

# Application Procedures for Grants-in-Aid for Scientific Research-KAKENHI-

# FY2018

Research Activity Start-up

March 1, 2018

Japan Society for the Promotion of Science (https://www.jsps.go.jp/)

# Introduction

This is the application procedure of "Grants-in-Aid for Scientific Research-KAKENHI-"Research Activity Start-up FY2018" listing the necessary procedures and other matters.

It comprises the following sections:

- I Outline of the Grants-in-Aid for Scientific Research-KAKENHI-
- I Call for Proposals
- III Instructions & Procedures for Applicants
- **IV** Instructions for Grant Recipients
- V Instructions & Procedures for Administrative Staff of Research Institution
- VI Other Relevant Issues

Among the above mentioned, there are such items as eligibility for this application call, amount of the grant, research period and other matters, and schedule from application to receipt of funding in the "I Details of the Call for Proposals".

In addition, there are "requirements for applying", "necessary procedures" and other matters for those who intend to apply in " $\mathbbm{I}$  Instructions & Procedures for Applicants", " $\mathbbm{V}$  Instructions & Procedures for Those Who Have Already Been Accepted" and " $\mathbbm{V}$  Instructions & Procedures for Research Institution Staff". Individuals to whom may it concern are requested to make sure that they verify the relevant parts of the text.

The current round of call for proposals opens before the finalization of the budget FY2018 so that the researchers proceed with their preparations for the screening early and that the researchers are able to start their research as early as possible. Therefore, please be advised that financial resources to be allocated and other matters may be subject to change by the overall budget at a later stage.

The major changes in the application procedure for FY2018 are stated in the following page.

Grants-in-Aid for Scientific Research comprise a competitive funding system that provides financial support for creative and pioneering research conducted by individual researchers. Accordingly, the content of the Proposal for Grant-in-Aid made by applying researchers must be original.

In preparing the Proposal for Grant-in-Aid, neither plagiarism nor misappropriation of other's research content is permitted. Applicants must comply with a high standard of research ethics.

# <Major changes to the FY2018 Guidelines>

1. Revision of screening categories

When applying for a "Research Activities Start-up" grant in the past, the applicant chose "Prospective Area for Screening" in which s/he wanted to be screened and one "related research field" with the closest relationship to his/her research from the "List of Categories, Areas, Disciplines, and Research Fields". Under the revised system, the List of Categories has been abolished in favor of a "Research Activity Start-up FY2018" Review Section Table (annexed Table 1), from which the applicant selects the category in which s/he wants to be screened. When selecting the screening category, please refer to "Research Activity Start-up FY2018 Review Section Table, Examples of Related Research Content" (annexed Table 2), and choose the category in which you want your application to be screened.

2. Revision of screening process

The past document and panel screening process has been revised to a 2-stage document review process.

- 3. Research Proposal (application)
  - The format of the Research Proposal has been revised. When preparing your proposal, please pay careful attention to the "Procedures for Grants-in-Aid for Scientific Research KAKENHI for FY2018 (Research Activity Start-up) (Forms/Procedures for Preparing and Entering a Research Proposal Document)" on the KAKENHI homepage of the JSPS website.

(URL: https://www.jsps.go.jp/j-grantsinaid/index.html)

- In preparing the "Research Achievements of the Principal Investigator (PI)" column of the application form, you may extract information on your research achievements from your researchmap and entered them in the column. This information may also be edited when preparing the column.

# **Table of Contents**

# I. Outline of the Grants-in-Aid for Scientific Research - KAKENHI ------1

- 1. Purpose and Character of Grants-in-Aid for Scientific Research KAKENHI -
- 2. Research Categories
- 3. Role sharing between MEXT and JSPS
- 4. Rules pertaining to KAKENHI
  - (1) Three types of rules pertaining to KAKENHI
  - (2) Appropriate use of KAKENHI
  - (3) The distinction between KAKENHI (Series of Single-year Grants) and KAKENHI (Multi-year Fund)
  - (4) Penalty for non-submission of "Report on the Research Achievements"
  - (5) Penalty for the case of infringement of related laws and regulations
- 5. "Guidelines on the Proper Implementation of Competitive Funding"
  - (1) Elimination of Unreasonable Duplication and/or Excessive Overconcentration in the Grant Allocation
  - (2) Dealing with "Improper Grant Spending", "Fraudulent Grant Acquisition" or "Research Misconduct"
- 6. Dissemination of Research Achievements supported by KAKENHI
  - (1) Acknowledging KAKENHI grant in research publications
  - (2) Promotion of "Open Access" to the research papers supported by KAKENHI grants

# II. Call for Proposals 14

- 1. Research Categories for which a Call for Proposals is Organized
- 2. Schedule from Application to Grant Delivery
  - (1) Procedures That Need to Be Completed Prior to the Deadline for Submission of the Application Documents
  - (2) Schedule After the Submission of the Application (Plan)

# 

- 1. Procedures to Be Completed Prior to the Application
  - (1) Ascertainment of the Eligibility for KAKENHI Application
  - (2) Confirmation of the Researcher Information Registered in the e-Rad System
  - (3) Obtainment of an ID and a Password for the Electronic Application System
- 2. Restrictions on Parallel Grant Application/Receipt
  - (1) The Basic Policy for Restriction on Parallel Grant Application/Receipt
  - (2) Restrictions on Parallel Grant Application/Receipt
  - (3) Important Notes
- 3. Preparation of the KAKENHI Application Form (Research Proposal Document)
  - (1) Preparation of KAKENHI Research Proposal Document
  - (2) Electronic Submission of the Research Proposal Document
    - Important Checkpoints of the Research Proposal Document
    - 1 Qualification as a KAKENHI project
  - 2 Eligibility of the Project Members
  - 3 Requirements for the Appropriation of Research Expenditure

4 Selection by the Applicant of a Desired Review Section in the Review Process

- 4. Completion of Research Ethics Education Course or Other etc.

# 

- 1. Handling of a research project that is to be continued in FY2018 (hereafter referred to as "continued research project").
- 2. Handling of Continued Research Projects Whose PI Fails to Submit the Report on the Research Achievements of his/her Other KAKENHI Project
- 3. Completion of Research Ethics Education Coursework etc.

# V. Instructions & Procedures for Administrative Staff of Research Institution ... 59

- 1. Issues to Be Completed Beforehand by the "Research Institution"
  - (1) Requirements as a "Research Institution" and Procedures for Designation and Change
  - (2) Ascertainment of the Eligibility to Apply of the Affiliated Researcher
  - (3) Submission of the Form U-21 "Background Description Regarding the Eligibility for Grant-in-Aid for Research Activity Start-up FY2018"
  - (4) Registration or Update of Researcher Information in e-Rad and Provision of ID and Password (5) Submission of a "Self-Assessment Checklist on the Improvement of the System" based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)"
  - (6) Submission of the "Checklist pertaining to the Current Status" based on "Guidelines for Responding to Research Misconduct"
  - (7) Implementation of a Research Ethics Education Course based on the "Guidelines on Research Misconduct"
  - (8) On the Submission of the Report on the Research Achievements
  - (9) Obtaining Sufficient Knowledge about the Contents of the Application Procedures
- 2. Issues that Need to Be Verified When Compiling the Application Forms (Preparing the Research Proposal Document)
  - (1) Ascertainment of the Eligibility for KAKENHI Application
  - (2) Confirmation of the Researcher Information Registered in the e-Rad System
  - (3) Verification of Principal Investigator
  - (4) Verification of the Application Forms
- 3. Submission and Other Matters of the Research Proposal Document (Preparing the Research Proposal Document)

# 

- 1. Concerning Support through Grant-in-Aid for Scientific Research on Innovative Areas Platforms for Advanced Technologies and Research Resources
- 2. Concerning the Promotion of the Shared Use of Research Equipment

- 3. On the Promotion of the 'Dialogue on Science and Technology with Citizens' (A Basic Approach Policy)
- 4. Cooperation with the National Bioscience Database Center
- 5. On the Inter-University Bio-Backup Project
- 6. National BioResource Project
- 7. Registration of the Researcher Information in researchmap
- 8. Security Export Control Policy

# 

- 1. Concerning KAKENHI Review (Omitted)
- 2. Review Methods, and Other Matters
- 3. Notification of the Review Results

# (Reference 2) Procedures on the Handling of Grants-in-Aid for Scientific Research

# omitted

# (Reference 3) Procedures on the Handling of JSPS Grants-in-Aid for Scientific Research (KAKENHI (Series of Single-year Grants)) ······omitted

# (Reference 4) State of Allocation of Grants-in-Aid for Scientific Research for FY2017 and Other Matters ......81

- 1. State of Allocation of Grants-in-Aid for Scientific Research for FY2017
- 2. State of Allocation of Grants-in-Aid for Scientific Research (KAKENHI (Multi-year Fund)) for FY2017
- 3. Changes in Budgets and Other Information

# Inquiries ······85

# References

The application forms (Proposal for Grant-in-Aid) and other application materials are stored separately. Please refer to "Supplementary Volume 'Application Procedures for Grants-in-Aid for Scientific Research – KAKENHI - for FY2018 (Research Activity Start-up) (Forms / Procedures for Preparing and Entering a Research Proposal Document)".

\* The application forms (Proposal for Grant-in-Aid) and other application materials can be downloaded from the JSPS website (cf. URL below).

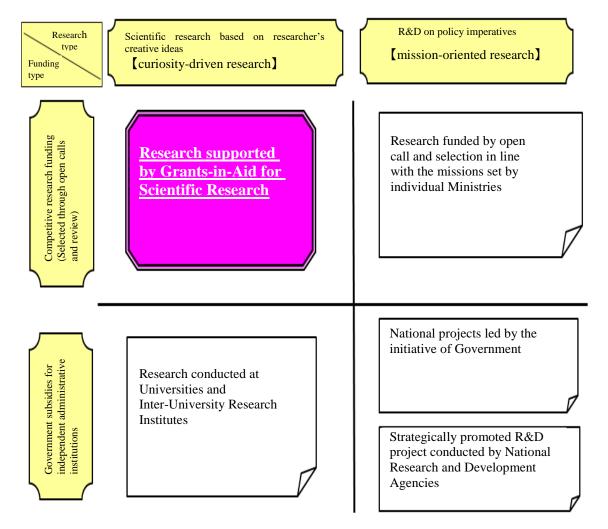
 $(URL) \quad https://www.jsps.go.jp/j-grantsinaid/index.html$ 

# I. Outline of the Grants-in-Aid for Scientific Research - KAKENHI -

# 1. Purpose and Character of Grants-in-Aid for Scientific Research - KAKENHI

Grants-in-Aid for Scientific Research are competitive funds that are intended to promote development of scientific research (based on original ideas of researchers), encompassing basic to applied researches in all fields ranging from humanities and social sciences to natural sciences. The grants provide financial support for creative and pioneering research projects that will become the foundation of social development. The research projects are selected by peer-review process.

# The placement of "KAKENHI" in the policy on the promotion of science, technology and scientific research in Japan



# 2. Research Categories

Different research categories of KAKENHI listed below are provided so as to meet the variety of the research content and budget scale.

♦ As of March 2018

Research categories	Purposes and description of each research category
Grants-in-Aid for Scientific Research	
Grant-in-Aid for Specially Promoted Research	Outstanding and distinctive research conducted by one or a relatively small number of research expected to achieve remarkably excellent research results that open up a new scientific field. (The research period is 3 to 5 years (in a truly necessary case, period up to 7 years is acceptable.) The budget ranges from 200 million to 500 million yen per project (only in a truly necessary case budget exceeding 500 million yen.is asked for).
Grant-in-Aid for Scientific Research on Innovative Areas	(Research in a proposed research area) This category is intended to foster novel research areas proposed by diverse groups of researchers th are expected to lead to development and heightening of Japan's research level in the respective field to be conducted by collective research efforts through collaboration, scholarly training, shared use of equipment, etc. (The period is 5 years. The budget range is generally set between 10 million to 300 million yen pe fiscal year per proposed area.)
Grant-in-Aid for Scientific Research	<ul> <li>(S): Creative/pioneering research conducted by one or a relatively small number of researchers (Th period is 5 years. The budget ranges from 50 to 200 million yen per project.)</li> <li>(A), (B), (C): Creative/pioneering research conducted by one researcher or jointly by multip researchers (The period is 3 to 5 years.)</li> <li>Classification of (A), (B) and (C) is according to the range of total budget <ul> <li>(A) 3 to 5 years</li> <li>20 million to 50 million yen</li> <li>(B) 3 to 5 years</li> <li>5 million to 20 million yen</li> <li>(C) 3 to 5 years</li> <li>5 million yen or less</li> </ul> </li> <li>*Classification of (A)/(B)/(C) is according to the budget range.</li> </ul>
Grant-in-Aid for Challenging Exploratory Research	[No new proposals are called for FY2018.] Early-stage research conducted by one or multiple researchers which, based on a unique idea, sets high and challenging goal (The period is 1 to 3 years. The budget is up to 5 million yen per project.)
Grant-in-Aid for Challenging Research (Pioneering/Exploratory)	<ul> <li>(Pioneering) (Exploratory)</li> <li>Research conducted by a single or multiple researchers that aims at radically transforming the existin research framework and/or changing the research direction and has a potential of rapid developmer. The scope of the (Exploratory) category encompasses research proposals that are highly explorator and/or are in their budding stages.</li> <li>The research period and total budget range are as follows;</li> <li>(Pioneering) 3 to 6 years 5 million to 20 million yen</li> <li>(Exploratory) 2 to 3 years 5 million yen or less</li> </ul>
Grant-in-Aid for Young Scientists	<ul> <li>[No new proposals are called for FY2018.]</li> <li>(A), (B): Research conducted individually by a researcher of age 39 or younger. The research period and total budget range are as follows;</li> <li>(A) 2 to 4 years 5 million to 30 million yen</li> <li>(B) 2 to 4 years 5 million yen or less</li> <li>*Classification of (A)/(B) is according to the budget range.</li> </ul>
Grant-in-Aid for Early-Career Scientists	Research conducted by an individual researcher (*) who is less than 8 years after Ph.D. acquisition. A an interim measures, a non-Ph.D. researcher who is 39 years old or younger can also apply (*)Individuals who are in the prospect of acquiring Ph.D. are also eligible. When counting the years after Ph.D. acquisition, the period of maternity leave and childca leave can be excluded. (The period is 2 to 4 years. The budget is up to 5 million yen per project.)
Grant-in-Aid for Research Activity Start-up	Research conducted by a single researcher who has been freshly appointed to a research position, who has returned from his/her maternity, childcare or other kinds of leave. (The period is up to2 years. The budget is up to 1.5 million per fiscal year.)
Grant-in-Aid for Encouragement of Scientists	Research conducted by an individual who is ineligible for application for other KAKENHI categorie (e.g. technical staffs of research institutions, school teachers, company employees, etc.). (The period is 1 year. The budget range is between 100 thousand and 1 million yen per project.)
Grant-in-Aid for pecial Purposes	Funding of research projects of pressing urgency and importance. (e.g. investigation of natural disaste
Grant-in-Aid for Publication of Scientific Research Results	
Publication of Research Results	Subsidy for publication and/or international dissemination of research achievements of high academ values executed by academic associations and other organizations

L	Enhancement of	Subsidy for efforts by academic societies and other scholarly organizations to strengthen international
	International	dissemination of academic information for the purpose of international academic exchange.
	Dissemination of	
	Information	
	Scientific Literature	Subsidy for academic publication of research results (books) authored by an individual or a group of researchers.
	Databases	Subsidy for creation and operation of a database open to public use, by an individual or a group of researchers.
(	Brant-in-Aid for	Funding for research conducted by JSPS Fellows (including Foreign JSPS Fellows)
J	SPS Fellows	(The period is up to3 years.)
J	Fund for the Promotion of oint International Research	
	Fostering Joint International Research	Support of joint international research project conducted by a KAKENHI grantee in collaboration with researcher(s) at foreign university or research institution. Over a period of 6 to 12 months (The budget is up to 12 million yen.)
	International Activities Supporting Group	<ul> <li>Support of international activities within Scientific Research on Innovative Areas</li> <li>(Set period of the Area, up to 15 million yen per year)</li> <li>* After FY2018 Call for Proposal, "International Activities Supporting Group" will be incorporated into "Grant-in-Aid for Scientific Research on Innovative Areas "Administrative Group".</li> </ul>
	Home-Returning	Support of research to be conducted by a Japanese researcher with current affiliation abroad who is to
	Researcher	be newly appointed at university or research institution in Japan.
	Development Research	(The period is up to3 years. The budget is to 50 million yen)
(	Generative Research Field	This category set for "Scientific Research (B/C)" is open to research proposals for which screening
-	or Scientific Research B/C)	within the conventional framework of research fields may be difficult and/or to applicants who prefer their proposals to be screened from a broader perspective relevant to the Generative Research Field. (The research period that can be applied for differs depending on the year of application.) * After the call for proposals in FY2018, setting of a new field is suspended (FY2018 Call for proposal is only for the 6 fields established in FY2016 and FY2017)

# 3. Role sharing between MEXT and JSPS

Up to FY 1998, all aspects of KAKENHI funding were handled by the Ministry of Education (the predecessor of the MEXT). From FY1999 on, these tasks have been gradually transferred to JSPS. The current role-sharing between MEXT and JSPS is as shown below.

		✤ As of March 2018
	Call for proposals, Review	Grant delivery
Research category	Preparation of the document(s) for procedures, Reception of proposal submission	Notifications of unofficial decision Reception of the application form (after unofficial decision) and other documents for the relevant procedures. Notification of grant decision
Scientific Research on Innovative Areas, Grant-in-Aid for Special Purposes Fund for the Promotion of Joint International Research (International Group)	MEXT	JSPS
Specially Promoted Research, Scientific Research, Challenging Exploratory Research, Challenging Research, Young Scientists, Early-Career Scientists, Research Activity Start-up, Encouragement of Scientists, Publication of Scientific Research Results, JSPS Research Fellow, Fund for the Promotion of Joint International Research (Fostering Joint International Research, Home-Returning Researcher Development Research), Generative Research Fields	JSPS	JSPS

# 4. Rules pertaining to KAKENHI

<u>KAKENHI</u> (Series of Single-year Grants) are governed by the "Law on Optimizing Implementation of Budgets Relating to Subsidies" (Law No. 179, 1955), "Procedures on the Handling of Grants-in-Aid for Scientific Research" (Announcement of the MEXT), "Procedures on the Handling of JSPS Grants-in-Aid for Scientific Research" (KAKENHI (Series of Single-year Grants)) (Regulations No. 17, 2003), and other rules.

<u>KAKENHI (Multi-year Fund)</u> are governed by the "Basic Policy on the Management of the KAKENHI (Multi-year Fund) (Decision by the Minister of Education, Culture, Sports, Science and Technology)", "Procedures on the Handling of JSPS Grants-in-Aid for Scientific Research (KAKENHI (Multi-year Fund))" (Rule No. 19, 2011) and other rules.

# (1) Three types of rules pertaining to KAKENHI

The following three sets of rules pertain to various aspects of KAKENHI.

- 1) Application Rules: rules concerning the submission of research proposals
- 2) Assessment Rules: rules concerning the pre-assessment (review) of applications, and rules concerning the interim, ex-post, and other progress assessment of granted projects.

• A . . . f M ..... 2010

3) Utilization Rules: rules concerning the use of KAKENHI

These three sets of rules apply as follows. [Grants-in-Aid for Scientific Research]

			* As of March 2018
	Application Rules	Assessment Rules	Utilization Rules
	MEXT	MEXT	JSPS
	Procedures on the call for proposals	Rules concerning the assessment for Grants-in-Aid for Scientific Research	For researchers: Supplementary conditions
KAKENHI (Series of Single-year Grants)		Review Outline for Grants-in-Aid for Scientific Research, category "Scientific Research on Innovative Areas" Assessment Outline for Grants-in-Aid for Scientific Research, category "Scientific Research on Innovative Areas"	For research institutions: Administrative work and other tasks concerning the use of Grants-in-Aid for Scientific Research (KAKENHI (Series of Single-year Grants)), to be performed by each research institution
	JSPS	JSPS	
	Procedures on the call for proposals	Rules concerning the review and assessment for Grants-in-Aid for Scientific Research	JSPS
KAKENHI (Multi-year Fund)		*The review and assessment rules for FY2018 are scheduled to be made public in early September.	For researchers: Funding conditions For research institutions: Administrative work and other tasks concerning the use of Grants-in-Aid for Scientific Research (KAKENHI (Multi-year Fund)), to be performed by each research institution

#### (2) Appropriate use of KAKENHI

KAKENHI are funded by the tax of citizens and other sources, so please ensure that KAKENHI is used efficiently and effectively, for example through planning for the communal use of purchased items. Researchers receiving KAKENHI have a duty to comply with the related laws, regulations and utilization rules by researchers (subsidiary conditions or funding conditions), and also to use such grants appropriately. To ensure grantees comply with this requirement, we check whether no inappropriate use of KAKENHI will be made, when an application is made. (See note below.)

