

FY2024

STRATEGIC BASIC RESEARCH PROGRAMS

(CREST/PRESTO/ACT-X)

Call for Research Proposals

[Application Guidelines]

Application Call Period

Tuesday, 9 April ~ 12:00 (noon, Japan time) on Tuesday, 4 June: CREST

Tuesday, 9 April ~ 12:00 (noon, Japan time) on Tuesday, 28 May: 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

April 2024

Overview of the Call for Research Application

(1) Research Areas calling for Proposals

FY2024 application call and selection of research proposals are for research areas are CREST... 9 areas, PRESTO... 15 area, and ACT-X... 5 areas.

○ CREST

Research Areas	Strategic Objectives	Since
Creation of mathematical foundation for prediction and control (Research supervisor: Motoko Kotani) (*A) AIP	Scientific prediction and control as the foundation of a new society and industry	FY2024
Frontier exploration via the synergy of photonics/optics with information, communication, sensing, and material technologies (Research supervisor: Yoshiaki Nakano)	Opening up technological frontiers by synergy between photonics and informatics, materials science, etc., to support a sustainable society	FY2024
Creation of innovative and integrated technologies for materials development and circular processes and development of their scientific basis (Research supervisor: Tomonaga Okabe)	Materials Science for desirable Selection — Constructing new principles toward a sustainable development society	FY2024
Elucidating the power of life through innovative measurement and analysis techniques (Research supervisor: Noboru Mizushima)	Measuring “resilience of life” — Discovery and exploration of unknown biological response mechanisms	FY2024
Exploring quantum frontiers through quantum-classical Interdisciplinary fusion (Research supervisor: Nobuyuki Imoto)	Co-creative research for opening up the quantum frontier	FY2023
Exploring the potential of ocean blue carbon through investigation of ocean and carbon cycling interactions (Research Supervisor: Shin-ichi Ito)	Elucidation of the relationship between the ocean and CO ₂ and maximization of ocean functions	FY2023
Fundamental technology for semiconductor-device structures using nanomaterials (Research Supervisor: Riichiro Saito) (*B) ANR	Fundamental technologies for utilizing low-dimensional materials in new semiconductor device structures	FY2023
Cell Control (Research Supervisor: Atsushi Miyawaki)	Development of innovative cell manipulation technologies and elucidation of cellular regulatory mechanisms	FY2023
Creating innovative measurement and analysis systems aiming to solve social issues (Research Supervisor: Takashi Washio)	Innovation in measurement and analysis processes aimed at solving social issues	FY2022

- *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 “5.1.6 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 “5.1.5 Japan-France joint proposal for strategic research promotion project CREST with France ANR”.

○ PRESTO

Research Areas	Strategic Objectives	Since
R&D Process Innovation by AI and Robotics: Technical Foundations and Practical Applications (Research supervisor: Ichiro Takeuchi) (*A) AIP	Research innovation through autonomous-driven research systems	FY2024
Exploration of new science using mathematics to predict and control the future (Research supervisor: Zin Arai) (*A) AIP	Scientific prediction and control as the foundation of a new society and industry	FY2024
Pioneering the Synergy of Information and Physics Connected by Optics and Photonics (Research supervisor: Tetsuya Kawanishi)	Opening up technological frontiers by synergy between photonics and informatics, materials science, etc., to support a sustainable society	FY2024
Basic Research for the Development and Recycling of Materials (Research supervisor: Susumu Kitagawa)	Materials Science for desirable Selection — Constructing new principles toward a sustainable development society	FY2024
Multiscale and interdisciplinary approaches to investigate mechanisms of resilience and diversification across wide ranges of spatiotemporal metrics (Research supervisor: Tadashi Uemura)	Measuring “resilience of life” — Discovery and exploration of unknown biological response mechanisms	FY2024
Cell Control (Research Supervisor: Atsushi Miyawaki Deputy Research Supervisor: Takashi Yamamoto) (*B)	Development of innovative cell manipulation technologies and elucidation of cellular regulatory mechanisms	FY2024
Exploring quantum frontiers through quantum-classical Interdisciplinary fusion (Research supervisor: Nobuyuki Imoto)	Co-creative research for opening up the quantum frontier	FY2023
Exploration of the Blue Biosphere-Climate System towards Carbon Cycle Management (Research supervisor: Jota Kanda)	Elucidation of the relationship between the ocean and CO ₂ and maximization of ocean functions	FY2023
Nano materials for new principle devices (Research supervisor: Yoshihiro Iwasa)	Fundamental technologies for utilizing low-dimensional materials in new semiconductor device structures	FY2023
Creating Human-Centered Interaction to Solve Social Issues (Research supervisor: Hideaki Kuzuoka) (*A) AIP	Mutual development of human-computer interaction and understanding of human behavior	FY2023
Establishing the solid foundation for innovative measurement and analysis process (Research supervisor: Isao Tanaka)	Innovation in measurement and analysis processes aimed at solving social issues	FY2023

Quantum Cooperation between Materials and Information (Research supervisor: Kensuke Kobayashi)	Creation of innovative quantum control technology through integrating quantum information and quantum materials	FY2022
Co-Creation of the transformation platform technology for human and society by integration of the humanities and sciences (Research Supervisor: Satoshi Kurihara) (*A) AIP	Creation of fundamental technologies to analyze human and society for Society 5.0	FY2022
Development of Basic Material Conversion Science for global environment (Research supervisor: Ichiro Yamanaka)	Recycling technology using a material conversion system pioneered through “Convergence of Knowledge”	FY2022
Fundamental understanding of age-related organismal transformations (Program Supervisor: MOCHIZUKI Naoki) (Research Supervisor: MIURA Masayuki)	Elucidation of the mechanisms relating to changes in biological robustness associated with aging and control of age-related diseases	FY2022

*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 “5.1.6 About AIP project and AIP network laboratory” for details.

*B. In the Research Area of 'Cell Control,' it will be solicited only for the fiscal year 2024 as a joint area of CREST.

○ ACT-X

Research Areas	Strategic Objectives	Since
<p>Life and Information (Research supervisor: Yuji Sugita) (*A) AIP</p>	Research innovation through autonomous-driven research systems	FY2024
	Measuring “resilience of life” — Discovery and exploration of unknown biological response mechanisms	
	Development of innovative cell manipulation technologies and elucidation of cellular regulatory mechanisms	
	Elucidation of the mechanisms relating to changes in biological robustness associated with aging and control of age-related diseases	
	Toward scientific discoveries through DX in life science research	
	Integrated understanding of human multi-sensing networks and elucidation of their control mechanisms	
	Design of plant-derived molecules building up the foundation for plant synthetic biology	
	Functional dynamics in the cell	
<p>Cyberinfrastructure for AI empowered society (Research supervisor: Shinji Shimojo) (*A) AIP</p>	Opening up technological frontiers by synergy between photonics and informatics, materials science, etc., to support a sustainable society	FY2024
	Fundamental technologies for utilizing low-dimensional materials in new semiconductor device structures	
	System Software Technology to support Safety, Security, and Trust in the era of Society 5.0	
	Information carriers and innovative devices	
	Innovative fundamental technologies based on state-of-the-art photon science and technology	
	Fundamental technologies for next-generation IoT (Internet of	

	<p>Things) to create a future smart society</p> <p>Creating Technology for Computing Revolution for Society 5.0</p>	
<p>Innovations in Mathematical and Information Sciences to Build the Next-Generation AI (Research Supervisor: Takahiro Hara) (*A) AIP</p>	<p>Mutual development of human-computer interaction and understanding of human behavior</p> <p>Creation of fundamental technologies to analyze human and society for Society 5.0</p> <p>Trusted AI</p> <p>Creating information utilization platform by integrating mathematical and information sciences, and development to society</p> <p>Creating Technology for Computing Revolution for Society 5.0</p>	FY2023
<p>Trans-scale approach toward materials innovation (Research Supervisor: Masayuki Takeuchi)</p>	<p>Innovation in measurement and analysis processes aimed at solving social issues</p> <p>Precision control of bonding and decomposition for resource recycling</p> <p>Opening up of unexplored exploration space of materials with multi-element, composite, and metastable phases based on elements strategy</p> <p>Precise arrangement toward functionality</p> <p>Information carriers and innovative devices</p> <p>Elucidation of macroscale mechanical properties based on an understanding of nanoscale dynamics</p> <p>The creation of innovative materials and devices based on the creation of topological materials science</p>	FY2023
<p>Life Phenomena and Materials (Research Supervisor: Yoko Toyoshima)</p>	<p>Elucidation of the mechanisms relating to changes in biological robustness associated with aging and control of age-related diseases</p> <p>Integrated understanding of human multi-sensing networks</p>	FY2022

	and elucidation of their control mechanisms
	Design of plant-derived molecules building up the foundation for plant synthetic biology
	Functional dynamics in the cell
	Development of core technology platforms for understanding spatiotemporal multicellular interaction
	Establishing technologies for genome-scale DNA synthesis and functional expression, and creating technology seeds for material production and medical care
	Construction of revolutionary material development methods through fusion among experiments and theory/data science

*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 “5.1.6 About AIP project and AIP network laboratory” for details.

(2) Call and Selection Schedule

The FY2024 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>April 9th (Tue), 2024</u>	
Holding of Explanatory Meetings	Organization within April (*Scheduled to be conducted in online meetings)	
Application deadline (Deadline for submitting applications through the e-Rad system)	<u>12:00 (noon, Japan time) on Tuesday, June 4th (No delays accepted)</u>	<u>12:00 (noon, Japan time) on Tuesday, May 28th (No delays accepted)</u>
Document review period	Early June – Late July	
Notification of document review results	Early July – Late July	
Interview review period	Mid July – Early August (*Scheduled to be conducted in online meetings)	
Notification/announcement of selected Research Projects	Late September	
Research Start	October or After	

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

*The schedule of explanatory meeting, document review and the interview review 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 review are noticed by e-mail within a week after the document review 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. Applicants who have high possibility to pass the interview review will be noticed by phone or email by Early Sept. from JST to check the availability to conclude contract with your institution.

Applicants whose research proposals are regrettably rejected after the document review or interview will have the result registered on the e-Rad system within one week after the document review (no e-mail will be sent at this time). The reason for the rejection will be sent by e-mail at a later date.

(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. **Update of the application is strictly prohibited after the deadline. JST will not accept proposals for any reason if the application process has not been completed in the e-Rad system by the deadline.** JST may provide instructions **on the "Call for Research Proposals" website** in cases when it is untenable to submit the application during the application call period due to reasons such as e-Rad system trouble.

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.html>

- For information on how to apply for research proposals, please refer to the following:

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

"Regarding the Application Method through the Cross-ministerial R&D Management System (e-Rad)"

- 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.”

Table of Contents

Overview of the Call for Research Application	1
(1) Research Areas calling for Proposals	1
(2) Call and Selection Schedule	8
(3) Submission of Research Proposal	9
Chapter 1. Introduction	13
1.1 Purpose and Overview of Strategic Basic Research Programs	13
1.1.1 Purpose of the Programs	13
1.1.2 Overview of the Programs	13
1.2 For Researchers Considering Applying or Participating in the Programs	15
1.2.1 Contribution to the accomplishment of sustainable development goals (SDGs)	15
1.2.2 Promotion of Diversity	17
1.2.3 Toward the Promotion of Fair Research	20
Chapter 2 CREST Program	21
2.1 CREST	21
2.1.1 CREST Overview	21
2.1.2 CREST Research Team Organization	21
2.1.3 CREST Flow from Research proposal to Selection	22
2.2 Call and Selection of Proposals	23
2.2.1 Eligible Research Proposals	23
2.2.2 Submission Period	23
2.2.3 Research Period	23
2.2.4 Research Budgets	23
2.2.5 Number of Research Projects	24
2.2.6 Proposal Submission Requirements	24
Chapter 3 PRESTO Program	28
3.1 PRESTO	28
3.1.1 PRESTO Overview	28
3.1.2 PRESTO Research Organization	28
3.1.3 PRESTO Flow from Research proposal to Selection	29
3.2 Call and Selection of Proposals	30
3.2.1 Eligible Research Proposals	30
3.2.2 Submission Period	30
3.2.3 Research Period	30
3.2.4 Research Budgets	30
3.2.5 Number of Research Projects	30
3.2.6 Proposal Submission Requirements	31
3.2.7 Researcher Appointment Types	34
3.2.8 PRESTO startup support system	37
Chapter 4 ACT-X Program	38
4.1 ACT-X	38
4.1.1 ACT-X Overview	38
4.1.2 ACT-X Research Organization	39
4.1.3 ACT-X Flow from Research proposal to Selection	39
4.2 Call and Selection of Proposals	40
4.2.1 Eligible Research Proposals	40
4.2.2 Submission Period	40
4.2.3 Research and Development Period	40

