researchers or PRIME Research and Development Director can be a Research Participant (except Research Director and Lead Joint Researcher) of CREST research projects).
- (5) In a case that the Research Proposal of an applicant is selected as a candidate of the CREST, PRESTO, or ACT-X program in FY2021, and he/she becomes candidate in multiple research projects funded by competitive research funds operated by JST as a result, JST may make a reduction of budgets the research projects or force to select one research project (This is not a case for research projects, which are scheduled to be ended on or before March 31, 2022). This coordination includes the research applicant, and in the case of a CREST application, Lead Joint Researcher or Other Research Participants.

[References]

Table 1: Possible / Impossible Applications to the CREST, PRESTO, and ACT-X Programs

(for Persons who are Currently Engaging into the CREST, AIP acceleration subject, PRESTO, ACT-I (acceleration phase), ACT-X, AMED, and ERATO Programs)

Type of Application in Research Proposal		Applying for CREST Research Director	Applying for CREST Lead Joint Researcher	Applying for CREST Other Research Participant (not research director or lead joint researcher)	Applying for PRESTO Individual Researcher	Applying for ACT-X Individual Researcher
Current Position in ongoing Research Project	Research Director	Impossible (refer to (2) of page 95)	Possible ^{Note1}	Possible ^{Note1}	Impossible ^{Note4} (refer to (2) of page 95)	Impossible (refer to (2) of page 95)
	Lead Joint Researcher	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note2} (refer to (4)b of page 97)
	Other Research Participant (not research director or lead joint researcher)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1,3} (refer to (4)b of page 97)	Possible ^{Note1,3} (refer to (4)b of page 97)
CREST	Research Director	Impossible ^{Note4} (refer to (2) of page 95)	Impossible (refer to (4) a of page 97)	Possible ^{Note1} (refer to (4)b of page 97)	Impossible (refer to (2) of page 95)	Impossible (refer to (2) of page 95)
	Lead Joint Researcher	Possible (refer to (2) of page 95)	Impossible (refer to (4) a of page 97)	Possible ^{Note1} (refer to (4)b of page 97)	Possible (refer to (2) of page 95)	Impossible (refer to (2) of page 95)
	Other Research Participant (not research director or lead joint researcher)	Impossible ^{Note4} (refer to (2) of page 95)	Possible ^{Note1}	Possible ^{Note1}	Impossible ^{Note4} (refer to (2) of page 95)	Impossible (refer to (2) of page 95)
PRESTO	Research Director	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note2} (refer to (4)b of page 97)
ACT-X	Research Director	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1,3} (refer to (4)b of page 96)	Possible ^{Note2} (refer to (4)b of page 96)
	Lead Joint Researcher	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1,3} (refer to (4)b of page 96)	Possible ^{Note2} (refer to (4)b of page 96)
	Other Research Participant (not research director or lead joint researcher)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1,3} (refer to (4)b of page 96)	Possible ^{Note2} (refer to (4)b of page 96)
AIP acceleration subject	Research Director	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}
ACT-I (acceleration phase)	Research Director	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}
	Lead Joint Researcher	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}
	Other Research Participant (not research director or lead joint researcher)	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}	Possible ^{Note5}

AMED- CREST, FORCE, LEAP	Research and Development Director	Impossible ^{Note4} (refer to (2) of page 95)	Possible ^{Note1}	Possible ^{Note1}	Impossible ^{Note4} (refer to (2) of page 95)	Impossible (refer to (2) of page 95)
	Research and Development Sharer	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note2} (refer to (4)b of page 97)
	Other Research Participant (not Director nor Sharer)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)
PRIME	Research and Development Director	Impossible ^{Note4} (refer to (2) of page 95)	Impossible (refer to (4)a of page 97)	Possible ^{Note1} (refer to (4)b of page 97)	Impossible ^{Note4} (refer to (2) of page 95)	Impossible (refer to (2) of page 95)
ERATO	Research Supervisor Deputy Research Supervisor	Impossible ^{Note4} (refer to (2) of page 95)	Possible ^{Note1} (Note 1)	Possible ^{Note1} (Note 1)	Impossible ^{Note4} (refer to (2) of page 95)	Impossible (refer to (2) of page 95)
	Group Leader	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of pages 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note2} (refer to (4)b of page 97)
	Contract Developer	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of pages 96)	Possible ^{Note1} (refer to (3)c of page 89)	Possible ^{Note1} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)
	Research Participant	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (3)c of pages 96)	Possible ^{Note1} (refer to (3)c of page 96)	Possible ^{Note1} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)
<p>Note 1) If the Research Proposal of an applicant is selected for adoption, to avoid excessive concentrations of research funds and unreasonable duplications, JST may make necessary adjustments including a budget reduction of the selected research project or a selection of a research project the applicant may conduct, and others.</p> <p>Note 2) If a Research Proposal of an applicant is selected for adoption in the PRESTO or ACT-X program, he/she must resign the Lead Joint Researcher of ongoing CREST project.</p> <p>Note 3) If the researcher wishes to participate CREST and also continue PRESTO Individual Researcher (JST employed) , JST will conduct a review.</p> <p>Note 4) This is only possible if it is approved by the research area supervisor and JST / AMED in advance (contact must be made 3 weeks before application deadline).</p> <p>Note 5) All of ACT-I(acceleration phase) research subjects will finish in FY2021.</p>						

Table 2: Possible / Impossible SIMULTANEOUS Applications to the CREST, PRESTO and ACT-X programs

(for researchers who are NOT engaging in ongoing research projects such as CREST, PRESTO, ACT-X, AMED Programs and ERATO.)