To facilitate the appropriate use of KAKENHI, research institutions to which the researchers belong are responsible for the management of the KAKENHI. The Administrative work that each research institution is required to carry out (rules for use for institutions) is determined.

The research institutions are responsible for the appropriate accounting of KAKENHI. It is desirable, for example, to set up an accounting system for proper management of KAKENHI budget and expenditure, purchase order and delivery inspection, and internal auditing. <u>To prevent</u> improper business transactions, it is important, in addition to appropriate delivery inspections, to make all traders thoroughly informed of the KAKENHI rules and thus obtain cooperation of traders in the prevention of this kind of fraudulent accounting. Research institutions should take rigorous measures so as to eliminate business malpractice.

KAKENHI applicants and their institute must have full understanding of the KAKENHI rules prior to the submission of their research proposals.

# (3) The distinction between KAKENHI (Series of Single-year Grants) and KAKENHI (Multi-year Fund)

<u>A research project submitted to the categories of KAKENHI (Series of Single-year Grants), if</u> <u>adopted</u>, is granted as a package plan for the multi-year research period. The actual funding, however, is made on the single-year basis for each fiscal year of the research period. Therefore, this type of KAKENHI cannot be used to cover the expenditures in fiscal years other than the respective grant year.

When it is anticipated that spending of the grant money cannot be completed within the fiscal year, owing to reason(s) unforeseeable at the time of grant delivery, the grant money can be carried over to the next fiscal year by going through the due procedures.

<u>On the other hand, KAKENHI (Multi-year Fund) is</u> handled as single funding for the whole research period. Therefore, it is possible to use the grant to cover the expenditures extending over fiscal year boundaries.

Moreover, if an amount of grant money remains unused by the end of a fiscal year, it can be carried over to the successive fiscal year(s) as long as they are within the overall research period, without going through prior authorization procedures. In case such a grant carry-over becomes necessary in the final year of the research period, the grantee may choose to request an official approval of one-year extension of the research period.

#### (4) Penalty for non-submission of "Report on the Research Achievements"

- The "Report on the Research Achievements" plays the important role in making the achievements of the research funded by KAKENHI widely known to the public, and thereby returning the outcome of KAKENHI supported by citizens' tax, to the society.
   The contents of the "Report on the Research Achievements" submitted by KAKENHI grantees are compiled and made available to the public on the "Database (KAKEN)" of the National Institute of Informatics and other platforms. "Report on the Research Achievements" should be submitted via the research institution to which the KAKENHI grantees belong.
- 2) No KAKENHI grant will be awarded to a researcher who failed to submit the "Report on the Research Achievements" at the end of his/her research period without any justifiable reason. If such a non-compliance case is uncovered, the decision of grant award to the researcher in question may be cancelled, the on-going grant may be suspended, and return of the delivered grant may be ordered. In addition, relevant information, such as the name of the research institution to which the researcher in question belongs, may be made public.

#### (5) Penalty for the case of infringement of related laws and regulations

If there have been serious falsehoods in the application documents, or violation of relevant laws, regulations and guidelines, the delivery of KAKENHI may be suspended or cancelled.

# 5. "Guidelines on the Proper Implementation of Competitive Funding"

The "Guidelines on the Proper Implementation of Competitive Funding" (agreement of the liaison meeting of related offices and ministries on competitive funding, dated September 9, 2005; amended June 22, 2017) states common understandings among the research-related ministries and offices in regard to allocation of competitive research funds, in terms of elimination of such inappropriate practices as unreasonable duplication and/or excessive overconcentration in the grant allocation, fraudulent acquisition and/or unlawful use of grants, and misconducts in research activities..

The implementation of the KAKENHI system as well as other competitive funding scheme follows the above-mentioned "Guidelines" and other related rules. Applicants are urged to take special notice of the following points.

# (1) Elimination of Unreasonable Duplication and/or Excessive Overconcentration in the Grant Allocation

 Towards elimination of "Unreasonable Duplication and/or Excessive Overconcentration" (\*) of competitive funds, relevant information on funding applications are shared among the pertinent ministries and funding agencies, making use of the Cross-ministerial Research and Development management system (e-Rad). Therefore, applicants, when submitting more than one KAKENHI applications and/or other competitive grants, are urged to prepare their application documents with due care to clearly state the differences between the project to be submitted and his/her other projects so as to make it clear that they do not constitute unreasonable duplication.

In case a particular KAKENHI application is recognized as constituting a case of unreasonable duplication and/or excessive overconcentration, that application may not be granted.

2) Untruthful statement or misrepresentation of the status of applications and acquisitions of other KAKENHI grants and other competitive funds in the application form, may result in cancellation of grant or reduction of the research budget.

#### (\*) Elimination of Unreasonable Duplication and Excessive Overconcentration in Grant Allocation

"Guidelines on the Proper Implementation of Competitive Funding" -Extract-

(Agreement of the Liaison Meeting of Related Offices and Ministries on Competitive Funding, Dated September 9, 2005 (Revision: June 22, 2017))

2. Elimination of Unreasonable Duplication and/or Excessive Overconcentration in the Grant Allocation

(1) Basic Policy of the Unreasonable Reduplication and Excessive Overconcentration

- ① In the "Guidelines", "Unreasonable Duplication" refers to a situation in which more than one competitive funds are unnecessarily and duplicative allotted to one and the same research project by one and the same researcher. Either of the following cases falls under "Unreasonable Duplication".
  - OCases where simultaneous applications have been made to more than one competitive funds for substantially the same research project, and where these research projects are redundantly adopted .
  - OCases where an application has been made again for substantively the same research project as another project that has already been adopted, and for which the allotment of competitive funding has already been completed.
  - OCases where there is duplication in the use of research funds among more than one research projects.
  - OOther cases corresponding to those above.
- 2 In these guidelines, "Excessive Concentration" is a situation in which the entire research funds that are allotted to one and the same researcher or research group (hereinafter called "researcher, etc.") in the fiscal year in question exceeds the limit within which they can be used effectively and efficiently, and in which the research funds cannot be used within the research period. Either of the following cases falls under "Excessive Concentration".

○Cases where, in the light of the abilities of the researcher, etc. and the research methods, etc., excessive research funds are allotted.

○Cases where, in comparison with the effort (the time allocation rate (%) of time necessary for the implementation of the research activities with the entire working time of researcher) that is being allotted to the research project in question, excessive research funds are allotted.

OCases where the purchase of unnecessarily expensive equipment is carried out.

OOther cases corresponding to the cases mentioned above.

# (2) Dealing with "Improper Grant Spending", "Fraudulent Grant Acquisition" or "Research Misconduct"

- O "Improper Grant Spending", "Fraudulent Grant Acquisition" and "Research Misconduct" refer to the following type of acts respectively.
- · "Improper Grant Spending":

Use of funds for other purposes, intentionally or by gross negligence, for example, by conducting fictitious business transactions ("*azukekin*") with a trader through fictitious order placements, or by charging costs higher than actually needed for personnel, travel expenses, etc., or use of funds in violation of the content of the funding decision or the conditions it implies

• "Fraudulent Grant Acquisition":

Receiving funds by deception or other fraudulent means, for example, by applying under the name of another researcher, or by making false entries in application documents

• "Research Misconduct":

Fabrication, Falsification, or Plagiarism of data, information, or findings published research achievements based on the intent of the researcher, or the failing of the researcher to fulfill the basic duty of care that he/she has.

# No KAKENHI will be offered, for a fixed period of time, when a researcher or related party has committed a improper grant spending of KAKENHI, has committed a fraudulent grant acquisition of KAKENHI, or has committed a research misconduct. Moreover, for research projects for which it is established that an improper grant spending of grants, a fraudulent grant acquisition of grants or research misconduct has been committed, he/she may be required to return the given KAKENHI completely or partially.

Moreover, an outline of the improper grant spending of KAKENHI, the fraudulent grant acquisition of KAKENHI, and/or the research misconduct in question of the researcher who falls in those categories (containing an outline of the research achievements in the research institution, the names of the people involved, the name of the system, the institution they belong to, the research project, the budget, the fiscal year of the research, the fraudulent content, details of the measures taken, etc.) will be made public.

Also researchers who have committed a fraud, waste, abuse, or fraudulent grant acquisition of competitive funding other than KAKENHI (including funds under the control of other ministries) etc., and/or has committed research misconduct by means of these competitive funds, and therefore are excluded from receiving these funds in question, for a fixed period of time, will not receive KAKENHI for the fixed period of time.

Note: This applies to those schemes newly starting a call for proposals in FY2017 (and onward) for "competitive funding other than KAKENHI" as well. It also applies to those schemes that ended before FY2016. Please refer to the website below for the schemes to which this specifically applies at present. Cf. URL http://www8.cao.go.jp/cstp/compefund/kyoukin29\_seido\_ichiran.pdf

# OPeriod of KAKENHI suspension

	Extent of the improper grant spending		Period of KAKENHI suspension
I. Researchers who committed improper grant spending of KAKENHI and researchers who conspired in such acts	1. Misappropriation of KAKENHI for personal gain		10 years
II. Researchers who committed improper grant spending	2. Other than 1.	(1) Cases of major seriousness and maliciousness	5 years
of KAKENHI and		(2) Cases other than (1) and (3)	2 to 4 years
researchers who conspired in such acts		(3) Cases of minor seriousness and maliciousness	1 year
III. Researchers who acquired KAKENHI by deception or other fraudulent means and researchers who conspired in such acts		_	5 years
IV. Researchers who were not directly involved in the improper grant spending of KAKENHI, but failed to exercise due care.		_	Half the period of improper grant spending (upper limit 2 years, lower limit 1 year, rounding off fractions)

# Improper Grant Spending and Fraudulent Grant Acquisition of KAKENHI

For cases judged as subcritical to the punitive suspension measures, sharp reprimand is administered to the individual(s) concerned. The following cases are pertinent to the "sharp reprimand" penalty.

1. Among the cases of II above, the cases in which improper grant spending are slight and the amount of money involved is small.

2. Among the cases of IV above, the cases in which seriousness and maliciousness are slight.

#### "Research Misconduct"

	Individual Involvement in the Misconducts		Negative Impacts on Science and on Public at Large Degree of Maliciousness	Period of KAKENHI Suspension
Sub	(a) Particularly malicious individual(s) who, for example, had intention of revery beginning of the research		ample, had intention of research misconduct from the	10 years
Subject of Research Misconduct	(b) Author(s) of paper(s), etc. related to the research in which research misconduct (s) have been identified (other than (a) above)	Responsible author(s) of the paper(s) in question	Cases where it is judged that the impact on the progress of the science in the field in question and the social impact are major, or the level of maliciousness involved in the acts is high	5 to 7 years
arch Misco		(corresponding author, lead author or other authors bearing equivalent responsibilities)	Cases where it is judged that the impact on the progress of the science in the field in question and the social impact are minor, or the level of maliciousness involved in the acts is low	3 to 5 years
nduct		Author(s) of the paper(s) in question other than the responsible author(s) described above		2 to 3 years
	<ul><li>(c) Individual(s) involved who are not the authors of the research paper(s) for which research misconduct(s) are identified.</li></ul>			2 to 3 years
Responsible author(s) of paper(s), (corresponding author, lead author or other authors bearing equivalent responsibilities) for which research misconduct(s) are identified, but not involved in the alleged research misconduct		other authors bearing equivalent	Cases where it is judged that the impact on the progress of the science in the field in question and the social impact are major, or the level of maliciousness involved in the acts is high	2 to 3 years
			Cases where it is judged that the impact on the progress of the science in the field in question and the social impact are low, or the degree of severity of the acts is low	1 to 2 years

\* In cases where specific issues for extenuation such as voluntary withdrawal of the paper in question may be taken into account, the suspension period can be shortened as judged fit.

2) The relevant information of each research misconduct case may be provided to the relevant offices and the office of research funding under the jurisdiction of Ministry of Education, Culture, Sports, Science and Technology (including independent administrative legal entities and other grant-allocating institutions) in charge of funding within such Offices and Ministries. Thereby the penalized researcher may be also subject to restriction in application of and/or participation to research projects in other competitive funds than KAKENHI.

Note: "Applying and participating" means proposing new projects, applying, responding to call for proposals, newly participating to research as a person involved in collective research, etc. and participating as a Principal Investigator or a person involved in collective research, etc. in research projects in progress (continued projects).

3) If it is established that research misconduct has taken place in a research paper, report, or other research output funded by KAKENHI, the researcher will be treated in the same way as stated in the above-mentioned 1) and 2). The severity of the research misconduct and other matters will be taken into consideration.

Moreover, a person who is determined to have a certain responsibility, because, for example, he or she neglected his/her duty of care as a person in charge of the paper, report, etc. in question, will be treated in the same way, even if it has not been established that he or she was directly involved in the research misconduct.

- 4) Research institutions are required to comply with the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards) (revised in February 2014), Ordered by the Minister of Education, Culture, Sports, Science and Technology" and "Guidelines for Responding to Research Misconduct (adopted August 26, 2014 by MEXT) ". Therefore, research institutions should pay adequate attention to these two sets of Guidelines when researchers implement their research activities.
  - O "Guidelines on the Management and Audit of Public Research Funds at Research Institutions"
    - Cf. URL http://www.mext.go.jp/a\_menu/kansa/houkoku/1343904.htm
  - "Guidelines for Responding to Research Misconduct"

Cf. URL http://www.mext.go.jp/a menu/jinzai/fusei/index.htm

Note: Recent case examples of improper grant spending, fraudulent grant acquisition and research misconduct of KAKENHI.

- O Improper grant spending
- Someone instructed a trader to forge fictitious transaction pretending to have purchased expendables, made the university pay KAKENHI for them, and then instructed the trader to keep the money as deposit for future use.
- Someone instructed a trader to forge a fictitious transaction, obtaining a false invoice which carries item names different from those actually ordered and delivered, and then made the university pay KAKENHI for them.
- Someone instructed his/her students to submit false work attendance sheets, made the university pay KAKENHI for them, and then kept the money as a pooled fund of his/her lab.
- Someone visited destination not listed on the oversea travel itinerary, in order to have a meeting on cooperative research unrelated to the purpose of the KAKENHI research project.
- (Note) The expenditure of KAKENHI for fictitious and other transactions, like the ones mentioned in the case examples above, are all considered "misappropriation or misuse", even if the expenditure was intended for the purpose of conducting the KAKENHI research project.

O Fraudulent grant acquisition

• A researcher ineligible for KAKENHI funding made application and acquired a KAKENHI grant.

O Research misconduct

- Someone manipulated or forged experimental data or figures in a research paper published as research achievement supported by KAKENHI.
- Someone published in his/her KAKENHI achievement report an article which was a translation of an original

# 6. Dissemination of Research Achievements supported by KAKENHI

KAKENHI research achievements are made available to other researchers and to the general public, through posting of the "Research Outline" and the "Report on the Research Achievements" on the Grants-in-Aid for Scientific Research (KAKEN) database operated by the National Institute of Informatics.

To promote dissemination of research achievements, KAKENHI can be used to cover such outreach-related expenses as preparation of website or printing of pamphlets. KAKENHI grantees are urged to actively pursue public promotion of their research achievements through the aid of KAKENHI so as to make them widely known to the public at large.

In this connection, KAKENHI grantees are encouraged to participate in the "HIRAMEKI 📩

TOKIMEKI SCIENCE" program run by JSPS, in which the latest science developments are presented to elementary, junior high and high school students in an easy-to-understand style. In addition, please take note of the following issues as well.

(1) Acknowledging KAKENHI grant in research publications

When publishing research achievements of a KAKENHI project, researchers should be sure to express that the project has been supported by a KAKENHI grant, by stating in the "Acknowledgment" section of the paper the "JSPS KAKENHI Grant Number JP8 digits" in the case of English publication or "JSPS 科研費 JP8 桁の課題番号" in the case of Japanese publication.

# $\langle Example \rangle$

【English】This work was supported by JSPS KAKENHI Grant Number JP17K45678. 【Japan】本研究は JSPS 科研費 JP17H45678 の助成を受けたものです。

(2) Promotion of "Open Access" to the research papers supported by KAKENHI grants

Japan Society for the Promotion of Science (JSPS) endorses general policy of promotion of open access of publications of research results funded by public grants including KAKENHI. Note that open access is not mandatory if there are justifiable reasons for deferral such as copyright-related issues, or insufficient repository infrastructure at the research institution.

The open access implementation policy of JSPS is given on the following webpage: <u>URL: https://www.jsps.go.jp/data/Open\_access.pdf</u>

# [Reference 1: What is "Open Access"]

Open access refers to the basic idea that research papers published in peer-reviewed journals should be made freely accessible by anyone.

# [Reference 2: Different Routes to Open Access]

There are 3 main ways of open access implementation ((1) to (3) below)

- (1) A way to make open the access to the article which is published in the conventional subscription fee type academic journal after a certain period (Embargo) (\* 1) (for example 6 months later) by opening the final manuscript to an Institutional Repository (\* 2) established by the research institution to which the author belongs, or by opening the final manuscript to the website etc. established by the researchers (self-archiving) (\* 3).
- (2) A way to make the article open access by posting the article on the Web established by the research community or public institution
- (3) A way to make the article open access immediately by paying the publication fee (APC: Article Processing Charge) by the author of the article
- \*1: "Embargo"

The predetermined period from the time of publication of an article in an academic journal to the time of release so that it can be posted on an online open access archiving system (repository).

\*2: Institutional Repository

An online archiving system created by university or research institution for storage and dissemination of the intellectual products. Institutional repositories play important roles in the reform of academic information distribution by enabling the researchers register their own articles, such as the transmission of research and education achievements of the research institution, PR for both the research institution and the researcher, guaranteeing the accountability of research and education activities towards society, and the long-term conservation of intellectual products.

# \*3: Self-archiving

"Self-archiving" refers to online posting of articles published in academic journals, dissertations, or data by those other than the publisher, (the researcher or research institution) generally on their institutional repositories.

# **II.** Call for Proposals

# 1. Research Categories for which a Call for Proposals is Organized

# Grants-in-Aid for Research Activity Start-up (KAKENHI)

(1) Funding target:

A research project carried out by one researcher (Principal Investigator) who was unable to apply for a Grants-in-Aid during the previous year's fall application period. The project should contain excellent concepts expected to lead to future research advances by way of the grant support given to its initial research activities.

- (2) Range of total budget: Up to ¥1.5 million per year
- (3) Research period: Up to 2 years
- (4) Type of Grant: KAKENHI (Series of Single-year Grants)
- (5) Important points:

Applicants must satisfy one of the following two requirements, A) or B), besides meeting the application eligibility requirements. (See pages 17-21 for further details.)

- A) Researchers who were not eligible under the Grants-in-Aid\* application calls issued by MEXT and JSPS during the period from September 1 to November 8, 2017 but who obtained eligibility after November 8.
- B) Researchers who were not eligible under the above Grants-in-Aid application calls for reasons of maternity and/or childcare leave in FY2017.
- (\*) Pertinent FY2018 Grants-in-Aids: "Grant-in-Aid for Scientific Research on Innovative Areas," "Grant-in-Aid for Specially Promoted Research," "Grant-in-Aid for Scientific Research," "Grant-in-Aid for Challenging Research," and "Early-Career Scientists."

# 2. Schedule from Application to Grant Delivery

# (1) Procedures That Need to Be Completed Prior to the Deadline for Submission of the Application Documents

Principal Investigator should sufficiently cooperate with the research institution, and should adequately respond to its requests.