4.2.4 Research Budgets.....	41
4.2.5 Number of Research Projects	41
4.2.6 Proposal Submission Requirements.....	41
4.2.7 Additional Expense Support as Research Assistant (RA) for ACT-X Student (Doctor / Master) Researcher.....	45
Chapter 5 Common Issues in the CREST, PRESTO, and ACT-X Programs.....	47
5.1 Common Issues in the Call and Selection of Proposals.....	47
5.1.1 Conflicts of Interest Involving Research Project Applicants and the Research Supervisor.....	47
5.1.2 Selection Method.....	47
5.1.3 Selection Perspective	51
5.1.4 Feasibility Study of Specific Research Proposal (for CREST or PRESTO Programs)	52
5.1.5 Japan-France joint call for proposal with ANR in Strategic Basic Research Program “CREST”	53
5.1.6 AIP Project and AIP Network Laboratory	53
5.2 Common Issues after Post-selection: Procedure of Research Work	53
5.2.1 Research Plan Preparation	53
5.2.2 Research Contract.....	55
5.2.3 Research Costs.....	56
5.2.4 Project Evaluations	58
5.2.5 Research Area Evaluation.....	59
5.2.6 Responsibilities of CREST PI, Co-PI, and PRESTO/ACT-X PI following Approval.....	59
5.2.7 Responsibilities of Research Institutions.....	62
Chapter 6 Policy of Research Areas Calling for Proposals.....	66
Chapter 7 Strategic Objectives.....	67
Chapter 8 Key Points in Submitting Proposals.....	68
8.1 Measures against Unreasonable Duplication and Excessive Concentration.....	68
8.2 Ensuring research integrity against new risks associated with internationalization and openness of research activities.....	71
8.3 The State of Acceptance of Applications for Other Competitive Research Funds Including Other Governmental Bodies.....	72
8.4 Measures against Inappropriate Usage of Research Funds.....	73
8.5 Measures taken for Researchers whose Application and Participation Eligibilities are Restricted in Another Competitive Research Fund System	74
8.6 Majors taken to the Violation of Related Guidelines.....	75
8.7 Carryover of Research Expenses	75
8.8 Cross-ministerial Expenses Handing Partitioned Table	75
8.9 Exchange of Direct Costs between Expense Items.....	76
8.10 Securing Research Period until the end of Fiscal Year	76
8.11 Storage of Receipts and Report of Actual Usage of Overhead Costs (Indirect Costs).....	76
8.12 Promotion on Effective Use of Research Facilities and Equipment	77
8.13 Improvement of Treatment of Doctoral Student Participants	78
8.14 Securing Independent and Stable Research Environments for Young Researchers.....	80
8.15 Promotion of Initiatives Related to Gender Equality and Human Resources Development.....	81
8.16 Self-motivated Research Activities by Young Researchers Employed to Carry Out Projects	82
8.17 Support for Diverse Career Paths for Young Researchers (for CREST).....	82
8.18 Securing management personnel such as URA	83
8.19 Security Export Control (Measures against Leakage of Technology internationally)	83
8.20 Strict Adherence to United Nations Security Council Resolution No. 2321	85
8.21 Dialogue and Collaboration with Public Stakeholders	86
8.22 Research Data Management	86
8.23 Data disclosure from NBDC.....	88
8.24 Research Support Service Partnership Certification System (A-PRAS)	88

8.25 Reform of Competitive Research Funds.....	89
8.26 Consideration on “Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards)”.....	89
8.27 Consideration on “Guidelines for Responding to Misconduct in Research”.....	90
8.28 Duty to Complete Education on Research Ethics and Compliance.....	94
8.29 Handling of Information Provided in Research Proposals, etc.....	94
8.30 Operation of R3 system and Registration of researcher information to researchmap.....	96
8.31 Patent Applications by JST.....	96
8.32 Enrolling in and Completing the Educational Program on Research Integrity.....	98
8.33 Measures for Protecting Civil Rights and Complying with Laws and Regulations.....	100
8.34 The use of JREC-IN Portal.....	101
8.35 Results of JST’s Development of Advanced Measurement and Analysis Program.....	101
Chapter 9 Limitations on Multiple Applications within the Strategic Basic Research Programs.....	103
Table 1: Possible / Impossible Applications to the CREST, PRESTO, and ACT-X Programs.....	106
Table 2: Possible / Impossible SIMULTANEOUS Applications to the CREST, PRESTO and ACT-X programs.....	108
Chapter 10 Submission via the Cross-ministerial R&D Management System (e-Rad) - Abstract.....	111
10.1 e-Rad usage notes.....	111
10.2 Application method using e-Rad.....	112
10.3 Enquiries and Service Availability.....	113
10.3.1 How to operate e-Rad.....	113
10.3.2 Where to direct questions on how to use the e-Rad system.....	113
10.3.3 Availability of e-Rad.....	114
10.4 Specific Application Method.....	114
10.4.1 Pre-registration of research institution and researcher information.....	114
10.4.2 Other specific application methods.....	115

Chapter 1. Introduction

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.

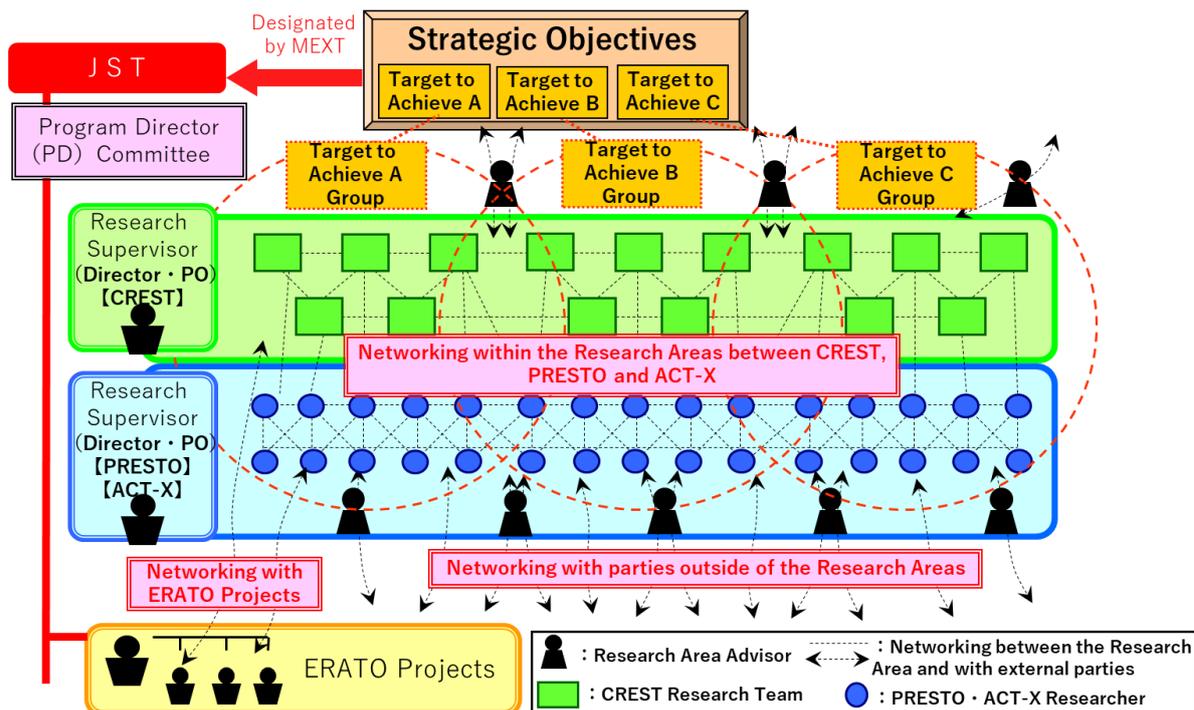
1.1.2 Overview of the Programs

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 (PO: 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 (PIs: Principal Investigators)), "PRESTO" and "ACT-X" (Research projects pursued by individual researchers (PIs: Principal Investigators)), 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 PIs and PRESTO/ACT-X PIs 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.

This project corresponds to the program listed in the Competitive Research Fund overview posted on the Cabinet Office website (<https://www8.cao.go.jp/cstp/compefund/index.html>)



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
 - Determinate 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 Contribution to the accomplishment of sustainable development goals (SDGs)

JST to contribute to the accomplishment of SDGs!

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

President, Japan Science and Technology Agency (JST)

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

 **SUSTAINABLE DEVELOPMENT GOALS**



1.2.2 Promotion of Diversity

JST Promotes Diversity!

The diversity is essential requisite for promotion of scientific and technological innovations. It is possible to open a new perspective of science and technology by the collaboration and discussion with various stakeholders having different specialties and values, irrespective of gender and nationality.

JST is, by promoting advances in diversity in its all activities in science and technology, undertaking possible problems of our future society, contributing to the strengthening of industrial competing power of Japan as well as to the enrichment of spiritual happiness of people. Our activities in this field accord with the “Sustainable Development Goals (SDGs)” agenda of the United Nations, in which goals relevant to diversity advancement are shown, including gender equality, contributing to efforts on our domestic problems but also to those on problems common to various countries.

Currently, the activity of woman is being positioned at the core of the Growth Strategy of the Japanese Government, being started as “the largest potential of Japan” in the strategy paper. Expending the participation of woman researchers in research projects is substantially important for advancing research and development, as they are a party of various researchers supporting science and technology innovations. JST is expecting that woman researchers would take this opportunity, positively and will apply to our 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.

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.

Director of Diversity and Inclusiveness
Director of the Office for Diversity and Inclusiveness
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, PRESTO, and ACT-X

<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>

○ PRESTO startup support system

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.

1.2.3 Toward the Promotion of Fair Research

Toward the Promotion of Fair Research

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

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

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

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

President, Japan Science and Technology Agency (JST)

Chapter 2 CREST Program

2.1 CREST

2.1.1 CREST Overview

Key points and characteristics of CREST are described as follows.

- a. CREST is 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 Principal Investigators (PI's) 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 (CREST Principal Investigators) 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 PIs and provide them with advice and guidance on their efforts.
 - Research project evaluation
 - Other necessary activities
- c. A PI can bring multiple researchers together in a team that is optimal for pursuing the PI's proposed research initiative. A PI 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 PI can assign multiple researchers to organize an optimal research team.

- a. The person proposing a research project, i.e. the PI, is able to organize a research team – the PI'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 "Co-PIs."
- c. When necessary for the pursuit of research, researchers, 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 PI prepares an overall research plan covering the entire period of the research project. The PI 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) Research Contract

After the project is selected, JST will, in principle, conclude Research Contract with the research institutions to which the PI and Co-PI are affiliated.

- ※ For more details, please refer to "5.2.2 Research Contract"

2.2 Call and Selection of Proposals

2.2.1 Eligible Research Proposals

- (1) Research proposals are called for the 9 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 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, April 9th to 12:00 (noon, Japan time) on Tuesday, June 4th, 2024 (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 2024 and ending in March 2030 (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”.
- * Based on the results of ex-post evaluation of the project, research projects that are expected to produce research results that contribute to the achievement of strategic goals may be granted a one-year extension of the research period and additional support for research costs.

2.2.4 Research Budgets

The budget (direct cost) 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 Research Contract, 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 CREST PI, 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 CREST PI, will be able to organize and pursue research as a researcher affiliated with a domestic Japanese research institution. (Nationality will not be considered.)
 - Researchers affiliated with a company 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 “5.2.6 Responsibilities of CREST PI, Co-PI, and PRESTO/ACT-X PI 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 “8.32 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 1, 2021).
- If the research proposal is selected, the Research Participants (PI, Co-PIs, 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.

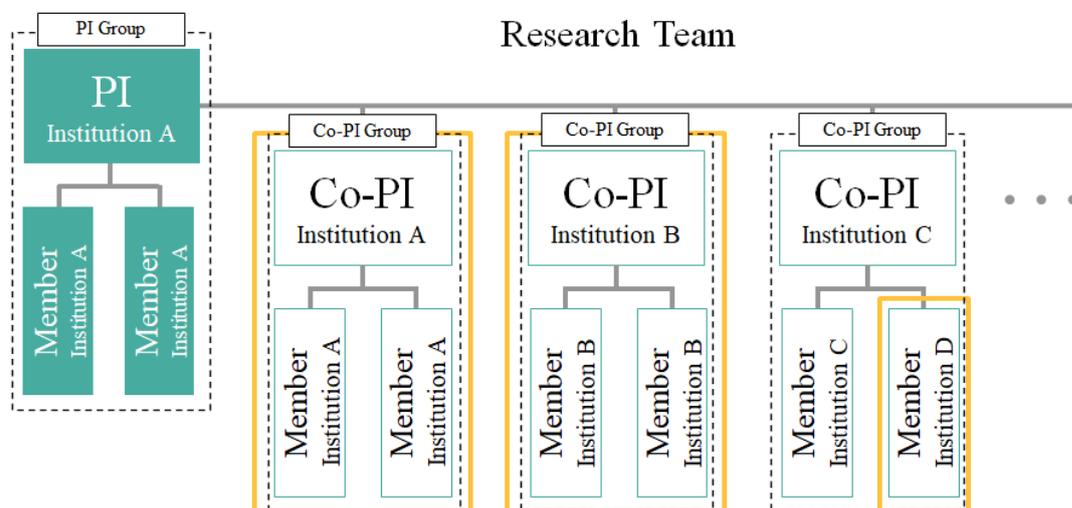
(2) Requirements for Organizing a Research Project

The following requirements must be met. Please refer to item (1) d. in “5.1.2 Selection Perspective”.

- a. A research team is optimally organized for pursuing the research initiatives of the research project applicant, who will be the CREST PI.
- 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.

*Multiple organizations (laboratories, departments, institutes, etc.) may be included in one group to address the same research subject. However, "the organization to which researchers (PI, Co-PI) presiding over the group belongs must be able to manage research expenses incurred by members belonging to different organizations." If this requirement cannot be met, researchers affiliated with different institutions should form a separate Joint Research Group (Co-PI Group). Even if the research groups belong to the same

institution, if expenses need to be estimated separately, etc., a separate Joint Research Group (Co-PI Group) will need to be established (the figure presented below shows an example of group composition). Additionally, please refer to "5.2.7 Responsibilities of Research Institutes" in the Application Guidelines.



It is possible to be a Co-PI even at the same institution which the PI group belongs to (in the case that the research budget needs to be executed separately, it is mandatory to conclude contract separately as Co-PI with JST).

The Co-PI may execute research budget at the affiliated institution which is different from the institution where the PI belongs to.

It is possible to include members from different affiliated institutions in the group. However, organization D is not allowed to use research fund (in the case that research budget needs to be executed in organization D, this personnel has to be Co-PI).

※Researchers affiliated with an overseas research institution cannot be a Co-PI. The research cost of the group belonging to an overseas institution, in principle, is not funded by JST. Therefore, it is not permissible, as a matter of principle, to appoint a researcher affiliated with an overseas research institution as a Co-PI. If JST recognizes exceptionally that it is essential for a researcher belonging to an overseas research institution to participate in the research as a Co-PI to fulfill the concept of the research, the research cost of the research group can be funded by JST. If you intend to form a research team involving an overseas research institution, describe in your research proposal the reasons why having a joint researcher from an overseas research institution is necessary (CREST - Form 4-2). Further, even in a proposal expecting research funding to the overseas institution from JST, describe a plan for cooperation with the overseas group in case where a Research Agreement between JST and the overseas institution is not concluded (CREST - Form 4-2). Based on these descriptions, the research supervisor will determine the necessity during the document screening process.

In addition, the overseas research institution must, in principle, conclude an agreement with JST based on the terms and conditions presented by JST. In some cases, the Agreement text may be adjusted for those items for which a rational reason is recognized, considering the special characteristics of the research or the like. However, the period of adjustment shall in principle be up to three months from the time JST begins negotiations. In addition, please understand that the researcher themselves may be required to make explanations to the manager in charge of the Agreement at the overseas research institution.

