

Chapter 5 Common subject matters of CREST, PRESTO and ACT-I Program

5.1 Common subject matters of solicitation and selection of proposals

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

Research project applicants, who will be the Research Director, shall be excluded from selection consideration when involved in a relationship involving a Research Supervisor, as described in a. through d. below. When it is unclear whether a condition applies, please download and fill the Inquiry Form and send it via email to rp-info@jst.go.jp before submitting a research project proposal.

Inquiry Form: http://senryaku.jst.go.jp/teian/en/koubo/H29youkou_form-en.doc

- a. The research project applicant is a relative of the Research Supervisor.
- b. The research project applicant and the Research Supervisor are both affiliated with the same smallest organizational unit (e.g. same research lab) of a university, national or an other national government-funded research and experiment institution. Or, the research project applicant and the Research Supervisor are affiliated with the same company.
- c. The research project applicant and the Research Supervisor are presently working in close cooperation on the same joint research project. Or, have done so within the past five years.
(Existence of close cooperation will be judged by the facts that, for example, the research project applicant and the Research Supervisor are working together on the same research project, are performing different parts of the same research project, or are co-authors of a research paper. If you have any questions, please contact JST.)
- d. The research project applicant and the Research Supervisor were in a close teacher-student relationship for a total of more than 10 years (not necessarily continuous), or were in a direct employer-employee relationship. “Close teacher-student relationship” means cases in which the research project applicant and the Research Supervisor were affiliated with the same research lab, and cases in which the Research Supervisor, though affiliated with a different organization, essentially functioned as a research advisor for the research project applicant.

※ For Research Areas in which Deputy Research Supervisors have been established, the same provisions shall apply.

※ For inquiries submitted by May 8, responses as to whether any of the relationship conditions described above have been violated shall be provided by the proposal deadline. For inquiries submitted after May 9, such responses may not be provided by the proposal deadline. Acceptance of research project proposals may be canceled if it is determined following the proposal deadline that any of the relationship conditions described above have been violated.

- ※ Please make use of the (CREST- Attachment) Pre-Submission Check Sheet “Conflict of interests with the Research Supervisor.
- ※ Please make use of the (PRESTO- Attachment) Pre-Submission Check Sheet “Conflict of interests with the Research Supervisor.
- ※ Please make use of the (ACT-I- Attachment) Pre-Submission Check Sheet “Conflict of interests with the Research Supervisor.

5.1.2 Selection Method

For schedule information, please refer to “1.3.1 Schedule for the acceptance and selection of research proposals”.

(1) Selection Process

The Research Supervisor, with the assistance of Research Area Advisors, will make documentation- and interview-based selections for each Research Area. External evaluators may also be enlisted to for support.

Depending on the number of applicants and other factors, documentation-based selections can be performed for individual Research Areas by beginning with a preliminary selection relying mainly on the CREST research proposal form, CREST Form 2 or the PRESTO research proposal form, PRESTO Form 2.

This preliminary selection is performed with attention paid mainly to whether proposals are suited to the purpose of the subject Research Area (whether the proposed research can be expected to contribute to achievement of the research area’s purpose) and whether the proposed research is suited to the purpose of the CREST or PRESTO program. Document-based selection, using CREST Form 3 or PRESTO Form 3, will then conducted only for the research proposals suited to these purposes. For more details, please refer to the CREST Research Proposal Form, CREST-Form 2 or PRESTO Research Proposal Form, PRESTO-Form 2. (Whether preliminary selections will be performed will not be announced for any Research Areas.)

An investigation in addition to the considerations above might also be conducted during the selection process. Note the Research Director or the Lead Joint Researcher, Individual Researchers might be requested to submit a financial statement if they are affiliated with a profit-making-institution.

JST will thus select the Research Directors or Individual Researchers and research projects according to the selection process above.

The name of a new research area supervisor is announced on the website of research proposal as soon as it is known. Also, see the websites of existing research areas.

New research areas : <http://www.senryaku.jst.go.jp/teian-en.html>

CREST existing research areas : http://www.jst.go.jp/kisoken/crest/en/research_area/index.html

PRESTO existing research areas : http://www.jst.go.jp/kisoken/presto/en/research_area/index.html

ACT-I : http://www.jst.go.jp/kisoken/act-i/en/research_area/ongoing/bunyah28-1.html

(2) Persons Involved in the Selection Process

To ensure fair and transparent evaluations, the following interested parties shall be excluded from the selection process, based on relationships with research project applicants, in accordance with JST rules.

- a. Relatives of research project applicants.
- b. Persons who were in the same department or research lab as a research project applicant at a university, national and other national government-funded research and experiment institutions, or who were affiliated with the same company.
- c. Persons who worked in close cooperation on a joint research project with a research project applicant.
(For example, a person who worked on a joint research project, co-authored a research paper, worked toward the same objectives as a member of the same research team, performed different parts of the same research project, or were otherwise essentially affiliated with the same research group as a research project applicant.)
- d. Persons who were in a close teacher-student relationship, or were in a direct employer-employee relationship, with a research project applicant.
- e. Persons in relationships of direct competition with a research project of a research project applicant.
- f. Persons in other relationships judged by JST to represent conflicts of interest.