Type of Application in Research Proposal B		Applying for CREST Research Director	Applying For CREST Lead Joint Researcher	Applying for CREST Other Research Participant (not research director or lead joint researcher)	Applying for PRESTO Individual Researcher	Applying for ACT-X Individual Researcher
Type of Application in Research Proposal A						
CREST	Research Director	Impossible (refer to (1) of page 95)	Possible ^{Note1} (refer to (3) a, b of page 95)	Possible ^{Note1} (refer to (3)b of page 96)	Impossible (refer to (1) of page 95)	Impossible (refer to (1) of pages 95)
	Lead Joint Researcher	Possible ^{Note1} (refer to (3)a, b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note2} (refer to (4)b of page 97)
	Other Research Participant (not research director or lead joint researcher)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)
	Feasibility Study of Specific Research Proposal of the previous fiscal year (Research Director)	Only assigned research area can be applied. (refer to 5.1.5 (2) of page 49)	Possible ^{Note1} (refer to (3) a, b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Impossible (refer to (1) of page 95)	Impossible (refer to (1) of pages 95)
PRESTO	Individual Researcher	Impossible (refer to (1) of page 89)	Possible ^{Note2} (refer to (4) b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)	Impossible (refer to (1) of page 95)	Impossible (refer to (1) of page 95)
	Feasibility Study of Specific Research Proposal of the previous fiscal year	Impossible (refer to (1) of page 95)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)	Only assigned research area can be applied. (refer to 5.1.5 (2) of page 49)	Impossible (refer to (1) of page 95)
ACT-X	Individual Researcher	Impossible (refer to (1) of Page 95)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)	Impossible (refer to (1) of pages 95)	Impossible (refer to (1) of page 95)
AMED-CREST	Research and Development Director	Impossible (refer to (1) of page 95)	Possible ^{Note1} (refer to (3) a, b of page 95)	Possible ^{Note1} (refer to (3)b of page 96)	Impossible (refer to (1) of page 95)	Impossible (refer to (1) of pages 95)
	Research and Development Sharer	Possible ^{Note1} (refer to (3)a, b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note2} (refer to (4)b of page 97)

	Other Research Participant (not Director nor Sharer)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)
PRIME	Research and Development Director	Impossible (refer to (1) of page 95)	Possible ^{Note2} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)	Impossible (refer to (1) of page 95)	Impossible (refer to (1) of pages 95)
ERATO	Research Supervisor Deputy Research Supervisor	Possible ^{Note2}	Possible ^{Note1}	Possible ^{Note1}	Possible ^{Note2}	Possible ^{Note2}
	Group Leader	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note2}	Possible ^{Note2}
	Research Participant	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)
	Feasibility Study of Specific Research Proposal of the previous fiscal year	Possible ^{Note2}	Possible ^{Note1}	Possible ^{Note1}	Possible ^{Note2}	Possible ^{Note2}
FORCE, LEAP	Research and Development Director	Possible ^{Note2}	Possible ^{Note1}	Possible ^{Note1}	Possible ^{Note2}	Impossible (refer to (1) of page 95)
	Research and Development Sharer	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note2}	Possible ^{Note2}
	Research Participant	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (3)b of page 96)	Possible ^{Note1} (refer to (4)b of page 97)	Possible ^{Note1} (refer to (4)b of page 97)
<p>Note 1) If the Research Proposal of an applicant is selected for adoption, to avoid excessive concentrations of research funds and unreasonable duplications, JST may make necessary adjustments including a budget reduction of the selected research project or a selection of a research project the applicant may conduct, and others.</p> <p>Note 2) In a case that both the Research Proposals A and B are selected for adoption, JST will make necessary adjustments between the Proposal. That is, the cancellation of the Research Proposal applied to the PRESTO or ACT-X program or the change of the Lead Joint Researcher of the CREST Research Proposal.</p>						

[Supplement]

- * A person, who is currently engaging into an ongoing CREST research project as a Research Participant other than the CREST Research Director and Lead Joint Researcher, is eligible to make “ONE” Research Proposal application as a research project applicant applying for either “CREST Research Director”, “PRESTO Individual Researcher”, “ACT-X Individual Researcher”, “AMED-CREST Research and Development Director”, “PRIME Research and Development Director”, or to participate in CREST research project as a “Lead Joint Researcher” or a “Research Participant”. However, if this is a case, JST may make necessary adjustments between the ongoing and proposed research projects, such as reducing the budget of the proposed research project, selecting a research project to be concluded by the person, and others, to avoid an excessive concentration of multiple research funds to the person and an unreasonable duplication of research projects.

On the other hand, a person, who is currently not engaging in either a CREST, a PRESTO or an ACT-X research project while making a Research Proposal application as a Research Participant of a CREST research project, is eligible to make another Research Proposal application as an applicant applying for either “CREST Research Director”, “PRESTO/ACT-X Individual Researcher or AMED-CREST / PRIME Research and Development Director, or as an applicant applying for another research subject of “CREST Lead Joint Researcher or Research Participant”, or as an applicant applying for another research subject of “AMED-CREST Research and Development Sharer or Research Participant”. However, if this is a case, JST may make necessary adjustments between these research projects, to avoid an excessive concentration of multiple research funds to the person and to eliminate an unreasonable duplication of research project in CREST selection procedure (refer to (3)b of page 86). The adjustments include a reduction of research budget of the proposed research projects, the selection of research project the applicant may conduct, and others.

- * Researchers conducting a CREST, a PRESTO, or an ACT-I research project (“CREST Research Director”, “CREST Lead Joint Researcher”, “PRESTO Individual Researcher”, or “ACT-I Individual Researcher”), which is scheduled to end on or before March 31, 2022, are eligible to make a Research Proposal application, as an applicant applying for a “CREST Research Director”, a “PRESTO Individual Researcher”, an “ACT-X Individual Researcher” or to participate in a CREST research project as Lead Joint Researcher.
- * If a researcher applies for PRESTO or PRIME during the course of ACT-X research and your application is selected, the researcher can carry out PRESTO or PRIME, but the ACT-X research should finish at the end of the academic year in which the researcher was selected for PRESTO or PRIME (early graduation). If the researcher is applying for PRESTO or PRIME during the course of ACT-X research, please notify the Research Supervisor and JST of the researcher’s intention.
- * In this submission period, researchers may submit an application as a CREST Research Director or PRESTO Individual Researcher even if the researchers are currently carrying out a FOREST program (Fusion Oriented Research for Disruptive Science and Technology) as a Principal Investigator (Individual Researcher). Please contact a person in charge of FOREST about the handling of the FOREST research subject when they were selected by CREST or PRESTO.

Chapter 10: Submission via the Cross-ministerial R&D Management System (e-Rad) - Abstract

○ Cross-ministerial R&D Management System (e-Rad)*¹

The cross-ministerial R&D Management System (e-Rad) is a cross-ministerial system that provides a series of on-line processes on the competitive funding system(Acceptance of applications → Screening → Selection →Management of selected project → Result report, etc.).

10.1 e-Rad usage notes

Applicants are requested to make an application using e-Rad (<https://www.e-rad.go.jp/en>). Please be aware of the following points when submitting your application:

○ **Please submit your application via e-Rad.**

A proposal for which the application procedure has not been completed via e-Rad by the deadline will not be subject to screening.