Please fill-in (CREST - Form 9) the contact information about the responsible person at the overseas research institution 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.

Prior Confirmation

https://www.jst.go.jp/kisoken/boshuu/teian/koubo/2024_prior_confirmation_en.docx

See also "5.2.7 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 agreement is not concluded within the period of adjustment, and the plan for cooperation is not foreseeing, we may cancel our selection.

※For the template of the research agreement 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 Institutions that cannot accomplish the tasks described in “5.2.7 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 program (individual research 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 challenging individual-type research that is only accomplished by such young researchers.
- b. The Research Supervisor manages Principal Investigators (PIs) whose applications have been accepted for PRESTO and oversees the Research Area in a research institution.

The Research Supervisor, in his/her role as director of a research institution, 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 PIs 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 PIs and provide them with advice and guidance on their efforts.
 - Research project evaluation
 - Other activities necessary to support research activities in various ways
- c. PIs, 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, it is possible to appoint research assistants to carry out research support tasks based on the instructions of the researcher 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 institutions in principle.

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 Institution**) 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 research (except Research Director (CREST PI: Principal Investigator)), It is possible to continue the CREST and ERATO research projects as other duties under certain conditions (however, the necessity for other duties will be subject to review by JST). When participating as exclusive appointment PRESTO researchers employed by JST and undertaking other additional duties, please ensure to review the requirements outlined in '3.2.7 Researcher Appointment Types'.

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) Research Contract

In advancing a research project, JST will enter into a Research Contract with the research institution where the researcher will pursue research work. In cases where there are multiple affiliated institutions, JST will enter into a Research Contract with the executing institution responsible for managing PRESTO research funds.

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

3.2 Call and Selection of Proposals

3.2.1 Eligible Research Proposals

- (1) Research proposals are called for the 15 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, April 9th to 12:00 (noon, Japan time) on Tuesday, May 28th, 2024 (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 2024 and ending in March 2028(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.”

※Based on the results of final evaluation, research project funded by PRESTO, that expects to contribute to the achievement of strategic objective, might have the potential to expand its research period by one additional year and additional research funding.

3.2.4 Research Budgets

The budget (direct cost) 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, and budget (direct cost) ranges may be set for each research area. Refer to Chapter 6 for detail budget information). In addition, JST, under Research Contract, 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 Applicants

a. A research project applicant must be a person himself/herself who is going to be a Principal Investigator (PI).

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.

※ 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.

c. Research project applicants must hold Japanese citizenship or be a researcher holding foreign nationality who will pursue research work within Japan.

- Researchers holding Japanese citizenship will pursue research in overseas:

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.

- Researchers holding foreign nationality 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.)

※ Researchers holding Japanese nationality who will perform their research work at an overseas research institution and researchers holding foreign nationality 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 a PI 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 “5.2.6 Responsibilities of CREST PI, Co-PI, and PRESTO/ACT-X PI 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 “8.32 Enrolling in and Completing the Educational Program for Research Integrity”.

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

※ The verification is required on the application information input screen within the e-Rad.

- 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 1, 2021).

- If the research proposal is accepted, the PI 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.
- g. Researchers currently conducting ACT-X research are eligible to apply for PRESTO, but if selected for PRESTO funding and proceed with the PRESTO project, the ACT-X research will conclude by the end of the fiscal year in which PRESTO is awarded (i.e. be terminated early). When applying for PRESTO during the ACT-X research period, please notify the ACT-X research supervisor and the JST personnel.

(2) Requirements for Research Institutions Conducting PRESTO Research

Research institutions conducting PRESTO research (research institutions with which the selected PIs are affiliated or the research institutions with which PIs (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 institutions that cannot accomplish the tasks described in “5.2.7 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 the document completed by the personnel department of the research institution from e-Rad when you submit your application form. Please also refer to “3.2.7 Researcher Appointment Types”.)

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

- a. Need to be a joint appointment researcher holding Japanese nationality

From the viewpoint of safety and health management, Exclusive appointment researchers are limited only from domestic research institutions, and not from overseas research institutions.

- b. Indispensable rationale for carrying out research in overseas research institution (PRESTO-Form 6)

In the case that research is carried out at an overseas research institution etc., you are requested to complete Form 6 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. Prior approval is required for the research agreement forms stipulated by JST

In principle, research institutions shall conclude collaborative research agreement with content proposed by JST. The research institutions overseas must, in principle, enter an agreement with JST based on the terms and conditions presented by JST. The adjustment period is limited to three months from the start of negotiations by JST (In some cases, the terms of the contract may be adjusted for items with rational reason, taking into consideration the characteristics of the research plan). Researcher may be required to provide explanations of the agreement to the person in charge of the contract at the overseas research institution.

For that purpose, describe the agreement information about the manager at the department or division of the research institution overseas in charge of agreement 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 collaborative research agreement is not made and the plan for cooperation cannot be foreseen, we may cancel our adoption. When it is difficult to conclude the agreement within the adjustment period after adoption, we will cancel the negotiations.

*For Overseas Research Institutions/Advance Confirmation Form Concerning Contract Conclusion
(Manager's approval in advance)

https://www.jst.go.jp/kisoken/boshuu/teian/koubo/2023_prior_confirmation_en.docx

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

※ Please refer following URL for a format of research agreement with foreign institutions.

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

Please also refer to “5.2.7 Responsibilities of Research Institutions” for the detail of conclusion of Research Contract.

3.2.7 Researcher Appointment Types

PRESTO Researchers conduct their respective PRESTO projects in either type a or b as below.

- a. Type an appointment type is for PIs conducting their PRESTO research at their affiliated institutions, (at new research institution or at new company if the affiliation changes at the start of PRESTO research). It is also possible to conduct PRESTO research at other research institutions, which is different from the affiliated institution. JST concludes PRESTO contract with the institution where researchers use PRESTO research

fund (in this case, researchers need to prepare research environment for PRESTO research and conclude contract with the institution).

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

- b. Type b appointment type is for PIs 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, based on the JST's rigorous evaluation of the necessity, JST employs individuals as "exclusive appointment PRESTO researchers". JST and the research institutions receiving the PIs 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 commissioned Research Contract based on the description in "5.2.2 Research Contract".

From the viewpoint of safety and health management, Exclusive appointment researchers are limited only from domestic research institutions, and not from overseas research institutions.

In addition, it is assumed that the research activity of a PRESTO researcher with an exclusive appointment at the host institution will be subject to a discretionary labor system.

Under certain conditions, 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). Please see the following for more information.

o"PRESTO Guideline (Handbook for Researchers) Appendix: Regarding Employment Contracts for Full-time Researchers"

https://www.jst.go.jp/kisoken/presto/manual/prestomanual_att1.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. 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: JST examination into the necessity of the exclusive appointment

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 review 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/2024supplementarydocument_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 although active job seeking at research institutions.
- (2) It must be possible that research institutions receiving Exclusive Appointment Researchers conclude a Research Contract 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 contract research expenses at the institutions.
- (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).
- (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 (8 hours) 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 institutions,

and if they are employed at a research institution, 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) should be paid from PRESTO research expenses. On the other hand, travel expenses incurred in connection with other work (including research participation in CREST / ERATO) should be paid from the research expenses of each other work.

3.2.8 PRESTO startup support system

With the aim of encouraging PRESTO researchers to become independent and to further develop their qualities as a researcher, we provide additional support for PRESTO research to build the research environment, when PRESTO researchers start their research independently at start of PRESTO research or during PRESTO research term. Researchers at overseas research institutions also apply for this support if they need to improve their research environment to conduct PRESTO research at domestic research institution. Details on how to apply and conditions for support will be announced after adoption.

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 (PIs: Principal Investigators) who meet the following criteria.

Researchers who have held a doctoral degree for less than eight years as of April 1, 2024

Researchers who earned their bachelor's degrees less than 13 years ago (as of April 1, 2024) 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 and childcare 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, PIs 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 Research Contract under the regulations of the affiliated 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 affiliated institution, first coordinate with the supervisor and the affiliated institution so that he or she have the authority to execute research and become a party to the Research Contract.
- d. The Research Supervisor oversees PIs, 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 institution." A Research Supervisor plays the role of head of this research institution 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 PI to report on and discuss the progress of the research; gives advice and/or guidance to PIs 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 PI will pursue his/her research as an individual (alone). (However, if necessary, a research assistant supervised by the PI 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. PIs are requested to conduct research at their affiliated institutions in principle. It is possible to perform research work outside of their affiliated research institution and for this case, JST will conclude contract with the institution which expends the ACT-X research budget (PIs and the affiliated institutions are requested to be approved by the research performing institution concerning these matters as prerequisite).
- d. The program is open to student PIs 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 structure.

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

(3) Research Contract

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

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

4.2 Call and Selection of Proposals

4.2.1 Eligible Research Proposals

- (1) Research proposals are called for the 4 Research Areas mentioned in the section “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 the 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, April 9th to 12:00 (noon, Japan time) on Tuesday, May 28th, 2024 (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 2024 to ending in March 2027 (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 PRIME¹ during the course of ACT-X research and your application is selected, you can conduct PRESTO or PRIME (i.e. be terminated early). If you apply for PRESTO or PRIME* during the course of ACT-X research, please notify the Research Supervisor and JST personnel.

* You cannot apply for PRESTO or PRIME at the same time as applying for ACT-X. 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 project is, in principle, 4.5 ~ 6 million yen for the research period of two years and six months or shorter (direct cost). 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 (direct cost), 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).

¹ 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 Principal Investigator (PI) 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, 2024.

- Researchers who earned their bachelor’s degrees less than 13 years ago* (as of April 1, 2024) 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 and childcare 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 PIs 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 Research Contract with JST as described in the Application Guidelines.
- The student applicant will, as “research practitioner” in the Research Contract, be the main person to conduct contract research.
- The applying student’s academic supervisor will, as “research implementation manager” in the Research Contract, 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.

*In case that the research applicant belongs to multiple institutions, need to choose ONE where the research expenses will be executed under the confirmation by the academic supervisor of the institution. JST concludes Research Contract with institutions that execute ACT-X research cost.

** 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 PIs 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 affiliated institution, first coordinate with the academic supervisor and the institution so that he or she have the authority to execute research and become a party to the Research Contract. 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 Research Contract specified in the application guidelines must be concluded between the affiliated institution and JST.
- The research applicant must conduct the contract research as the “Researcher in charge” in the Research Contract.
- The supervisor must take responsibility for the Research Contract as the “Research Leader” who oversees the contract research.
- The affiliated institution agrees that the PI and the institution will negotiate intellectual property rights resulting from research.

*In case that the research applicant belongs to multiple institutions, need to choose ONE where the research expenses will be executed under the confirmation by the academic supervisor of the institution. JST concludes Research Contract with institutions that execute ACT-X research cost.

*” 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 Research Contract. If a position is not granted, a Research Contract may not be concluded and ACT-X research may not be conducted.

f. A PI must have participated in a study at a research institution 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.

- PIs 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 PI holding foreign nationality is engaged in a study at a research institution in Japan must know the following:
 - *The PI must acquire a visa, extend the period of stay, renew the residency status, and follow any other necessary procedures independently as necessary. If the PI 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 a PI, we cannot adopt his or her proposed research and will cancel the research challenge (or take similar measures).
- g. The PI must be personally responsible for the ACT-X research challenge throughout the research period.
- * For more details, please refer to “5.2.6 Responsibilities of CREST PI, Co-PI, and PRESTO/ACT-X PI 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 “8.32 Enrolling in and Completing the Educational Program on Research Integrity”.
- i. The applicant must pledge following four items upon submission.
- ※ The verification is required on the application information input screen within the e-Rad.
- 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 1, 2021).
 - If the research proposal is accepted, the PI 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.

(2) Requirements for Research Institutions

Research institutions (with which the selected PIs are affiliated) must fully recognize that the research funds are public funding, ensure compliance with related law, and make efforts to implement the research effectively. Research institutions that cannot accomplish the tasks described in “5.2.7 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 academic 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 academic supervisor changes, or the position of the student changes during the academic year, contact JST immediately.
- Prepare and maintain evidence documents based on the Research Contract 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 (only the case that it is executed in the relevant fiscal year), but if it exceeds, the balance shall be refunded in full. Also, even the balance is 10% or less of the additional support, and if the balance is not diverted to the budget of the main task, it shall be refunded in full.
- If the expenditure exceeds the amount of additional support, please understand that the excess amount will be borne by the affiliated institution.
- Since this is a single-year budget support for the first fiscal year only, it cannot be carried over to the next fiscal year. If wish to continue to receive additional support from the following fiscal year, please apply for additional support for the relevant fiscal year when formulating the research plan for each fiscal year.
- Share the details of the application for additional support to the student, the contract and get the confirmation about the application detail from 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 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 PI is a student, we will provide additional support for his / her own RA expenses. If the ACT-X PI is a non-student including a specially-appointed assistant professor, we will not be able to support their labor costs. If the ACT-X PI is a non-student, refer to "5.2.3 Research Costs".

(Reference)

The Integrated Innovation Strategy 2023, p. 22 (Cabinet decision of June 9, 2023)

“Improvement of the situation facing researchers, such as young researchers, including the decline in students entering doctoral programs (18.7% in 1981, 16.7% in 2000, 9.9% in 2022), the unstable employment of young researchers, and the decline in research time spent by researchers.”

https://www8.cao.go.jp/cstp/tougosenryaku/togo2022_honbun.pdf

The Comprehensive Package for Strengthening Research Capabilities and Supporting Young Researchers (January 23, 2020, Council for Science, Technology and Innovation) p.12

“Training and securing excellent doctoral students and researchers through strategic management that maximizes various financial resources.”

<https://www8.cao.go.jp/cstp/package/wakate/wakatepackage.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

Previously, research applicants who had a conflict of interest with the research supervisor were excluded from the selection process. However, from FY2024, this measure will be abolished, and they will be included in the selection process with conflict of interest management.

5.1.2 Selection Method

For the schedule of Research Proposal Selection, please refer to “Overview of the Call for Research Application” section at the beginning of this document.