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

- a. Research project applicants who have been selected for participation in the interview phase of the process based on documentation-based selection results, shall be notified of their selection in writing. They will also be provided with an overview of the interview process, schedule information, and instructions regarding matters like the submission of additional information. They may be required to submit the proposal, research plan and so on of other research grants. In case Research Director, Lead Joint Researcher or Individual Researcher belongs to profit-making-institution etc., financial statements may be required to submit.
Information on the schedule for the interview-based selection phase shall be posted on the research proposal solicitation homepage (<http://www.senryaku.jst.go.jp/teian-en.html>) as soon as it becomes available.
- b. In the interview, the research project applicant shall be asked to explain the proposed research initiative. It should be noted that interviews shall basically be conducted in Japanese, but that English may be used when conducting the interview in Japanese is impractical.
- c. Research project applicants who are not selected in either the document-based or interview-based selection phases shall be notified in writing.
- d. Research project applicants who are selected shall be notified of their selection in writing and provided with information on procedures for commencing research.

5.1.3 Selection Perspective

(1) Selection Standards (Preliminary Evaluation Standards)

Common selection standards for all Research Areas are described below. (All standards described in a.~d. must be met.)

CREST	PRESTO	ACT-I
a. Contributes to the achievement of Strategic Objective.		

b. Consistent with the Research Area intent (Refer to Addendum 1. Addendum 2.)		
c. Basic research that is unique, highly appreciated internationally, and expected to produce outstanding results (Refer to Addendum 3.) that contribute greatly to science and technology innovation.	c. Basic research that is unique, challenging, internationally expected to develop at an advanced level, and can be expected to produce groundbreaking results (Refer to Addendum 3.) that lead to science and technology innovation.	c. Proposals are original, challenging, innovative and are expected to attain high quality developments by the international standards over the coming decades and generate new values necessary for scientific and technological innovations.
<p>d. Meets all of the following conditions.</p> <ul style="list-style-type: none"> - The research project applicant has produced research results for accomplishing research objectives. - Promising preliminary results have been obtained for pursuing the research initiative. -The research proposals must separately and clearly specify: (i) the background to the research initiative (its necessity and importance); (ii) the actual research record of the research project applicants; and (iii) the research initiative and plan. - An optimal research organization is in place. <p>The research project applicant will exercise strong leadership and bear responsibility for the entire research team, and, if there will be Lead Joint Researchers, they are essential for pursuing the research project applicant's research initiatives, and a collaboration framework sufficient for enabling significant contributions toward the achievement of research objectives will be constructed.</p> <ul style="list-style-type: none"> - Research budget planning necessary and sufficient for pursuing the research project applicant's research initiatives has been performed. - The research institutions with which the research project applicant and Lead Joint Researchers are 	<p>d. The research project applicant can be expected to contribute to the development of the subject overall PRESTO or ACT-I Research Area and to the ongoing development of related 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 that mutually inspire.</p>	

<p>affiliated have R&D capabilities and other technical foundations in the subject research field.</p>	
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Addendums

1. Regarding item b. “Research Area intent,” please refer to “Chapter 6 Research Areas calling for Proposals ” and the “Research Supervisor’s Policy on Calls for Application, Selection and Management of the Research Area” for individual Research Areas. Contained therein are discussions of selection perspectives and policies, management directions, etc. for individual Research Areas.
 2. Whether the research project structure fits with the desired research project structure 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 science and technology 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 used in commercial production).
- ※ "New technologies" and "commercialization development" are terms used (as rendered in Japanese) in the text of 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 a selection criterion. For more details, please refer to "8.3 Measures against Unreasonable Duplication and Excessive Concentration”.

5.1.4 About AIP projects and AIP network laboratories

(1) About AIP (Advanced Intelligence Project) projects

AIP projects aim to build a “super smart society” leading the world in order to establish base technologies to collect, process, and control large amounts of data in an intellectual, integrated, and secure manner in responding to various situations and demands. The project also aims to establish technologies that improve the efficiency of existing services and the creation of new services which are applicable to various sectors of a real society. This project greatly improves productivity and economic growth to contribute in bringing a people-friendly society into reality.

For the promotion of AIP projects, RIKEN has established “Center for Advanced Intelligence Projects” as a core research and development facility for innovative artificial intelligence. JST undertakes a public invitation program to support the promotion of creative researchers and research issues that develop new pathways in innovation in collaboration of research areas of the AIP project among strategic creative research promotion projects as “AIP network laboratories.”

AIP projects also attempt close collaboration among governmental ministries to maximize research achievement in order to undertake integrated research and development from basic research to applications in the society. AIP network laboratories of JST are integrated with Center for Advanced Intelligence Projects of RIKEN to examine effective cooperation and role assignment of research themes to be promoted for bilateral flow of research achievements and human resource interchange in close collaboration.

(2) About AIP network laboratories

AIP network laboratories invite a wide range of proposals from researchers at universities and the like to build time-limited research systems, not bound to organization or field, in order to promote strategic basic research. Furthermore, the laboratories adopt creative ideas to resolve present and future problems of humankind and initiate new research programs that support young researchers, who develop pathways for the future and establish independence. Research areas that constitute AIP network laboratories are given below.

Research supervisors of certain areas may participate in proposal selection meetings of other research areas in the present proposal invitation to alter some of research areas to which original applications were made to other research areas during selection in some cases. However, no proposal is switched to different for adoption, for example, from CREST to PRESTO.