The Date and Time	Procedures to be performed by Principal Investigator (See "Ⅲ Instructions & Procedures for Applicants")	<b>Procedures to be performed by</b> <b>Research Institution</b> (See "V Instructions & Procedures for Research Institution Staff")
From March 1, 2018 Start Call for Proposals	<ul> <li>Applicants")</li> <li>1)Preparing the Application Investigators should access the Electronic Application System using the ID and the e-Rad Password which has been provided by the research institution and preparing the application.</li> <li>2)Submission (Sending) of the Application Documents The Principal Investigator should submit (send) the application documents to the research institution he/she belongs to, by the deadline decided the research institution.</li> </ul>	<ul> <li>Procedures to be completed, if the need arises</li> <li>1) The Research Institution obtains an ID and Password for e-Rad from the person in charge of the operation of e-Rad (This does not apply if the research institution already obtained them.)</li> <li>*The issue of the ID and the Password takes about 2 weeks.</li> <li>2) Registration of the Researcher Information in e-Rad and other matters.</li> <li>3) Research institutions issue an ID and password to the Principal Investigators. (This does not apply if the researcher already obtained an ID and a password.)</li> <li>4) Submission of the "Submission of the System", based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions".</li> <li>• Submission of the "Checklist Pertaining to the Current Status" based on "Guidelines for Responding to Misconduct in Research"</li> <li>Deadline for submission: April 18 (Wed) (to be strictly observed)</li> <li>5) Research institution submits Form U-21 to JSPS at any time (Only in case that there are applicants who correspond to it).</li> <li>*It may be submitted at any time. (Final Deadline for submission: May 2 (Wed) 5:00 pm (to be strictly observed)</li> </ul>
<u>May 9 (Wed) 4:30 pm</u>		6) <u>Submission (Sending) of the</u> <u>Application Documents</u>
Deadline for Submission		
(to be strictly observed)		

Notes:

<sup>1.</sup> After the Principal Investigator submit (Sending) to the application to the research institution (mentioned in "Procedures to be Performed by the Principal Investigator" ②), the research institution should submit (Sending) to the JSPS the application the application by the deadline for the submission (mentioned in "Procedures to be

Performed by the Research Institution" 5)).

Next, he or she should verify the section "Preparing the Application and Submitting the Application" (pages 24-26), etc. as well as verify the procedures designated by the research institution, etc. (deadline for the submission of the application, etc., in the research institution) with the office worker in charge in the research institution.

- 2. When the researcher is applying for KAKENHI, he or she should register the researcher information beforehand in e-Rad. The research institution should perform the registration in e-Rad. Therefore, the researcher who is planning to apply should verify the state of the registration with the office worker in charge in the research institution.
- 3. If the researcher satisfies Condition B), Form U-21 "Background Description Regarding the Eligibility for Grant-in-Aid for Research Activity Start-up FY2018" must be submitted to JSPS before applying. Form U-21 must be prepared and submitted by the research institution, so researchers planning to apply should promptly offer to their intention to the research institution.
- 4. The research institution should submit a "Self-assessment Checklist on the Implementation of the System", based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)" and a "Checklist Pertaining to the Current Status" based on "Guidelines for Responding to Misconduct in Research" (mentioned in "Procedures to be Performed by the Research Institution" 4)). If it has not been submitted, the applications of researchers belonging to the research institution in question will not be accepted in the Electronic Application System.

#### (2) Schedule After the Submission of the Application (Plan)

June-August 2018: Application Screening Late August: Notice of Provisional Decision to the Grant Mid-September: Request for Disbursement Early October: Notice of the Final Decision to the Grant Late October: Disburse Grant

# **III. Instructions & Procedures for Applicants**

# 1. Procedures to Be Completed Prior to Application

The following three items must be completed prior to submission of research proposal:

- (1) Ascertainment of the Eligibility for KAKENHI Application,
- (2) Confirmation of the Researcher Information Registered in the e-Rad System,
- (3) Obtainment of an ID and a Password for the Electronic Application System.

# (1) Ascertainment of the Eligibility for KAKENHI Application

An applicant submitting a research proposal to Grant-in-Aid for Scientific Research (KAKENHI) as Principal Investigator (PI) must meet the requirements ① and ② stated below. If qualified applicants belong to more than one research institution, they may apply from either of them. However, they may apply for only one project under the "Grant-in-Aid for Research Activity Start-up." JSPS Research Fellow (SPD, PD, or RPD) cannot apply for a Grant-in-Aid for Research Fellow cannot apply for a Grant-in-Aid. Nor may graduate or other students apply for one. (See the note below for exceptions.) Therefore, it should be kept in mind that, even if they hold a position in a research institution, students are not eligible to apply for a Grant-in-Aid.

# (Note)

The term "student" as defined here does *not* include such an individual who has a position to conduct research in his/her research institution, as the main job (e.g., university teaching staff, researcher belonging to company etc.), and holds a student status at the same time.

①At the time of the proposal submission, a researcher needs to have been approved by his/her research institution (\*) as an eligible researcher who meets the Requirements 1),
2) and 3) stated below, and have his/her Researcher Information properly registered in the e-Rad system as eligible for KAKENHI application.

# Requirements

- 1) The applicant must be an individual belonging to a research institution with job assignment including research activity within the said institution. (Whether the job is paid/unpaid, or full-time/part-time is irrelevant. It is not a prerequisite of eligibility that the research activity constitutes the main part of his/her job.)
- 2) The applicant must be actually engaged in research activity in his/her research institution. (Those who are only engaged in research assisting jobs are ineligible.)
- 3) The applicant must not be a graduate student or any other categories of student. (An individual who has a position in a research institution with research activity as his/her main job (e.g., university teaching staff, researcher belonging to a company, etc.), and holds a student status at the same time.)
- (\*): Here, the research institution must be such that designated according to the Article 2 of the "Rules for the Handling of Grants-in-Aid for Scientific Research" (issued by the MEXT)

(Reference) Requirements that the research institution must meet (see page 59):

#### Requirements

- The research institution must authorize the research project for which KAKENHI is granted, as its proper activity.
- The research institution must take responsibility for management and accounting of the KAKENHI delivered to its researcher staffs.
- (2) The individual must not be categorized as ineligible for grant acquisition in FY2018, as a penalty for his/her improper grant spending, fraudulent grant acquisition, or research misconduct.

A researcher who is employed by a KAKENHI grant (hereafter called "KAKENHI employee"), is generally bound by their employment contract to concentrate on the research work relevant to the KAKENHI project for which he/she is employed (hereafter called "employment-related work") specified in his/her employment contracts. Therefore, such a KAKENHI employee cannot apply for his/her own KAKENHI project which is to be conducted within the working hours of his/her employment.

However, provided that he/she can clearly demarcate his/her own research hours from the working hours of employment and intends to conduct his/her own research project during the former hours on their own initiative, the KAKENHI employee can submit his/her own KAKENHI proposal, on the condition that the following points are verified by his/her research institution.

- The KAKENHI employee is granted on his/her employment contract, to conduct research on his/her own initiative, besides the employment-related work.
- The employment-related work and the work devoted to the research on his/her own initiative are clearly demarcated in regard to the working hours and the effort.
- The KAKENHI employee is able to secure enough research hours (besides the working hours for his/her employment-related work) to be allotted to his/her own KAKENHI project.

<u>Principal Investigators are stipulated as Principal KAKENHI Users under "the Law on the</u> <u>Improvement of the Administration of the Budget for Grants-in-Aid (1955, Law no. 179)."</u> <u>Therefore, if they should commit an inappropriate act using Grants-in-Aid (KAKENHI), they will</u> <u>be disqualified from KAKENHI grants for a fixed period of time.</u>

In the following cases, an individual registered in the e-Rad system as "eligible for KAKENHI application" may be subject to different treatment.

- In case the research institution to which the individual belongs has made a judgement that it is not appropriate to let the individual conduct the said research activity as a part of his/her work within the institution, the institution may withhold the submission of his/her KAKENHI proposal, or may withhold the formal application for grant delivery of a provisionally adopted KAKENHI grant resulting in declination of the grant in question.
- In case a KAKENHI recipient has failed to submit the "Report on the Research Achievements" that is due after the completion of the research period of his/her KAKENHI without any good reason, no new KAKENHI grant(s) will be delivered to him/her, even if the grant(s) have been provisionally adopted. Moreover, if a KAKENHI recipient has failed to submit the "Report on the Research Achievements" by the due date, then the delivery of KAKENHI grant(s) for that FY will be suspended.

Applicants for a "Grant-in-Aid for Research Activity Start-up" are required to possess the above-stipulated eligibility at the time of application. They must also satisfy one of the following two requirements, A) or B), to be confirmed by their research institution.

#### **Requirements:**

- A) Researchers who were not eligible under the Grants-in-Aid application calls issued by MEXT and JSPS during the period from September 1 to November 8, 2017 but who obtained eligibility after the November 8 deadline.
- B) Researchers who were not eligible under the above Grants-in-Aid application calls for reasons of maternity and/or childcare leave in FY2017.

#### Examples of Persons Eligible to Apply for the Grant

Persons who satisfy one of the conditions, A) or B), are eligible.

Condition A)

- 1) Persons who were newly hired by a Japanese research institution or employed by an overseas or private company on or after November 9, 2017 (after the deadline for the 2017 application period).
- 2) Persons who were hired as educational specialist without KAKENHI eligibility, then hired as researcher on or after November 9, 2017, obtaining the eligibility.
- 3) Researchers who had eligibility but lost it due to being employed at an overseas research institution then regained it on or after November 9, 2017.

Condition B)

Persons who were unable to apply for a Grant-in-Aid during the 2017 application period for reason of maternity and/or childcare leave. In this case, regardless of whether the researcher did or did not take leave during the FY2017 application period, s/he may apply for a Grant-in-Aid in FY2018.

\*Attention:

If a researcher who satisfies Condition A) was, for some reason outside his/her control, erroneously registered in e-Rad as "Eligible to Apply for Grants-in-Aid for Research" on November 8, 2017 (FY2018 application deadline for Grants-in-Aid), or if a researcher satisfies Condition B), his/her research institution must prepare a Form U-21 "Background Description Regarding the Eligibility for Grant-in-Aid for Research Activity Start-up FY2018" and submit it to JSPS by May 2, 2018 (to be strictly observed). If the form does not arrive at JSPS by this date, the researcher will not be able to prepare his/her research proposal on the electronic application system. Therefore, researchers should offer to their intention to apply for this grant to their research institution early.

Form U-21 must arrive at JSPS's Research Aid Division I by 5 p.m. (Wednesday) May 2, 2017. Irrespective of the reason, forms that do not meet the deadline will not be accepted; therefore, applicants should confirm the application requirements well in advance.

- **Note 1** If a person does not satisfy one of the eligibility conditions, the mere submission of a Form U-21 will not qualify him/her for Research Activity Start-up support.
- **Note 2** When the research institution submits Form U-21 "Background Description Regarding Grant-in-Aid for Research Activity Start-up FY2018", Principal Investigators will be able to access the Electronic Application System. (which differ according to the date that form arrives at JSPS) For details, see "The Accessible Date to the Electronic Application System" referring to supplement.

#### (2) Confirmation of the Researcher Information Registered in the e-Rad System

A researcher who intends to submit a research document proposal as the PI to any of the KAKENHI categories for which "Call for Proposals" is announced, must carry the eligibility for KAKENHI application at the time of submission of the "Research Proposal Document" from his/her research institution to JSPS, and must be registered in the e-Rad system as such.

# Therefore, <u>it is important for the researcher to ascertain proper registration of his/her</u> Researcher Information in the e-Rad system.

The registration in the e-Rad system is handled by <u>the research institution</u> to which the researcher belongs. The researcher should check with the administrative section of his/her institution about the registration procedures including the registration deadline within the institution, the method of confirmation of the current contents of registration, etc. If any of the entry items (such as "affiliation", "position etc.) of the researcher who has been already registered in the e-Rad system need updating, they should be duly completed.

#### (3) Obtainment of an ID and a Password for the Electronic Application System

When the research institution completes the e-Rad registration of a researcher, an ID and a password will be issued for the researcher. The researcher can access the KAKENHI Electronic Application System using the ID and password and prepare the Research Proposal Document.

The first date that a researcher can access the electronic application system is based on the date that s/he obtains an e-Rad ID and password. For details, see "The Accessible Date to the Electronic Application System" referring to supplement.

The ID and the password issued to a researcher remain valid after he/she moves to another research institution. Every researcher should exercise due care in handling his/her ID and password so as to prevent their leakage and abuse.

# 2. Restrictions on Parallel Grant Application/Receipt

A researcher who intends to submit research proposal(s) to KAKENHI should be well acquainted with the "Restrictions on Parallel Grants Application/Receipt" before starting preparation of research proposal document(s) to check if applications to the intended categories are permitted.

# (1) The Basic Policy for Restriction on Parallel Grant Application/Receipt

KAKENHI consists of different "Research Categories" and "Application Sections" set on the basis of budget scale, content, and other factors of the intended research, so as to meet various needs and research styles of the applicants.

On the other hand, in consideration of the necessity to support many excellent researchers with limited funding resources, and of the possible detrimental influence of overcrowding applications on the proper management of the review process, the "Rules for Restrictions on Parallel Submission of Research Proposals" have been set up, according to the following basic principles.

Restrictions on parallel grant application/receipt do apply to the current round of call for proposals.

- ① Give considerations so as to ensure that as many excellent researchers as possible can be supported with limited funding resources.
- (2) Give considerations so as to ensure that the number of applications does not become excessive in comparison with the review scheme of each research category.
- (3) The restrictions to be enforced are primarily directed to the applicant as Principal Investigator (PI) who bears all responsibility for the implementation of the research project(s). In some cases such as the research categories with large budget scale, however, the restrictions may be also extended to individuals as the Co-Investigator (Co-I).
- ④ The restriction on parallel submission of research proposals and the restriction on simultaneous receipt of grants are separately set on each of the KAKENHI categories, in accordance of the basic concepts outlined above and by taking into consideration the purpose, characteristics and other factors of each KAKENHI category

In case a particular research project falls under the concept of "unreasonable duplication" as put forward in the "Guidelines on the Proper Implementation of Competitive Funding" (see page 6, it may be judged as such in the review process. Therefore, the applicant should take due precautions in preparing his/her research proposal document.

#### (2) Restrictions on Parallel Grant Application/Receipt

1) Under this call for the "Grant-in-Aid for Research Activity Start-up," an individual researcher may apply as the Principal Investigator for one research project.

- 2) Principal Investigators of other KAKENHI projects during FY 2018 may not apply for the Grant-in-Aid for Research Activity Start-up except in the following cases:
  - a) Persons who were selected for an Encouragement of Scientists Grant (see "Note" below) under the FY2018 Grants-in-Aid program may also apply for the Start-up Grant if they become eligible during the period from April 2, 2018 to the grant's application submission deadline. However, if selected for both grants, they must stop using the already-disbursed Encouragement of Scientists grant and return those unused funds immediately upon receipt of the Notice of Provisional Decision for the Research Activity Start-up.

Note: Encouragement of Scientists: Supports research carried out by an employee of an educational or research institution or a corporation or any other individual.

- b) Fellows under the JSPS Research Fellowships for Young Scientists and JSPS Postdoctoral Fellowships for Overseas Researchers may not apply for a Research Activity Start-up grant. However, they can apply if they become eligible during the period from April 2, 2018 to the application submission deadline. (Example: A person hired as an assistant professor who loses his/her JSPS fellowship eligibility during the above period.) If selected for a Research Activity Start-up grant, the researcher must stop using the already-disbursed Grant-in-Aid for JSPS Research Fellows and return those unused funds immediately upon receipt of the Notice of Provisional Decision for the Research Activity Start-up.
- 3) Under the KAKENHI Multi-year Fund and KAKENHI Partial Multi-year Fund, when the

research period is extended in the last fiscal year of a project, the restriction on duplication is not applied during the interval between the extended project and the new project being applied for (except in cases where the researcher took maternity leave or childcare leave).

4) Even when a researcher is eligible to apply for the "Grant-in-Aid for Research Activity Start-up," if s/he is being funded (or will be funded) under the "Fund for the Promotion of Joint International Research Returning Researcher Development Research)," s/he may not apply for the Start-up grant.

# (3) Important Notes

- In some cases, even after a research proposal has been duly submitted via the Electronic Application System, it may be eliminated from the subsequent review process on the basis of the rules of restrictions on parallel grant application/receipt.
- 2) The rules of restrictions on parallel submission of research proposals do apply to a case in which a researcher carrying eligibility for applications in more than one research institutions intends to submit different proposals from each of those institutions.
- 3) A researcher must not neglect his/her responsibility as a Principal Investigator due to participation in plural research projects.
- 4) The Principal Investigators in a Grant-in-Aid for Research Activity Start-up project may apply for a grant in another category in FY 2019. If selected, however, s/he will not receive the second-year Start-up grant.
- 5) Although there is no restriction on duplicate applications between the KAKENHI program and other competitive funding schemes, applicants should take into account the stipulations in the "Eliminate Unreasonable Reduplication and Excessive Concentration" (see pages 6-7) when applying.

# 3. Preparation of the KAKENHI Application Form (Research Proposal Document)

For submission of a research proposal, the applicant (PI) has to complete the relevant Research Proposal Document. The Research Proposal Document consists of two parts: "Items to be entered in the Website" and "Forms to be uploaded as an attached file".

The PI (applicant) should complete the Research Proposal Document (PDF file) by entering the "Items to be entered in the Website" and by uploading the "Forms to be uploaded as an attached file" to the Electronic Application System. Then he/she should submit the Research Proposal Document to the administrative section of his/her research institution, by the deadline set by the institution.

Preparation and submission of the KAKENHI Research Proposal Document should follow the procedures detailed below.

# (1) Preparation of KAKENHI Research Proposal Document

For the preparation of the KAKENHI research proposal document, <u>the applicant must first</u> <u>access the Electronic Application System using his/her e-Rad ID and Password.</u>

# On the Research Proposal Document

The KAKENHI Research Proposal Document consists of the following two parts:

# Items to be entered in the Website:

Items to be directly entered by the PI (applicant) on the website of the KAKENHI Electronic Application System

# Forms to be uploaded as an attached file:

A part containing such entries as "Research Objectives, Research Method, etc.", "Research Development Leading to Conception of the Present Research Proposal, etc." to be prepared by downloading the form from the "Grants-in-Aid for Scientific Research - KAKENHI" page within the JSPS website (<u>http://www.jsps.go.jp/j-grantsinaid/index.html</u>), and by uploading the filled form to the KAKENHI Electronic Application System so as to compile a PDF file of the research proposal document. (<u>Paper-based applications will not be accepted.</u>)

	Research Proposal Document		
Research category Application Section	Items to be entered in the Website (First part)	Forms to be uploaded as an attached file (File ID) * When selecting "Items to be entered in the Website" to enter "Research Achievements of the Principal Investigator (PI)" (※ ※)	Items to be entered in the Website (Second part)
Grants-in-Aid for Research Activity Start-up	To be entered in the electronic application	S-22 (1) S-22 (2) S-22 (3)	To be entered in the electronic application system (Title of research project, Fundamental data on the research project such as total budget, Data on the project members, etc.)
	(Research project Information)	S-22 (1) Research Achievements are entered under "Items to be entered in the Website" (※ ※) S-22 (3)	

- \* Forms can be downloaded from the "Grants-in-Aid for Scientific Research KAKENHI" page within the JSPS website (URL: <u>http://www.jsps.go.jp/j-grantsinaid/index.html</u>) even before the obtaining of the e-Rad ID and password.
- \*\* With "Research Achievements of the Principal Investigator (PI)," the method of entry may either be by direct entry of items in the Website or by the entry of attached files. When items are directly entered in the Website, achievements registered in your researchmap may be extracted, edited and entered in the column. For details, please see the "Procedures for Grants-in-Aid for Scientific Research - KAKENHI - for FY2018 (Research Activity Start-up) (Forms/Procedures for Preparing and Entering a Research Proposal Document).