(1) Selection Process

The Research Supervisor of each CREST, PRESTO, and ACT-X Research Area conducts the document- and interview review of Research Proposals submitted by applicants, 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 will be conducted before the document review, considering the total number of submitted Research Proposals and other factors. In the preliminary selection, each submitted Research Proposal is reviewed from the viewpoint whether Research Proposals are suitable for the CREST or PRESTO program and 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 review 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 review selection if necessary. In addition, CREST Research Directors (PI: Principal Investigators), CREST Co-PIs (Co-Principal Investigators), and PRESTO/ACT-X Individual Researchers (PI: Principal Investigators), 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 announce 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. In addition, it should be noted that

evaluators, including the research supervisor, research area advisors, and external evaluators, cannot participate as Co-PIs or a research participants in proposals submitted to the relevant research area.

① Persons Involved in the Selection Process

To ensure fair and transparent evaluations, the following persons, including the research supervisor and research area advisors, from item a to f described as follows who have conflicts of interest with an ‘applicant’ (CREST PI and Co-PI or PRESTO/ACT-X PI) may be excluded from the selection process. If you have any suspicion about conflicts of interest, please describe it specifically in the Notice section of the application forms (CREST: Form 9, PREST: Form 6, ACT-X: Form 6).

- a. Persons who are relatives of applicants.
- b. Persons who are affiliated with the same department or specialty at a university to which the applicants are affiliated, who are board members or considered affiliated members of the same university or managed corporation, or who act as the represent of the university. Here, “same department or specialty” means a one rank above group of the smallest research unit.
- c. Persons who are affiliated with the same or group company with which applicants are affiliated.
- d. Persons who are conducting a close collaboration in a research work with applicants. (Examples are persons who are conducting a joint research project or have co-authored a paper with applicants, a researcher pursuing the same research objectives as applicants, a participant or a Co-PI of the research project, others, being recognized those practically affiliated with same research group.)
- e. Persons in a close teacher-student relationship, or in a direct employer-employee relationship.
- f. Persons in relationships of direct competition with applicants.
- g. Persons in other relationships judged by JST to representing conflicts of interest with applicants.

② Conflict of Interest with Research Director (CREST PI)

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 institutions. Unambiguously, Research Director’s affiliated institution would be in charge to manage the conflict of interest of Research Director, additionally, JST as 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 CREST PI, is assigned as a Co-PI, it will be strictly judged from the viewpoint of requirement, rationality, and relevance. In this case, declare that a researcher who belongs to the related organization of the CREST PI, is included as a Co-PI in the “special remarks (CREST: Form 9)”.

Additional documents may be requested to judge conflicts of interest with the PI.

③ Conflict of Interest with JST

It is regarded as conflicts of interest on the JST side (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 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 9; PRESTO: Form 6; ACT-X: Form 6)” 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 JST side. 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.

※Please refer to the website below for information on JST's portfolio companies.

Note: Companies that have terminated their investment are not subject to conflict-of-interest management and you do not need to report.

Support Program for the Creation of New Businesses with Equity Participation (SUCCESS) Investment Results

<https://www.jst.go.jp/entre/en/result.html>

※The base date for declaration is starting application call date. Please report on companies whose investment from JST has been publicly announced. When the companies have already received an offer of investment but have not yet made a public announcement, declaration is not required for confidentiality reasons within JST.

Please refer to the following website for JST's announcement of investment.

Support Program for New Business Creation with Equity Participation (SUCCESS) What's New

<https://www.jst.go.jp/entre/news.html>

(3) Interview Reviews and Notification of Selection Results

- a. Research project applicants, whose research proposals have cleared the document review and are nominated for the interview review, will be notified their success by email. The notice also provides the information on the overview of the interview review, its schedule, supplemental documents requested to be additionally submitted (please make sure the email address registered in the e-Rad system is accessible). In the interview review, the applicants may be requested to submit a financial statement if they or their Co-PI are affiliated with a profit-making institution. The schedule of the interview review 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 review session, each applicant is requested to give a presentation explaining the idea and scope of his/her research proposal. Japanese is the official language in principle, however if impossible, English can be used as an alternative for the purpose in the CREST, PRESTO and ACT-X interview review.
- c. JST will contact applicants, whose research proposals are likely to be selected with high possibility as a result of the interview review, to confirm the availability of conditions necessary for concluding a Research Contract between their affiliated research institution and JST, by Early September, 2024 (by e-mail or phone). Applicants, whose research proposals are selected for adoption, will be notified of their success by e-mail, and be provided with the procedure of starting their research.
- d. Applicants whose research proposals are regrettably rejected after the document review or interview will have the result registered on the e-Rad system within one week after the document review (no e-mail will be sent at this time). The reason for the rejection will be sent by e-mail at a later date.

*In principle, we do not issue documents regarding the results.

*E-mail will be sent to the address registered in e-Rad, so please set your e-mail address so that it can be received.

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. must be met.)

CREST	PRESTO	ACT-X
<i>a.</i> Contributes to the achievement of a strategic objective and consistent with the research area purpose.		
<i>b.</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>b.</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>b.</i> Proposals that are original, challenging, innovative, and expected to attain high-quality basic research by international standards over the coming decades and generate new values necessary for scientific and technological innovations.
<i>c.</i> Meets all the following conditions about the research concept. -Promising preliminary results have been obtained for pursuing the research project. - The research proposals are clearly specifying the background of the research project (its necessity and importance) and the research initiative and plan, separately. -Research budget planning is necessary and sufficient for pursuing the research project.	<i>c.</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>d.</i> Meets all the following conditions about the research organization. -The research project applicant has produced research results for achieving the research objectives. -The research project applicant will exercise strong leadership and bear responsibility for the entire research team, and, if there will be Co-PI, they are essential for to the pursuit of the research project,	<i>d.</i> Meets all the following conditions. - The originality of the research project is based on the applicant's own idea. - Promising preliminary results have been obtained for pursuing the research	<i>d.</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

<p>and a collaboration framework sufficient for enabling significant contributions toward the achievement of research objectives is provided.</p> <p>-The research institutions with which the research project applicant and Co-PIs are affiliated have R&D capabilities and other technical foundations in the subject research field.</p>	<p>project. Some clues for realizing the research project objective have already been obtained.</p> <p>-Costs of the research project is suitable in size as that of Individual based Research.</p>	<p>that of Individual based Research.</p>
--	---	---

Supplement

1. Regarding item *a*. “Research Area purpose,” please refer to the “Overview” and the “Research Supervisor’s Policy on Call 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 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 will give limited financial support, the Research Supervisor may request a Feasibility Study of Specific Research for the applicant, in addition to and apart from the regular accepted proposals process.
- (2) The applicant may conduct his/her Feasibility Study with a agreeing to re-submit the proposal in the next fiscal year to the same Research Area, The re-submitted proposal is treated along with other research proposals without preference.
- (3) Applicant cannot be applied for a Feasibility Study of Specific Research directly.

(4) In case of a Feasibility Study, the name of applicant and other information will **be posted on JST website** in the same manner as other adopted applicants. In further, the applicant will be required to enroll in and complete a program on research ethics education. (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.) For more detailed information, Please refer to “8.32 Enrolling in and Completing the Educational Program on Research Integrity.”

5.1.5 Japan-France joint call for proposal with 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 conducted by Japanese and French researchers within the framework of the JST-CREST program. In the call for proposals of CREST in FY2024, in addition to regular research proposals in 1 Research Areas described in the call for research proposals of the existing research areas, 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-en.html>

5.1.6 AIP Project and AIP Network Laboratory

AIP project (Advance Integrated Intelligence Platform Project) has been promoted by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) since FY2016. This program promote innovative fundamental research activities in the field of AI, Big Data, IoT, and cyber security in the AIP Center at RIKEN. as well as AI-related research support at universities and research institutions on nationwide through JST funding. JST facilitate inter-disciplinary through the operation of the AIP network laboratory, to encourage the original ideas of young researchers and support challenging research subjects in AI, Big Data, and etc. that will open the way to new innovations.

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

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

5.2.1 Research Plan Preparation

- a. Once the proposal is selected, the CREST PIs, PRESTO PIs and ACT-X PIs 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 for ACT-X is two and a half years. The research plan describes the research budget, and, in CREST program, also describes 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 instruction, when necessary, based on information the Research Supervisor gains through, for example, the project selection process, discussions with CREST PIs, PRESTO PIs or ACT-X PIs, 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.
- d. 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 Research Contract

- a. Once a research project is selected, JST, in principle, will enter concluding a Research Contract with the research institutions which the CREST PI, Co-PI, and PRESTO/ACT-X PI are affiliated.
- b. If it is not possible to conclude Research Contract 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 the financial situation is extremely unstable, the research may not be carried out at the institutions in question. For more details, please refer to "5.2.7 Responsibilities of Research Institutions."
- c. In principle, patents and other intellectual property rights resulting from research shall, in accordance with Research Contract terms, reside with research institutions under the condition that the research institutions abide by the items provided in Article 17 (Japanese version of the Bayh-Dole Act) of the Industrial Technology Enhancement Act.
- d. A "joint research agreement" will be concluded with the overseas research institution (In instances where it is deemed essential by the research supervisor for the realization of the research concept, researchers affiliated with foreign research institutions may exceptionally participate as co-PI). Intellectual property rights will be shared equally with JST on the condition that the costs required for application, maintenance, etc. are borne equally by both parties. (If these terms and conditions cannot be agreed upon, the intellectual property rights will belong to JST.) For details on other responsibilities, please refer to "5.2.7 (2) When the Research Organization is an Overseas Organization.

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

<https://www.jst.go.jp/contract/download/2024/2024kisokens201keiya.pdf>

[Important Note]

When a PI is employed by JST as part of an exclusive appointment, the standard Research Contract as well as job assignment contract is concluded between JST and the research institution for receiving the researcher.

* Regarding appointment type of PRESTO PIs, please refer to “ 3.2.7 Researcher Appointment Types”.

5.2.3 Research Costs

JST pays the costs to the research institution based on the research contract, that have concluded with JST. The costs consist of the research cost (the direct cost) and the indirect cost 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 Research Contract, 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 institutions, 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.

- Universities, etc.: <https://www.jst.go.jp/contract/kisoken/2024/kisokena.html>

- Companies, etc.: <https://www.jst.go.jp/contract/kisoken/2024/kisokenc.html>

(1) Research Budget (Direct Costs)

Research budget (direct costs) are directly related to and required for pursuing the subject research.

- a. Commodities: Costs for purchasing new facilities *1, equipment, consumable supplies, etc.
- b. Travel Expenses: Expenses for travel by the CREST PI, Co-PI, PRESTO/ACT-X PI and other Research Participants (not PI nor Co-PI) who listed on the research plan.
- c. Personnel Expenses: Salaries for Research Participants (not PI, Co-PI (*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.(*2).

*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 “8.12 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 institutions, public interest corporations, etc. accepted by JST) and companies, etc. (mainly research institutions 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), if 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)" (Revised on November 13, 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)" (Revised on June 3, 2022)

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"" (Revised on June 3, 2022)

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 program only) and consider "Improvement of Treatment of Doctoral Course (later stage) Students." For more details, please refer to "[5.2.6 Responsibilities of CREST PIs, Co-PIs, and PRESTO/ACT-X PIs](#)", "[8.13 Improvement of Treatment of Doctoral Student Participants](#)", "[8.16 Self-motivated Research Activities by Young Researchers Employed to Carry Out Projects](#)", and "[8.17 Support for Diverse Career Paths for Young Researchers \(for CREST\)](#)".

NOTE: The PRESTO and ACT-X Principal Investigator 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 PRESTO/ACT-X PI), 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 as 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 on April 20, 2001, and revised on May 5, 2023), a policy on use, etc. shall be created and shall be systematically and properly executed to ensure that use of indirect expense be transparent.

(3) 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 institutions.

5.2.4 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 completion 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 completion evaluation is going to be conducted immediately after or before the conclusion of research activities, with due consideration of the nature and progress stage. In addition, if recognized in the post-evaluation, a one-year extension is possible.
- (2) In PRESTO, the Research Supervisor conducts the completion 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, with due consideration of the nature and progress stage. In addition, if recognized in the post-evaluation, a one-year extension is possible.
- (3) In ACT-X, the Research Supervisor conducts the completion 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, with due consideration of the nature and progress stage. 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 years 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, based on 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. Based on the follow-up investigation, external experts assigned by JST will conduct a following-up evaluation of the research project.

5.2.5 Research Area Evaluation

Apart from the research project evaluations mentioned in “5.2.4 Project Evaluations,” Research Area Evaluation will be conducted to evaluate Research Areas and the Research Supervisors. The Research Area evaluations include interim and 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.

5.2.6 Responsibilities of CREST PI, Co-PI, and PRESTO/ACT-X PI following Approval

- (1) CREST PIs, Co-PIs, and PRESTO/ACT-X PIs 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 Educational Program on Research Integrity and let them to enroll in and complete the program. For details, refer to “8.32 Enrolling in and Completing the Educational Program on Research Integrity”.
 - d. Note that failure to complete the Educational Program on Research Integrity above in c. would result in the suspension of the research budget until the completion has been confirmed by JST.

- (3) The CREST PIs, the Co-PIs, and other Research Participants of CREST, the PRESTO/ACT-X PIs, and research assistants of PRESTO and ACT-X, and student of ACT-X , in cases who is not a party to the Research Contract and does not have operating authority for research budget due to the regulations of their affiliated institution, the researcher’s academic supervisor (see“4.2.6 Proposal Submission Requirements”) will required to complete the Educational Program on Research Integrity to prevent research misconduct (fabrication, falsification, and/or plagiarism). For details, refer to “8.32 Enrolling in and Completing the Educational Program on Research Integrity”.
- (4) Pursuing and Managing Research
- a. CREST PIs are taken responsibility for the whole research team, include the preparation and implementation of his/her research plan.
 - b. PRESTO and ACT-X PIs are responsible for arranging research conducting locations and environments necessary for pursuing their research. If serious weaknesses in theses are found, the research project may be cancelled.
 - c. CREST PIs and PRESTO/ACT-X PIs 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. To ensure appropriate research promotion and evaluation, it is a principle that the CREST PIs as well as PRESTO and ACT-X individual researchers, cannot engage in collaborative research with the research supervisor and the research advisors on the adopted projects. Should a new conflict of interest arise due to collaborations other than those related to the adopted projects, it is imperative to conduct conflict of interest management and report to JST in advance. For details on the management, please refer to "5.1.2(2) Conflicts of Interest Involving Research Project Applicants and the Research Supervisor."
- (5) CREST PIs, together with research institutions, shall appropriately manage (expenditure planning, monitoring, etc.) overall research budgets for research teams. CREST Co-PIs, together with research institutions, shall appropriately manage (expenditure planning, monitoring, etc.) research budgets for their own research team. PRESTO and ACT-X PIs 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 PI is a person who is not a party to the Research Contract and does not have operating authority for research budget due to the regulations of their affiliated institution, the Researcher’s academic supervisor other related person is asked to bear responsibility as the “research implementation manager” in the Research Contract with JST (see“4.2.6 Proposal Submission

Requirements).”. 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 PIs and Co-PIs must be mindful of research and working environments and conditions for their own group’s Research Participants, especially for research staff and others whose employment is being funded by CREST research funds.