【CREST】

- Symbiotic Interaction: Creation and Development of Core Technologies Interfacing Human and Information Environment (Research Supervisor : Kenji Mase)

- Development and Integration of Artificial Intelligence Technologies for Innovation Acceleration (Research Supervisor: Minoru Etoh)

【PRESTO】

- The Future of Humans and Interactions (Research Supervisor : Jun Rekimoto)

- Fundamental Information Technologies toward Innovative Social System Design (Research Supervisor: Sadao Kurohashi)

【ACT-I】

- Information and Future (Research Supervisor: Masataka Goto)

5.1.5 Specific Project Investigation (for CREST or PRESTO Program)

- (1) When a research project application can be supported with supplemental research data that can be obtained for little financial cost and in a short amount of time, and it is expected that the application thus supported would be appropriate for regular evaluation in the following or later fiscal years, the Research Supervisor may request the research project applicant to undertake a Specific Project Investigation separate and apart from the regular

selection process.

(2) Specific Project Investigation can be performed under the condition that an application will be resubmitted for the subject Research Area in the following or later fiscal years. The resubmitted application will then be treated like other research project applications, and shown no favoritism.

(3) Specific Project Investigation cannot be applied for directly.

5.1.6 Research Proposal Forms and Completion Requirements

Please refer to "2.3 Research Proposal (Form) Completion Requirements" for CREST, "3.3 Research Proposal (Form) Completion Requirements" for PRESTO or "4.3 Research Proposal (Form) Completion Requirements" for ACT-I

- The application form may differ depending on the Research Area. Download and use the application form for the Research Area you are going to apply applying to form the e-Rad website.
- Some research areas settle distinct requirement for proposal (research period and research budgets). Please refer to Chapter.6 and "Research Supervisor's Policy on Call for Application, Selection and Management of the Research Area"for detail.

5.2 Common subject matters of After Selection: Proceeding with Research Work

5.2.1 Preparing a Research Plan

- a. Once selected, the Research Director or Individual Researcher will be requested to an overall research plan covering the entire research project period (CREST; up to five and a half years, PRESTO; up to three and a half years, ACT-I; up to one and a half years). The Research Director or Individual Researcher will be also requested to prepare overall and annual research plans. Research plans include information on the research budget and research team structure.

Proposed research budgets will undergo an assessment in the selection process. Proposed research expenses are subject to assessment throughout the selection. Furthermore, actual research expenses are determined after confirmation and approval by Research Supervisor when a research plan is prepared for a research issue.

- b. Research plans (overall and annual plans) become official once they are checked and approved by the Research Supervisor. The Research Supervisor will offer advice and coordination assistance on the research plan, and provide instructions when necessary, based on information the Research Supervisor gains through, for example, the project selection process, discussions with Research Directors or Individual Researchers, regular progress updates, and the results of research evaluations.
 - c. The Research Supervisor, in approving research project plans to achieve objectives including the accomplishment of the overall objectives of a Research Area, may merge or link research projects, or take other coordinative actions.(only for CREST)
- ※ 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 Agreement

- a. Once a research project is selected, JST, in principle, will enter into a contract research agreement with the research institutions with which the Research Director, Lead Joint Researcher and Individual Researcher are affiliated.
- b. If it is not possible to conclude contract research agreements with these research institutions, or not possible to put in place the management and audit systems required in connection with the use of public funds, or if the subject research institutions are conspicuously financially unstable, it may be impossible to pursue research at the subject research institutions. For more details, please refer to "5.2.6 Responsibilities of Research Institutions".
- c. In principal, patents and other intellectual property rights resulting from research shall, in accordance with contract research agreement terms, reside with research institutions under the condition that the research institutions abide by the items provided in Article 19 (Japanese version of the Bayh-Dole Act) of the Industrial Technology Enhancement Act. However this rule does not apply to foreign research institutes.

[Note]

When an individual researcher is employed by JST under exclusive appointment, depending on the research institution where the individual researcher will perform research work, there will be cases where joint research contracts need to be concluded in a different way from the usual contract research agreements and intellectual property rights dealt with separately. In the event that the institution implementing research is overseas, intellectual property rights will be transferred to JST without compensation based on the research contract, the equity of which will be shared with the individual researcher and JST.

* Regarding joint appointments and exclusive appointments, please refer to "3.3.3 Joint Appointment and Exclusive Appointment".

5.2.3 Joint appointment and Exclusive appointment (for PRESTO)

The Individual Researcher whose research proposal has been selected will become affiliated with JST under joint appointment^{*1} or exclusive appointment^{*2}. In case neither appointment could be made, notify JST in advance.

- If necessary, researchers who are planning to submit a research project proposal should notify the research institutions with which they are affiliated, collaborate, etc. of their intent in advance.
- If necessary, a researcher may change his/her research institution affiliation or otherwise revise the terms of his/her participation during the research project period.

^{*1} Joint appointment: The researcher is affiliated with a university, national and public testing and research institution, National Research and Development Agencies, foundation, company, etc. and his/her participation will be based on a concurrent appointment at JST. Based on JST's regulation, JST reward the researcher a fixed amount of money monthly. The researcher shall take out social insurance at his/her

affiliated institution.