○ **Recommended system environments to use the e-Rad system.**

The recommended system environments to use e-Rad are IE, Firefox, Chrome, Edge, Safari.

https://www.e-rad.go.jp/operating_environment.html

○ **Pre-registration of research institution and researcher information is required.**

Please refer to “10.4.1 Pre-registration of research institution and researcher information”.

○ **Please allow several days (or more) after the application deadline for inputting information into e-Rad.**

Input of information into e-Rad takes a minimum of around 60 minutes. Furthermore, on the day of the application deadline, there is a risk that the e-Rad system may be congested and inputting may take a long time. Please allow sufficient time before the application deadline to commence inputting information into e-Rad.

○ **It is possible to “temporarily save” input information.**

It is possible to discontinue input of and temporarily save application information part way through. For details, please refer to “Temporary storage of application information and resumption of entry” in “How to Apply Using the Common R & D Management System (e-Rad)” of Appendix Document (see 10.4.1).

*¹ "e-Rad" is an abbreviation of the R & D management system common to all ministries, with the acronym for Research and Development (R & D for science and technology) followed by the acronym Electric ((Electron)).

- **“Retraction” on e-Rad system is possible.**

Up to and including the day prior to the application deadline, it is possible for researchers to retract and re-edit their research proposals. For details, please refer to the “Amending Submitted Application Information: ‘Retraction’” in “How to Apply Using the Common R & D Management System (e-Rad)” of Appendix Document (see 10.4.1).

Do NOT “retract” research proposals on the day of the application deadline. On the day of the application deadline, there is a risk that the e-Rad system may be crowded and re-editing the proposal after retraction may take a very long time.

10.2 Application method using e-Rad

- (1) Register research institution and researcher information.

The research institution must register its researcher information and be issued a log-in ID and password.

* For detail, please refer to “10.4.1 Pre-registration of research institution and researcher information”.

- (2) Obtain required application documents and research proposal forms.

Please download the research proposal form from the website of the call for research proposal.

The proposal format may differ depending on the research area. Please be sure to download and use the form of the research area that researchers are applying for.

- (3) Prepare a research proposal. (Maximum file size: 3 MB)

- (4) Enter application information into the e-Rad system.

- (5) Submit your research proposal. (Upload file to e-Rad for submission)

- The created application form file can be uploaded only in PDF format. e-Rad has a PDF conversion function from WORD and Ichitaro files. You can also download PDF conversion software that can be used on your PC. The use of these functions and software is not essential for PDF conversion, but if you do, be sure to refer to the researcher's manual for usage and precautions.
- Applications whose application status is NOT “Distribution Institution” or “Accepted” by the submission deadline will be INVALID. Please check the status of your application on the "Project List" screen.

10.3 Enquiries and Service Availability

10.3.1 How to operate e-Rad

For how to operate e-Rad, visit the portal site (<https://www.e-rad.go.jp/en/>) or download the manual from the site. Be sure to agree to the terms of use before making an application.

10.3.2 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 Innovation Research (person in charge of calls for proposals)	Be certain to send questions by e-mail, except when in a hurry. For matters related to proposal submission: E-mail : rp-info@jst.go.jp Tel : 03-3512-3530 Office hours: 10:00 -12:00, 13:00 - 17:00 ● 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	e-Rad helpdesk	Tel: 0570-066-877(navi dial) Office hours: 9:00-18:00 ● Except on Saturdays, Sundays, holidays, and the year-end and new year period (29 th December – 3 rd January).

- Website for this program: (<https://www.jst.go.jp/kisoken/boshuu/teian-en.html>)

- e-Rad portal website (<https://www.e-rad.go.jp/en/>)

10.3.3 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.

10.4 Operation Method and Notes

10.4.1 Pre-registration of research institution and researcher information

Research institutions have to be registered on e-Rad by the time of application. One research institution must assign a representative for e-Rad, download the research institution registration form from the e-Rad portal site (hereinafter referred to as “portal site”), and apply for registration. However, if the proposer belongs to an overseas research institution, the research institution will be registered at JST after adoption. Please proceed to the application screen with no affiliation registered for the researcher ID (Ministry-common R & D management system), and click the “Basic Information” tab (Attachment: Common R & D management system (e-Rad)) Please refer to "How to apply by"). In that case, it is necessary for the proposer himself to obtain the e-Rad login ID and password.

Applicants are: CREST, the Research Director and all Lead Joint Researchers, and PRESTO and ACT-X, Individual Researchers. Applicants need to obtain a password in advance (if you have already registered for another application, you do not need to re-register).

The acquisition procedure is as follows. Please register prior to two weeks or more. Please refer to the portal site for details.

1) Researchers belonging to domestic research institutions

- Worker: Research institution clerk
- Registration Contents: Research Institution and Researcher Information

2) Researchers who belong to a foreign research institution or researchers who do not belong to a research Institution

- Worker: Proposer yourself
- Registration Details: Researcher Information

Please refer to the document below and the attached sheet for the application guidelines and the acquisition of research proposal forms.

"How to Apply Using the Common R & D Management System (e-Rad)" of Appendix Document

<https://www.jst.go.jp/kisoken/boshuu/teian/koubo/2021e-rad.pdf> (Japanese only)

Q & A

If there are major updates on this Q&A, it will be announced on the following website.

<https://www.jst.go.jp/kisoken/boshuu/teian-en.html>

For information related to the operation of the Cross-ministerial R&D Management System (e-Rad), registration of research institutions and researchers, and use of the e-Rad system, please refer to the following website:

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

○ Enrolling in the educational program for research integrity

Content of the educational program for research integrity

Q What content must be included in the educational program for research integrity conducted by affiliated institutions?

A Educational programs for research integrity are the responsibility of each research institution. JST does not specify the specific teaching material to be used in such programs.

(Reference)

According to the “Guidelines for Responding to Misconduct in Research Activities” (August 26, 2014, adopted by the Minister of Education, Culture, Sports, Science and Technology), which were effective as of April 2015, research institutions are required to implement a structure for preventing misconduct—such as the installation of a “Research Integrity Education Manager”—and conduct education at the institutional level. Further, the allocating institution is also required to confirm researcher enrollment in the institution’s research integrity education program.

Note, however, that the details in the referenced guidelines focus on misconduct related to academic papers and does not cover bioethics and conflicts of interest, which are different topics. If you have any questions, please contact the JST Office of Research Integrity.

Japan Science and Technology Agency Department of Audit and Legal Affairs, Research Integrity Division E-mail : rcr-kousyu@jst.go.jp
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Program completion certification

Q Is it necessary to submit documentation certifying completion of an educational program for research integrity?