(7) In CREST Program, the PI and Co-PI should actively support young doctoral researcher. In the research project selection interview, research project applicants will be asked about plans² 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. In addition, in interim and completion evaluations, questions will be asked regarding the status of career path assistance efforts and the post-completion career paths of young doctoral researcher. Responses to these questions will be positively evaluated.

※ Please refer to the details in “8.17 Support for Diverse Career Paths for Young Researchers (for CREST)”

(8) In PRESTO and ACT-X Program PIs 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 PI considering the whole picture and provides advice and guidance on the content and approach to individual research through site visits and other occasions.

(9) Handling of Research Results

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. Furthermore, we kindly request your cooperation in facilitating the open access of research papers and related documents (*).

* https://www.jst.go.jp/pr/intro/openscience/policy_openscience_r4.pdf

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 to report research results.

² Part of the activities in these plans can be included in research efforts.

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 Research Contract terms, by the research institutions which researchers are affiliated.

(10) Researchers are requested to actively engage citizens in discussions of science and technology to promote citizens' understanding and going to supporting of science and technology. Especially in CREST Program, efforts on the engagement of citizens will be positively evaluated at both interim and completion evaluations of research project.

※Please refer to the guideline details in “8.21 Dialogue and Collaboration with Public Stakeholders.”

(11) Researchers shall abide by Research Contract 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, researchers names, research budget information, and other required information to the Cross-ministerial R&D Management System (e-Rad) and the Government Research and Development Database. Principal Investigators and others are going to be requested to provide these types of information in this respect. (“8.29 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.

5.2.7 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 implementing research. Researchers are requested to obtain a consent of pursuing the tasks from their implementing research institutions before conducting research.

(1) For Domestic Institutions

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

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

- Universities, etc.: <https://www.jst.go.jp/contract/kisoken/2024/kisokena.html>

- Companies, etc.: <https://www.jst.go.jp/contract/kisoken/2024/kisokenc.html>

- 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 cooperative in various investigations into their system implementation and other related matters (8.26 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_21.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, are responsible for responding to various investigations relating to the construction of administration based on the guideline (8.27 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 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, 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 regarding 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 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 obligated to responding 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 national budget, in the case of contract cancellation and contract research expenses reduction measures may be taken on the contract period. 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 institutions 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 contract and rescind the research funds.)
- j. As for prevent misconduct in research and development activities, JST has required researchers, who were newly selected in research projects and affiliated with a research institution, should enroll in and complete the educational program on research integrity (The procedures required for enrollment will be handled by JST). Research institutions are responsible for their enrollment and completion of the program by the relevant persons without fail.

In the case if the relevant researchers of the institution fail to complete the educational program as stipulated despite repeated reminders by JST, JST will suspending research fund partially or entirely. consequently, the research institution should halt all use of the research funds and not to restart the use until further notice from JST is given.

- k. For not to interfere the Research implementing and utilizing the Research achievement, Research institutions should take necessary measures to conclude research contracts with other institutions as for collaborative Research, regarding the handling of intellectual property rights and non-disclosure

agreement. Which should base on the Research contract between JST and Research implementing institutions.

1. Research institutions are requested to take appropriate measures to fulfill their accountability, paying full attention to economics, efficiency, effectiveness, legitimacy, and accuracy, since the national funds as a source of funding shall be used for entrusted research expenses. In addition, research institutions should make sure working on planned execution and 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 must conclude a Research Agreement using the "Joint Research Agreement" model form with the contents 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). In further, research institutions are responsible for properly implementing the Research in accordance with the research agreement and research plan. When an agreement 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 agreement is available to the following website.

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

- b. Research institutions are responsible for properly disbursing and managing research expenses based on the research agreement and JST designates guiding principles, etc. 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. For more details of the terms and conditions, please refer to the latest "Collaborative Research Agreement" form.

※ From the viewpoint of Security Export Control, JST may not conclude joint Collaborative Research Agreement with such institutions as announced in the "Foreign User List"³ (or "End User List") by Japanese Ministry of Economy, Trade, and Industry (METI).

※ ACT-X cannot conduct research in overseas institutions.

³ METI has issued the End User List, providing exporters with information on foreign entities for which concern cannot be eliminated regarding involvement in activities such as the development of weapons of mass destruction (WMDs) and other items, for the purpose of enhancing the effectiveness of the catch-all control* on cargos and other loads relating to WMDs and other items. <https://www.meti.go.jp/policy/anpo/20221104-3.pdf>

Chapter 6 Policy of Research Areas Calling for Proposals

As for Research Areas calling for Research Proposals in fiscal year 2024, 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>

Chapter 7 Strategic Objectives

As for the titles of Strategic Objectives relevant to Research Areas calling for Research Proposals, please refer to “Overview of the Call for Research Application” in the beginning 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>

Chapter 8 Key Points in Submitting Proposals

8.1 Measures against Unreasonable Duplication and Excessive Concentration

○ Measures against “Unreasonable Duplication”

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

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

At the application stage for this program there are no limitations regarding the submission of proposals to other competitive research funding programs or other research funds. If a research project is selected by another competitive research funding program or other research funds, report this promptly to JST at the contact address given at the end of this document (rp-info@jst.go.jp). If there is any omission in this report, there is a possibility that the research theme will be rejected in this program.

* Excludes basic expenses or internal funds that are allocated within the institution to which the company belongs, commercial activities stipulated by the Commercial Code, and financing through direct or indirect financing.

○ Measures against “Excessive Concentration”

Even if the content of the research proposed for this program differs from the content of another research being carried out under another competitive research funding program or other research funds, if that the overall research funding allocated to the same researcher or research group (hereinafter referred to as “researchers”) in

relevant fiscal year exceeds an amount that can be utilized effectively and efficiently and can be used within the research period, and in this program, research projects may be rejected in accordance with the degree of the following cases. In the case that an excessive amount of research funding is being received in light of the capabilities of the researchers and the research methods being used, etc.

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

For this reason, if you submit proposals to other competitive research 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 to eliminate Unreasonable Duplication and Excessive Concentration

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

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

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

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

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

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

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

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

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

Regarding information on the acceptance status of facilities / equipment, etc. that are not used for the research project of the application but are used for the research that is separately engaged, can the research project be sufficiently carried out without unreasonable duplication or excessive concentration. From the viewpoint of

confirming, in addition to the pledge, JST may ask the affiliated institution to submit the status of grasping and managing the information.

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

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

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

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

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

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

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

8.3 The State of Acceptance of Applications for Other Competitive Research 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 research 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 research 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 FY2024 or FY2025, in view of the purpose of eliminating unreasonable duplication and excessive concentration, generally, 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.

8.4 Measures against Inappropriate Usage of Research Funds

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

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

(i) Measures to Cancel Contracts

The Research 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 Eligibility⁴

Restriction measures set out in the table below, depending on the levels of inappropriate usage, are taken against the application and participation eligibility of researchers⁵ (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 in charge of competitive research funds including of other ministries, 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, 4)	
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
		③ 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 research		5 years	

⁴ “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.

⁵ “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.

fund or etc. and a researcher who was 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

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

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

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

*4: In principle, the application restriction period will be calculated from the following the fiscal year in which the research funds are refunded after the unauthorized use is recognized. Also ineligible in the fiscal year in which inappropriate usage of research funds are identified.

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

Among those who are involved in an inappropriate usage of the program’s research funds or those who failed to fulfill 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 research institution, name of program, fiscal year of research, details of misconduct, details of research costs) will be disclosed in principle by JST. At the same time, information of outline of their misconduct will be disclosed in principle by MEXT.

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

* Please refer to the following URL for the outline of the fraudulent cases currently announced on the website of MEXT.

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

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

Researchers on whom restriction is imposed for the reason of inappropriate usage of research expenses in another competitive research fund system⁵, including those from other ministries and agencies, are not eligible to apply to or participate in this program while their qualifications are restricted for application in the competitive research fund system.

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

8.6 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.

8.7 Carryover of Research Expenses

Making a carryover of research expenses until the end of the following fiscal year at the maximum in the case of a multi-year contracts that continues through the following year, a carryover 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 competitive 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 "6th Science and Technology / Innovation Basic Plan", the "Integrated Innovation Strategy 2023" 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 and paperwork procedure to be checked.

In addition, based on the "Common Guidelines for the Development of a Competitive Research Funding System from the Perspectives of Gender Equality and Human Resources Development " (February 8, 2023 agreement by the Liaison Committee on Competitive Research Funding), this project makes it possible to use direct costs to pay for expenses related to promoting the development of science and engineering human resources who will lead the next generation.

- "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)" (revised on November 13, 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)" (revised on June 3, 2022)
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"" (revised on June 3, 2022)
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 conditions. Exchanges 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

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

(1) The research institutions 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 institution should make efforts to organize necessary systems at the institution 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 Storage of Receipts and Report of Actual Usage of Overhead Costs (Indirect Costs)

In using overhead costs, research institutions shall, under the responsibility of the head of the research institution, create a policy regarding use, execute it systematically and appropriately in accordance with the policy, and ensure transparency of usage through explanations to researchers. Institutions are required to manage the costs appropriately and store the receipts as evidence for the appropriate use of overhead costs for five years counted from the next fiscal year from which the project ended.

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

How to use e-Rad system is described on user manual of e-Rad is provided on the website

(https://www.e-rad.go.jp/manual/for_organ.html).

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

Due to the revision of the guideline: "Guidelines regarding the execution of overhead cost on competitive research funds" (April 20, 2001, Agreement between the institutions allocating funds and the relevant supervising government bodies), it is now possible for incorporated administrative agency whose funds are funded by funds or management expense grant to use the funds for the replacement of depreciable assets based on accounting standards.

8.12 Promotion on Effective Use of Research Facilities and Equipment

According to "Reform on Competitive Research Funds for Sustainable Creation of Research Achievements (Midterm Summary)" (Examination Meeting on the Reform of Competitive Funds, June 24, 2015), it is considered appropriate that facilities/equipment which are comparatively large in scale and have high general applicability should in principle be shared, under the assumption that the original research objectives are sufficiently accomplished.

In addition, the "6th Science and Technology Innovation Basic Plan" (Cabinet decision on March 26, 2021) and the "Integrated Innovation Strategy 2023" (Cabinet decision on June 9, 2023) request the promotion on the maintenance and sharing of research equipment and facilities, to establish a system for introducing, updating and utilizing research equipment (core facility), and to formulate and publish a sharing policy.

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

Based on the above, for research facilities/equipment which are purchased by this program, and particularly for large scale, general purpose items, positive efforts for sharing should be made, including sharing within the scope that does hinder the progress of the applicable Research Project, use of research facilities and equipment purchased with other research funds, and purchase and sharing by combining multiple research funds, within the scope of the management conditions of other research funds and in accordance with the sharing system in the affiliated institution or organization. It is important to examine the sharing of research facilities due to strengthen research performance. Please note that it is necessary to strike a balance between management as shared equipment/facilities and accomplishment of the research purpose of the applicable Research Project. Moreover, participants are asked to promote the sharing of research facilities and equipment beyond the framework of individual research organizations and institutions by positively cooperating with the "Inter-University Network for Common Utilization of Research Equipment," which was implemented for the purpose

of the mutual use of facilities in the National Institutions of Natural Sciences, and the sharing system constructed thanks to the "Equipment Support Center Maintenance Business New Shared System Introduction Support Program" and the "New Shared System Introduction Core Facility Construction Support Program" in each university.

- "Reform on the Competitive Research Funds for Sustainable Creation of Research Achievements (Midterm Summary)" (Examination Meeting on the Reform of Competitive Funds, June 24, 2015), in Japanese.
https://www.mext.go.jp/b_menu/shingi/chousa/shinkou/039/gaiyou/1359306.htm
- "6th Science and Technology / Innovation Basic Plan" (March 26, 2021, Cabinet decision), in Japanese.
<https://www8.cao.go.jp/cstp/kihonkeikaku/6honbun.pdf>
- "Integrated Innovation Strategy 2023" (June 9, 2023, Cabinet decision), in Japanese.
https://www8.cao.go.jp/cstp/tougosenryaku/togo2023_honbun.pdf
- Unification of usage rule of competitive research funds
(revised on May 24, 2020, Agreement between the institutions allocating funds and the relevant supervising government bodies), in Japanese.
https://www8.cao.go.jp/cstp/compefund/toitsu_rule_r50524.pdf
- "The Purchase of Shared Facilities Using Multiple Research Fund Systems (Use of Combined Total)"
(September 10, 2020, Agreement between the institutions allocating funds and the relevant supervising government bodies)
https://www.mext.go.jp/content/20200910-mxt_sinkou02-100001873.pdf
- "Guidelines for Promotion of Sharing of Research Facilities" (March 2022), in Japanese.
https://www.mext.go.jp/content/20220329-mxt_kibanken01-000021605_2.pdf
- Inter-University Network for Common Utilization of Research Equipment, in Japanese.
<https://chem-eqnet.ims.ac.jp/>
- New shared system introduction support program, in Japanese
<https://www.jst.go.jp/shincho/program/sinkyoyo.html>
- Core facility construction support program, in Japanese
<https://www.jst.go.jp/shincho/program/corefacility.html>

8.13 Improvement of Treatment of Doctoral Student Participants

In the "Science and Technology / Innovation Basic Plan" (decided by the Cabinet on March 26, 2021), financial support for graduate students, especially doctoral students (second semester), to attract excellent students and

working people from inside and outside of Japan. The aim is to triple the number of doctoral students who receive living expenses equivalent to the conventional amount (equivalent to about 30% of students enrolled in the doctoral program receiving living expenses equivalent). Set as a numerical target, "RA, etc. in each business and university, etc., in order to promote salary payment at an appropriate level as a research assistant (RA) to doctoral students from competitive research expenses and joint research expenses. We will formulate rules for the expenditure of RA expenses related to employment and rewards, and will implement them sequentially from FY2021. " There is a need to expand employment and improve treatment of doctoral students as research assistant (RA) in universities and research institutions.