*2 Exclusive appointment: The researcher is not affiliated with a research institution, company, etc. or will need to resign his/her existing appointment for certain reasons of the organization he/she currently belongs to and will participate as a researcher employed by JST. In order to be an exclusive appointment researcher, employment contract should be signed after the necessity of employment by JST is found eligible. However, JST does not employ students whose proposals are adopted for ACT-I. As per JST's regulation, JST reward the researcher with an annual salary scheme. An annual salary includes salary, various allowance, bonus, etc.. As for social insurance, the researcher shall take out health insurance, welfare annuity insurance, employees' pension funds and employment insurance which JST designates.

(note) The form of participation may be changed to reflect alterations in affiliation during the research period.

5.2.4 Research Costs

JST will pay research institutions a contract research cost, which is defined as the sum of the research costs (direct costs) and overhead (indirect) costs, which is up to 30% of the direct costs.

(1) Research Costs (Direct Costs)

Research costs (direct costs) means costs that are directly related to and required for the pursuit of the subject research. Research costs can include:

- a. Commodities: Costs for the purchase of new facilities (※1), equipment, consumable supplies, etc.
- b. Travel Expenses: Expenses for travel by the Research Director, Lead Joint Researcher, research participants listed on the research plan and Individual Researcher,.
- c. Personnel Expenses: Salaries for research participants (except Research Director, Lead Joint Researchers and Individual Researcher) and honorariums.
- d. Other Expenses: Costs related to the presentation of research results (research paper submission fees, etc.), costs for leasing and transferring of equipment, etc.

※1 The purchase of new research equipment and apparatuses will proceed 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" (Advance Research Fundamentals Working Group, Scholarship Commission, November 2015). Please refer to "5.2.10 Other Considerations" for details.

NOTE:

- ※ The following costs are examples of those not treated 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 cost (indirect cost).
- ※ For certain items, JST has created specific rules and guidelines from sources like the contract research

agreement, administration manuals, and a common governmental expense categorization table. Universities, etc. (Universities, public research institutions and public-service corporations recognized by JST) and companies (mainly research institutions operated by private companies) may differ in their handling of administrative matters. For more details, please refer to the following URLs (only in Japanese).

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

Table of expense classification common to prefectures

http://www.mext.go.jp/a_menu/shinkou/hojyo/1311601.htm

- In CREST, in hiring research staffs, please give consideration to supporting the career paths of people who have recently completed their doctoral programs and improvement of working condition of doctoral course students. For more details, please refer to “5.2.5 Responsibilities of Research Directors, Lead Joint Researchers and Individual Researchers” and “5.2.10 Other Considerations”.
- In PRESTO and ACT-I, it is possible to include personnel and service fees for up to a maximum of three research assistants who will assist the research, but the participation of a researcher who can independently handle a part of the research is not permitted.

(2) Overhead (Indirect) Costs

Overhead (indirect) costs are costs required for the management, etc. of research institutes 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, 2001 and revised on May 29, 2014), regarding indirect expenses, a policy on use, etc. shall be created and shall be systematically and properly executed to ensure that use is 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, in order to be capable of carrying over research expenses and procurement contracts over financial years, JST has made research contracts into multiple-year contracts. With regard to carrying over, universities are treated differently from business firms. In addition, multiple-year contract or carrying over may not be acceptable to the office management system of some research organizations.

5.2.5 Responsibilities of Research Director, Lead Joint Researchers and Individual Researchers after approval

- (1) Research Directors, Lead Joint Researcher, and Individual Researchers are responsible for fully recognizing that JST research budgets are funded by precious tax revenues collected from citizens, and for fairly and efficiently executing budgeted expenditures.
- (2) Once a proposed research project is selected, the Research Director and Lead Joint Researcher shall affirm that they will fulfill the following requirements, presented to them via JST briefings and other means, and submit to JST a written document evidencing this affirmation.
 - a. Comply with application guidelines and other requirements.
 - b. Pledge not to become involved in research misconduct (fabrication, falsification, plagiarism) or in the improper use of these funds.
 - c. To prevent any research misconduct (fabrication, falsification, plagiarism), enroll in and complete the JST-specified research integrity educational program (CITI Japan e-learning program) and promise to educate the research participants of the obligation to enroll in and complete the program and make them understand. For details refer to “8.1 Enrolling in and Completing the Educational Program for Research Integrity.”

Note that failure to complete the research integrity educational program in c. above can result in the suspension of the research budget until confirmation has been made that the program has been completed.

- (3) The Research Director and research participants of CREST, Individual Researchers and research assistants of PRESTO and ACT-I are required to complete the research integrity educational program (CITI Japan e-learning program) specified by JST to prevent research misconduct (fabrication, falsification and plagiarism). For details, refer to “8.1 Enrolling in and Completing the Educational Program for Research Integrity.”
- (4) Pursuing and Managing Research
 - a. (CREST) Research representative is held responsible for the whole research team, with responsibilities including preparation and implementation of a research plan.
 - b. (PRESTO and ACT-I) Individual Researchers shall be responsible for arranging research implementation location and environments necessary for promotion of research. When serious obstruction of research implementation location and environments to promote research is found, research project may be cancelled.
 - c. Research teams shall also be responsible for submitting research reports and other required documentation to JST (including the Research Supervisor) and taking steps required for research evaluations. Research teams shall also be responsible for providing the progress and other reports the Research Supervisor may request from time to time.
- (5) Creation and Implementation of Data Management Plans

The Research Director, selected in research areas newly installed in FY 2016 and after, is asked to submit to JST a data management plan that sets forth policy on storage, management, publicity and non-publicity in regard to research data obtained from research team activities and research data to be made public for each of the items below, together with a research plan document. Further, data storage, management, and publishing based on the above policy are requested.