A No, submission is not necessary.

Declaring completion with the certificate completion number

Q I have completed the digest version of eAPRIN (ex-CITI Japan) e-learning program, but where/how do I view the course completion number?

A After passing the quiz, Confirmation Report will be provided. The Confirmation Report Number (7 digits + ARD) is written on the Course Completion Report.

受講確認書
JST申請用

Confirmation Report

下記の単元を受講し、合格点を取得しました
Took the following lesson and passed.

単元名(Lesson name): 責任ある研究行為ダイジェスト / < Digest Version >
Responsible Conduct of Research_RCR

受講日(Passed on): 2019/06/13

受講確認書番号(Confirmation Report Number): 1930269ARD ← Check the Confirmation Report Number

氏名(FULL NAME): 栄富林 花子

機関名(ORGANIZATION): APRIN大学

部局名(DEPARTMENT): 理工学部

メールアドレス(Mail Address): aprinhanako@xxx.ac.jp

一般財団法人 公正研究推進協会
Association for promotion of Reserch integrity

↑ Sample of certificate of completion

Availability of an English version of the eAPRIN (ex-CITI Japan) e-learning program digest version

Q Since I have not taken the program offered by my institution, I am planning to enroll in the digest version of eAPRIN (ex-CITI Japan) e-learning program. What options are there if my native language is not Japanese, which makes taking the course in Japanese difficult?

A An English translation of the digest version of eAPRIN (ex-CITI Japan) e-learning program has been published and posted on the Invitation for Proposal website.

Regarding the deadline for completing the educational program for research integrity

Q I cannot complete the educational program for research integrity before the application deadline. Can I complete the program after the deadline?

A Completion of the educational program for research integrity is a prerequisite for applying. Enrollment and completion of this program will not be permitted after the solicitation deadline.

○ Common issue for CREST, PRESTO, and ACT-X

Responding to the fiscal year 2021 Call for Proposals

Q When submitting a research proposal, is an approval of the institution with which I am affiliated required?

A No, it is not required. However, if your proposal is selected, a Collaborative Research Agreement will have to be signed by both JST and the research institution with which you are affiliated, so please notify your institution in prior ("5.2.8 Responsibilities of Research Institutions").

Q Why are duplicate application restrictions applied between JST and AMED's Strategic Basic Research Programs?

A The target programs are based on a program of the Ministry of Education, Culture, Sports, Science and Technology's Strategic Basic Research Programs, which promotes strategic basic research under strategic or R & D goals, although the executing agency is divided into JST and AMED. For this reason, duplicate application restrictions are applied between the two organizations.

Use of color in research proposals

Q Is it possible to use color for the text or figures in research proposals? Do evaluators evaluate research proposals in color document?

A Evaluators do evaluate color document in their assessment of research proposals. However, proposals may be printed out from PDF files, so we request you to use figures and tables that are easy to read even at low resolutions.

“Information on Other Supports” of Research Proposal Application

Q It says that it includes foreign institutions. What should be specifically described about the research funds that plan to accept or apply for from overseas institutions?

A At the time of application, researchers will be asked to fill in a wide range of research expenses that they are applying for and will accept, so competitive funding, subsidies from private foundations, contract research expenses from companies, joint research expenses, etc. Please be sure to fill in all research funds accepted from foreign institutions.

Requirements for applicants

Q What is the status regarding research proposals submitted by female researchers?

A Female researchers comprise 5–10 % (CREST), 10–20% (PRESTO), and 20% (ACT-X) of applicants and selectees. In the hope of encouraging research proposal submissions from a broad spectrum of researchers, JST is actively trying to improve the environment where researchers can give full play to their abilities. As a part of the activities, Strategic Basic Research Programs have special sites for the promotion of diversity. Data on selected female researchers are publicly available on this website. Activities to promote diversity in CREST and PRESTO are announced on <https://www.jst.go.jp/kisoken/crest/nadeshiko/index.html>

JST is continuously trying to improve its programs and research environment so as to make individual researchers possible to give full play to their ability and enjoy active roles. Please refer to the JST diversity website:

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

Overhead Costs (Indirect Costs)

Q Is support for covering overhead costs (indirect costs) paid to all research institutions that sign a Collaborative Research Agreement?

A In principle, an amount equal to 30% of research costs (direct costs) is paid to all research institutions that sign a Collaborative Research Agreement. This amount covers overhead costs (indirect costs).

Q What types of expenditures are counted as overhead costs (indirect costs)?

A Overhead costs (indirect costs) include expenditures for improving the research environment for participants in research projects implemented under CREST, PRESTO and ACT-X programs and money used by research institutions to cover expenditures required to enhance their overall functions.

Use of Research Budgets

Q Is it possible to subcontract program preparation and other such work to external companies, etc.?

A If it is required as a matter of advancing research work, it is possible. However, there is a premise that such subcontracting of work to outside parties is based on subcontracting agreements that exclude research and development work. In principle, the subcontracting of research and development work is not permitted.

Personnel Transfers after Proposal Selection

Q If a Research Director (CREST) or an Individual Researcher (PRESTO or ACT-X) experiences a change in position (promotion, transfer to a different research institution, etc.) while conducting research, will the Research Director (CREST) or Individual Researcher (PRESTO or ACT-X) be permitted to continue research activities?

A As long as it is possible to continue research activities unhindered by the change in position, research activities may be continued. Having another person take over as Research Director (CREST) or Individual Researcher (PRESTO or ACT-X) as a result of a change in position, however, is not permitted.

Q If a research institution affiliation changes because of a personnel transfer, for example, as research is being conducted, is it possible to move research equipment, etc., purchased with research funds to the new research institution?

A Equipment, etc., purchased with funds accounted for as research costs (direct costs) must, in principle, be moved, via transfer of ownership, etc., to the new research institution in accordance with a Collaborative Research Agreement.

Others

Q Who is the Program Officer (PO) for the program? What roles does the PO perform?

A For the CREST, PRESTO, and ACT-X programs, the Research Supervisor is the PO designated for competitive funding systems. For information on the roles played by the Research Supervisor, refer to “2.1.1 CREST Overview,” “3.1.1 PRESTO Overview,” and “4.1.1 ACT-X Overview.”

Q Please provide information on the research topics selected and applications submitted for the previous fiscal year.

A Please refer to the JST websites below.