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 considers the costs of salary for the doctoral students mentioned above.

(Points to remember)

- With regard to the salary level equivalent to living expenses, the "6th Science and Technology /Innovation Basic Plan" assumes that 1.8 million yen or more 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 approximately 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 hour⁶, 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.

8.14 Securing Independent and Stable Research Environments for Young Researchers

The "Guideline for Employment and Upbringing of Postdoctoral Researcher" (December 3, 2020, Council for Science and Technology, Committee on Human Resources) point out that "there are many postdoctoral fellows whose tenure is less than three years, however, too short employment period can be a hindrance a major obstruction to career development, and from this view point, it is necessary to secure a term that allows them to settle down and concentrate on their research activities for a certain period of time.", and "after working as a postdoctoral fellow at one or two places, considering that it is desirable to proceed to the next step in about 3 to 7 years until the mid-30s, it is hoped that each post will have a term of 3 to 5 years."

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

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

⁶ The standard pays for a specially-appointed assistant professor employed with competitive research funds is considered to be around 2,000 yen to 2,500 yen per hour, taking average amounts of pay into account. (Calculated based on the median monthly salary (between 400,000 and 450,000 Yen) of specially-appointed assistant professors according to the Survey on Instructor Employment at Research Universities (Preliminary Report) published August 2020 divided by the number of working hours per day (between 7 hours 45 minutes and 8 hours) for actual days worked (between 19 and 20 days), excepting weekends and holidays, and multiplying by 0.8 in light of their status as doctoral students.)

8.15 Promotion of Initiatives Related to Gender Equality and Human Resources Development

The "Science, Technology, and Innovation Basic Plan " (March 26, 2021 decision by the Cabinet Office), the "Basic Plan for Gender Equality " (December 25, 2021 decision by the Cabinet Office) and the "Policy Package on Education and Human Resources Development for the Realization of Society 5.0 " (June 2, 2020 decision by the Council for Science, Technology, and Innovation) aim to create a research environment that makes it easy for both men and women to continue their research activities even when life events such as childbirth, childcare, and nursing care occur, and to promote the appointment of talented female researchers as project managers. Furthermore, through efforts to convey the appeal of science and technology to female junior high and high school students, as well as to their parents and teachers, and by increasing the proportion of women who enter master's and doctoral programs primarily in science and engineering, we aim to overcome the low rate of women entering doctoral programs in the natural sciences and to increase the number of potential knowledge bearers in Japan.

If gender differences are not taken into account in research and development processes that should take such gender differences into account, then there is a risk of inappropriate effects/impacts at the social implementation stage, and as such there is a need to conduct research and technology development that gives appropriate consideration to gender differences such as differences in physique, body structure, and body function.

Based on these considerations, this project will also give consideration to initiatives aimed at promoting the active participation of female researchers and to expanding the base of human resources who will be responsible for science and technology in the future.

- Please give due consideration to the fact that, if research and development is conducted without taking into account gender differences such as differences in physique, body structure, and body function, then such research and development may have inappropriate effects/impacts on society when the research results are implemented into society.
- Direct expenses can be used to pay for expenses related to online classes in science, physics, and chemistry at elementary, junior high, and high schools, as well as in-person lectures given by individuals with a science or mathematics-related doctoral degree.
- Direct expenses can be used to pay for the cost of distributing research results on social media as content that can be easily understood by junior high and high school students.
- The results of the above two outreach activities will be included in the research report and will be subject to positive evaluation. The above two outreach activities can also be included in research plans and will be subject to positive evaluation during the review process.

8.16 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" (Revised on December 18, 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.

- 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" (revised on June 3, 2022)
https://www.jst.go.jp/kisoken/crest/manual/senjukanwa_houshin.pdf
- Agreement between the institutions allocating funds and the relevant supervising government bodies related to the "Self-motivated Research Activities by Young Researchers Employed to Carry Out Projects (contact)" (revised on December 18, 2020)
<https://www8.cao.go.jp/cstp/compefund/jisshishishin.pdf>

8.17 Support for Diverse Career Paths for Young Researchers (for CREST)

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

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

Institutions should also consider using indirect funds in these efforts.

See also “5.2.6 Responsibilities of CREST PI, Co-PI, and PRESTO/ACT-X PI following Approval

8.18 Securing management personnel such as URA

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

Based on these, when management personnel such as URA employed by research institutions or newly hired are engaged in the management of research programs of this project, the research institution is not limited to this project, but other management personnel. Please try to secure a fixed term as much as possible by utilizing indirect expenses of external funds, basic expenses, donations, etc. At the same time, as support for securing a career path for such management personnel, we would like to ask for active efforts such as having them participate in URA training, etc. Also, please consider using indirect expenses for the project.

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

Many cutting-edge technologies are being researched at the 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.

* 1 Currently, Japan's security export control system consists of two main systems that require the permission from the Minister of Economy, Trade and Industry, based on international agreements, etc. (1)"list regulation" when trying to export (provide) cargo (technology) with specifications and functions above a

certain level, such as carbon fiber and numerically controlled machine tools, etc. (2)” catch-all regulation” when certain requirements (use requirements / consumer requirements or inform requirements) are met.

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

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

Based on the Foreign Exchange Law, it is necessary to establish a security trade management system when exporting list-regulated cargo or providing list-regulated technology to foreign countries (* 3). Therefore, by the time the contract is concluded, it will be confirmed whether the project plans to provide cargo and technology that are subject to the provide restrictions of the Foreign Exchange Law, and if there is an intention to export, it will be confirmed via e-Rad whether or not there is a management system. It may be. If you are willing to provide and do not have a management system, we request that you establish a system by the earlier of provide or the end of this project. The confirmation status may be reported at the request of the Ministry of Economy, Trade and Industry. In addition, if it is found that the technology acquired through this project violates the regulations related to the Foreign Exchange Law, the contract may be canceled in whole or in part (* 4).

* 3 Exporters, etc. are obliged to comply with the "Exporter Compliance Standards" stipulated in Article 55-10, Paragraph 1 of the Foreign Exchange Law. In addition, the security trade management system here is based on the management system in the "Exporter Compliance Standards", and by appropriately exporting list-

regulated cargo or providing list-regulated technology to foreign countries. The internal control system of an organization to prevent illegal exports.

* 4 The above paragraph will apply after implementing the modifications related to security trade control requirements.

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

- Ministry of Economy, Trade and Industry: Security Trade Management (general)

<https://www.meti.go.jp/policy/anpo/>

- Ministry of Economy, Trade and Industry: Handbook of Security Trade Management

<https://www.meti.go.jp/policy/anpo/seminer/shiryo/handbook.pdf>

- Ministry of Economy, Trade and Industry: Guidance on sensitive technology management related to security trade (for universities and research institutions)

https://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03.pdf

- Center for Information on Security Trade Information

<https://www.cistec.or.jp/export/jisyukanri/modelcp/modelcp.html>

- Information about Transactions or Acts that Provide Technologies that Require Permission Pursuant to the Provisions of the Foreign Exchange and Foreign Trade Act Article 25 Paragraph 1 or the Foreign Exchange Order Article 17 Paragraph 2

https://www.meti.go.jp/policy/anpo/law_document/tutatu/t10kaisei/ekimu__tutatu.pdf

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

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

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

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

Ministry of Foreign Affairs of Japan: United Nations Security Council Resolution No. 2321, Japanese translation (Ministry of Foreign Affairs Notice No. 463 (issued on December 9, 2016))

<https://www.mofa.go.jp/mofaj/files/000211409.pdf>

8.21 Dialogue and Collaboration with Public Stakeholders

In "Promotion of" Science and Technology Dialogue with the People "(Basic Initiative Policy)" (decided by the Minister of State for Science and Technology Policy and a member of the Diet on June 19, 2010), the excellent results of science and technology are constantly being achieved. To create and further develop Japan's science and technology, it is essential to return the results of science and technology to the people, gain the understanding and support of the people, and promote science and technology together. It has been. If the research results are selected for this open call and receive an annual allocation of 30 million yen or more per year, public lectures on research results, symposiums, continuous distribution of research results on the Internet, and various stakeholders We ask that you actively engage in "scientific and technical dialogue with the people" such as round table conferences that involve the public.

- Promotion of "Science / Technology Dialogue with the People" (Basic Initiative Policy)

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

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

- Science Agora

<https://www.jst.go.jp/sis/scienceagora/>

- The National Museum of Emerging Science and Innovation (Miraikan)

<https://www.miraikan.jst.go.jp/>

8.22 Research Data Management

JST announced the basic policy regarding the handling of research results for the promotion of open science in April 2017 and revised it in April 2022. This policy stipulates the basic concept of making research papers, open access and storing, managing, and disclosing research data in the research activities of this project.

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

See below for more information.

- JST's basic policy regarding the handling of research results for the promotion of open science
https://www.jst.go.jp/pr/intro/openscience/policy_openscience_r4.pdf
- JST Basic Policy Operation Guidelines for Handling Research Results to Promote Open Science
https://www.jst.go.jp/pr/intro/openscience/guideline_openscience_r4.pdf

(* 1) Items that should be included in the DMP and metadata items are described in this guideline.

○ Management and Utilization of Research Data Funded by Public Funds (Cabinet Office)

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

- Basic Concept for the Management and Utilization of Research Data Funded by Public Funds

(Council for Science, Technology and Innovation)

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

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

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

In addition, JST analyzes statistical data such as the number of data modules, data types, disclosure types, storage locations, etc. for the purpose of grasping the contents of the description, supporting researchers, and reflecting (revising) in the basic policy. JST assumes that the analyzed statistical data will be disclosed, but will not disclose individual personal data or data whose names are known.

* For life science data, please refer to "8.23 Data Disclosure from NBDC".

8.23 Data disclosure from NBDC

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

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

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

No.	Type of Data	Place of Disclosure	URL
1.	Overview of databases constructed for disclosure	Integbio Database Catalog	https://integbio.jp/dbcatalog/?lang=en
2.	Recorded data in the constructed database for public use	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/

8.24 Research Support Service Partnership Certification System (A-PRAS)

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) established the "Research Support Service Partnership Certification System (A-PRAS)" in FY 2019, aiming to improve the research environment for researchers and accelerate the promotion of science and technology and creation of innovation in Japan. Among the research support services provided by private business operators, those that meet certain requirements are accredited as "Research Support Service Partnership" by MEXT, and as of April 2023, eight services had been accredited. Please take advantage of our wide variety of services, including searching for joint researchers, publicizing and commercializing research results, and procuring research funds and research equipment.

Details of each certified service can be found on the following MEXT web page.

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

- "Development of Science and Technology Innovation Policy for Knowledge-Intensive Value Creation-Toward a World-Leading Country by Realizing Society 5.0-Final Summary" (March 26, 2nd year of Reiwa Science and Technology Council Comprehensive Policy Special Committee)

https://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu22/houkoku/1422095_00001.htm

8.25 Reform of Competitive Research Funds

At the present time, the government has received the "6th Science and Technology Innovation Basic Plan" and "Integrated Innovation Strategy 2023" and is holding discussions about improving systems related to competitive research funds 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.

8.26 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).⁷ There is a need for research institutions, having implemented a system for managing and auditing public research funds, to take responsibility for making every effort to properly disburse the contract research funds in line with the aforementioned guidelines. If the Ministry of Education, Culture, Sports, Science and Technology (MEXT) decides that the system of a research institution for managing and auditing is insufficient, based on an investigation according to the said guidelines, measures such as reduction of indirect costs of competitive research funding could be taken on the said institution.

(2) Response and 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 organization⁸ must prepare for a management and auditing system for research expenses based on the said guidelines and submit a “Self-evaluation Checklist for Implementation of Proper Systems” (“checklist,” hereinafter), which is a report on the situation (research undertaking is not approved unless the checklist is submitted).

Accordingly, starting on April 1, 2024, you must review the content of the following website and submit it.

⁷ Please refer to the following URL for the details of the “Guidelines for the Management and Audit of Public Research Funds in Research Institutions (Practice Standards).”

https://www.mext.go.jp/a_menu/kansa/houkoku/1343904_21.htm

⁸ In the case of “CREST,” the research organizations include not only those with which a CREST PI is affiliated but also those with which Co-PIs are affiliated to whom research expenses are distributed.

Please note that contracts for research institutions that have submitted the FY2023 version of the checklist will be approved irrespective of the above, but you must also submit the FY2024 version of the checklist by December 1, 2024.

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

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

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

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

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

8.27 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”⁹).

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 research 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 organizations¹⁰ must submit “a checklist related to the approach, based on ‘Guidelines for responding to misconduct in research’” (hereinafter, “checklist of

⁹ Refer to the following webpage for the “Guidelines for Responding to Misconduct in Research” (in Japanese)

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

¹⁰ In the case of “CREST,” the research organizations include not only those with which PI is affiliated but also those of Co-PIs 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.

inappropriate research conduct”). (The contract is not approved unless a checklist of inappropriate research conduct is submitted).

Accordingly, starting on April 1, 2024, you must review the content of the website, download the FY2024 version of the Research Misconduct Checklist, fill it out, and submit it (upload it) via e-Rad to the Research Integrity Promotion Office, Research Environment Division, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports of the MEXT.

Institutions that are not receiving competitive funds from the MEXT or administrative agencies under the jurisdiction of the MEXT do not have to submit a Research Misconduct Checklist.

See the website of the MEXT below for details of the method for Research Misconduct Checklist submission (The following web page is about the research misconduct checklist for FY2023, so please refer to the web page of the Ministry of Education, Culture, Sports, Science and Technology in FY2024.).

https://www.mext.go.jp/a_menu/jinzai/fusei/1420301_00001.html

*Note 1: A perfect environment for using e-Rad is necessary for Research Misconduct Checklist submission. Also be aware that registering a research institution with e-Rad normally takes approximately two weeks. See the URL below in addition to the URL given above for details of the procedures related to the use of e-Rad.