For details regarding the following entries, please refer to the “Policy for the Implementation of Data Management in Strategic Innovative Research Promotion” below.

http://senryaku.jst.go.jp/teian/en/koubo/data_houshin_en.pdf

[Entries in the data-managing plan]

- Policy on the storage and management of research data to be managed
- Policy related to publicity and non-publicity in regard to research data
- Providing methods and systems for data to be made public
- Assumed use applications for public research data
- Initiative for the promotion of the use of public research data
- Other items of note

[CREST research areas to which the policy applies]

- 1) Elucidation of biological mechanism of extracellular fine particles and the control system
- 2) Creation of Innovative Core Technologies for Nano-enabled Thermal Management
- 3) Revolutionary material development by fusion of strong experiments with theory / data science
- 4) Symbiotic Interaction: creation and development of core technologies interfacing human and information environment
- 5) Development and application of optical technology for spatiotemporal control of biological functions
- 6) Development and application of intelligent measurement-analysis methods through coalition between measurement technologies and information sciences
- 7) Creation of an innovative quantum technology platform based on the advanced control of quantum states
- 8) Development and integration of artificial intelligence technologies for innovation acceleration

[PRESTO research areas to which the policy applies]

- 1) Creation of life science basis by using quantum technology
- 2) Function and control of fine particles in a living body
- 3) Thermal science and control of spectral energy transport
- 4) The future of humans and interactions
- 5) Optical control of biological functions for the elucidation of biological systems
- 6) Development and application of intelligent measurement-analysis methods through coalition between measurement technologies and information sciences
- 7) Quantum state control and functionalization

8) Fundamental information technologies toward innovative social system design

(Background)

According to the “Investigative Commission for Open Science in Light of International Trends,” the Cabinet Office made “Examples for the Promotion of Open Science in Japan” official in March 2015; it specifies that each ministry, fund allocation agency, university, and research institute must formulate implementation policies and plans for open science. Given this, JST has formulated the “Policy for the Implementation of Data Management in Strategic Innovative Research Promotion” and has decided that in research areas in which research results are effectively obtained and anticipated to generate new products and services (markets) through the active sharing and utilization of data, the Research Director must create a data management plan according to which the selection and storage, management, and publication of data will henceforth be made.

The “Policy for the Implementation of Data Management in Strategic Innovative Research Promotion” is described below.

“Policy for the Implementation of Data Management in Strategic Innovative Research Promotion”

http://senryaku.jst.go.jp/teian/en/koubo/data_houshin_en.pdf

(6) CREST Research Directors together with research institutions shall appropriately manage (expenditure planning, monitoring, etc.) overall research budgets for research teams. Lead Joint Researcher together with research institutions shall appropriately manage (expenditure planning, monitoring, etc.) research budgets for his/her own research team.

PERSTO and ACT-I Individual Researchers shall be responsible for matters including oversight of the expenditure and management of funds, the performance of administrative procedures, the management of research assistants, and matters related to travel. When ACT-I Individual Researchers are students, their academic supervisors are also held responsible as “research monitors” for the terms and conditions of the contract research agreement with JST. If, for example, a student researcher has committed misconduct or other improprieties as defined by Article 13 of the contract research agreement, both the student and the academic supervisor will be held accountable.

(7) CREST Research Directors and Lead Joint Researcher are asked to be mindful of research and working environments and conditions for their own group's research participants, and especially research staff and others whose employment is being funded by CREST research funds.

(8) It is recommended that CREST Research Directors and Lead Joint Researcher actively support the development of varied domestic and international career paths for research staff who have recently completed doctoral programs and are being employed with research budget funds. In the research project selection interview, research project applicants will be asked about plans¹ for supporting the development of varied domestic and international career paths for research staff who have recently completed doctoral programs and will be employed with research budget funds. In addition, in interim and post-completion evaluations, questions will be

¹ A part of the activities on these plans can be included among research efforts.

asked regarding the status of career path assistance efforts and the post-completion career paths of the research staff who were the subject of career path assistance efforts. Responses to these questions may positively affect project evaluations.

※ Please refer to the details in “5.2.10 Other Considerations”.

(9) PRESTO and ACT-I Individual Researchers shall 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-I values active discussion and interaction at research area meetings among Research Supervisor and Research Area Advisors and such a networking of younger researchers, through competition and mutual inspiration, for the researchers’ cooperation in the future. In ACT-I, research supervisor considers the whole balance to determine an advisor in charge of each individual researcher, who visits websites in order to provide advice and guidance for the content of and approach to individual research.

(10) Handling of Research Results

- a. Given that research results were obtained with national government funding, it is asked that research results be actively reported on both domestically and internationally, with due consideration for the acquisition of intellectual property rights.
- b. When reporting on research results through research papers or other media, please indicate that the research results were obtained via the Strategic Basic Research Programs (CREST, PRESTO, ACT-I).
- c. Research team members may be asked to participate in JST-sponsored domestic and international workshops and symposia, and to report on research results.
- d. It is asked that active efforts be made to secure intellectual property rights. In principle, intellectual property rights are to be applied, in accordance with contract research agreement terms, by the research institutions with which researchers are affiliated.