- CREST <https://www.jst.go.jp/kisoken/crest/en/application/index.html>
- PRESTO <https://www.jst.go.jp/kisoken/presto/en/application/index.html>

- ACT-X <https://www.jst.go.jp/kisoken/act-x/en/index.html>

Q At present, I am affiliated with an overseas research institution and do not have a researcher number. What should I do?

A Personally apply for a researcher registration number by mailing (via postal mail) a completed Researcher Number Issuance Request Form, identification documentation, and other materials directly to the e-Rad system administrator. For more details, refer to the e-Rad portal site.

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

Q I am not able to temporarily store my research proposal on the e-Rad system.

A Unless you fill in all items in “Application,” you cannot store information temporarily. Modification of the input data is possible, so fill in all the items with temporary information first; then, temporary storage will be possible.

Q If the date of the interview scheduled as part of the selection process is inconvenient, is it possible for someone else be interviewed in my place? Alternatively, is it possible to schedule a different interview date?

A It is not possible to have someone else interviewed in your place. In addition, since, interview dates are set by coordinating the schedules of numerous evaluators, securing a different interview date is not possible. Please check the interview period information shown in “(2) Call and Selection Schedule” in the section “Overview of the Call for Research Application” of this document and also the interview schedules for individual Research Areas which will be announced on the “Call for Research Proposals” website (<https://www.jst.go.jp/kisoken/boshuu/teian-en.html>).

○ Issues for CREST

Entering Research Costs in Proposals

Q Is it necessary to include in the research proposal: 1) the basis for cumulated research costs and 2) yearly budgets?

A It is not necessary to include the bases for cumulated research costs, but an itemized research budget and the research budget for the entire research group should be included in the Research Proposal (Form 5). In addition, applications which are selected for participation in the interview phase of the selection process will be asked to prepare supplementary materials covering various matters, including details of research expenditures.

Research Organization and Budget Allocation

Q Please give inappropriate examples of Joint Research Group organization and Joint Research Group budget allocations which would be unacceptable.

A Unacceptable formation of Joint Research Groups include (but are not limited to) followings:
1) The Research Director does not play the central role in the research organization to pursue the proposed research initiative; 2) A substantial portion of the research is subcontracted to an external party or parties; 3) The role and position of the Joint Research Group in the research initiative is unclear; and 4) The budget is allocated equally to the Joint Research Groups without considering their roles and positions.

Q Is it possible to change the research project organization and total budget, which were presented in the research proposal at the interview screening process?

A No, please do not change the contents of the research proposal since selections are conducted based on these contents. Please be very careful to create a research proposal that you will not change later. It should be noted, though, that after the selection process, changes may be requested in accordance with the instructions of the Research Supervisor.

Applicant Requirements

Q Is it possible for non-full-time researchers (guest researchers, etc.) to submit research proposals? Also, is it possible for researchers scheduled to retire during the research period to submit proposals?

A Both are possible if you can establish your own research project organization at a domestic (located in Japan) research institution during the research period and the research institution could conclude a contract Collaborative Research Agreement with JST.

Research Team Organization

Q Could “Individual Researcher”, who is currently performing a PRESTO research, be included in the research project organization – as a Lead Joint Researcher – for the CREST research proposal?

A It is not possible for an Individual Researcher currently performing PRESTO research to participate in a CREST research as a CREST Lead Joint Researcher (excluding projects ending in FY2021).

Q Is it possible to include multiple organizations in one group? In other words, are each group required to be divided by researchers’ affiliated organization?

A Multiple institutions can form one group when it is necessary to undertake same research topic. However, in case which it is necessary to implement budgets for each institution separately, agreements for contract research may be concluded separately after the research proposal approved.

*[description of a Research Director's group] A researcher not affiliated with the same organization as the Research Director (note 1) may be included as a member of the Research Director's group. In such a case, however, it is essential that "the organization with which the Research Director is affiliated manage the research expenses of the researcher affiliated with another organization (note 2)". If this accounting is not acceptable, the researcher affiliated with another organization can be described as part of a joint research group.

*[description of a joint research group] Describe the person who leads a joint research group as a Lead Joint Researcher. A researcher not affiliated with the same organization as the Lead Joint Researcher (note 1) may be included as a member of the same group. In such a case, however, it is essential that "the organization with which the Lead Joint Researcher is affiliated manage the research expenses of the researcher affiliated with another organization (note 3)". If this is not acceptable, the researcher affiliated with another organization should be described as another joint research group.

Note 1: the same business firm in case of a business firm or the same organization (research department and so on) in case of a university

Note 2: when there is a rational reason for a member affiliated with another organization to spend the research expenses of the organization with which the Research Director is affiliated and when the organization with which the Research Director is affiliated can manage the research expenditure (the research expense is paid to the organization with which the Research Director is affiliated) of the researcher. Please see the application guideline "5.2.8. Responsibilities of Research Institution".

Note 3: when there is a rational reason for a member affiliated with another organization to spend the research expenses of the organization with which the Lead Joint Researcher is affiliated and when the organization with which the Lead Joint Researcher is affiliated can manage the research expenditure (the research expense is paid to the organization with which the Lead Joint Researcher is affiliated) of the researcher. Please see the application guideline "5.2.8. Responsibilities of Research Institutions".

Research Site

Q What criteria will be used to determine whether the performance of research would be impractical if not done at a foreign institution?

A Decision concerning whether research must be performed overseas are assumed as following.

- 1 . Required facilities do not exist in Japan and have been installed only in foreign institution.
- 2 . Field studies that can be performed only at overseas are required.

3. Research materials can be obtained only at a foreign research institution or foreign location and cannot be brought to Japan.

Research Cost

Q Should we include the overhead costs (indirect costs), which would be paid to the research institution after a Collaborative Research Agreement is signed, in the amount of "Total Research Budget" (CREST Form 1) and "Research Budget Plan" (CREST Form 5) described in the research proposal?

A Do not include overhead costs (indirect costs). Enter only direct costs information.

Q After a research proposal is selected, how should the allocation of research expenditures within the team be decided?

A Once a research proposal is selected, allocation of research expenditures within the team are determined based on the research plan prepared every fiscal year. For more information on research plans, please refer to "5.2.1 Research Plan Preparation."

Collaborative Research Agreement

Q Would a Collaborative Research Agreement with Lead Joint Researchers be subcontracted¹⁷ from the research institution with which the Research Director is affiliated?

A In this program, Collaborative Research Agreement are not subcontracts. JST contracts separately with each of research institutions with which the Research Director and Lead Joint Researchers are affiliated.