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

*Note 2: Institutions that conduct research activities that receive budgetary allocations or measures from MEXT or from independent administrative agencies under its jurisdiction must submit a research misconduct checklist by September 30 each year (or the immediately preceding business day if September 30 falls on a Saturday, Sunday, or holiday).

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

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

(i) Measures to Cancel the Contract

In the case of specific misconduct (fabrication, falsification, and plagiarism) is identified of research of the program, the Research Contract 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 contract 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 other competitive research fund systems (referred to as “competitive research 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 research fund systems (referred to as “competitive research 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 other competitive fund systems related to the Ministry of Education, Culture, Sport, Science and Technology and to other ministries.

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

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. (*)	
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 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	

* In general, the ineligible period is calculated from the year following the year in which it was determined that there was a specific misconduct activity. Participation qualifications is also restricted for the relevant fiscal year in which specific misconduct activities are recognized.

(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 research fund related to MEXT; management grants to national university corporations, inter-university research institution corporations and independent administrative agencies under MEXT; base expenses including private school subsidies; or competitive fund systems related to other ministries during the period the restriction is in effect.

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

(iv) Public Announcement of Misconduct

In principle, JST makes a public announcement regarding the outline of specific misconduct in research activities of this project (project name, affiliation, contents of misconduct, and measures taken). At the same time, information of outline of their misconduct will be disclosed in principle by MEXT.

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

8.28 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 Research Contract after the selection of a proposed research project, it is necessary for all researchers participating in the research project, including the CREST PIs and PRESTO/ACT-X PIs, to receive training on research ethics education and compliance education and submit a document to confirm their understanding of the contents of the training.

8.29 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” 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” 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

<https://elaws.e-gov.go.jp/document?lawid=415AC0000000057>

- 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 research 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 to the National Institution of Biomedical Research and Innovation.

- Handling of Information on the e-Rad system

The Information on e-Rad (name of funding program, name of research project, name of affiliated research institution, name of Principal Investigator (PI), budget amount, implementation period, and research project summary) regarding each selected proposal 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). This information will be announced on the web page of this program, JST project data base (<https://projectdb.jst.go.jp/>), and “GRANTS” (<https://grants.jst.go.jp/>) after the adoption of the project. Additionally, the research results reports submitted by researchers may be published in the JST project data base.

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

The "6th Science, Technology and Innovation Basic Plan" (decided by the Cabinet on March 26, 3rd year of the Ordinance) states that EBPM for policy making based on objective evidence will be thoroughly implemented in science and technology and innovation administration. The registered information is used for appropriate evaluation of research and development with national funds, effective and efficient comprehensive strategy, planning of resource allocation policy, etc.

Information on research achievements and accounting and use of indirect expenses related to the competitive research 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.

8.30 Operation of R3 system and Registration of researcher information to researchmap

For JST Strategic Basic Research Programs (CREST, PRESTO, ACT-X), researchers are required to submit research plans and reports of research results using JST's research project management system (R3; R-Cube*2), which is linked to JST's researcher information database (researchmap*1), and community function of researchmap will be used in project management, such as distribution of various files and event announcements. Since registration in researchmap of Researchers, PIs and Co-PIs 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 before 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 a Japanese researcher information database which has more than 300 thousand researcher registrations, and registered achievement information can also be administrated and disclosed. 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 the same achievements can be registered many times in various application forms and databases. It also leads to efficiency, such as eliminating the need to do it.

(※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>

8.31 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.

○Patent Application Nondisclosure System

In addition to granting patent rights, the patent system uniformly discloses inventions for which a patent has been applied for, thereby promoting further technological improvements and eliminating duplicate research and development. On the other hand, before the establishment of the patent application non-disclosure system, Japan's patent system was such that, once a patent application had been filed, even if the invention would not be spread or proliferated due to security reasons, the contents of the application were made public after 1 year and 6 months had passed. However, in other countries' patent systems, it was common for patent applications related to such inventions to be kept private. As such, in Japan as well, the "Act on the Promotion of Ensuring National Security through Integrated Implementation of Economic Measures (Act No. 43 of 2022)" (hereinafter referred to as the "Economic Security Promotion Act") established a patent application non-disclosure system that, in certain cases, suspends procedures such as the disclosure of patent applications and takes measures to prevent the spread or proliferation of patent application.

Under the Economic Security Promotion Act, there may be cases where the invention described in the specifications of a patent application is likely to cause a situation in which the security of the state and its citizens may be harmed by external acts that are carried out if the information is made public. In these cases, through a procedure called "Preservation Designation," in addition to withholding information about patent proceedings such as the publication of patent applications and decisions to either grant or refuse a patent, during this withholding period in principle there is a prohibition on the general disclosure of the content of the invention (including publication) and on the implementation of inventions that are likely to lead to similar results. Furthermore, evasion of this system by withdrawal of the patent application is also prohibited. Please comply with national laws, guidelines, and notices, etc., including with the Economic Security Promotion Act.

Details of the patent application non-disclosure system are available on the Cabinet Office website.

Cabinet Office: Patent application nondisclosure system

https://www.cao.go.jp/keizai_anzen_hosho/patent.html

8.32 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 Co-PI 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 “Chapter 10 Submission via the Cross-ministerial R&D Management System (e-Rad) – Abstract”.

(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 at the time of application submission.

(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 at the time of application submission.

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. No cost is needed for completing the program, which will take one to two hours to complete.

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

■ 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

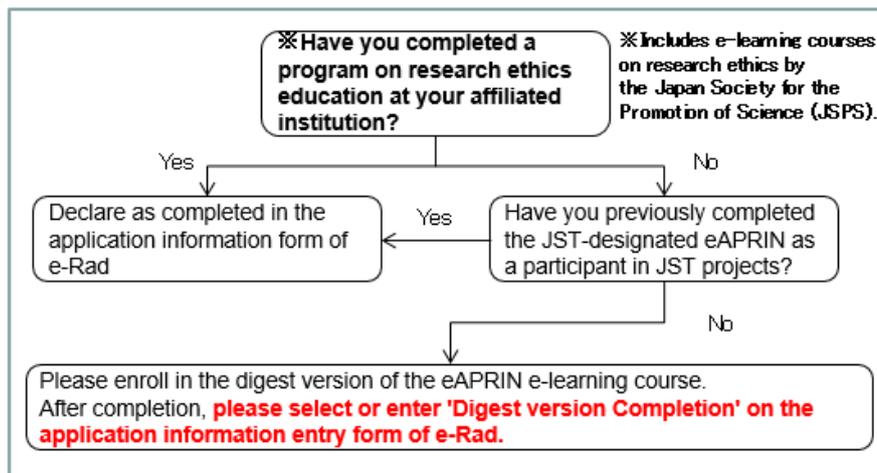
■ Contact for consultation on the call for application

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.

Program Enrollment and Completion Declaration Flowchart for Research Ethics Education



JST requires researchers participating in CREST, PRESTO, or ACT-X to take one of the following programs or educational materials.

- eAprin, provided by the Association for the Promotion of Research Integrity
- eL CoRE, provided by the Japan Society for the Promotion of Science
- For the Sound Development of Science -The Attitude of a Conscientious Scientist-, provided by the Japan Society for the Promotion of Science
- Responsible Research Practices to Learn from Cases – A Casebook to Instill Awareness and Learning –, provided by the Japan Agency for Medical Research and Development
- A Compendium of Near-Miss Incidents Related to Research Integrity, provided by the Japan Agency for Medical Research and Development
- Other research ethics education programs or training that the research institution with which you are affiliated determines to be equivalent to the above. (If deemed equivalent by your research institution, then the Gaps in Ethics video teaching materials provided by JST will also be accepted.)

If it is difficult for you to take a research ethics education program at the research institution with which you are affiliated, such as because your research institution does not have a program on research ethics education, then you can take the eAPRIN (e-learning materials operated by the Association for the Promotion of Research Integrity (APRIN)) course through JST. The requirements for next year will be similar, so accepted proposals will, in principle, require all research participants (including principle co-researchers from CREST) to take one of the aforementioned JST-designated research ethics education programs or teaching materials. (However, this does not apply for cases in which the individual has already completed the designated unit of eAPRIN (formerly CITI) by taking one of the aforementioned JST-designated research ethics education programs or teaching materials at their research institution or via a JST initiative.)

8.33 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.

Regarding 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):

<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.

(Examples of laws, regulations, guidelines, etc., to be observed)

The "Guidelines for Responding to Misconduct in Research" (adopted by the Minister of Education, Culture, Sports, Science and Technology on August 26, 2014; including subsequent amendments).

The "Guidelines for the Management and Audit of Public Research Funds in Research Institutions (practice standards)," enacted on February 15, 2007, and revised on February 18, 2014, by the Minister of Education, Culture, Sports, Science and Technology. (Including subsequent amendments)

Regarding security export control (measures against technology leakage to outside of Japan), in addition to the Foreign Exchange and Foreign Trade Act (Foreign Exchange Act), laws, ordinances, ministerial ordinances, notifications, etc., established by each ministry and agency are used to ensure that the results of cutting-edge research are not passed on to developers of weapons of mass destruction, terrorist groups, or other parties that may engage in activities of concern, such as military diversion of technology.

The following is a list of the laws and regulations of the relevant country regarding conducting actual research activities overseas (including taking biological resources out of the country) or joint research with overseas research institutions.

The following is a summary of the laws, regulations, ministerial ordinances, ethical guidelines, etc., established by each ministry and agency regarding bioethics and safety assurance for life science research.

8.34 The use of JREC-IN Portal

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

At present, the database holds more than 20,000 pieces of information on needed human resources from universities, public research organizations, and private business firms, in addition to more than 140,000 registered users. Furthermore, use of the Portal's web job application functionality enables the simplification of application documentation management while reducing the burden on job applicants. 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 is linked to researchmap, may 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.

8.35 Results of JST's Development of 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 advanced measurement and analysis systems, which aims to establish and develop R&D platforms, 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】

IST 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

プログラムの概要 経歴経路 **開発成果DB** 開発成果の活用・普及促進 公衆案内 評価結果

ISTトップ > 先端計測分析技術・機器開発プログラム

事業紹介
▶ 事業紹介パンフレット (PDF(5.9MB))
▶ 事業紹介リーフレット (PDF(1.5MB))

開発成果の活用・普及促進
▶ 実施している課題HPリンク一覧

**要素技術タイプ
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、最先端の研究もものづくり現場でのニーズに応えるため、将来の創造的・効率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。

開発成果のご案内
開発成果 pick up!
高速度ビデオカメラ Vision
高速度ビデオカメラ Vision

【先端計測分析技術・機器開発プログラム】 **開発成果** IST 科学技術振興機構

ISTトップ > 先端計測分析技術・機器開発プログラム > 開発成果のご案内

開発成果のご案内

先端計測分析技術・機器開発プログラムでは、既にいくつかの課題から実用化に利用できる成果を輩出しています。実用化された成果をランダムに検索することができ、一部は動画でも確認することができます。それぞれの製品の購入については「開発成果のデータベース」を参照してください。

また、これまで開発してきた成果のうち、まだ実用化に至っていないが、将来有望な成果も成果集として公開しています。最新の成果集については、このページをご覧ください。

開発成果 成果集PDF

これまでの開発成果がPDFでご覧いただけます(マウスオーバーすると詳細が表示されます)。

成果集PDF

ASTROCAM 7.0 0.0HS
最新鋭超広角高速度カメラ

この成果を詳しく見る

成果集PDF

放射線計測検出器 成果集

先端計測分析技術で最先端技術に貢献する
Contributing through Innovation

成果集2015

これまで開発してきた成果や有望な成果を「成果集」として公開しています。最新の成果集はこちらをご覧ください。(成果集2015)

TOPICS

製品化した成果について
先端計測分析技術・機器開発プログラムで製品化...詳しく見る

開発成果の一覧

成果名	開発種別名	分野	製品
放射線計測検出器検定標準装置	放射線検出器標準装置の開発	放射線計測	
結晶構造解析装置/結晶構造解析ソフトウェアシステム Nexera UC	質量分析用結晶構造解析装置の開発	放射線計測	
放射線分析用中性子線標準装置 (フレック状 伝送線)	放射線検出器標準装置の開発	放射線計測	
高分解能電圧プローブ測定機SPH-8000PM	大気中・液中で動作する原子分解能分析装置	放射線計測	
青色カルシウムプローブ「CaTH-3™/CaTH-2™ AM」	次世代型蛍光プローブの開発を目的とした新規蛍光灯の開発	環境計測	

実用化された研究開発ツールを検索できます

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 2024, 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.”

- (1) An applicant may submit only one Research Proposal to one of Research Areas of the CREST, PRESTO, ACT-X, AMED-CREST^{*11}, or PRIME^{*12} program which calls for application in FY2024.

* As an exceptional measure, multiple applications are possible in some areas. Please refer to (6) below.

- (2) In the following cases, the application will be restricted.
 - Applicants in the position of a to g currently, are restricted to apply for CREST, PRESTO, or ACT-X as a research proposer. See the details in chapter 9, Table 1: Possible / Impossible Applications to the CREST, PRESTO, and ACT-X Programs.
 - If applicants are in the position of h currently, or a to g in the past, they cannot apply for "ACT-X". (Those currently in position of h may apply for CREST and PRESTO, but ACT-X research will finish at the end of the academic year in which they are selected for CREST or PRESTO (i.e. be terminated early)).
- a. Research Supervisor or Deputy Research Supervisor of ERATO in the Strategic Basic Research Program

^{*1}. 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 ²PRIME (solo type) is a program in which Research and Development Directors promote research on their own.

- b. PI of CREST in the Strategic Basic Research Program
 - c. PI of PRESTO in the Strategic Basic Research Program
 - d. PI of AIP acceleration subject in the Strategic Basic Research Program
 - e. Research and Development Director of AMED-CREST in the Strategic Basic Research Program (Advanced Research and Development Programs for Medical Innovation)
 - f. Research and Development Director of PRIME in the Strategic Basic Research Program (Advanced Research and Development Programs for Medical Innovation)
 - g. Research and Development Director of FORCE, LEAP in the Strategic Basic Research Program (Advanced Research and Development Programs for Medical Innovation)
 - h. PI of ACT-X in the Strategic Basic Research Program
- (3) In the CREST program, the Co-PI 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 PI to Co-PI, 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 PI, Co-PI or other Research Participants while he/she has made another Research Proposal application as Co-PI 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 Co-PI 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) From the FY2022, it is possible to be a PRESTO or ACT-X PI and a CREST Co-PI at the same time. Similar measures will be put in place for PRIME PIs, AMED-CREST, FORCE, and LEAP Research

and Development Sharers, and ERATO Group Leaders. For details, please refer to “Table 1: Possible / Impossible Applications to the CREST, PRESTO, and ACT-X Programs” and “Table 2: Possible / Impossible SIMULTANEOUS Applications to the CREST, PRESTO and ACT-X programs”.