(11) Researchers are asked to actively engage citizens in discussions of science and technology to promote citizen’s understanding and support of science and technology. Especially for CREST, efforts to engage citizens in discussions of science and technology will be evaluated both interim and post-completion evaluations.

➤ Please refer to the guideline details in “2-3 About bilateral communications activity with the public”.

(12) Researchers shall abide by research agreements entered into by JST and research institutions, and shall abide by JST’s various rules.

(13) It should be noted that JST will provide research project names, names of researchers, research budget information, and other required information to the Cross-ministerial R&D Management System (e-Rad) and the Government Research and Development Database (“Chapter 8 Key Point in Submitting Proposals”). Research Directors and others, therefore, may be asked to provide various types of information in that connection.

(14) Researchers will cooperate with Strategic Basic Research Program evaluations, accounting examinations by JST, accounting audits by the national government, and similar activities.

(15) Researchers will cooperate by providing various types of information, responding to interviews, etc. in connection with follow-up evaluations performed sometime after project completion.

5.2.6 Responsibilities of Research Institutions

Research Institutions must fully recognize that the research funds are public funding, ensure compliance with related law, and make efforts to implement the research effectively upon implementation. Research institutes that cannot accomplish the tasks described below will not be enjoined to implement research; thus, when applying, the prior consent of the research institute at which the implementation of research is planned shall definitively be obtained.

(1) For Domestic Institutions

- a. Research organizations shall conclude the research contract with the content proposed by JST. Further, research institutes are responsible for properly implementing research in accordance with the research contract document, administrative process document, and research plan. When the contract cannot be concluded, or when it is judged that research at the research institute is not being implemented properly, the implementation of research at the research institute shall not be admitted

※ For the latest sample of the research contract document, please refer to the URL below.

<http://www.jst.go.jp/kisoken/contract/kisoken/h29/h29s201keiyal70401.pdf>

- b. Research institutions, with an autonomously instituted management and audit system for public research budgets, are obligated to properly execute the contract research funds in accordance with the “Guidelines for Management and Audit of Public Research Funds at Research Institutions (implementation standards)” (decided by the Minister of Education, Culture, Sports, Science and Technology on February 15, 2007; revised on Feb. 18, 2014). Research institutions, 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, are also obligated to support various investigations into their system implementation and other related matters (“8.6 Regarding implementation of systems based on the Guidelines of Management and Audit of Public Research Funds in Research Institutes (Implementation standards)”).

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

- c. In accordance with the “Guidelines for Responding to Misconduct in Research Activities” (August 26, 2014, adopted by the Minister of Education, Culture, Sports, Sciences and Technology), research institutes are asked to construct necessary regulations and systems that they are responsible for in order to prevent misconduct. Research institutes are responsible for responding to various investigations relating to systems construction based on the guideline (8.7 Regarding implementation of systems based on the “Guidelines for Responding to Misconduct in Research Activities”).

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

- d. Research institutes are responsible for ensuring that associated researchers fully recognize the contents of the above guideline described in a and b and have been trained with teaching materials related to research ethics provided by JST.
- e. Research institutes shall expend and manage research expenses properly in accordance with the regulations of the research organization while considering flexibility; when items are regulated by administrative process documents, etc., provided by JST, which state rules specific to the project, the rules shall be obeyed. (For research institutes receiving Grants-in-Aid for scientific research expenses, it is possible that items not described in administrative process documents for use in research expenses may be handled in conformity with the Grants-in-Aid for scientific research expenses.)
- f. Research institutes shall either enter into contracts with associated researchers that ensure that intellectual property rights resulting from the implementation of research will be accorded to the research institutes or construct work regulations in this vein. In case a student who is not employed by a research organization participates in research, a necessary measure, such as concluding a contract with the student in advance, needs to be taken in order for pertinent intellectual property right associated with the invention (including ideas) that the student made during the research to belong to the research organization unless it is clear that the student cannot be an inventor. Take into consideration eliminating conditions unfavorable to the student, the inventor, concerning the price of transferring the intellectual property right.

In addition, when intellectual property rights are transferred, exclusive licenses are granted, etc., in principle, the prior approval of JST is needed, and when application, registration, implementation, and renunciation are conducted, a prior report to JST is needed.
- g. Research institutes are responsible for responding to accounting investigations by JST and account audits by the Government.
- h. Research institutes shall obey measures pertaining to changing terms of payment and will accept decreased payments decided upon by JST based on JST investigations related to administrative managing systems, financial conditions, etc.
- i. When research institutes are national or municipal organizations, such institutes concluding research contracts shall definitively implement necessary budgetary measures before starting research contracts for which they are responsible. (In case it becomes apparent that the non-fulfillment of necessary procedures after contracting will occur, measures to release the research contract and rescind research funds will be taken.)
- j. As part of the effort to prevent misconduct in research and development activities, JST has required researchers, who are part of newly selected research projects and who also are affiliated with a research institution, to enroll in and complete the educational program on research integrity (The procedures required for enrollment will be handled by JST). Research institutions are to supervise, without fail, the enrollment in and completion of the program by the relevant persons.