Research Evaluations

Q How is research evaluated and how will the evaluation results be utilized?

A In principle, CREST research projects undergo an:

- 1) Interim evaluation around three years after they begin,
and a
- 2) Ex-post evaluation at the end of the research period.

For more information, please refer to "5.2.5 Project Evaluations". In addition, "Research Areas" are evaluated ("5.2.6 Research Area Evaluation") as well as "follow-up evaluations" which take place after a certain amount

¹⁷ "Subcontract" in the research contract means that JST concludes a research contract with a research institution with which the Research Director is affiliated and the said institution concludes another research contract with a research institution with which a joint researcher is affiliated.

of time has passed after the completion of the research period. All evaluation results will be posted on the website.

Multiple Applications

Q Is it possible to make a CREST research proposal as a Research Director and participate in another research proposal as a Lead Joint Researcher?

A This is possible, but if both proposals come to be considered seriously for selection, research funding may be lowered or the researcher in question may be asked to participate in only one of the research projects, depending on factors like the details and scale of the research to be performed. It should be noted that having researchers swap roles as Research Director and Lead Joint Researcher and submitting multiple research proposals is not permitted. For more details, please refer to "Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs".

Q I have been adopted for AMED-CREST or PRIME of AMED, and can I apply for CREST, PRESTO, or ACT-X?

A You cannot apply for that from the 2020 application. Please refer to "Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs" for details.

○ Issues for PRESTO

Requirements for Applicants

Q Does the PRESTO program have an age limit?

A There is no particular age limit for submitting PRESTO research proposals. However, research is performed mainly by researchers in their 30s and it is expected that PRESTO can help to boost the careers of such researchers.

Q Could students apply?

A Yes, he/she can apply. A requirement is, however, that the student participate in PRESTO will end the status of being a student by the end of March in the following year after if his/her proposal is selected. Concerning the way how to obtain e-Rad ID, refer to Q&A of issues for ACT-X.

Q Is it possible for non-full-time researchers (guest researchers, etc.) to submit research proposals?

A The PRESTO program has no restrictions in terms of the institutional affiliations or positions of applicants. Whether an applicant is a full-time employee of a research institution or not, or paid or not, is not considered in the selection process.

Q Is it possible to submit a PRESTO research proposal while participating in a CREST research project as a Lead Joint Researcher?

A It is possible to submit a PRESTO research proposal. However, if the subject researcher is already participating as a Lead Joint Researcher in a CREST research project and his/her PRESTO research proposal comes under serious consideration for selection, or if both the subject researcher's PRESTO research proposal and a CREST research proposal for which the researcher would be a Lead Joint Researcher come under serious consideration for selection, adjustments – such as choosing either participation in the CREST research project or pursuing the PRESTO research project – would become necessary (excluding projects ending in FY2021). It is advisable, therefore, to consult well with the person who is or would be the CREST Research Director before submitting a PRESTO research proposal.

Q Can a Special Researcher at the Japan Society for the Promotion of Science apply to the PRESTO program?

A There are no restrictions on the applicant's position at the time of application. Researchers who are currently performing work under the system of an institution other than JST, or who will apply to do so, should ask that institution whether it is appropriate to perform the work under its system and the PRESTO program, concurrently.

Research Cost

Q Is it necessary to include in the research proposal: 1) The bases for cumulated research costs and 2) Yearly budgets?

A It is not necessary. However, those selected for participation in the interview phase of the selection process will be asked to prepare supplementary materials covering matters like details of research expenditures.

Requirements for Performing Research Work at an Overseas Research Institution

Q What are the requirements for performing research work at an overseas research institution?

A Please contact to person in charge of contract in the foreign institute for prior consent since there are requirements such as conclusion of a research contract with conditions indicated by JST is needed. (Please also check PRESTO-Form 7)

※Refer to “References” in the “How to apply” section of the following website

<https://www.jst.go.jp/kisoken/boshuu/teian/en/top/ryoiki.html>

Particular attention should be paid to the three points below.

1. Appropriate expense execution shall be possible based on the research expense execution guidelines specified by JST.
2. Payment of indirect expenses to the relevant overseas research institution does not exceed 30% of direct expenses (research expenses).
3. It shall be possible to submit to JST English-language cost statements showing the details of research expenditures (equivalent to the account books used by Japanese institutions).

Contract may not be concluded if foreign institute does not accept above condition.

Please refer to “3.2.6 Proposal Submission Requirements” for details.

Employment of Researchers with Doctoral Degrees

Q Under the PRESTO program, is it possible to employ additional researcher with a doctoral degree (a postdoc)?

A Under the PRESTO program, it is not possible to create a research team including postdocs. However, postdocs can be employed as research assistants to support the efforts of an Individual Researcher pursuing PRESTO research.

Other

Q Is it possible to suspend and later resume PRESTO research in response to life events (childbirth, child care, and care giving)?

A If a PRESTO Individual Researcher experiences of a life event during the research period, it is possible, upon consultation with the Research Supervisor, to suspend research work for periods of time designated for individual life events and later resume work.

Q Should personnel cost for PRESTO Individual Researcher with Exclusive Appointment come from research expenditure? How much is the approximate cost?

A JST will cover the personnel cost (separately from the research cost) based on the job assignment agreement conducted between the host research institution and JST.

○ **Issues for ACT-X**

Requirements for Applicants

Q Does the ACT-X program have an age limit?

A No. There is no limitation on age. However, this program is intended for researchers who have held a doctoral degree for less than eight years as of April 1, 2021

Researchers who earned their bachelor's degrees less than 13 years ago (as of April 1, 2021) if they have not acquired doctoral degrees.

*This includes researchers who satisfy the described terms and conditions when the period of maternity or paternity leave taken after acquiring the degree is excluded.

Graduate school students are also invited to our program regardless of the terms and conditions described above.

Q Can university students apply?

A Only post-graduate students can apply.

Q Is it possible for non-full-time researchers (guest researchers, etc.) to submit research proposals?

A The ACT-X program has no restrictions in terms of the institutional affiliations or positions of applicants. Whether an applicant is a full-time employee of a research institution or not, or paid or not, is not considered in the selection process. However, it is required that the Collaborative Research Agreement between the organization the researcher belongs to and JST should be able to specify the applicant him- or herself (or the academic advisor if the applicant is a student) as the "research implementation manager."

Q I belong to a company, but I do not have a doctorate. Can I apply for the program?