# (2) Electronic Submission of the Research Proposal Document

- An applicant should prepare his/her Research Proposal Document (PDF file) by entering the "Items to be entered in the Website" and by uploading the separately prepared "Forms to be uploaded as an attached file" to the Electronic Application System, following the instructions in the "FY2018 Procedures for Preparing and Entering a Research Proposal Document" and "FY2018 Procedures for Preparing and Entering a Research Proposal Document (Items to be entered in the Website)".
- 2) The compiled books of the submitted KAKENHI Research Proposal Documents to be sent to the reviewers are <u>in black-and-white (gray scale) print</u>. Therefore, in preparing the Research Proposal Document, the applicant should pay attention to the clarity of the figures when printed in gray scale.
- 3) The Research Proposal Documents are collected and submitted to JSPS by the research institution to which the PIs (applicant) belong. Therefore, the applying PI <u>should submit his/her Research</u> <u>Proposal Document to the administrative section of his/her research institution by the</u>

# <u>deadline set by the institution. (It is not allowed to submit the Research Proposal Document</u> <u>directly to JSPS.)</u>

Before submission, the applying PI should carefully check the contents of the Research Proposal Document (PDF file) he/she prepared, and subsequently proceed to the "Check Completed and Submission" stage of the submission process. (This amounts to submitting the Research Proposal Document (PDF file) to the administrative section of his/her research institution.) After the "Approval" process by his/her institution, no further corrections or modifications to the submitted Research Proposal Document (PDF file) is possible.

4) The personal information included in the Research Proposal Document will be used for the elimination of "unreasonable duplication and/or excessive concentration in the allocation of competitive funds" and for the appropriate funding of KAKENHI grants. (This includes providing the data to external contractor(s) in charge of electronic processing and management of the KAKENHI data.) The information included in the Research Proposal Document will also be provided to the e-Rad system. (The information will be supplied to the Cabinet Office through the e-Rad system. The applicant may be requested to cooperate in verification of the information and other related works.)

The information on the adopted KAKENHI projects (the title of research project, the name of PI, the grant money to be delivered, etc.) is categorized as "information planned to be made public", as laid down in Article 5, paragraph 1, item 1 of the "Act on Access to Information Held by Independent Administrative Agencies" (Act No. 140 of 2001). The information will be made public through press release materials, the database of Grants-in-Aid for Scientific Research (KAKEN) of the National Institute of Informatics, and other means.

# Important Checkpoints of the Research Proposal Document

In preparing a Research Proposal Document, the applicant should pay attention to the following points among others, so as to avoid "outright rejection by incompleteness of the research proposal document".

#### 1. Qualification as a KAKENHI project

The following kinds of research plans fall outside the scope of funding target:

- A) A research plan which merely aims at purchasing ready-made research equipment.
- B) A research plan whose purpose is to build a large-size research facility or equipment which is more appropriate to be funded by other resources.
- C) A research plan whose purpose lies at developing and selling goods and/or services (including market research associated with such as them).
- D) An entrusted research conducted as regular business.
- E) A research plan with a yearly budget less than 100,000 yen.

#### 2. Eligibility of the Project Members

The PI (see 1 below) may organize a research team with appropriate combination of Research Collaborators(s) (see 2 below), as needed by the nature of the research project.

It is necessary for the Principal Investigator to be registered as eligible for a KAKENHI grant on the e-Rad system at the time of application and for his/her research institution to confirm that s/he satisfies the program's application eligibility requirements. On the other hand, to be a Research Collaborators, registration to the e-Rad system is not a requirement.

#### 1) Principal Investigator (PI) (Applicant)

(A)Principal Investigator is the main recipient of the grant who bears full responsibility for the implementation of the research project (including summarization of the research achievements). An individual who is anticipated to become unable to carry through the PI's responsibility over the entire research period due to, for example, loss of the KAKENHI eligibility, should refrain from becoming a PI. (See Note below)

The Principal Investigator is the researcher who plays the central role in the implementation of the research plan and thus bears a heavy responsibility. An individual who is anticipated to lose his/her eligibility for KAKENHI application during the research period due to retirement or other reasons so that is anticipated to be unable to carry through the responsibility, should refrain from becoming a Principal Investigator. (Note that substitutions of the PI of an on-going KAKENHI project are not permitted.)

(B) The PI must be registered in the e-Rad system as "Eligible for KAKENHI Application". It is also required that he/she is *not* designated as "ineligible for grant receipt" in FY2018 (suspension of eligibility), as a penalty for such misconducts as improper grant spending, fraudulent grant acquisition or research misconduct associated with KAKENHI or any other competitive funding.

<sup>(</sup>Note)

#### 2) Research Collaborator

(A) Research Collaborator is an individual who cooperates in the implementation of a research project other than the PI. Examples of this category include, a postdoctoral researcher, a research assistant (RA), a JSPS Research Fellow, a researcher belonging to an overseas research institution, a researcher belonging to a corporation not designated as a research institution according to Article 2 of the Rules for the Handling of Grants-in-Aid for Scientific Research, and an individual offering research support such as technician and intellectual property specialist.

\* JSPS Fellows (SPD, PD or RPD) who are *not* registered as eligible for KAKENHI application in their host her research institution, and JSPS fellows (DC)

(B) Registration as "Eligible for KAKENHI application" in the e-Rad system is *not* a requirement for becoming a Research Collaborator.

#### 3. Requirements for the Appropriation of Research Expenditure

#### 1) Expenditures that can be covered by direct expense

Expenditures necessary for the implementation of the research plan (including those necessary for summarization of the research achievements) can be covered by the direct expense.

\* If any of the expenditure categories (equipment costs, travel expenses, or personnel cost/honoraria) exceeds 90% of the total yearly expenditure in any FY of the research period, or if the expenditure in category Consumables or Miscellaneous constitutes a significant portion of the total expenditure, the necessity of that spending should be clarified in Research Proposal Document.

#### 2) Expenditures that cannot be covered by KAKENHI

#### The following kinds of spending cannot be covered by KAKENHI:

- A. Costs associated with buildings and other facilities (excluding expenditure for minor installations necessary for installation of research equipment purchased by the KAKENHI direct **expense**).
- B. Expenditures for measures to deal with accidents or disasters that occurred during the implementation of funded project
- C. Personnel cost/Honoraria for the PI or Co-I(s)
- D. Other expenditures that are apt to be covered by indirect expense\*
  - \* Indirect expense which amounts to 30% of the direct expense, is intended for use by the research institution in covering expenditures needed by the research institution for the management and other things associated with the implementation of the research project.

Indirect expense will be placed for Grants-in-Aid for Research Activity Start-up. Applicant does not need to state the indirect expense in his/her Research Proposal Document.

#### 4. Selection by the Applicant of a Desired Review Section in the Review Process

The applicant should select one of the review sections from Attached Table 1 "Grants-in-Aid for

Scientific Research-KAKENHI-"Research Activity Start-up FY2018" Review Section Table" as a suggested review section for his/her research proposal.

Furthermore, "Research Activity Start-up FY2018 Review Section Table, Examples of Related Research Content" (annexed Table 2)" is provided to assist you in understanding the content of the screening categories. Please check it when necessary. However, it does not exclude proposal of contents other than if applicants' contents are not included the examples.

Attached Table 1

Grants-in-Aid for Scientific Research-KAKENHI-"Research Activity Start-up FY2018" Review Section Table

	Review Section
0101	Philosophy, art, and related fields
0102	Literature, linguistics, and related fields
0103	History, archaeology, museology, and related fields
0104	Geography, cultural anthropology, folklore, and related fields
0105	Law and related fields
0106	Political science and related fields
0107	Economics, business administration, and related fields
0108	Sociology and related fields
0109	Education and related fields
0110	Psychology and related fields
0201	Algebra, geometry, analysis, applied mathematics, and related fields
0202	Condensed matter physics, plasma science, nuclear engineering, earth resources engineering, energy engineering, and related fields
0203	Particle-, nuclear-, astro-physics, and related fields
0204	Astronomy, earth and planetary science, and related fields
0301	Mechanics of materials, production engineering, design engineering, fluid engineering, thermal engineering, mechanical dynamics, robotics, aerospace engineering, marine and maritime engineering, and related fields
0302	Electrical and electronic engineering and related fields
0303	Civil engineering, social systems engineering, safety engineering, disaster prevention engineering, and related fields
0304	Architecture, building engineering, and related fields
0401	Materials engineering, chemical engineering, and related fields
0402	Nano/micro science, applied condensed matter physics, applied physics and engineering, and related fields
0403	Biomedical engineering and related fields
0501	Physical chemistry, functional solid state chemistry, organic chemistry, polymers, organic materials, biomolecular chemistry, and related fields
0502	Inorganic/coordination chemistry, analytical chemistry, inorganic materials chemistry, energy-related chemistry, and related fields
0601	Agricultural chemistry and related fields
0602	Agricultural and environmental biology and related fields
0603	Forestry and forest products science, applied aquatic science, and related fields
0604	Agricultural economics and rural sociology, agricultural engineering, and related fields

	Review Section
0605	Veterinary medical science, animal science, and related fields
0701	Biology at molecular to cellular levels, and related fields
0702	Biology at cellular to organismal levels, and related fields
0703	Biology at organismal to population levels and anthropology, and related fields
0704	Neuroscience, brain sciences, and related fields
0801	Pharmaceutical sciences and related fields
0802	Biomedical structure and function and related fields
0803	Pathology, infection/immunology, and related fields
0901	Oncology and related fields
0902	General internal medicine and related fields
0903	Organ-based internal medicine and related fields
0904	Internal medicine of the bio-information integration and related fields
0905	Surgery of the organs maintaining homeostasis and related fields
0906	Surgery related to the biological and sensory functions and related fields
0907	Oral science and related fields
0908	Society medicine, nursing, and related fields
0909	Sports sciences, physical education, health sciences, and related fields
1001	Information science, computer engineering, and related fields
1002	Human informatics, applied informatics and related fields
1101	Environmental analyses and evaluation, environmental conservation measure and related fields

### Attached Table 2 Grants-in-Aid for Scientific Research-KAKENHI-"Research Activity Start-up FY2018" **Review Section Table Examples of related research content**

This chart gives examples of the content in each screening category. Please check it when choosing the category in which you want your application to be screened. Examples are provided for multiple screening categories.

	Review Section
Examples of related research content	corresponding
	Examples of related
	research content
Area studies-related	0104、0106
Tourism studies-related	0104、0107、0108
Gender studies-related	0104、0106、0108
Design-related	0101,0304,1002
Japanese language education-related	0102、0109
Foreign language education-related	0102,0109
Library and information science, humanistic and social informatics-related	0102、1002
Cognitive science-related	0110、1002
Quantum beam science-related	0202、0203

0101 : Philosophy, art, and related fields

Г

Philosophy and ethics-related	
Philosophy in general, Ethics in ge	neral, Western philosophy, Western ethics, Japanese philosophy,
Japanese ethics, Applied ethics, etc	

Chinese philosophy, Indian philosophy and Buddhist philosophy-related Chinese philosophy/thought, Indian philosophy/thought, Buddhist philosophy, Bibliography, Philology,

etc.

Religious studies-related

History of religions, Philosophy of religion, Theology, Sociology of religion, Psychology of religion, Anthropology of religion, Studies of religious folklore, Mythology, Bibliography, Philology, etc.

History of thought-related

History of thought in general, History of Western thought, History of Eastern thought, History of Japanese thought, etc.

Aesthetics and art studies-related

Philosophy of art, Aesthetics, Miscellaneous art studies, etc.

History of arts-related

Japanese art, Eastern art, Western art, Contemporary art, Craft, Design, Architecture, Costume, Photography, etc.

Theory of art practice-related

Art expression, Arts management, Art policy, Art production, etc.

Sociology of science, history of science and technology-related

Sociology of science, History of science, History of technology, History of medicine,

Industrial archeology, Philosophy of science, Foundation of science, STS (Science, technology and society), etc.

Design-related

Information design, Environmental design, Industrial design, Spatial design, Design history, Theory of design, Design standard, Design support, Evaluation of design, Design education, etc.

ļ	Examples of related research content
ŀ	Japanese literature-related
	Japanese literature in general, Ancient literature, Medieval literature, Chinese classics in Japan, Bibliography, Philology, Premodern literature, Modern literature, Contemporary literature, Literar
	theory, etc.
ŀ	Chinese literature-related
	Chinese literature, Bibliography, Philology, Literary theory, etc.
ŀ	English literature and literature in the English language-related
	English literature, American literature, Literature in the English language, Literary theory, Bibliog Philology, etc.
Ŀ	European literature-related
	French literature, Literature in the French language, German literature,
	Literature in the German language, Classics, Russian and East European literature,
	Literature in other European languages, Literary theory, Bibliography, Philology, etc.
ŀ	Literature in general-related
	Literature in other languages and areas, Literary theory, Comparative literature, Bibliography, Phil
	Literature education, etc.
- E	Linguistics-related
	Phonetics/phonology, Semantics/pragmatics, Morphosyntax, Sociolinguistics, Contrastive linguist
I	Psycholinguistics, Neurolinguistics, Historical linguistics, Corpus linguistics,
I	Endangered and minority languages, etc.
ľ	Japanese linguistics-related
ſ	Phonetics/phonology, Writing systems, Lexicon and semantics, Grammar, Stylistics, Pragmatics,
	Language life, Dialect, History of the Japanese language, History of Japanese linguistics, etc.
	English linguistics-related
ſ	Phonetics/phonology, Lexicon and semantics, Grammar, Stylistics, Pragmatics, Sociolinguistics,
	Diversity of the English language, Corpus linguistics, History of the English language,
	History of English linguistics, etc.
	Japanese language education-related
-	Research on learners, Language acquisition, Teaching material, Curriculum evaluation,
I	Japanese language education for specific purposes, Bilingual education, Research on teachers,
	Japanese language for Japanese language education, History of Japanese language education,
	Cross-cultural understanding, etc.
	Foreign language education-related
	Learning method, Computer-assisted language learning (CALL), Teaching material, Language tes
	Theory of second language acquisition, Early English education,
	History of foreign language education and language policies, Curriculum evaluation,
	Training foreign language teachers, Cross-cultural understanding, etc.
l	Library and information science, humanistic and social informatics-related
ſ	Library science, Information services, Information organizing, Information retrieval, Information
ļ	Bibliometrics, Information resources, Information ethics, Digital humanities, Social Informatics, I
I	archives, etc.
i	story, archaeology, museology, and related fields
ſ	Examples of related research content
ŀ	Historical studies in general-related
L	Historical theory, Historical methodology, Research in historical materials, Memory and medium,
ſ	HISTORICAL THEORY HISTORICAL METHODOLOGY Recearch in historical materials Memory and moduling

Japanese history-related

Japanese history in general, History of ancient Japan, History of medieval Japan, History of early modern Japan, History of modern Japan, History of local Japan, History of Japanese culture, History of Japanese religion, History of Japanese environment, History of Japanese city, History of cultural and diplomatic exchange, Comparative history, Research in historical materials, etc.

History of Asia and Africa-related

History of pre-modern China, History of modern China, East Asian history, Central Eurasian history, Southeast Asian history, Oceanian history, South Asian history, West Asian history, African history, History of cultural and diplomatic exchange, Comparative history, Research in historical materials, etc.

History of Europe and America-related

Ancient European history, Medieval European history,

Modern and contemporary West European history,

Modern and contemporary East European history, North and South American history,

History of cultural and diplomatic exchange, Comparative history, Research in historical materials, etc.

Archaeology-related

Archaeology in general, Prehistoric archaeology, Historical archaeology, Japanese archaeology, Asian archaeology, Ancient civilizations, History of material culture, Experimental archaeology, Information archaeology, Study of buried cultural property, etc.

Cultural assets study-related

Dating methods, Material analysis, Production techniques, Conservation science,

Archaeological prospection, Plant and animal residues, Human remains, Cultural heritage, Cultural resources, Cultural property policy, etc.

Museology-related

Exhibition studies, Museum pedagogy, Museum informatics, Museum business management,

Public finance and administration of museums, Museum material resources, History of museology, etc.

0104 : Geography, cultural anthropology, folklore, and related fields

Examples of related research content

Geography-related

Geography in general, Land use, Landscape, Environmental system, Geomorphology, Climatology, Hydrology, Cartography, Geographic information system, Regional planning, etc.

Human geography-related

Human geography in general, Economic geography, Social geography, Political geography, Cultural geography, Urban geography, Rural geography, Historical geography, Regional geography, Geography education, etc.

Cultural anthropology and folklore-related

Cultural anthropology in general, Folklore in general, Material culture, Ecology, Social relationship, Religion, Arts, Health care, Border crossing, Minority, etc.

Area studies-related

Area studies in general, Cross-regional comparative studies, Aid, International cooperation, Interregional exchange, Environment, Transnationalism, Globalization, Social development, etc.

Tourism studies-related

Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.

Gender studies-related

Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.

	Examples of related research content
	Legal theory and history-related
	Legal philosophy, Roman law, Legal history, Sociology of law, Comparative law, Foreign law,
	Law and policy, Law and economics, Judicial system, etc.
	Public law-related
	Constitutional law, Administrative law, Tax law, etc.
	International law-related
	Public international law, Private international law, International human rights law, International economic law, EU law, etc.
	Social law-related
	Labor law, Economic law, Social security law, Education law, etc.
	Criminal law-related
	Criminal law, Criminal procedure, Criminology, Criminal justice policy, Juvenile law, Law and psychology, etc.
	Civil law-related
	Civil law, Commercial law, Civil procedure, Insolvency law, Alternative dispute resolution, etc.
	New fields of law-related
	Environmental law, Medical law, Information law, Consumer law, Intellectual property law, Law and gender, Legal profession, etc.
)6 :	Political science and related fields
	Examples of related research content
	Politics-related
	Political theory, History of political thought, Political history, Japanese political history, Japanese politics, Political process, Electoral studies, Political economy, Public administration, Local government, Comparative politics, Public policy, etc.
	International relations-related
	Theory of international relations, Modern international relations, Diplomatic history,
	International history, Foreign policy, International security, International political economy, Global governance, International cooperation, etc.
	Area studies-related
	Area studies in general, Cross-regional comparative studies, Aid, International cooperation,
	Interregional exchange, Environment, Transnationalism, Globalization, Social development, etc.
	Gender studies-related
	Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.
)7:	Economics, business administration, and related fields
	Examples of related research content
	Economic theory-related
	Microeconomics, Macroeconomics, Game theory, Behavioral economics, Experimental economics, Economic theory, Evolutionary economics, Economic institutions, Economic systems, etc.
	Economic doctrines and economic thought-related Economic doctrines, Economic thought, Social thought, Economic philosophy, etc.
	Economic statistics-related Statistical system, Statistical research, Population statistics, Income/wealth distribution,

Economic policy-related

International economics, Industrial organization, Economic development, Urban economics, Regional economy, Environmental and resource economics, Japanese economy, Economic policy, Transportation economics, Development economics, International development, etc.

Public economics and labor economics-related

Public finance, Public economics, Health economics, Labor economics, Social security, Education economics, Law and economics, Political economy, etc.

Money and finance-related

Monetary economics, Finance, International finance, Corporate finance, Financial engineering, Insurance, etc.

Economic history-related

Economic history, Business history, Industrial history, etc.

Business administration-related

Corporation theory, Organization theory, Organizational behavior, Corporate strategy, Business management, Human resource management, Management of technology,

International business, Management information, Industrial management, Management in general, etc.

Commerce-related

Marketing, Consumer behavior, Distributive sciences, Logistics, Commerce in general, etc.

Accounting-related

Financial accounting, Management accounting, Auditing, Accounting in general, etc.

Tourism studies-related

Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.

0108 : Sociology and related fields

Examples of related research content

Sociology-related

Sociology in general, Community, Family, Labor, Sociology of welfare, Gender, Media, Ethnicity, Social movements, Social research, Sociology of medicine, Social demography, etc.

Social welfare-related

Social work, Social policy, Social welfare history, Child welfare,

Social welfare for people with disabilities, Social welfare for aging, Community welfare, Poverty, Volunteerism, Social welfare in general, etc.

Family and consumer sciences, and culture and living-related

Culture and living, Home economics, Consumer affairs, Lifestyle, Culture of clothing, Culture of food, Culture of dwelling, Dress and fashion, Diet habits, Housing, Family and consumer sciences in general, Family and consumer education, etc.

Tourism studies-related

Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.