In the event that the relevant researchers fail to complete the educational program as stipulated despite repeated reminders by JST, the research institution will be instructed to halt, partially or entirely, the

execution of contract research fund payments. In line with this instruction, the research institution is to halt all use of the research funds and not restart their use until further notice from JST.

- k. Take necessary measures, such as concluding a joint research contract with participating organizations within a range of contract research agreements with JST concerning handling of intellectual property rights or confidentiality in order to avoid problems in properly undertaking research or utilizing research achievement.

(2) For Overseas Institutions

- a. In principal, research institutes shall conclude research contracts with content proposed by JST. (Indirect costs are capped at 30% of direct costs.) Further, research institutes are responsible for proper implementation of the research in accordance with the research contract document and research plan. When contracts cannot be concluded, or when it is judged that research at the research organization will not be properly implemented, the implementation of research at the research organization shall not be admitted.
- ※ For a sample of a research contract document for overseas institutes, please refer to the URL below.
- CREST : <http://www.jst.go.jp/kisoken/crest/en/2017crest/index.html>
- PRESTO : <http://www.jst.go.jp/kisoken/presto/en/2017presto/index.html>
- b. Research institutes are responsible for properly disbursing and managing research expenses for which they are responsible based on the research contract, guiding principles, etc. When JST designates guiding principles, etc. separately; they are responsible for creating and reporting expense details (for domestic organizations, this corresponds to accounting books) in English. Research institutes shall respond to various investigations related to implementation status per JST request in the period of the contract.
- c. Research institutes shall transfer intellectual property rights resulting from research without compensation (Article 19 of the Industrial Technology Enhancement Act, the Japanese version of the Bayh-Dole Act, will not apply to overseas organizations).
- ※ From the view of the point of Security Export Control, JST may not conclude joint research agreements with such institutions as Japanese Ministry of Economy, Trade and Industry (METI) announces in the “Foreign User List²” (or “End User List”).

5.2.7 Project Evaluations

- (1) In CREST, the Research Supervisor shall familiarize himself/herself with research project progress and results, and, enlisting the cooperation of Research Area Advisors and others, perform interim and post-completion research project evaluations. For a project with a research term of five and a half years, the interim evaluation should be conducted around three years after the beginning of research activities, and the post-completion evaluation, immediately following or before the conclusion of research activities depending on the nature and

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

progress stage of research project.

- (2) In PRESTO, the Research Supervisor shall familiarize himself/herself with research project progress and results, and, enlisting the cooperation of Research Area Advisors and others, perform post-completion research project evaluations immediately following or before the conclusion of research activities depending the nature and progress stage of research project.
- (3) In ACT-I, Research supervisor obtains cooperation from research area advisors to perform the post-research evaluation of research issues as soon as possible or at a proper time before the completion of research depending on the nature or progress stage of research. In addition, research supervisor performs progress evaluation at about a year after the beginning of research for researchers who newly want an acceleration phase for a maximum of two years, to determine research issues for added support.
- (4) In addition to the above, project evaluations may be conducted when deemed necessary by the Research Supervisor.
- (5) In CREST, the results of interim evaluations and so on should be reflected in subsequent research plan revisions and resource allocations (including increases or decreases in research budgets, changes in research team structure, etc.). On occasion, measures, like actions taken to coordinate multiple research projects or terminate a research project, may be taken.
- (6) After the passage of a certain amount of time following the conclusion of research activities, follow-up examinations will be conducted to look at matters such as how research results have been received and are being applied, and the activities participating researchers have taken up following their project involvement. Based on the results of follow-up examinations, external experts selected by JST will then perform follow-up evaluations.

5.2.8 Research Area Evaluations

Separate and apart from the project evaluations mentioned in 5.2.6, research areas and performance of the Research Supervisor will be examined in research area evaluations. Research area evaluations include interim and post-completion evaluations. Research area evaluations focus on matters such as the state of progress achieved toward the accomplishment of Strategic Objectives and conditions with regard to research area management.

5.2.9 Development of achievements obtained in CREST, PRESTO, and ACT-I to science and technology innovations (maximization of achievement in AIP projects)

Research areas constituting AIP network laboratories not only collaborate within the laboratories, but also examine cooperation or role assignment for research themes to be promoted in close collaboration with Center for Advanced Intelligence Projects of RIKEN to move forward bilateral transfer of research achievements and interchange human resources in order to contribute to the maximization of AIP project achievement.

“5.1.4 See “About AIP projects and AIP network laboratories.”

5.2.10 Other Considerations

(1) RA (Research Assistants) (for CREST)

The 3rd, 4th and 5th Science and Technology Basic Plan set a numerical target that “enabling 20 percent of doctorate course students to receive an amount equivalent to their living expenses” in order to attract quality students and business persons from Japan and overseas by increasing economic supports.

In “Reformation of Education in Graduated School Leading Future (Deliberation Summary)” (Work Group on Universities, Central Council for Education, September 15, 2015), it was requested that research assistant (RA) employment for (latter-stage) doctoral students be enhanced by various financial resources and that payment for employed (latter-stage) doctoral student RAs and TAs be standardized at a level approximating living expenses.