A You can apply if you are a bachelor for less than 13 years as of April 1, 2021. However, it is required that the Collaborative Research Agreement between the organization the researcher belongs to and JST should be able to specify the applicant him- or herself (or the academic advisor if the applicant is a student) as the "research implementation manager."

Q How do I know if I have the authority to execute a contract research fund or can be a party to a Collaborative Research Agreement?

A In the form of the Collaborative Research Agreement template (<https://www.jst.go.jp/contract/index2.html>), become a “Principal Investigator” and become a registered researcher of the institution (research site) to determine whether or not it is possible for the research site to conclude the Collaborative Research Agreement with JST and whether or not it is possible to execute the contract research fund by itself based on the consigned contract. Please check with the secretariat. For non-students, first coordinate with the supervisor and the institution (research institution) at your institution (research institution) so that you have executive authority and be a party to the contract research contract (See 4.2.6 “Proposal Submission Requirements”).

Q I have been a doctor for less than 8 years as of April 1, 2021, but have been a bachelor for more than 13 years. May I apply for the program?

A Given that you are a doctor, the number of years being a bachelor does not matter. You can apply for the program if you have held a bachelor for less than 8 years. However, you should know that the Research Areas of ACT-X are intended for the development and production of young researchers; thus, one of our norms for the selection is that your proposal should conform to the intention of the Research Areas.

Q I am a company worker continuing education in doctorate program as a university student. Can I apply either as a student or as a company researcher?

A You can apply as either position. However, if you are going to apply as a company researcher, you need to meet the requirement of the year limitation after acquiring bachelor's degree (If you will apply as a student, there is no year limitation after acquiring bachelor's degree). However, you should know that the Research Areas of ACT-X are intended for the development and production of young researchers; thus, one of our norms for the selection is that your proposal should conform to the intention of the Research Areas. If the research activity is conducted in universities etc., JST will conclude a research contract with universities etc. as a basis.

Q Is it possible to submit an ACT-X research proposal and participate as a Lead Joint Researcher in a CREST research project?

A It is possible to submit an ACT-X research proposal. However, if the subject researcher is already participating as a Lead Joint Researcher in a CREST research project and his/her ACT-X research proposal comes under serious consideration for selection, or if both the subject researcher’s ACT-X research proposal and a CREST research proposal for which the researcher would be a Lead Joint Researcher come under serious consideration for selection, adjustments – such as choosing either participation in the CREST research project or pursuing the ACT-X research

project – would become necessary (excluding projects ending in FY2021). It is advisable, therefore, to consult well with the person who is or would be the CREST Research Director before submitting an ACT-X research proposal.

Q I am currently a PRESTO researcher and is it still possible for me to apply to ACT-X?

A You cannot apply to ACT-X. (For detail, please refer to “Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs”)

Q Can research fellow (PD, DC) at the Japan Society for the Promotion of Science apply to the ACT-X program?

A There are no restrictions on the applicant's position at the time of application. Researchers who are currently performing work under the system of an institution other than JST, or who will apply to do so, should ask your affiliated institution whether it is appropriate to perform a work under its system and the ACT-X program concurrently.

Q What if I was expecting to continue the research at a research institute in this country until I finish the ACT-X research, but I happen to transfer to another research institute overseas before I finish the research, which implies that I have difficulty in continuing the research. Should the research be canceled?

A If you cannot meet the ACT-X requirement, the research will be terminated.

Research Cost

Q Is it necessary to include in the research proposal: 1) The bases for cumulated research costs and 2) Yearly budgets?

A It is not necessary. However, those selected for participation in the interview phase of the selection process will be asked to prepare supplementary materials covering matters like details of research expenditures.

Details that Should be Included in the Project Description

Q Do I have to give the project description for the acceleration phase in the research proposal?

A No. you do not. Please give the project description for the 2 years and 6 months in the research proposal.

Execution of Research Expenses

Q I am a JSPS special researcher, but if I am selected, I can apply for "Additional budget support such as research assistant (RA) to ACT-X student (doctor / master) researcher". ?

A A student (DC) can apply, but a non-student PD (PD) cannot. Please check with the Japan Society for the Promotion of Science to see if there is no problem applying for ACT-X from the position of a Research Fellow (DC).

Employment of Researchers with Doctoral Degrees

Q Under the ACT-X program, is it possible to employ another researcher with a doctoral degree (a postdoc)?

A Under the ACT-X program, it is not possible to create a research team including postdocs. However, postdocs can be employed as research assistants to support the efforts of an Individual Researcher.

(Applications by Students) Preliminary Discussions with your affiliated Institution

Q I am a student. Is there anything that I have to discuss with the university I am affiliated to with the course of making an application?

A First of all, it is necessary that the institution with which you are affiliated can conclude a Collaborative Research Agreement with JST. Please refer to the following web page to see the format for the Collaborative Research Agreement:

<https://www.jst.go.jp/contract/index2.html>

Furthermore, as stated in Special Clause 4 of Appendix 8-2, it is essential that an understanding is required between the institution and you regarding the treatment of any discoveries etc. that are made. Furthermore, it is stipulated that the responsibility for the management or, should it arise, any misuse of research funds lies with not only with you but also with your academic supervisors under the Collaborative Research Agreement. Your academic supervisors are required to submit a memorandum of confirmation giving their consent for the above, and you must submit the memorandum together with the research proposal.

The form of memorandum of confirmation can be downloaded from the following website. You and your academic supervisor are requested to sign the document, save it in a PDF format and submit it together with the research proposal via e-Rad.

<https://www.jst.go.jp/kisoken/boshuu/teian/en/top/ryoiki.html>

※Please click the name of Research Area which you are going to apply. Forms can be downloaded from “How to apply” section on the website

(Applications by Students) Continuation of ACT-X Research after Taking Up Employment

Q I am a student. If I become employed by a company etc. midway through my research can I continue with the ACT-X research?

A In order to continue pursuing your ACT-X research you need to obtain the consent of your place of employment for simultaneously carrying out the work of your employers and the ACT-X research. Moreover, if the place where you conduct your research is your place of employment, a Collaborative Research Agreement has to be drawn up between your employers and JST. You can continue to carry on your ACT-X research when your employer's consent to both of these conditions have been obtained.

(Applications by Students) Graduation during the ACT-X Research Period

Q I am a student. I am going to graduate during my 2.5 year research period. In this case, should I just conduct research work before graduation?

A Please accomplish your 2.5 year research period. Consult with your academic supervisors to obtain academic post and continue your research work. If you worked hard to obtain academic post but failed and became difficult to continue ACT-X research, please immediately consult with JST.