Gender studies-related

Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.

0109 : Education and related fields

Examples of related research content

Education-related

History of education, Philosophy of education, Curriculum and pedagogy, Evaluation of education, Teacher and trainer, School education, Social and community education,

Vocational education and training, Lifelong learning, Institutions and administration, etc.

Sociology of education-related

Sociology of education, Socialization, Educational organization and system,

Destination and career formation, Class disparities, Gender, Education policy, Comparative education, Globalization and development, etc.

Childhood and nursery/pre-school education-related

Childhood, Nursery/pre-school education, Right of child, Development,

Contents and methods of child care, Childcare facilities and kindergarten,

Caregiver and pre-school teacher, Child care support, Childhood culture,

History and thought, etc.

Education on school subjects and primary/secondary education-related

Education of individual subjects, Education excluding subjects, Student guidance and counselling, Career education, School management, Teacher education, ESD, Environmental education, Literacy, etc.

Tertiary education-related

Policy, Admission and articulation, Curriculum, Career guidance, Teacher and staff, Scientific research, Regional link and contribution, Globalization, Management and governance,

Non-university higher education, etc.

Special needs education-related

Philosophy and history, Inclusion and cohesive society, Instructions and supports,

Developmental disabilities, Emotional disturbance, Intellectual disabilities, Language disorders, Physical disabilities, Career education, etc.

Educational technology-related

Curriculum development, Teaching-learning support systems, Utilization of media, Utilization of ICT, Teacher's education, Information literacy, etc.

Science education-related

Science education, Science communication, Scientific literacy, Science and society, etc.

Japanese language education-related

Research on learners, Language acquisition, Teaching material, Curriculum evaluation,

Japanese language education for specific purposes, Bilingual education, Research on teachers,

Japanese language for Japanese language education, History of Japanese language education,

Cross-cultural understanding, etc.

Foreign language education-related

Learning method, Computer-assisted language learning (CALL), Teaching material, Language testing, Theory of second language acquisition, Early English education,

History of foreign language education and language policies, Curriculum evaluation,

Training foreign language teachers, Cross-cultural understanding, etc.

0110 : Psychology and related fields

Examples of related research content

Social psychology-related

Social psychology in general, Self, Group, Attitude and behavior, Affection/emotion, Interpersonal relation, Social issues, Culture, etc.

Educational psychology-related

Educational psychology in general, Development, Family, School, Clinical practice, Personality, Learning, Assessment and evaluation, etc.

Clinical psychology-related

Clinical psychology in general, Psychological disorder, Assessment, Psychological intervention, Training, Mental health, Crime and delinquency, Community, etc.

Experimental psychology-related

Experimental psychology in general, Sensation, Perception, Attention, Memory, Language, Emotion, Learning, etc.

Cognitive science-related

Cognitive science in general, Cognitive models, Kansei, Human factors, Cognitive and brain science, Comparative cognition, Cognitive linguistics, Cognitive engineering, etc.

#### 0201 : Algebra, geometry, analysis, applied mathematics, and related fields

Examples of related research content

Algebra-related

Group theory, Ring theory, Representation theory, Algebraic combinatorics, Number theory, Arithmetic geometry, Algebraic geometry, Algebraic analysis, etc.

Geometry-related

Differential geometry, Riemannian geometry, Symplectic geometry, Complex geometry, Topology, Differential topology, Low dimensional topology, etc.

Basic analysis-related

Functional analysis, Complex analysis, Probability theory, Harmonic analysis, Operator theory, Spectral analysis, Operator algebras, Algebraic analysis, Representation theory, etc.

Mathematical analysis-related

Functional equations, Real analysis, Dynamical system, Variational method, Nonlinear analysis, Applied analysis, etc.

Basic mathematics-related

Mathematical logic and foundations, Information theory, Discrete mathematics, Computer mathematics, etc.

Applied mathematics and statistics-related

Numerical analysis, Mathematical modelling, Optimal control, Game theory, Statistical mathematics, etc.

0202 : Condensed matter physics, plasma science, nuclear engineering, earth resources engineering, energy engineering, and related fields

Examples of related research content

Mathematical physics and fundamental theory of condensed matter physics-related

Statistical physics, Fundamental theory of condensed matter physics, Mathematical physics, Nonequilibrium nonlinear physics, Fluid dynamics, Computational physics,

Quantum information theory, etc.

Semiconductors, optical properties of condensed matter and atomic physics-related

Semiconductors, Dielectrics, Atoms and molecules, Mesoscopic systems, Crystals,

Surfaces and interfaces, Optical properties of condensed matter, Quantum electronics, Quantum information, etc.

Magnetism, superconductivity and strongly correlated systems-related

Magnetism, Strongly correlated electron systems, Superconductivity, Quantum fluids and solids, Molecular solids, etc.

Biophysics, chemical physics and soft matter physics-related

Physics of biological phenomena, Physics of biological matters, Liquids and glasses, Soft matters, Rheology, etc.

Fundamental plasma-related

Basic plasmas, Magnetized plasmas, Laser plasmas, Strongly coupled plasmas, Plasma diagnostics, Astrophysical and space plasmas, etc.

Nuclear fusion-related

Plasma confinement, Plasma control, Plasma heating, Plasma diagnostics, Edge plasma, Plasma wall interaction, Inertial fusion, Fusion material, Fusion system, etc.

Applied plasma science-related

Plasma processing, Plasma photonics, Plasma material science, General plasma applications, etc.

	Quantum beam science-related
I	Accelerators, Beam physics, Radiation detectors, Beam control, Applied quantum beam science, etc.
1	Nuclear engineering-related
1	Reactor physics and safety design, Thermal-hydraulics and structure, Fuel material, Nuclear chemistry, Nuclear life cycle, Radiation safety, Radiation beam engineering, Plasma engineering for fusion reactor, Equipment and material engineering for fusion reactor, Nuclear social environment, etc.
Ī	Earth resource engineering, Energy sciences-related
F	Earth resource sciences, Resource prospecting, Resource development, Resource cycle, Resource economy, Energy system, Environmental load evaluation, Renewable energy, Natural resource and energy technological policy, etc.
0203 : Part	ticle-, nuclear-, astro-physics, and related fields
	Examples of related research content
	Quantum beam science-related Accelerators, Beam physics, Radiation detectors, Beam control, Applied quantum beam science, etc.
]	Theoretical studies related to particle-, nuclear-, cosmic ray and astro-physics
F	Particle physics, Nuclear physics, Cosmic-ray physics, Astrophysics, Relativity, Gravity, etc.
	Experimental studies related to particle-, nuclear-, cosmic ray and astro-physics
F	Particle physics, Nuclear physics, Cosmic-ray physics, Astrophysics, Relativity, Gravity, etc.
0204 : Ast	ronomy, earth and planetary science, and related fields
	Examples of related research content
	Astronomy-related
Σ	Optical/infrared astronomy, Radio astronomy, Solar physics, Astrometry, Theoretical astronomy, X-ray/γ-ray astronomy, etc.
S	Space and planetary sciences-related
	Solar-terrestrial physics, Aeronomy, Planetary science, Exoplanetary science,
	Extraterrestrial material science, etc.
	Atmospheric and hydrospheric sciences-related
	Climate system, Atmospheric science, Ocean science, Limnology, Glaciology, Paleoclimatology, etc.
	Human geosciences-related Geoenvironmental science, Natural disaster science, Geospatial information science,
	Quaternary research, Earth resources science, etc.
S	Solid earth sciences-related
	Solid earth geophysics, Geology, Earth's interior material science, Solid earth geochemistry, etc.
	Biogeosciences-related
	Drigin and evolution of life, Extremophile biology, Biogeochemistry, Paleoenvironmental science, Paleontology, etc.
	chanics of materials, production engineering, design engineering, fluid engineering, thermal g, mechanical dynamics, robotics, aerospace engineering, marine and maritime engineering, and related
[	Examples of related research content
	Mechanics of materials and materials-related
	Structural mechanics, Fatigue, Fracture, Biomaterials, Material design, Material characteristics, Material evaluation, etc.
Ν	Manufacturing and production engineering-related
N F	Machine tools, Machining, Non-traditional machining, Ultraprecision machining, Additive manufacturing, Precision metrology, Manufacturing systems, Computer-aided technology, Process planning, etc.

	Design engineering-related
	Product design, Service design, Design for reliability, Maintainability design, Lifecycle engineering,
F	Reverse engineering, Safety design, Design engineering, etc.
N	Aachine elements and tribology-related
N	Aachine elements, Mechanisms, Tribology, Actuators, Micromachines, etc.
F	Iuid engineering-related
	Fluid machinery, Flow measurement, Computational fluid dynamics, Turbulence, Multiphase flow, Compressible flow, Incompressible flow, etc.
]	Thermal engineering-related
H	Heat transfer, Convection, Combustion, Thermophysical properties, Refrigeration and air-conditioning
ł	Heat engine, Energy conversion, etc.
	Aechanics and mechatronics-related
	Kinematics, Kinetics, Vibration, Acoustics, Automation, Learning control, Mechatronics, <i>A</i> icro/nano mechatronics, Biomechanics, etc.
F	Robotics and intelligent system-related
F	Robotics, Intelligent system, Human mechanical system, Human interface, Planning, ntelligent spatial system, Virtual reality, Augmented reality, etc.
I	Aerospace engineering-related
]	hermo-fluid dynamics, Structural strength, Propulsion, Aerospace craft design,
F	Production engineering, Aircraft system, Specific aircraft, Aerodynamics, Spacecraft system,
	space utilization, etc.
	Marine engineering-related
	Navigation, Structural mechanics, Structural design, Production technology, Marine propulsion,
	Marine transport, Marine development engineering, Underwater engineering, Polar engineering, Marine environmental technology, etc.
le	ctrical and electronic engineering and related fields
	Examples of related research content
Ī	ower engineering-related
F	Electrical energy-related, Energy conservation, Power system engineering, Electric machinery, Power electronics, Effective utilization of electric energy, Electromagnetic compatibility, etc.
(	Communication and network engineering-related
	nformation theory, Nonlinear theory, Signal processing, Wired/wireless communication systems, Aodulation/demodulation, Antennas, Networks, Multimedia, Cryptography/security, etc.
N	Aeasurement engineering-related
	Aeasurement theory, Measuring instruments, Applied wave metrology, Measurement systems, Signal processing, Sensing devices, etc.
$\overline{\mathbf{C}}$	Control and system engineering-related
	Control theory, System theory, Control systems, Knowledge-based control systems,
	system information processing, System control applications, Biosystems engineering, etc.
	Electric and electronic materials-related
	semiconductor, Dielectric materials, Magnetic materials, Organic materials, Superconductor,
	Composite materials, Thin films, Quantum structures, Thick films, Fabrication/characterization nethods, etc.
	Electron device and electronic equipment-related
	Electron devices, Circuit design, Optical devices, Spintronic devices, Millimeter wave/terahertz wave, Applied wave devices, Storage devices, Displays, Micro fabrication process technology,

Implementation technology, etc.

0303 : Civil engineering, social systems engineering, safety engineering, disaster prevention engineering, and related fields

Examples of related research content Civil engineering material, execution and construction management-related Concrete, Steel, Composite material, Wood, Pavement material, Repair and reinforce material, Execution, Maintenance, Construction management, Underground space, etc. Structure engineering and earthquake engineering-related Applied mechanics, Structure engineering, Steel structure, Concrete structure, Composite structure, Wind engineering, Earthquake engineering, Aseismatic structure, Earthquake prevention, etc. Geotechnical engineering-related Soil mechanics, Foundation engineering, Rock engineering, Engineering Geology, Ground behavior, Soil structure, Geo-disaster prevention, Geoenvironmental engineering, Tunnel engineering, Soil environment, etc. Hydroengineering-related Hydraulics, Environmental hydraulics, Hydrology, River engineering, Water resource engineering, Coastal engineering, Port and harbor engineering, Ocean engineering, etc. Civil engineering plan and transportation engineering-related Civil engineering plan, Regional urban planning, Spatial planning, Disaster prevention plan, Transportation plan, Transportation engineering, Railway engineering, Surveying and remote sensing, Landscape design, Civil engineering history, etc. Environmental systems for civil engineering-related Environment plan, Environmental system, Environment conservation, Water serve and drainage systems, Waste, Water environment, Atmospheric circulation, Noise and vibration, Environment ecology, Environmental monitoring, etc. Social systems engineering-related Social systems, Industrial engineering, Operations research, Industrial management, Reliability engineering, Policy science, Regulatory science, Quality control, etc. Safety engineering-related Safety engineering, Safety system, Risk engineering, Risk management, Work safety, Product safety, Safety information, Human engineering, Liability engineering, etc. Disaster prevention engineering-related Disaster prediction, Hazard map, Building prevention against disaster, Lifeline prevention against disaster, Regional disaster prevention planning, Risk evaluation of disaster,

#### 0304 : Architecture, building engineering, and related fields

Disaster prevention policy, Disaster resilience, etc.

Examples of related research content

Building structures and materials-related

Load theory, Structural analysis, Structural design, Structures, Earthquake resistant design, Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.

Architectural environment and building equipment-related

Sound environment, Vibration environment, Light environment, Heat environment, Air environment, Environmental psychology/physiology, Building equipment, Fire engineering, Urban environment, Environment design, etc.

Architectural planning and city planning-related

Planning theory, Design theory, Housing theory, Buildings, Urban/regional planning, Administration, Building economics, Production management, Disaster prevention planning, Landscape, etc.

Architectural history and design-related

Architectural history, Urban history, Architectural theory, Design, Landscape, Preservation, Renovation, etc.

	Design-related Information design, Environmental design, Industrial design, Spatial design, Design history,
	Theory of design, Design standard, Design support, Evaluation of design, Design education, etc.
01:	Materials engineering, chemical engineering, and related fields
	Examples of related research content
	Metallic material properties-related
	Electric and magnetic properties, Electronic information properties, Metastable states, Diffusion, Phase transformation, Phase diagram, Crystal lattice defects, Mechanical properties, Thermal and optical properties, Materials computational science, etc.
	Inorganic materials and properties-related
	Functional ceramics, Functional glasses, Structural ceramics, Carbon-based materials, Crystal structure analysis, Microstructure control, Electric properties, Mechanical properties, Physical and chemical properties, Grain boundary, etc.
	Composite materials and interfaces-related
	Functional composite materials, Structural composite materials, Biocompatible composite materials, Polymer composite, Surface treatment, Dispersion control, Joining and welding, Adhesive bonding, Interface properties, Gradient function, etc.
	Structural materials and functional materials-related
	Social infrastructure materials, Toughness, Medical welfare materials, Functional polymer materials, Reliability, Photo-functional materials, Sensor materials, Energy materials, Battery functional material Environment functional materials, etc.
	Material processing and microstructure control-related
	Processing and molding, Thermal treatment, Crystal microstructure control, Laser processing, Precision processing, Polishing, Powder metallurgy, Coatings, Metal plating, Corrosion and protection
	Metals production and resources production-related
	Separation and purification, Melting and solidifying, Crystal growth, Casting, Resource security reservation, Scarce resources substitution, Low environment impact, Recycle, Ecomaterials, Energy saving, etc.
	Transport phenomena and unit operations-related
	Phase equilibrium, Transport properties, Momentum/heat/mass transfer, Fluid-phase unit operation, Adsorption, Membrane separation, Mixing, Powder technology, Crystallization, Film formation, etc.
	Chemical reaction and process system engineering-related
	Reaction operation, Novel reaction process, Reaction mechanism, Reactor design, Materials synthesis process, Micro-chemical process, Process control, Process system design, Process informatics, etc.
	Catalyst and resource chemical process-related
	Catalysis, Catalyst preparation, Catalytic function, Energy conversion process, Energy development, Energy-saving technology, Resources effective utilization technology, etc.
	Biofunction and bioprocess engineering-related
	Biocatalyst engineering, Biofunction engineering, Food engineering, Medicochemical engineering, Bioproduction process, Nano-bioprocess, Bioreactor, Bioseparation, Biosensor, Biorefinery, etc.
2:	Nano/micro science, applied condensed matter physics, applied physics and engineering, and related field
	Examples of related research content
	Nanometer-scale chemistry-related
	Nonastructure exection Clusters Nanonarticles Messessenie chemistry Superstructures

Nanostructure creation, Clusters, Nanoparticles, Mesoscopic chemistry, Superstructures,

Nanometer-scale surfaces and interfaces, Self-assembly, Nanocarbons, Molecular devices, Nanometer-scale optical devices, etc.

Nanostructural physics-related

Physics in nanoscale materials and structures, Nanoprobes, Quantum effects, Quantum dots, Quantum devices, Electron devices, Spin devices, Nanotribology, Nanocarbon physics, etc.

Creation of nanomaterials, Analysis of nanomaterials, Nanosurfaces, Nanointerfaces, Functional nanomaterials, Nanostructures, Nanoparticles, Carbon nanomaterials,

Nanocrystalline materials, Nanocomposites, Nanodefects, Nanofabrication process, etc.

Nanobioscience-related

Biomolecular devices, Molecular manipulation, Molecular imaging, Nanomeasurements, Nanosynthesis, Single molecule science, Nano-bio interfaces, Biomolecular array, Genome engineering, etc.

Nano/micro-systems-related

MEMS, NEMS, BioMEMS, Nano/micro-fabrication, Nano/micro-optical devices,

Nano/micro-chemical systems, Nano/micro-biosystems, Nano/micro-organism systems, Nano/micro-mechanics, Nano/micro-sensors, etc.

Applied physical properties-related

Magnetic materials, Superconductors, Dielectrics, Fine particles, Organic molecules, Liquid crystals, New functional materials, Organic molecules and bioelectronics, Spintronics, etc.

Thin film/surface and interfacial physical properties-related

Thin-film engineering, Thin-film electronics, Oxide electronics, Vacuum, Surface science, Analysis, Measurement, Nanoscopic technology, Surface and interfacial engineering, Advanced equipment, etc.

Applied condensed matter physics-related

Elementary quantities, Standards, Units, Physical quantity measurements and detection, Energy conversion, etc.

Crystal engineering-related

Metals, Semiconductors, Ceramics, Amorphous materials, Crystal growth, Artificial structures, Crystal characterization, Plasma materials engineering, Plasma processing, Plasma engineering, etc.

Optical engineering and photon science-related

Optical materials, Optical elements, Optical properties, Optical information processing, Laser, Optical sensing, Optical recording, Opto-electronics, Nonlinear optics, Vision optics, etc.

0403 : Biomedical engineering and related fields

Examples of related research content

Biomedical engineering-related

Medical imaging, Medical modeling, Biological simulation, Biometrics, Artificial organs, Tissue engineering, Biophysical properties, Biocontrol, Biomechanics, Nanobio systems, etc.

Biomaterials-related

Biofunctional materials, Tissue engineering materials, Biocompatible materials, Nanobio materials, Drug delivery systems, Stimuli-sensitive materials, Genetic engineering material, etc.

Medical systems-related

Medical ultrasound system, Diagnostic imaging system, Laboratory diagnosis systems,

Minimally invasive treatment systems, Remote diagnosis and treatment systems,

Organ preservation systems, Medical information systems, Computer-assisted surgery, Medical robot, etc.

Medical technology assessment-related

Regulatory science, Safety evaluation, Clinical study, Medical technology ethics, Medical devices, etc.