Given these intentions, in CREST research, it is requested that (latter-stage) doctoral students be employed as RAs and that payment at at an appropriate level for living expenses and at an appropriate level for hours worked be established.

Excerpt from “Fifth term Basic Plan of Science and Technology, Chapter IV Strengthening basic force for science and technology, (1) human resource development”, ④ Development, securement, and activity promotion of human resources as intellectual professionals, (iii) Promotion of reforming graduate school education

To attract excellent students and working people in Japan and from overseas, financial supports to graduate students, those in a Ph.D. course (the latter half) in particular, are improved. Universities and public research organizations are requested to increase employment and improve treatment of students in the Ph.D. course (the latter half) as teaching assistants (TA), research assistants (RA) or the like. The central government attempts to enlarge the fellowship program as well as promote approaches by relevant agencies. This aims to quickly achieve the goal for “about 20% of students in the PH.D. course (the latter half) to receive a fellowship roughly corresponding to living expenses” set out in the basic plans of the 3rd and 4th terms.

<omitted hereafter>

“Fifth term basic plan of science and technology”

(outline)

<http://www8.cao.go.jp/cstp/kihonkeikaku/5gaiyo.pdf>

(text)

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

“Reforming graduate school education, which leads the future (summary by council)” (September 15, 2015, University subcommittee, Central council for education,)

(outline)

http://www.mext.go.jp/component/b_menu/shingi/toushin/__icsFiles/afieldfile/2016/02/09/1366899_02.pdf

(text)

http://www.mext.go.jp/component/b_menu/shingi/toushin/__icsFiles/afieldfile/2016/02/09/1366899_01.pdf

Note: Considerations in hiring doctoral course students as Research Assistants (RAs)

- It is recommended that annual compensation approximate 2 million yen per year, or 170,000 yen per month, so please estimate research budgets based on these figures.
- Judgments regarding the specifics of payment amounts, payment timing, etc. will be left to research institutions. There are no requirements concerning the payment of amounts either above or below the levels mentioned above.
- The prerequisite for one receiving scholarship or other program payments as an RA are that multiple funding sources are not a hindrance to the respective scholarship, program, and affiliated research institution and that expenses can be prorated to the time engaged on the other programs.

(2) Career Paths for Young Research Staff with Doctoral Qualifications (for CREST)

The Ministry of Education, Culture, Sports, Science and Technology’s basic policy for supporting diverse career paths for young research staff who have doctoral qualifications and are being employed with public research funds (December 20, 2011 Council for Science and Technology, Committee on Human Resources) states that it is

necessary to actively support public research institutions and research directors who are using public research funds to employ young research staff with doctoral qualifications in their efforts to secure diverse domestic and overseas career paths for these young research staff members. Given these intentions, when public research funds (i.e., competitive funds, other project research funds, and project-type education research funds) are used to employ junior doctoral researchers, when projects are adopted, active assistance to ensure that students can pursue various research career paths will be appreciated.

Further, considering the utilization of indirect costs for relevant initiatives will be appreciated. For more details, please refer to “5.2.5 Responsibilities of Research Directors, Lead Joint Researchers and Individual Researchers” and the following URL.

http://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu10/toushin/1317945.htm

(3) Promotion of the sharing of research equipment and apparatuses

“About reforming competitive research fund toward sustainable creation of research achievement (mid-term summary)” (June 24, 2015, Committee for reforming competitive research fund) is said to consider it proper to share relatively large facilities and instruments for universal use while aiming to fully achieve research objectives. In addition, “About introduction of a joint use system for new research facilities and instruments integrated with research organization management” (November 2015, Advanced Research Base Subcommittee, Science, Technology and Academy Council) requests that universities and national research and development corporations operate “Joint use system for research facilities and instruments for each research organization unit” (instrument joint use system, hereafter).

Based on the above described background, follow a joint-use system for instruments of affiliated organizations within a range of management conditions for other research expenses to actively undertake joint-use of large and universal-use research facilities and instruments to be purchased for this project in particular to the extent giving rise to no problem in promoting relevant research issue, utilization of research facilities and instruments purchased with other research funds, purchase with combined research expenses, and their utilization. Note that balance needs to be maintained between management of instruments and facilities for joint use and use of instruments for achieving research objectives of relevant research issues.

Furthermore, attempt to actively collaborate with “Research facility network project for collaboration of universities” implemented for nationwide mutual facility utilization in Institute of Molecular Science, National Institutes of Natural Sciences, University Joint Utilization Corporation, and the all-university joint use system established by “facility support and preparation project” at universities to promote joint use of research facilities and instruments not bound to research organizations in addition to the above described joint-use system for instruments.

○ “About introduction of a new joint-use system for research facilities and instruments integrated with research organization management” (November 25, 2015, Advanced Research Base Subcommittee, Science and Technology and Academy Council)

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

- “About reforming competitive research expenses toward sustainable creation of research achievements”
(mid-term summary)

(June 24, 2015, Committee for reforming competitive research expenses)

http://www.mext.go.jp/b_menu/shingi/chousa/shinkou/039/gaiyou/1359306.htm

- “About unifying rules for the use of competitive fund”

(March 31, 2015, Agreement at liaison conference of relevant governmental ministries related to competitive fund)

<http://www8.cao.go.jp/cstp/compefund/siyouruuru.pdf>

- “Research facility network project for collaboration of universities”

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