※In the event that both individual research and Co-PI research are conducted simultaneously, if it is deemed to involve unreasonable duplication or excessive concentration of research funds, appropriate measures may be taken as needed. Please refer to “chapter 8.1 Measures against Unreasonable Duplication and Excessive Concentration”.

- (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 FY2024, 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, 2025). This coordination includes the research applicant, and in the case of a CREST application, Co-PI or Other Research Participants.

※It is possible to apply concurrently for the FOREST Program and as a CREST PI or a PRESTO researcher (PI), however it is not possible to implement both simultaneously. Concurrent applications and overlapping implementation are possible for CREST co-PI and ACT-X PI.

※Even if you are currently implementing the FOREST Program as a PI (FOREST researcher), you can apply as a CREST PI or a PRESTO PI in this call for proposals. Please check with FOREST Program regarding research topics of the program after being selected for CREST or Specially Promoted research.

- (6) Regarding PRESTO "Fundamental understanding of age-related organismal transformations" research area, as an exceptional measure, it is possible to submit duplicate application with AMED's PRIME "Bridging the fundamental mechanism of aging and the effective treatment of age-related disease associated with impaired functional system" R&D project, which is established under the same Strategic Objective.

* Only duplicate applications for "PRESTO and PRIME" in the above areas are accepted. However, the proposal will be a proposal to each corporation using the forms specified by JST and his AMED respectively. Proposals made in the wrong format will not be accepted. In addition, you will not be selected for two areas at the same time.

* Applicants who will apply multiple programs will be required to submit their status of participation and application to the 3 programs to the JST (please refer to the guidance of each research area for the format and method of submission).

[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 PI		Applying for CREST Co-PI		Applying for CREST Research Participant (not PI nor Co-PI)		Applying for PRESTO PI		Applying for ACT-X PI	
		Applying for CREST PI		Applying for CREST Co-PI		Applying for CREST Research Participant (not PI nor Co-PI)		Applying for PRESTO PI		Applying for ACT-X PI	
Current Position in ongoing Research Project		Applying for CREST PI		Applying for CREST Co-PI		Applying for CREST Research Participant (not PI nor Co-PI)		Applying for PRESTO PI		Applying for ACT-X PI	
CREST	PI	× ^{Note3} (refer to (2) of page 103)	○ ^{Note1}	○ ^{Note1}	○ ^{Note1}	○ ^{Note1}	× ^{Note3,4} (refer to (2) of page 103)	× (refer to (2) of page 103)			
	Co-PI	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1,2} (refer to (4) of page 104)	○ ^{Note1} (refer to (4) of page 104)	○ ^{Note1} (refer to (4) of page 104)			
	Other Research Participant (not PI nor Co-PI)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1,2}	○ ^{Note1}	○ ^{Note1}			
PRESTO	PI	× ^{Note3,4} (refer to (2) of page 103)	○ ^{Note1} (refer to (4) of page 104)	○ ^{Note1}	○ ^{Note1}	× ^{Note3} (refer to (2) of page 103)	× (refer to (2) of page 103)				
ACT-X	PI	○ ^{note5} (refer to (2) of page 103)	○ ^{Note1} (refer to (4) of page 104)	○ ^{Note1}	○ ^{Note1}	○ ^{note5} (refer to (2) of page 102)	× ^{Note3} (refer to (2) of page 101)				
AIP acceleration subject	PI	× ^{note3} (refer to (2) of page 103)	○ ^{Note1}	○ ^{Note1}	○ ^{Note1}	○ ^{Note1}	× ^{Note3,4} (refer to (2) of page 103)	× (refer to (2) of page 103)			
	Co-PI	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1,2} (refer to (4) of page 104)	○ ^{Note1} (refer to (4) of page 104)	○ ^{Note1} (refer to (4) of page 104)			
	Other Research Participant (not PI nor Co-PI)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1} (refer to (3)c of page 104)	○ ^{Note1,2}	○ ^{Note1}	○ ^{Note1}			

AMED-CREST, FORCE, LEAP	Research and Development Director	× Note3,4 (refer to (2) of page 103)	○ Note1	○ Note1	× Note3,4 (refer to (2) of page 103)	× (refer to (2) of page 103)
	Research and Development Sharer	Possible Note1 (refer to (3)c of page 104)	Possible Note1 (refer to (3)c of page 104)	Possible Note1 (refer to (3)c of page 104)	Possible Note1 (refer to (4) of page 104)	Possible Note1 (refer to (4) of page 104)
	Other Research Participant (not Director nor Sharer)	Possible Note1 (refer to (3)c of page 104)	Possible Note1 (refer to (3)c of page 104)	Possible Note1 (refer to (3)c of page 104)	Possible Note1	Possible Note1
AMED-PRIME	Research and Development Director	× Note3,4 (refer to (2) of page 103)	○ Note1 (refer to (4) of page 104)	○ Note1	× Note3,4 (refer to (2) of page 103)	× (refer to (2) of page 103)
ERATO	Research Supervisor Deputy Research Supervisor	× Note3,4 (refer to (2) of page 103)	○ Note1	○ Note1	× Note3,4 (refer to (2) of page 103)	×(refer to (2) of page 103)
	Group Leader	○ Note1 (refer to (3)c of page 104)	○ Note1 (refer to (3)c of pages 104)	○ Note1 (refer to (3)c of page 104)	○ Note1 (refer to (4) of page 104)	○ Note1 (refer to (4) of page 104)
	Contract Developer	○ Note1 (refer to (3)c of page 104)	○ Note1 (refer to (3)c of pages 104)	○ Note1 (refer to (3)c of page 104)	○ Note1	○ Note1
	Research Participant	○ Note1 (refer to (3)c of page 104)	○ Note1 (refer to (3)c of pages 104)	○ Note1 (refer to (3)c of page 104)	○ Note1	○ Note1
<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 the researcher wishes to participate CREST and also continue PRESTO PI (JST employed), JST will conduct a review.</p> <p>Note 3) If the research period concludes in the FY 2024, applications are permissible.</p> <p>Note 4) If the research period concludes in the FY2025 or later, it 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) During the implementation of ACT-X, if you apply for PRESTO, PRIME, CREST, or AMED-CREST, please notify the Research Supervisor and JST accordingly (if selected, the ACT-X will be terminated, resulting in early completion (i.e. be terminated early)). It is possible to apply for the ACT-X Acceleration Phase concurrently, but you cannot undertake both simultaneously (once a decision is made for either, adjustments will be made to withdraw the other proposal).</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 PI	Applying For CREST Co-PI	Applying for CREST Other Research Participant (not PI nor Co-PI)	Applying for PRESTO PI	Applying for ACT-X PI
Type of Application in Research Proposal A						
CREST	PI	× (refer to (1) of page 103)	<input type="radio"/> ^{Note1} (refer to (3) a, b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	×(refer to (1) of page 103)	×(refer to (1) of pages 103)
	Co-PI	<input type="radio"/> ^{Note1} (refer to (3)a, b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)
	Other Research Participant (not PI nor Co-PI)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note1}
	Feasibility Study of Specific Research Proposal of the previous fiscal year (PI)	Only assigned research area can be applied. (refer to 5.1.4 (2) of page 52)	<input type="radio"/> ^{Note1} (refer to (3)a, b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	×(refer to (1) of page 103)	×(refer to (1) of pages 103)
PRESTO	PI	×(refer to (1) of page 103)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)	<input type="radio"/> ^{Note1}	×(refer to (1) of page 103)	× (refer to (1) of page 103)
	Feasibility Study of Specific Research Proposal of the previous fiscal year	×(refer to (1) of page 103)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)	<input type="radio"/> ^{Note1}	Only assigned research area can be applied. (refer to 5.1.4 (2) of page 52)	×(refer to (1) of page 103)
ACT-X	PI	×(refer to (1) of Page 103)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)	<input type="radio"/> ^{Note1}	× (refer to (1) of pages 103)	×(refer to (1) of page 103)

AMED-CREST	Research and Development Director	×(refer to (1) of page 103)	<input type="radio"/> ^{Note1} (refer to (3) a, b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	×(refer to (1) of page 103)	× (refer to (1) of pages 103)
	Research and Development Sharer	Possible ^{Note1} (refer to (3)a, b of page 104)	Possible ^{Note1} (refer to (3)b of page 104)	Possible ^{Note1} (refer to (3)b of page 104)	Possible ^{Note1} (refer to (4) of page 104)	Possible ^{Note1} (refer to (4) of page 104)
	Other Research Participant (not Director nor Sharer)	Possible ^{Note1} (refer to (3)b of page 104)	Possible ^{Note1} (refer to (3)b of page 104)	Possible ^{Note1} (refer to (3)b of page 104)	Possible ^{Note1}	Possible ^{Note1}
AMED-PRIME	Research and Development Director	×(refer to (1) of page 103)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)	<input type="radio"/> ^{Note1}	× ^{Note3} (refer to (1) of page 103)	×(refer to (1) of pages 103)
ERATO	Research Supervisor Deputy Research Supervisor	<input type="radio"/> ^{Note2}	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note2}	<input type="radio"/> ^{Note2}
	Group Leader	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)
	Research Participant	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note1}
	Feasibility Study of Specific Research Proposal of the previous fiscal year	<input type="radio"/> ^{Note2}	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note2}	<input type="radio"/> ^{Note2}
LEAP	Research and Development Director	<input type="radio"/> ^{Note2}	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note2}	×(refer to (1) of page 103)
	Research and Development Sharer	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)	<input type="radio"/> ^{Note1} (refer to (4) of page 104)
	Research Participant	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1} (refer to (3)b of page 104)	<input type="radio"/> ^{Note1}	<input type="radio"/> ^{Note1}
<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 Co-PI of the CREST Research Proposal.</p>						

Note 3) With regard to PRESTO “Fundamental understanding of age-related organismal transformations” research areas to submit multiple applications for the AMED “Bridging the fundamental mechanism of aging and the effective treatment of age-related disease associated with impaired functional system” R&D project PRIME (solo type). Also, Note that it will not be selected in two areas at the same time.

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

○ Cross-ministerial R&D Management System (e-Rad) *¹³

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 → Review → 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.

(*IE cannot be used.)

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

○ Pre-registration of research institution and researcher information, information related to research integrity, and the status of security trade control systems in research institutions are required.

Please refer to “10.4.1 Pre-registration of research institution and researcher information” and "Attachment Document: How to apply using the cross-ministerial R&D Management System (e-Rad)".

○ Please allow several days (or more) before 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, submission may take a long

*¹³ "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)).

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.

○ **“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 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 designated form of the research area to apply 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. In general, please use this conversion function to convert the submitted form file to PDF. It is possible to convert it to PDF with your own application software but be sure to check that the text copied and pasted from the PDF reader screen is not garbled. In PDF conversion by some apps, the text embedded in PDF may not be the correct character code.
- 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

Manuals on how to operate e-Rad can be viewed or downloaded from the e-Rad portal site

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

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 review or acceptance.

<p>Questions on matters such as programs, and questions about preparation and submission procedure of application documents</p>	<p>JST Department of Innovation Research (person in charge of calls for proposals)</p>	<p>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 (Japan Time) ● Except on Saturdays, Sundays, holidays, the year-end and new year period.</p> <p>[Communication by e-mail may be requested even when a question is asked by telephone.]</p>
<p>Questions regarding usage way of the e-Rad system</p>	<p>e-Rad helpdesk</p>	<p>Tel: 0570-057-060 (Navi dial) Office hours: 9:00-18:00 (Japan Time) ● Except on Saturdays, Sundays, holidays, and the year-end and new year period (29th December – 3rd January).</p>

- 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 Specific Application Method

10.4.1 Pre-registration of research institution and researcher information

It is necessary to register the research institution and affiliated researcher by the time of application (re-registration is not required if already registered). **Please allow at least 2 weeks for the registration process.**

(1) Application for registration of a research institution

Please assign one administrative representative for e-Rad at your research institution and follow the procedures from the “research institution registration application”.

(<https://www.e-rad.go.jp/organ/entry.html>)

If the applicant belongs to an overseas research institution, regarding institution’s information 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 and input the name of the affiliated institution (Attachment: See how to apply using the cross-ministerial research and development management system (e-Rad). In that case, it is necessary for the applicant to obtain the e-Rad login ID and password.

(2) Registration of Researcher Information

Applicants for CREST PI, all Co-PIs, and PRESTO, ACT-X, PIs all must register your researcher information in e-Rad and obtained login ID and password in advance.

The acquisition procedure is as follows. Please refer to the portal site for details.

1) Researchers belonging to domestic research institutions

Please follow the procedure from -- For Research Institutions "How to Register Affiliated Researchers" (<https://www.e-rad.go.jp/organ/regist.html>).

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

2) Researchers affiliated with overseas research institutions, or researchers not affiliated with research institutions. Please follow the procedure from -- For Researchers "Method of New Registration" (<https://www.e-rad.go.jp/researcher/index.html>).

- Worker: Proposer himself /herself
- Registration Details: Researcher Information

10.4.2 Other specific application methods

For details on how to apply and how to obtain the research proposal form, please refer to the attached sheet at the address below. "Attachment: How to apply using the cross-ministerial research and development management system (e-Rad)"

https://www.jst.go.jp/kisoken/boshuu/teian/en/koubo/2024e-rad_en.pdf

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).

Japan Science and Technology Agency

Department of Innovation Research

K's Gobancho, 7 Gobancho, Chiyoda-ku, Tokyo 102-0076 Japan

E-mail: rp-info@jst.go.jp

Tel: +81-3-3512-3530 (Mon. – Fri. 10:00–12:00, 13:00–17:00*, Japan Time)

*Except Saturdays, Sundays, and National Holidays

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