Medical assistive technology-related

Healthcare and rehabilitation engineering, Life assist technology, Care support technology, Accessibility design, Universal design, Rehabilitation and nursing robot, Assist device for artificial internal organ, 0501 : Physical chemistry, functional solid state chemistry, organic chemistry, polymers, organic materials, biomolecular chemistry, and related fields

I	Examples of related research content
ľ	Fundamental physical chemistry-related
	Theoretical chemistry, Molecular spectroscopy, Structural chemistry, Electronic state dynamics,
L	Chemical reaction dynamics, Surface/interface, Cluster and nano materials,
	Bio-related physical chemistry, Liquid structure dynamics, Solid state properties, Molecular propertie
L	etc.
E	Functional solid state chemistry-related
L	Optical properties, Electron spin, Molecular electronics and devices, Supermolecules, Liquid crystals Crystals, Surface/interface, Nano particles, Colloids, Electrochemistry, Electronic properties, etc.
	Structural organic chemistry and physical organic chemistry-related
ſ	Organic crystals, Molecular recognition, Supermolecules, Organic functional materials,
	Extended p-electron system compounds, Heterocyclic chemistry, Organoelement chemistry,
	Organic reaction mechanism, Organic photochemistry, Theoretical organic chemistry, etc.
	Synthetic organic chemistry-related
ſ	Selective reactions, Asymmetric synthesis, Organometallic complex/catalysis, Catalyst design,
I	Organocatalysts, Biocatalysis, Sustainable organic synthesis, Natural product synthesis,
	Process chemistry, Organic electrochemistry, etc.
ľ	Polymer chemistry-related
ſ	Polymer synthesis, Polymer reactions, Precision polymerization, Functional polymers,
	Self-assembled polymers, Chiral polymers, Bio-related polymers, Polymer properties,
	Polymer structures, Polymer thin film/surface, etc.
l	Polymer materials-related
	Properties of polymer materials, Synthesis of polymer materials,
I	Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers,
	Gel, Biopolymers, Polymer composites, Polymer processing, etc.
I	Organic functional materials-related
	Organic semiconductors, Liquid crystals, Optical materials, Device-related materials,
I	Electrically conductive materials, Hybrid materials, Molecular functional materials,
	Organic hybrid materials, Materials for energy conversion, etc.
I	Bio-related chemistry
	Bioorganic chemistry, Bioinorganic chemistry, Biological reaction engineering,
	Biofunctional chemistry, Biofunctional materials, Biotechnology, etc.
	Chemistry and chemical methodology of biomolecules-related
	Natural product chemistry, Biologically active compounds,
	Molecular mechanism of biological activities, Biofunctional molecules, Combinatorial chemistry,
L	Metabolomic analysis, etc.
	Chemical biology-related
L	In vivo functional expression, Intracellular chemical reactions, Drug discovery science,
н	Chemical library, Structure-activity relationship, Chemical probes, Biomolecular measurements, Molecular imaging,
-	organic/coordination chemistry, analytical chemistry, inorganic materials chemistry, energy-related

Examples of related research content

Inorganic/coordination chemistry-related

Coordination chemistry, Organometallic chemistry, Inorganic solid-state chemistry,

Bioinorganic chemistry, Solution chemistry, Clusters, Supramolecular complexes,

Coordination polymers, Typical elements, Physical properties and functions, etc.

Spectrometric analysis, Advanced measurements, Surface/interface analysis, Separation analysis, Analytical reagents, Radiochemical analysis, Electrochemical analysis, Bioanalysis, New analysis methods, etc.         Green sustainable chemistry and environmental chemistry-related         Green process, Green catalysts, Recycle, Environmental assessment, Environmentally conscious materials,         Reduction of environmental load, Environmental restoration, Resource saving, Geochemistry,         Inorganic compounds and inorganic materials chemistry-related         Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials,         Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,         Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
methods, etc.         Green sustainable chemistry and environmental chemistry-related         Green process, Green catalysts, Recycle, Environmental assessment, Environmentally conscious materials,         Reduction of environmental load, Environmental restoration, Resource saving, Geochemistry,         Inorganic compounds and inorganic materials chemistry-related         Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials,         Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,         Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
Green sustainable chemistry and environmental chemistry-related         Green process, Green catalysts, Recycle, Environmental assessment, Environmentally conscious materials,         Reduction of environmental load, Environmental restoration, Resource saving, Geochemistry,         Inorganic compounds and inorganic materials chemistry-related         Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials,         Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,         Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
Green process, Green catalysts, Recycle, Environmental assessment, Environmentally conscious materials,         Reduction of environmental load, Environmental restoration, Resource saving, Geochemistry,         Inorganic compounds and inorganic materials chemistry-related         Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials,         Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,         Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
materials,         Reduction of environmental load, Environmental restoration, Resource saving, Geochemistry,         Inorganic compounds and inorganic materials chemistry-related         Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials,         Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,         Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
Reduction of environmental load, Environmental restoration, Resource saving, Geochemistry,         Inorganic compounds and inorganic materials chemistry-related         Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials,         Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,         Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
Inorganic compounds and inorganic materials chemistry-related         Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials,         Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,         Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
Crystals, Amorphous, Ceramics, Semiconductors, Inorganic device-related materials,         Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds,         Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
Low-dimensional compounds, Porous materials, Nanoparticles, Multicomponent compounds, Hybrid materials, etc. Energy-related chemistry Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization, Material separation, Catalytic transformation, Battery and electrochemical materials, Energy-saving materials, Renewable energy, Unused energy, etc. 0601 : Agricultural chemistry and related fields
Hybrid materials, etc.         Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
Energy-related chemistry         Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization,         Material separation, Catalytic transformation, Battery and electrochemical materials,         Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
Energy resources, Energy conversion materials, Energy carriers, Solar energy utilization, Material separation, Catalytic transformation, Battery and electrochemical materials, Energy-saving materials, Renewable energy, Unused energy, etc. 0601 : Agricultural chemistry and related fields
Material separation, Catalytic transformation, Battery and electrochemical materials, Energy-saving materials, Renewable energy, Unused energy, etc. 0601 : Agricultural chemistry and related fields
Energy-saving materials, Renewable energy, Unused energy, etc.         0601 : Agricultural chemistry and related fields
0601 : Agricultural chemistry and related fields
Examples of related research content
Plant nutrition and soil science-related
Plant metabolism and physiology, Nutritional elements in plants, Soil classification,
Soil physical chemistry, Soil organisms, etc.
Applied microbiology-related
Microbial genetics/breeding, Microbial function, Microbial metabolism and physiology,
Microbial applications, Control of microbes, Microbial ecology, Production of useful materials, etc.
Applied biochemistry-related
Cellular biochemistry, Applied biochemistry, Structural biology, Regulation of bioactivity,
Metabolism and physiology, Cellular function, Molecular function, Production of useful materials, etc.
Bioorganic chemistry-related
Bioactive substances, Signal molecules, Natural products chemistry, Biosynthesis,
Structure-activity relationship, Synthetic organic chemistry, Chemical biology, etc.
Food sciences-related
Food function, Food chemistry, Nutritional chemistry, Food analysis, Food engineering,
Food safety, Functional food, Nutritional epidemiology, Clinical nutrition, etc.
Applied molecular and cellular biology-related
Molecular cell biology, Cellular bioengineering, Molecular engineering, Gene expression control,
Cell-cell/intermolecular interactions, Cellular function, Production of useful materials, etc.
0602 : Agricultural and environmental biology and related fields
Examples of related research content
Science in plant genetics and breeding-related
Genetic resources, Breeding theories, Genomic breeding, Plants with novel traits, Quality components,
Stress tolerance, Yielding ability, Reproduction and multiplication, Growth physiology, Development,
etc.
Crop production science-related
Field crops, Crop yield, Crop product quality, Crop morphology, Growth prediction, Crop physiology,
Field management, Low-cost cultivation techniques, Environmentally friendly agriculture,
Field ecosystem, etc.
Horticultural science-related
Plant growth, flowering, and fruit development, Nursery plant propagation and production,
Crop production systems, Cultivation techniques, Protected horticulture,
Controlled environment systems, Breeding and development of new cultivars,
Quality of horticultural products, Postharvest physiology and management, Socio-horticulture, etc.
Contraction of the second

	Plant protection science-related
	Plant pathology, Clinical plant science, Agricultural insect pest, Natural enemy, Weed,
	Agricultural chemicals, Integrated pest management, etc.
	Insect science-related
	Sericulture insect technology, Insect genetics, Insect pathology, Insect physiology and biochemistry,
	Insect ecology, Chemical ecology, Systematics, Symbiosis and parasitism, Social insects,
	Medical entomology, etc.
	Conservation of biological resources-related
	Conservation biology, Biodiversity conservation, Conservation of phylogenetic diversity,
	Conservation of genetic resources, Ecosystem conservation, Conservation of endemic species,
	Conservation of microorganisms, etc.
	Landscape science-related
	Landscape architecture, Parks and open space planning, Landscape planning, Cultural landscape,
	Nature conservation, Landscape ecology, Parks and open space management, Parks,
	Environmental greening, Participatory community design, etc.
$0603 \cdot E$	orestry and forest products science, applied aquatic science, and related fields
0005.1	
	Examples of related research content
	Forest science-related
	Forest ecology, Forest biodiversity, Forest genetics and breeding, Silviculture, Forest protection,
	Forest environments, Erosion control, Forest planning, Forest policy, etc.
	Wood science-related
	Wood structure, Wood property, Lignocellulose, Trace element, Fungus, Wood processing,
	Biomass-refinery, Wood based material, Wooden building, Forest products education, etc.
	Aquatic bioproduction science-related
	Aquatic environment, Fisheries, Aquatic resource management, Aquatic organisms, Aquatic ecosystem,
	Aquaculture, Fisheries engineering, Fishing community/fisheries policy,
	Fisheries economics/management/marketing, Fisheries education, etc.
	Aquatic life science-related
	Aquatic nutrition, Aquatic pathology, Aquatic genetics/heredity/breeding, Aquatic physiology,
	Utilization of aquatic organisms and biomass, Aquatic biological chemistry, Aquatic biotechnology,
	Aquatic food sciences, etc.
0604 : A	gricultural economics and rural sociology, agricultural engineering, and related fields
	Examples of related research content
	Agricultural and food economics-related
	Food economy, Agricultural production economy, Policy for agriculture, forestry and fishery,
	Food system, Food marketing, International agricultural development,
	Trade of agricultural commodities and livestock products, Rural resources and environment, etc.
	Rural sociology and agricultural structure-related
	Farm organization, Farm management, Agricultural structure, Agricultural market, Agricultural history,
	Rural society, Rural life, Agricultural cooperative, etc.
	Rural environmental engineering and planning-related
	Irrigation and drainage, Reclamation and conservation of agricultural land, Rural planning,
	Rural environment, Circulation of resources and energy, Disaster prevention in rural area,
	Stock management of agricultural infrastructures, Hydrodynamics and hydrology, Soil physics,
	Design and construction materials, etc.
	Agricultural environmental engineering and agricultural information engineering-related
	Agricultural environmental engineering and agricultural information engineering-related Agricultural production facilities, Bioproduction machinery, Environmental control,
	Agricultural meteorology and micrometeorology, Agricultural information, Greenhouse horticulture,
	Plant factory, Postharvest and supply chain, Nondestructive measurement,
	Remote sensing and geographic information system, etc.

	Environmental agriculture-related
	Biomass, Environmental manipulation, Biodiversity, Environmental analysis, Ecosystem services,
	Resources circulation system, Low-carbon societies, Life-cycle assessment,
	Environmental friendly agriculture, Watershed management, etc.
05 :	Veterinary medical science, animal science, and related fields
	Examples of related research content
	Animal production science-related
	Breeding/genetics, Reproduction, Nutrition/feeding, Anatomy/physiology, Product, Environment, Behavior, Therapy, Grassland, Grazing, etc.
	Veterinary medical science-related
	Basic veterinary science, Pathological veterinary science, Applied veterinary science, Clinical veterinary science, Animal nursing, Animal welfare, Wildlife, etc.
	Animal life science-related
	Homeostasis, Cellular function, Biological defense, Integrated genetics, Development/differentiation, Biotechnology, etc.
	Laboratory animal science-related
	Genetic engineering, Developmental engineering, Animal models of disease, Facility management, Laboratory animal welfare, Laboratory animal-related technology, Bioresource, etc.
01 :	Biology at molecular to cellular levels, and related fields
	Examples of related research content
	Molecular biology-related
	Chromosome function, Chromatin, Epigenetics, Genome maintenance, Genome transmission, Chromosome re-organization, Gene expression, Non-coding RNA, Regulation of protein function, Molecular genetics, etc.
	Structural biochemistry-related
	Proteins, Nucleic acids, Lipids, Carbohydrates, Biological membrane, Molecular recognition, Denaturation, Three-dimensional structural analysis, Three-dimensional structural prediction, Molecular dynamics, etc.
	Functional biochemistry-related
	Enzymes, Sugar chain, Bioenergy conversion, Biological trace elements,
	Physiologically active substances, Cell signaling, Membrane transport, Proteolysis, Molecular recognition, etc.
	Biophysics-related
	Structure biology, Physical property of biomolecules, Biomembrane, Photobiology, Molecular motor, Biometrics, Bioimaging, Systems biology, Synthetic biology, Theoretical biology, etc.
	Genome biology-related
	Genome organization, Genome function, Genome diversity, Molecular evolution of genome, Genome repair/maintenance, Trans-omics, Epigenome, Gene resource, Genome dynamics, etc.
	System genome science-related
	Network analyses, Synthetic biology, Biological databases, Bioinformatics, Genome analysis technology, Genome biotechnology, etc.
	Biology at cellular to organismal levels, and related fields
02 :	
02 :	Examples of related research content
02 :	Examples of related research content Cell biology-related
702 :	

	Developmental biology-related
	Cell differentiation, Stem cells, Regeneration, Germ layer formation, Morphogenesis, Organogenesis,
	Fertilization, Germ cells, Regulation of gene expression, Developmental genetics,
	Evolution and development, etc.
	Plant molecular biology and physiology-related
	Photosynthesis, Growth physiology, Plant development, Organelle, Cell wall,
	Responses to environment, Plant-microbe interaction, Metabolism, Plant molecular function, etc.
	Morphology and anatomical structure-related
	Animal and plant morphology, Micro-organismal morphology, Molecular morphology, Microstructure,
	Tissue organization, Morphogenesis, Comparative endocrinology, Microscopic technology, Imaging,
	etc.
	Animal physiological chemistry, physiology and behavioral biology-related
	Metabolic physiology, Neurophysiology, Neuroethology, Behavioral physiology,
	Animal physiological chemistry, Chronobiology, Comparative physiology, etc.
0703 : B	iology at organismal to population levels and anthropology, and related fields
	Examples of related research content
	Genetics-related
	Genetic mechanism, Molecular genetics, Cellular genetics, Population genetics, Evolutionary genetics, Developmental genetics, Behavioral genetics, Genetic diversity, etc.
	Evolutionary biology-related
	General evolutionary biology, Molecular evolution, Phenotypic evolution,
	Evolution of developmental traits, Evolution of ecological traits, Evolution of behaviors,
	Experimental evolution, Evolutionary theory, Evolution of symbiosis, Phylogenetics, Speciation, etc.
	Biodiversity and systematics-related
	Taxonomic characters, Taxon, Classification system, Biodiversity, Phylogenetics, Evolution,
	Natural history, Speciation, etc.
	Ecology and environment-related
	Chemical ecology, Molecular ecology, Physiological ecology, Evolutionary ecology,
	Behavioral ecology, Population ecology, Community ecology, Ecosystem, Conservation ecology,
	Natural environment, etc.
	Physical anthropology-related
	Molecular anthropology and genetics, Morphology and function, Bioarchaeology,
	Behavior and cognition, Ecology, Primates, Evolution, Development and ontogeny,
	Variation and diversity, etc.
	Applied anthropology-related
	Physiological anthropology, Ergonomics, Forensic anthropology, Medical anthropology,
	Physiological polymorphisms, Environmental adaptability, Somatic and physiological function,
	Anthropometry and bioengineering, etc.
0704 : N	euroscience, brain sciences, and related fields
	Examples of related research content
	Neuroscience-general-related
	Neurochemistry, Neuron, Glia, Genome, Epigenetics, Neurobiology, Information processing, Synapse,
	Neurogenesis, etc.
	Anatomy and histopathology of nervous system-related
	Neural development, Anatomy of nervous system, Neural network structure, Neuropathology, etc.
	Function of nervous system-related
	Neurophysiology, Neuropharmacology, Neurotransmission, Neuroinformatics, Behavioral neuroscience,
	Neural system physiology, Cerebral blood flow, Autonomic nervous system, etc.
I	

Basic brain sciences-r	elated
------------------------	--------

Brain-machine interface, Model animal, Computational brain science, Brain information decoding, Control technologies, Brain imaging, Brain biometrics, etc.

Cognitive and brain science-related

Social behavior, Communication, Emotion, Decision making, Consciousness, Learning, Neuroeconomics, Neuropsychology, etc.

Pathophysiologic neuroscience-related

Clinical neuroscience, Dolorology, Sensory impairment, Movement disorder, Neurological disorder, Neurogenesis, Neuroimmunology, Cellular degeneration, Disease model, etc.

#### 0801 : Pharmaceutical sciences and related fields

Examples of related research content

Pharmaceutical chemistry and drug development sciences-related

Inorganic chemistry, Organic chemistry, Medicinal chemistry, Medicinal molecular design, Drug discovery, Bio-related materials, Chemical biology, etc.

Pharmaceutical analytical chemistry and physicochemistry-related

Environmental analysis, Bioanalysis, Physicochemistry, Biophysics, Structural biology, Radiochemistry, Bioimaging, Drug formulation design, Computer science, Information science, etc.

Pharmaceutical hygiene and biochemistry-related

Environmental hygiene, Healthful nutrition, Disease prevention, Toxicology, Drug metabolism, Host defense, Molecular biology, Cell biology, Biochemistry, etc.

Pharmacology-related

Pharmacology, Pharmacogenomics, Applied pharmacology, Signal transduction, Drug interactions, Drug response, Pharmacotherapy, Pharmacotoxicology, etc.

Environmental and natural pharmaceutical resources-related

Environmental resource science, Natural products chemistry, Bioactive natural compounds, Medicinal resources, Medicinal foods, Pharmaceutical microbiology, etc.

Clinical pharmacy-related

Pharmacokinetics, Medical informatics, Social pharmacy, Clinical pharmacy, Pharmaceutics, Regulatory science, Education for the pharmacist, etc.

0802 : Biomedical structure and function and related fields

Examples of related research content

Anatomy-related

Macroscopic anatomy, Histology, Embryology, etc.

Physiology-related

General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.

Pharmacology-related

Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.

Medical biochemistry-related

Biofunctional molecular and medical biochemistry, Genome medical sciences, Human genetics, Disease model, etc.

0803 : Pathology, infection/immunology, and related fields

Examples of related research content

Pathological biochemistry-related

Molecular pathology, Metabolic disorders, Molecular diagnosis, etc.

 Human pathology-related

 Molecular pathology, Cyto- and histo-pathology, Diagnostic pathology, etc.

 Experimental pathology-related

 Disease models, Pathological regulation, Tissue regeneration, etc.

 Parasitology-related

Parasite, Vector organism, Parasite pathogenicity, Epidemiology of parasites, Control of parasite infections, etc.

Bacteriology-related

Bacterium, Fungus, Antimicrobial resistance, Bacterial pathogenicity, Epidemiology of bacteria, Control of bacterial infections, etc.

Virology-related

Virus, Prion, Viral pathogenicity, Epidemiology of viruses, Control of viral infections, etc.

Immunology-related

Immune system, Immune response, Inflammation, Immune-related disorder, Immune regulation, etc.

0901 : Oncology and related fields

Examples of related research content

Tumor biology-related

Cancer and gene, Tumor development, Invasion, Metastasis, Cancer microenvironment, Cancer and signal transduction, Characteristics of cancer cells, etc.

Tumor diagnostics and therapeutics-related

Genome analysis, Diagnostic markers, Molecule imaging, Chemotherapy, Nucleic acid therapy, Gene therapy, Immunotherapy, Molecular targeted therapy, Physical therapy, Radiation therapy, etc.

0902 : General internal medicine and related fields

Examples of related research content

General internal medicine-related

Laboratory medicine, General practice, Geriatrics, Psychosomatic internal medicine, Oriental medicine, Palliative medicine, etc.

Neurology-related

Neurology, Neurofunctional imaging, etc.

Psychiatry-related

Clinical psychiatry, Biological psychiatry, Forensic mental health, etc.

Radiological sciences-related

Diagnostic radiology, Therapeutic radiology, Radiation biology, Radiological technology, etc.

Embryonic medicine and pediatrics-related Fetal medicine, Neonatal medicine, Pediatrics, etc.

0903 : Organ-based internal medicine and related fields

Examples of related research content

Gastroenterology-related

Upper digestive tract, Lower digestive tract, Liver, Biliary tract, Pancreas, etc.

Cardiology-related

Ischemic heart disease, Valvular heart disease, Arrhythmia, Cardiomyopathy, Heart failure, Peripheral arterial disease, Arteriosclerosis, Hypertension, etc.