(Applications by Students) Responsibility of Academic Supervisors

Q I am an academic supervisor. One of my students is considering applying for the ACT-X program and I would like to know to what extent academic supervisors are responsible for it.

A Under the Collaborative Research Agreement between JST and the institution to which the student is affiliated, academic supervisors are held responsible for the management of contract research costs and any misuse of them as a "research implementation manager". If the student graduates before he/she finishes the research, you are requested for consideration as much as possible so that they can continue the ACT-X research after graduation.

(Applications by Students) Registration of students in e-Rad

Q I am a student. How can I acquire a researcher ID for e-Rad?

A 1. Confirm that the organization you are affiliated with can conclude Collaborative Research Agreement with JST. (There is another Collaborative Research Agreement prescribed for the case in which a student is the main researcher.)

2. Have the secretariat of the organization you are affiliated with confirm whether it allows you to acquire a research ID for e-Rad. If not, consider methods acceptable to the organization, including the following:

(1) Use the ID of a guiding instructor for application.

(2) Acquire a researcher ID as "a researcher not affiliated with any organization"

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

Q I am a student. A guiding instructor has approved for me to make a proposal to ACT-X and to sign a confirmation document. However, the university I attend does not approve for a student to possess a researcher ID for e-Rad, whether the student is affiliated with the university or not. Therefore, I am studying how to make a proposal using the ID of the guiding instructor. Are there any precautions concerning the submission of a proposal to e-Rad?

A1 When you use the ID of a guiding instructor for application, input information on yourself instead of information on the guiding instructor in [individual item] tab (JST makes various contacts with the proposer on the basis of the information). => See the figure below.

When a student uses the ID of a guiding instructor for application, please input information of the student applicant (not the guiding instructor) in the “Entries specific to the program” tab.

A2 Definition of efforts in case of students is different from a usual definition (ratio of involvement time to the total work time per year). The former means the “ratio of time spent on ACT-X research to weekly 40 hours.” Follow this definition for input in the proposal. However, input of an intact efforts value of the proposal in e-Rad imposes pressure on the ratio of guiding instructor’s efforts on e-Rad possibly influencing on managing instructors’ efforts by the university. Properly make adjustment in such a case, such as inputting the smallest possible value (1%) in e-Rad. => See the figure below.

基本情報 **研究経費・研究組織** 個別項目 応募・受入状況

研究経費

年度ごとの経費の登録を行います。
「1.費目ごとの上下限」

1.費目ごとの上限

	上限	下限
直接経費	500,000千円	(設定なし)
間接経費	(設定なし)	-

2.年度別経費内訳 (単位:千円)

	2018年度	2019年度	2020年度	20	合計
直接経費					
間接経費					

研究組織

1.申請種 (初年度)
「1.申請種 (初年度)」
ここで入力した値

直接経費
間接経費

2.研究組織情報
課題に参加するメンバーと、研究メンバーごとの研究経費初年度を入力してください。
研究者ごとの金額合計に反映されます。

行の追加

研究者を検索	研究者番号 氏名	研究機関 部署/職階 必須	専門分野 学位 役割分担 必須	直接経費 間接経費 (千円) 必須	エフ ォ ー ト (%) 必須	閲覧・ 編集権限	削除	移動
	10000142 基礎研 市ヶ谷 (キンケン イチ カヤ)	独立行政法人科学技術振興 研究部 主席/その他	なし	0 千円 0 千円				

行の追加

研究組織内の連絡事項を登録する

▼ 任意項目を表示

[Research Cost, Research Organization] tab

**When a student uses the ID of a guiding instructor for application, use 1%, for convenience, as efforts ratio to minimize the influence on guiding instructor's actual efforts.
(Input the student's actual efforts in the text of a proposal document.)**

(Applications by Students) Intellectual property right related to inventions by students

Q I am in charge of contracts for a research organization. A student of this university is considering a proposal to ACT-X. The university has a stipulation in place that the intellectual property right related to invention by a student belongs to the student him/herself, which makes it impossible for the right to belong to the university.

On the other hand, the Collaborative Research Agreement (Appendix 8-2) of JST states that “a contract research organization takes measures for the intellectual property right related to contract research achievement to belong to the contract research organization.” The provision does not agree with the stipulation by the university. Is the student of this university not allowed to make a proposal to ACT-X in such a situation?

A ACT-X believes that an intellectual property right for invention by a student researcher not employed by a university belongs to the university in principle. However, it is possible for the intellectual property right to belong to the student in case the university has such a rule that an intellectual property right related to research achievement in ACT-X must belong to the student. It is possible also for the student to apply a proposal to ACT-X. In that case, however, the student needs to submit a “confirmation document” of agreement to (1) and (2) below in addition to provisions of agreement in an ordinary “confirmation document.” A confirmation document for such a case (a special form) is prepared separately. Contact rp-info@jst.go.jp to ask for the special form.

(1) A student has the same obligations as those of OTSU (B) in articles 2-7 of “intellectual property provisions” of Collaborative Research Agreement, separate prescription 4, when an intellectual property right related to invention obtained as research achievement in ACT-X belongs to the student.

(2) Considering universities’ recent view to inventions by students during their employment on a contract job, such as “About how to handle inventions at universities (Study Committee for Risk Management in Collaboration between Industry and University of Ministry of Education, Culture, Sports, Science and Technology),” there may be cases in the future in which an intellectual property right related to contract research achievement belongs to the research organization. Research organization who decided that the intellectual property right will belong to the organization, should follow the duties stipulated in “intellectual property provisions,” Collaborative Research Agreement, separate prescription 4.

Life Events During the Research Period

Q Is it possible to suspend and later resume ACT-X research in response to life events (childbirth, child care, and care giving)?

A If a ACT-X Individual Researcher experiences of a life event during the research period, it is possible, upon consultation with the Research Supervisor, to suspend research work for periods of time designated for individual life events and later resume work. In this case, JST will allocate the same amount of research budget which this Individual Researcher have not yet used because of his/her suspension of research activity due to the life event.

CREST/PRESTO/ACT-X

Please make sure to visit our Invitation for Research Proposals page for the latest updates and frequently asked questions:

<https://www.jst.go.jp/kisoken/boshuu/teian-en.html>

Contact for Inquiries (We cannot answer to inquiry related to selection process)

Please submit inquiries by email (except for urgent inquiries).

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*Except Saturdays, Sundays, and National Holidays

[Communication by e-mail may be requested even when a question is asked by telephone.]