	Respiratory medicine-related
	Respiratory medicine, Asthma, Diffusive lung disease, COPD, Lung cancer, Pulmonary hypertension,
	etc.
	Nephrology-related
	Acute renal failure, Chronic kidney disease, Diabetic nephropathy, Hypertension,
	Aqueous electrolyte metabolism, Artificial dialysis, etc.
	Dermatology-related
	Dermatology, Cutaneous immune disease, Cutaneous infection, Cutaneous tumor, etc.
In	ternal medicine of the bio-information integration and related fields
	Examples of related research content
	Hematology and medical oncology-related
	Hematological oncology, Hematological immunology, Anemia, Thrombosis and hemostasis,
	Chemotherapy, etc.
	Connective tissue disease and allergy-related
	Connective tissue disease, Allergy, Clinical immunology, Inflammation, etc.
	Infactions discoss modicing valated
	Infectious disease medicine-related
	Infection diagnostics, Infection therapeutics, Host defense, International infection science, etc.
	Metabolism and endocrinology-related
	Energy balance, Glucose metabolism, Lipid metabolism, Purine metabolism, Bone metabolism,
	Electrolyte balance, Endocrinology, Neuroendocrinology, Reproductive endocrinology, etc.
u	rgery of the organs maintaining homeostasis and related fields
	Examples of related research content
	*
	General surgery and pediatric surgery-related
	Surgical basic principles, Breast surgery, Endocrine surgery, Pediatric surgery, Transplant surgery,
	Artificial organs science, Regeneration, Operation support, etc.
	Digestive surgery-related
	Upper gastrointestinal surgery, Lower gastrointestinal surgery, Hepatic surgery, Biliary surgery,
	Pancreatic surgery, etc.
	Cardiovascular surgery-related
	Coronary artery surgery, Heart valve surgery, Surgery for myocardial disease, Aortic surgery,
	Vascular surgery, Congenital heart surgery, etc.
	Respiratory surgery-related
	Lung surgery, Mediastinal surgery, Chest wall surgery, Respiratory tract surgery, etc.
	Anesthesiology-related
	Anesthesiology, Perioperative management, Pain management, Resuscitology, Palliative medicine, etc
	Anconcology, renoperative management, rain management, Resuscitology, rainative medicine, etc
	Emergency medicine-related
	Intensive care medicine, Emergency resuscitation science, Trauma surgery, Disaster medicine,
	Disaster medical care, etc.
Su	rgery related to the biological and sensory functions and related fields
	Examples of related research content
	Neurosurgery-related
	Neurosurgery, Spine and spinal cord diseases, etc.
	rearosurgery, spine and spinar cord diseases, etc.
	Orthopedics-related
	Orthopedics-related Orthopedics, Rehabilitation medicine, Sports medicine, etc.

Urology-related

Urology, Male genitalia science, etc.

Obstetrics and gynecology-related

Obstetrics, Reproductive endocrinology, Gynecologic oncology, Female health care medicine, etc.

Otorhinolaryngology-related

Otorhinolaryngology, Head and neck surgery, etc.

Ophthalmology-related

Ophthalmology, Ophthalmological optics, etc.

Plastic and reconstructive surgery-related

Plastic surgery, Reconstructive surgery, Aesthetic plastic surgery, etc.

0907 : Oral science and related fields

Examples of related research content

Oral biological science-related

Oral anatomy, Oral histology and embryology, Oral physiology, Oral biochemistry,

Pharmacology for hard tissues, etc.

Oral pathobiological science-related

Oral infectious diseases, Oral pathology, Oral experimental oncology, Immunity and inflammation, Laboratory medicine, etc.

Conservative dentistry-related

Operative dentistry, Endodontology, Periodontology, etc.

Regenerative dentistry and dental engineering-related

Regenerative dentistry, Biomaterial science, Dental materials science,

Oral and maxillofacial prosthetics, Oral implantology, etc.

Prosthodontics-related

Prosthodontics, Oral rehabilitation, Gerodontology, etc.

Surgical dentistry-related

Oral and maxillofacial surgery, Oral maxillofacial reconstructive surgery, Dental anesthesiology, Psychosomatic medicine dentistry, Dental radiology, etc.

Developmental dentistry-related

Orthodontics, Pediatric dentistry, etc.

Social dentistry-related

Dental hygiene, Preventive dentistry, Oral health administration and management, Dental education, Forensic odontology, etc.

0908 : Society medicine, nursing, and related fields

Examples of related research content

Medical management and medical sociology-related

Medical management, Medical social science, Ethics for medical science, Ethics for medical care, Biomedical education, History of medical science, Health policy and economics, Clinical trials, Health and medical services administration, Disaster medical science, etc.

Hygiene and public health-related: including laboratory approach

Hygiene, Public health, Epidemiology, Global health, etc.

Hygiene and public health-related: excluding laboratory approach Hygiene, Public health, Epidemiology, Global health, etc.

I	Forensics medicine-related
	Forensic medicine, Forensic pathology, Forensic toxicology, Forensic genetics, Suicide, Abuse,
	Clinical forensic medicine, Sudden death, etc.
	Fundamental of nursing-related
	Fundamental of nursing, Nursing education, Nursing administration, etc.
	Clinical nursing-related
	Critical care and emergency nursing, Perioperative nursing, Nursing of chronic illness,
	Oncology nursing, Psychiatric nursing, Palliative care nursing, etc.
	Lifelong developmental nursing-related
	Women's health nursing, Maternal nursing, Midwifery, Family health nursing, Child health nursing, School nursing, etc.
	Gerontological nursing and community health nursing-related
	Gerontological nursing, Community health nursing, Public health nursing, Disaster nursing, etc.
0909 : \$	Sports sciences, physical education, health sciences, and related fields
	Examples of related research content
	Rehabilitation science-related
	Rehabilitation medicine, Rehabilitation nursing, Rehabilitation medical care, Physicotherapeutics,
	Occupational therapy, Assistive technology, Speech and language therapy, etc.
	Sports sciences-related
	Sports physiology, Sports biochemistry, Sports medicine, Sports sociology, Sports management,
	Sports psychology, Sports education, Training science, Sports biomechanics, Adapted sports science, Doping, etc.
	Physical education, and physical and health education-related
	Growth developmental science, Physical and health education, Physical education in school,
	Educational physiology, Physical systems science, Higher brain function science, Martial arts theory, Outdoor education, etc.
	Nutrition science and health science-related
	Nutritional physiology, Nutritional biochemistry, Nutritional education, Clinical nutrition, Functional food, Lifestyle-related disease, Health promotion, Aging, etc.
1001 : I	nformation science, computer engineering, and related fields
	Examples of related research content
	Theory of informatics-related
	Discrete structure, Mathematical logic, Theory of computation, Mathematical theory of programs, Computational complexity theory, Algorithm theory, Information theory, Coding theory, Theory of cryptography, Learning theory, etc.
	Mathematical informatics-related
	Optimization theory, Mathematical systems theory, System control theory, System analysis,
	System methodology, System modeling, System simulation, Combinatorial optimization,
	Queueing theory, Mathematical finance, etc.
	Statistical science-related
	Statistics, Data science, Modeling, Statistical inference, Multivariate analysis, Time series analysis, Statistical quality control, Applied statistics, etc.
	Computer system-related
	Computer architecture, Circuit and system, LSI design, LSI testing, Reconfigurable system, Dependable architecture, Low power technology, Hardware/software codesign, Embedded system, etc.

Software-related Programming language, Programming methodology, Operating system, Parallel and distributed computing, Software engineering, Virtualization technology, Cloud computing, Software dependability, Software security, etc. Information network-related Network architecture, Network protocol, Internet, Mobile network, Pervasive computing, Sensor network, IoT, Traffic engineering, Network management, Service platform technology, etc. Information security-related Cryptography, Tamper resistance technology, Authentication, Biometrics, Access control, Malware countermeasure, Countermeasures against denial-of-service attacks, Privacy protection, Digital forensics, Security evaluation and authorization, etc. Database-related Data model, Database system, Multimedia database, Information retrieval, Content management, Metadata, Big data, Geographic information system, etc. High performance computing-related Parallel processing, Distributed processing, Cloud computing, Numerical analysis, Visualization, Computer graphics, High performance computing application, etc. Computational science-related Mathematical engineering, Computational mechanics, Numerical simulation, Multi-scale modeling, Large-scale computing, Massively parallel computing, Numerical computing methods, Advanced algorithms, etc. 1002 : Human informatics, applied informatics and related fields Examples of related research content Perceptual information processing-related Pattern recognition, Image processing, Computer vision, Visual media processing, Acoustic media processing, Media editing, Media database, Sensing, Sensor fusion, etc. Human interface and interaction-related Human interface, Multi-modal interface, Human-computer interaction, Computer supported cooperative work, Virtual reality, Augmented reality, Realistic communication, Wearable device, Usability, Ergonomics, etc. Intelligent informatics-related Search, Inference, Machine learning, Knowledge acquisition, Intelligent system, Intelligent information processing, Natural language processing, Data mining, Ontology, Agent system, etc Soft computing-related Neural network, Evolutionary computation, Fuzzy theory, Chaos, Complex systems, Probabilistic information processing, etc. Intelligent robotics-related Intelligent robot, Behavior and environment recognition, Planning, Sensory behavior system, Autonomous system, Digital human, Real world information processing, Physical agents, Intelligent space, etc. Kansei informatics-related Kansei design, Kansei cognitive science, Kansei psychology, Kansei robotics, Kansei measurement evaluation, Kansei interface, Kansei physiology, Kansei material science, Kansei pedagogy, Kansei brain science, etc. Design-related Information design, Environmental design, Industrial design, Spatial design, Design history, Theory of design, Design standard, Design support, Evaluation of design, Design education, etc. Cognitive science-related Cognitive science in general, Cognitive models, Kansei, Human factors, Cognitive and brain science, Comparative cognition, Cognitive linguistics, Cognitive engineering, etc.

Life, health and medical informatics-related
Bioinformatics, Life informatics, Biological information, Neuroinformatics,
Neural information processing, Molecular computing, DNA computing, Medical information,
Health information, Medical image, etc.
Web informatics and service informatics-related
Web system, Social web, Semantic web, Web mining, Social network analysis, Service engineering,
Educational service, Medical service, Welfare service, Social service, Information culture, etc.
Learning support system-related
Media literacy, Learning media, Social media, Learning content, Learning management,
Learning support, Remote learning, e-Learning, etc.
Entertainment and game informatics-related
Music information processing, 3D content, Animation, Game programming, Network entertainment,
Media art,
Library and information science, humanistic and social informatics-related
Library science, Information services, Information organizing, Information retrieval, Information media,
Bibliometrics, Information resources, Information ethics, Digital humanities, Social Informatics,
Digital archives, etc.
1 : Environmental analyses and evaluation, environmental conservation measure and related fields
Examples of related research content
-
Environmental dynamic analysis-related
Global warming, Environmental change, Water and material cycle, Polar regions,
Chemical oceanography, Biological oceanography, Environmental measurements,
Environmental model, Environmental information, Remote sensing, etc.
Radiation influence-related
Radiation, Measurement, Control, Repair, Biological effects, Risk, etc.
Chemical substance influence on environment-related
Toxicology, Toxic substance to human, Trace chemical substance, Endocrine disruptor, Repair, etc.
Environmental impact assessment-related
Atmosphere, Hydrosphere, Terrestrial impact, Impact assessment on human health,
Social and economic impacts, Impact assessment on the future generation,
Environmental impact assessment, Assessment methods, Monitoring, Simulation, etc.
Environmental load and risk assessment-related
Environmental analysis, Environmental load analysis, Environmental monitoring,
Dynamics of environmental pollution, Environmental modelling, Evaluation of contamination,
Exposure assessment, Toxicity evaluation, Environmental assessment,
Chemical substance management, etc.
Environmental load reduction and remediation-related
Removal of contamination, Treatment of waste material, Control of contamination source,
Disposal of waste material, Environmental load reduction, Remediation measure of contamination,
Noise and vibration reduction, Countermeasure of ground settlement, Bioremediation,
Radioactive decontamination, etc.
Environmental materials and recycle technology-related Recycle materials, Valuable materials recovery, Separation, refining and purification,
Environment-conscious design, Recycle chemistry, Green production, Zero emission,
Resource circulation, Renewable energy, Biomass utilization, etc.
Social-ecological systems-related
Biodiversity, Conservation biology, Ecosystem services, Natural capital, Impact analysis on ecosystem,
Ecosystem management, Ecosystem restoration, Ecological engineering,
Regional environmental planning, Impact of climate change, etc.

Sound material-cycle social systems-related

Sound material-cycle systems, Material and energy budget analysis, Low carbon society,

Unused energy, Regional revitalization, Water use system, Industrial symbiosis,

Life cycle assessment (LCA), Integrated environmental management,

3R (reduction, reuse, recycle) social systems, etc. Environmental policy and social systems-related

Environmental philosophy and ethics, Environmental laws, Environmental economics,

Environmental information, Environmental education, Environmental social activities,

Environmental management and governance, Consensus forming, Environmental safety and security,

Social and public system, Sustainable development, etc.

#### 4. Completion of Research Ethics Education Course or Other etc.

Principal Investigators taking part in research funded by KAKENHI should complete at least one of the following kinds of coursework relevant to research ethics by the time he/she submits the formal application for grant delivery of a newly adopted research project in the FY2018 Grants-in-Aid for Scientific Research.;

-- reading a textbook such as "For the Sound Development of Science --- The Attitude of a Conscientious Scientist ---"("For the Sound Development of Science" Editorial Committee)

--- going through an e-learning course on research ethics such as "e-Learning Course on Research Ethics (eL CoRE)", "APRIN e-leaning program (CITI Japan)", etc.

--- attending a lecture on research ethics offered by his/her research institute based on the "Guidelines for Responding to Misconduct in Research (issued on August 26, 2014 by the MEXT).\*Participation in a Research Ethics Education course of the Principal Investigator will be confirmed through the JSPS Electronic Application System.

### **IV. Instructions for Grant Recipients**

# **1.** Handling of a research project that is to be continued in FY2018 (hereafter referred to as "continued research project").

For a continued research project, the PI does not need to submit any application form afresh. However, he/she has to prepare and submit the necessary documents, including the form of the formal application for grant delivery, after receiving a notification of the provisional grant decision.

### 2. Handling of Continued Research Projects Whose PI Fails to Submit the Report on the Research Achievements of his/her Other KAKENHI Project

As is the case for new proposal submissions, no KAKENHI will be delivered to a researcher who fails to submit the Report on the Research Achievements at the end of the research period, without any justifiable reason. In such cases, a cancellation of the official grant decision and an order for refund of the grant may be issued. In addition, <u>the information such as the name of the research</u> institute of the said researcher may be made public.

Furthermore, if a researcher fails to submit the scheduled Report on the Research Achievements without any justifiable reason, then he/she may be ordered to suspend the spending of his/her other KAKENHI grant(s) for the same fiscal year.

#### 3. Completion of Research Ethics Education Coursework etc.

The PI should check with the administrative section of his/her institution about the rules concerning the research ethics education coursework etc.

# V. Instructions & Procedures for Administrative Staff of Research Institution

#### 1. Issues to Be Completed Beforehand by the "Research Institution"

#### (1) Requirements as a "Research Institution" and Procedures for Designation and Change

In order to apply for KAKENHI, a researcher needs to belong to a "Research Institution".

Concerning the "Research Institution" cited here, the following four types of "Research Institution" have been designated as eligible in Article 2 of the Rules for the Handling of Grants-in-Aid for Scientific Research (announced by the Ministry of Education, Culture, Sports, Science and Technology)

Science and Technology).

- 1) Universities and inter-university research institutions
- 2) MEXT facilities and other institutions engaged in scientific research
- 3) Technical colleges
- 4) Institutions designated by the MEXT (see Note as below)

#### (Note)

In order to become research institution, institutions not falling under 1) to 3) first need to receive the designation by the MEXT. Therefore, institutions should consult with the Scientific Research Aid Division of the Research Promotion Bureau of the MEXT.

Moreover, if changes in one of the following items have been scheduled, institutions that have received the designation by the MEXT and already have been recognized as research institution should promptly report the content of these changes to the Scientific Research Aid Division of the Research Promotion Bureau of the MEXT.

- A) Abolition or dissolution of the research institution
- B) Name and address of the research institution, and name of the representative
- C) Matters concerning laws, regulations, endowment acts and other rules that prescribe the purpose of establishment, the business content, and the internal organization of the research institution

Moreover, researchers who belong to such institutions should consider that, in order to conduct research activities using KAKENHI, the research institution should meet the requirements mentioned below.

#### Requirements

- The research institution must authorize the research project for which KAKENHI is granted, as its proper activity.
- The research institution must take responsibility for management and accounting of the KAKENHI delivered to its researcher staffs.

#### (2) Ascertainment of the Eligibility to Apply of the Affiliated Researcher

Researchers who try to apply for KAKENHI should meet the requirements ① and ② below. Also, Researchers applying for a "Grant-in-Aid Research Activity Start-up" must at the time of application be eligible to apply for a KAKENHI grant, and must also satisfy one of the two conditions stipulated on the following page. Therefore, they should sufficiently verify these requirements with the research institution.

JSPS Research Fellow (SPD, PD, RPD) cannot apply for a Grant-in-Aid for Research Activity Start-up. Also, JSPS Research Fellow (DC), and JSPS International Research Fellow cannot apply for a Grant-in-Aid. Nor may graduate or other students apply for one. (See the note below for exceptions.) Research institutions should bear in mind that graduate or other students are also not eligible to apply, even if they hold a position and conduct research activities in the institution.

(Note)

The term "student" as defined here does not include such an individual who has a position to conduct research in his/her research institution, as the main job (e.g., university teaching staff, researcher belonging to company etc.), and holds a student status at the same time.

Researchers who try to apply for KAKENHI should meet following Eligibility to Apply.

①At the time of the proposal submission, a researcher needs to have been approved by his/her research institution as an eligible researcher who meets the Requirements 1), 2) and 3) stated below, and have his/her Researcher Information properly registered in the e-Rad system as eligible for KAKENHI application.

#### Requirements

- 1) The applicant must be an individual belonging to a research institution with job assignment including research activity within the said institution. (Whether the job is paid/unpaid, or full-time/part-time is irrelevant. It is not a prerequisite of eligibility that the research activity constitutes the main part of his/her job.)
- 2) The applicant must be actually engaged in research activity in his/her research institution. (Those who are only engaged in research assisting jobs are ineligible.)
- 3) The applicant must not be a graduate student or any other categories of student. (An individual who has a position in a research institution with research activity as his/her main job (e.g., university teaching staff, researcher belonging to a company, etc.), and holds a student status at the same time.)
- (2) The individual must not be categorized as ineligible for grant acquisition in FY2018, as a penalty for his/her improper grant spending, fraudulant grant acquisition, or research misconduct.

A researcher who is employed by a KAKENHI grant (hereafter called "KAKENHI employee"), is generally bound by their employment contract to concentrate on the research work relevant to the KAKENHI project for which he/she is employed(hereafter called "employment-related work") specified in his/her employment contracts. Therefore, such a KAKENHI employee cannot apply for his/her own KAKENHI project which is to be conducted within the working hours of his/her employment.

In view of the working hours he/she should spend on the employment-related work, he/she is not allowed to apply for his/her own KAKENHI project.

However, provided that he/she can clearly demarcate his/her own research hours from the working hours of employment and intends to conduct his/her own research project during the former hours on their own initiative, the KAKENHI employee can submit his/her own KAKENHI proposal, on the condition that the following points are verified by his/her research institution.

· The KAKENHI employee is granted on his/her employment contract, to conduct research on

his/her own initiative, besides the employment-related work.

- The employment-related work and the work devoted to the research on his/her own initiative are clearly demarcated in regard to the working hours and the effort.
- The KAKENHI employee is able to secure enough research hours (besides the working hours for his/her employment-related work) to be allotted to his/her own KAKENHI project.

#### Requirements:

- A) Researchers who were not eligible under the Grants-in-Aid application calls issued by MEXT and JSPS during the period from September 1 to November 8, 2017 but who obtained eligibility after November 8.
- B) Researchers who were not eligible under the above Grants-in-Aid application calls for reasons of maternity and/or childcare leave in FY2017.

\*Please refer to page 19-20 for examples of applicants with eligibility.

# (3) Submission of the Form U-21 "Background Description Regarding the Eligibility for Grant-in-Aid for Research Activity Start-up FY2018"

If a research institution has researchers who satisfy Condition B), before submitting (transmitting) their Grant-in-Aid proposals to JSPS, must first prepare a Form U-21 "Background Description Regarding the Eligibility for Grant-in-Aid for Research Activity Start-up FY2018" and submit it to JSPS's Research Aid Division I by May 2, 2018. The deadline for receipt of the form is 5 p.m.

In addition, if a research institution has researchers who satisfy Condition A) but were erroneously registered in e-Rad as "Eligible to Apply for Grants-in-Aid for Scientific Research" for reasons beyond their control (example: research institution failed to update their information in e-Rad) on November 8, 2017 (FY2018 application deadline for Grants-in-Aid), the research institution must prepare a Form U-21 and submit it to JSPS before submitting (transmitting) the Grant-in-Aid proposals to JSPS.

Research institutions do not need to compile all the applying researchers on one form, and may submit the forms at any time before the deadline. However, the form will not be accepted after the deadline for any reason, so research institutions should ensure that their researchers know the deadline and the application requirements well in advance.

- Note 1 If a person does not satisfy one of the eligibility conditions, the mere submission of a Form U-21 will not qualify him/her for Research Activity Start-up support.
- Note 2 When the research institution submits Form U-21 "Background Description Regarding Grant-in-Aid for Research Activity Start-up FY2018", Principal Investigators will be able to access the Electronic Application System. (which differ according to the date that form arrives at JSPS) For details, see "The Accessible Date to the Electronic Application

System" referring to supplement.

# (4) Registration or Update of Researcher Information in e-Rad and Provision of ID and Password

In addition to the Principal Investigator who tries to apply <u>should be limited to whom the</u> researcher information has been registered in e-Rad as "Eligible to Apply for KAKENHI" when research institution submits (sends) the Research Proposal Document to JSPS.

Regarding the registration (update) of the researcher information necessary when applying, the administrative staff in the research institution to which the researcher belongs should perform the procedures using e-Rad. (if there is any item, such as the institution, the position, or others, that needs to be corrected, even though he or she has already been included in the researcher list of the research institution, the applicant needs to register the correct information on the researcher list.)

For specifics on the method of registration, the research institution should verify the "Manual for Research Institutions to which the Researchers belong (for Research Institution Office Representatives and for Research Institution Office Workers)".

To apply for a KAKENHI grant, researchers must complete the necessary procedures by accessing the e-Rad system. Accordingly, when a researcher scheduled to apply for a grant does not have an e-Rad ID and password, the research institution should provide them to him/her in accordance with the following procedure. (They are issued by registering the researcher's information in e-Rad.)

Moreover, concerning the registration of the researcher information in e-Rad, there is no registration period (deadline). Therefore, registration is possible at any time.

The first date that a researcher can access the electronic application system is based on the date that s/he obtains an e-Rad ID and password. For details, see "The Accessible Date to the Electronic Application System" regarding the FY2018 Grant-in-Aid for Research Activity Start-up and refer to supplement.

However, since Research Proposal Document will not be accepted after the deadline for submission of Research Proposal Document, applicants should complete the registration (update) of the researcher information early, in order to have sufficient time to submit them.

In order not to negatively affect the compilation of the applications within the research institution, when completing the applications, the research institution should perform the various procedures (including the procedures within the research institution), positioning this specific procedure as one of the important procedures to be performed by the research institution. Registered in the e-Rad system need updating, they should be duly completed.

Notes:

- \*1: When providing the login ID and password, research institutions must make it known to researchers that they must strictly protect the login ID and password in order to prevent them from being disclosed to others.
- \*2: Once the ID and the password for the researcher have been provided they can be used, even if the research institution changes.
- \*3: Please be sure to obtain and use the latest version of the Operation Manual.

### <u>Procedures for research institutions when a researcher scheduled to apply for a grant do not have</u> an ID or password

In order to provide the researcher with an ID and a Password, the research institution needs to have an ID and a Password for use of the research institution. If the research institution has not yet obtained them, it should first of all download a registration form from the e-Rad Portal site, conduct a registration application in writing.

It takes approximately two weeks for the "ID and Password for use of the research institution" to arrive after registration application the "Application for Use of the Electronic Application System".

Notes:

- \*1: Please refer to "Advance Preparation when Using the System" (<u>http://www.e-rad.go.jp/shozoku/system/index.html</u>) on the e-Rad website for information on
  - downloading the ID and password for e-Rad.
- \*2: Research institutions that already obtained an ID and a password for e-Rad issued do not need to obtain it again.
- \*3: It is not necessary to obtain an ID and a password for e-Rad for each research category of the KAKENHI.

### (5) Submission of a "Self-Assessment Checklist on the Improvement of the System" based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)"

Because research institutions submitting KAKENHI applications must comply with the content of the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)" (Revised on February 18, 2014) (hereinafter called "Guidelines"), they must set up a system of the management and audit for implementing the public research funds and report the state of implementation and other matters.

Therefore, "those research institutions which Principal Investigators applying for Grant-in-Aid for Research Activity Start-up FY2018 belong to" and "those research institutions which Principal Investigators of the continued research projects using Grant-in-Aid for Research Activity Start-up are scheduled to belong to in FY2018" must <u>submit a "Self-Assessment Checklist on the Improvement of the System and Other Matters" based on the Guidelines to the Office of Research Funding Administration of the Promotion Policy Division of the Research Promotion Bureau of</u>

the MEXT by **April 18, 2018 (Wed)**, using e-Rad. **Please be advised that, in case the report is not submitted, applications of researchers who belong to the research institution in question in the electronic system will not be considered.** (Even if the "Self-Assessment Checklist on the Improvement of the System and Other Matters" based on the "Guidelines on public research expenses" or the "Checklist pertaining to the Current Status" based on "Guidelines for Responding to Misconduct in Research" has been submitted, it takes approximately one week for researchers belonging to these research institutions before they are able to apply for KAKENHI.) If the checklist has already been submitted in April 2017 or later through e-Rad when applying for competitive funding or other kinds of funding that is allotted by the MEXT or by independent administrative legal entities under the control of the MEXT, it is not necessary to submit it again. <u>Regarding research institutions that did not submit a "Checklist pertaining to the Current Status"</u> <u>during FY2017, if they submit one on or after April 1, 2018, they should submit a "Checklist</u>

pertaining to the Current Status" for FY2018.

With regard to the checklist submission method, checklist forms and other matters using e-Rad, the research institution should verify the text "Concerning the Form Files 'Self-Assessment Checklist on the Improvement of the System and Other Matters' based on the 'Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)" on the webpage of the MEXT.

(http://www.mext.go.jp/a menu/kansa/houkoku/1324571.htm)

Note: When using e-Rad, ID and Password for the research institution are necessary

< Inquiries >

(Concerning forms of the guidelines and submission)

Office of Research Funding Administration, Promotion Policy Division, Research Promotion Bureau, the MEXT

e-mail: kenkyuhi@mext.go.jp

URL: http://www.mext.go.jp/a\_menu/kansa/houkoku/1324571.htm

(Concerning the research institute e-Rad registration)

Helpdesk of the Cross-ministerial Research and Development management system of the MEXT

Telephone: 0570-066-877 (Navi Dial)

(Office hours: 9:00-18:00, except on Saturdays, Sundays, National Holidays and the New

Year Holidays (from December 29 until January 3))

URL: http://www.e-rad.go.jp/shozoku/system/index.html

(Time period when e-Rad is available for use)

(Monday to Sunday) 0:00 - 24:00 (in operation 24 hours a day, 365 days a year)

However, even during the above-mentioned time period, it may happen that the operation of e-Rad is disrupted or suspended, when maintenance and inspection is being carried out. If the operation is scheduled to be disrupted or suspended, this will be announced beforehand on the Portal Site.

## (6) Submission of the "Checklist pertaining to the Current Status" based on "Guidelines for Responding to Research Misconduct"

Based on the "Guidelines for Responding to Research Misconduct" (Adopted by the MEXT on 26 August 2014) (hereinafter referred to as Guidelines on Research Misconduct), Research institutes applying for KAKENHI need to establish related provisions.

Furthermore, when applying for KAKENHI, from FY 2017 there is a need to submit a "Checklist pertaining to the Current Status" based on "Guidelines for Responding to Research Misconduct" (hereinafter referred to as Checklist pertaining to the Current Status)

Therefore the "research institute to which the Principal Investigator of Grant-in-Aid for Research Activity Start-up FY2018 belong" or the "research institution to which the Principal Investigator of a research project that will continue to receive Grant-in-Aid for Research Activity Start-up in FY 2018 will belong" <u>need to submit the "Checklist pertaining to the Current Status" to the MEXT Science and Technology Policy Bureau, Knowledge Infrastructure Policy Division, Office for Promotion of Correct Research by April 18, 2018 (Wed) using e-Rad.</u>

Please note that if no submission is made, the applications made by researchers belonging to said research institute cannot be admitted. Even if both the "Checklist pertaining to the Current Status" based on the "Guidelines on Research Misconduct" and the "Self-Assessment Checklist on the Improvement of the System and Other Matters" based on the "Guidelines on public research expenses" are both submitted, it takes about 1 week from submission until researchers can apply for KAKENHI.

Note: Please note that while the "Checklist pertaining to the Current Status" is similar to the "Self-Assessment Checklist on the Improvement of the System and Other Matters" based on the "Guidelines on public research expenses" in that it uses e-Rad for the submission, the submission destination is different so both checklists must be submitted.

Furthermore, there is no need to resubmit the checklists, if the checklists have been already submitted via e-Rad after the administrative notification from the MEXT on February 10 2017, when applying to competitive funds of the MEXT or independent administrative institutions managed by the MEXT.

For information regarding the method of checklist application using e-Rad or information regarding the format, please check the MEXT homepage: "(administrative notification) Regarding the submission of the "Checklist pertaining to the Current Status" based on "Guidelines for Responding to Research Misconduct" (Request) February 10, 2017". URL:http://www.mext.go.jp/a\_menu/jinzai/fusei/index.htm

Note: When using e-Rad, you need an ID and a Password for use of the research institution

< Inquiries >

(Concerning the format and submission of Guidelines on Fraudulent Acts)

\* Differs from the contact information for public research expenses.
Office for Promotion of Correct Research, Knowledge Infrastructure Policy Division, Science and Technology Policy Bureau, the MEXT
e-mail: kiban@mext.go.jp
URL : <u>http://www.mext.go.jp/a\_menu/jinzai/fusei/index.htm</u>

The Helpdesk of the Cross-ministerial Research and Development management system of the MEXT

Telephone: 0570-066-877 (Navi Dial)

(Office hours: 9:00-18:00, except on Saturdays, Sundays, National Holidays and the New Year Holidays (from December 29 until January 3))

URL: http://www.e-rad.go.jp/shozoku/system/index.html

(Concerning the research institute e-Rad registration)

(Time period when e-Rad is available for use)

(Monday to Sunday) 0:00 - 24:00 (in operation 24 hours a day, 365 days a year)

However, even during the above-mentioned time period, the operation of e-Rad may be disrupted or suspended, when maintenance and inspection is being carried out. If the operation is scheduled to be disrupted or suspended, this will be announced beforehand on the Portal Site.

# (7) Implementation of a Research Ethics Education Course based on the "Guidelines on Research Misconduct"

Principal Investigators and Co-Investigators taking part in a new research project have to read and complete the teaching materials concerning the Ethics Education and Research Training Session (For the Sound Development of Science-The Attitude of a Conscientious Scientist- "For the Sound Development of Science" Editorial Committee, E-Learning Course on Research Ethics [eL CoRE], APRIN e-leaning program (CITI Japan), etc.) or participating in the Ethics Education in Research Training Session based on the "Guidelines for Responding to Research Misconduct before the formal application for grant delivery.

To that end, each research institution has to implement an Ethics Education in Research Training Session based on the "Guidelines for Responding to Research Misconduct"

#### (8) On the Submission of the Report on the Research Achievements

The research institution to which researchers belong has to collect and submit the report on the research achievements. If the research institution has failed, without good reason, to submit the report on the research achievements at the end of the research period, it may happen that it is treated as indicated below. Therefore, it is the responsibility of the representative of the research institution to ensure that the report on the research achievements is submitted without fail.

• No KAKENHI will be delivered to researchers who do not submit the report on the research achievements at the end of the research period, without good reason. Moreover, it may happen that the official grant decision to the researcher is cancelled, that an order to return the grant is issued, or that the information such as the name of the research institute said researcher

belongs to is disclosed in public.

Furthermore, if researchers have failed to submit the scheduled report on the research achievements without justified reason, then execution of other KAKENHI implemented in the same fiscal year will be suspended.

#### (9) Obtaining Sufficient Knowledge about the Contents of the Application Procedures

The research institution should beforehand disseminate the contents of the Application Procedures to all the researchers on the campus. JSPS would especially like to request the dispersion of information on the items listed in the Application Procedures and the submission deadlines of Research Proposal Document, in order to avoid potential misunderstandings.

Moreover, the Application Procedures are available on the section Grants-in-Aid for Scientific Research of the JSPS website.

URL: https://www.jsps.go.jp/j-grantsinaid/index.html

## 2. Issues that Need to Be Verified When Compiling the Application Forms (Preparing the Research Proposal Document)

The contents of the Research Proposal Document should be verified in each research institution, and all the Research Proposal Document should be submitted to JSPS together. When doing so, special attention should be paid to the following points.

#### (1) Ascertainment of the Eligibility for KAKENHI Application

It should be verified whether the Principal Investigator are researchers who meet the requirements that are stipulated in the Application Procedures (see page 17-21), and also whether the researcher information is registered in e-Rad as "Eligible to Apply for KAKENHI".

Moreover, it should be verified certainly that whether the researchers have not been excluded from receiving KAKENHI, due to an improper grant spending of KAKENHI.

#### (2) Confirmation of the Researcher Information Registered in the e-Rad System

Regarding the registration (update) of the researcher information necessary when applying, the administrative staff in the research institution to which the researcher belongs should perform the procedures using e-Rad.

Moreover, if there is any item such as the institution, the position, or others that needs to be corrected, the applicant needs to correct information on the researcher list even though applicant has already been included in the researcher list of the research institution.

#### (3) Verification of Principal Investigator

The research institution should verify whether the Principal Investigator who have been listed in the Research Proposal Document prepared the Research Proposal Document, after verifying the column "II. Call for Proposals" in this Application Procedures for Grants-in-Aid for Scientific Research.

#### (4) Verification of the Application Forms

It should be verified whether the application format is in conformity with the prescribed format. Moreover, the format and other matters of the application forms for each research category are as follows.

		Research Proposal Documen	t			
Research category Application Section	Items to be entered in the Website (First part)	Forms to be uploaded as an attached file (File ID) * When selecting "Items to be entered in the Website" to enter "Research Achievements of the Principal Investigator (PI)" (※ ※)	Items to be entered in the Website (Second part)			
Grants-in-Aid for Research Activity Start-up	To be entered in the electronic application system	S-22 (1) S-22 (2) S-22 (3) S-22 (1)	To be entered in the electronic application system (Title of research project, Fundamental data on the			
	(Research project Information)	Research Achievements are entered under "Items to be entered in the Website" (※※) S-22 (3)	research project such as total budget, Data on the project members, etc.)			

\*\* With "Research Achievements of the Principal Investigator (PI)," the method of entry may either be by direct entry of items in the Website or by the entry of attached files. When items are directly entered in the Website, achievements registered in your researchmap may be extracted, edited and entered in the column. For details, please see the "Procedures for Grants-in-Aid for Scientific Research - KAKENHI - for FY2018 (Research Activity Start-up) (Forms/Procedures for Preparing and Entering a Research Proposal Document).

# 3. Submission and Other Matters of the Research Proposal Document (Preparing the Research Proposal Document)

- (1) The research institution should access the "Electronic Application System", using the ID and the password for e-Rad, obtain the information of the Research Proposal Document (PDF files) that the Principal Investigators prepared, and verify their contents and other matters.
- (2) The research institution should perform the "approval" process on all the Research Proposal Document (PDF files) that has no mistakes in their contents. (Completed to submit the Research Proposal Document (PDF files) to JSPS.) Moreover, it is not possible to make corrections or other modifications to the Research Proposal Document (PDF file) for which the research institution has already performed the "approval" process

The deadline for the submission of the Research Proposal Document is:

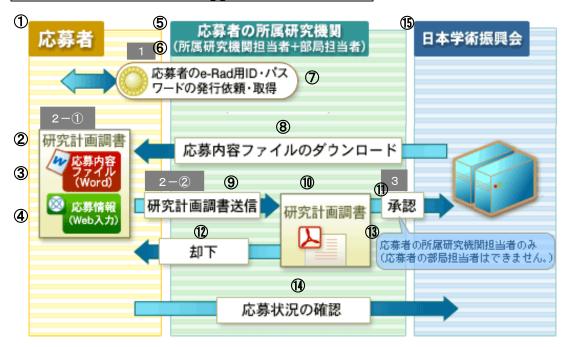
May 9, 2018 (Wednesday), 4:30 pm (This deadline should be strictly observed.)

- Note 1: Research Proposal Document that is submitted after this deadline will not be accepted for any reason. Therefore, the documents should be submitted well in advance.
- Note 2: After the submission of the application documents, it is not possible to make corrections or to re-submit them.
- (3) The ID and the password which are used in the e-Rad are designed to verify the individual. Therefore, the handling and administration of them should be done carefully when carrying out the application procedures.

Moreover, an outline of the procedures for electronic application can be found below. However, for details on the operating environment, procedure, etc. of the "Electronic Application System", please refer to the "Operation Manual" as shown below.

URL: http://www-shinsei.jsps.go.jp/kaken/topkakenhi/shinsei\_ka.html

### Outline of the Electronic Application Procedures



- 1 Applicant
- 2 Research Proposal Document
- ③ Forms to be uploaded as an attached file
- ④ Items to be entered in the website
- (5) The research institution to which the applicant belongs
- (6) Administrative staff in the research institution + Administrative staff in the department
- $\overline{O}$  Request for issue and acquisition of the applicant's ID and password for e-Rad
- (8) Downloading of the forms to be uploaded as an attached file
- (9) Sending the Research Proposal Document
- 1 Research Proposal Document
- 1 Approval
- 12 Rejection
- (3) Only the administrative staff in the research institution to which the applicant belongs (The administrative staff in the department of the applicant cannot make an approval.)
- (1) Confirmation of the state of the application
- (15) JSPS

# [The administrative staff in the research institution to which the applicant (Principal Investigator) belongs]

1 The administrative staff in the research institution to which the applicant belongs issues the ID and the password to the applicant.

#### [The applicant (Principal Investigator)]

2 - (1) The applicant accesses the "Electronic Application System", using the ID and the password he or she received, and prepares the Research Proposal Document (PDF file), by entering the items to be entered in the website and by uploading the forms to be uploaded as an attached

- 2 (2) If there are no mistakes in the Research Proposal Document (PDF file) the applicant prepared, he or she should submit the Research Proposal Document (PDF file) to the administrative staff in the research institution to which he or she belongs, by performing the "completed and submission" process.

# [The administrative staff in the research institution to which the applicant (Principal Investigator) belongs]

3 By approving the Research Proposal Document (PDF file) the administrative staff in the research institution to which the applicant belongs submits (sends) it to JSPS.

Moreover, if the Research Proposal Document (PDF file) that the applicant submitted is not approved due to mistakes or other reasons, it will be rejected and the applicant will be requested to make corrections.

# VI. Other Relevant Issues

## 1. Concerning Support through Grant-in-Aid for Scientific Research on Innovative Areas - Platforms for Advanced Technologies and Research Resources

In order to respond effectively to the diverse needs of researchers of KAKENHI research projects, the Grant-in-Aid for Scientific Research on Innovative Areas—Platforms for Advanced Technologies and Research Resources forms a resource and technical support platform for research (hereinafter referred to as Platform) under the close cooperation of relevant institutes with inter-university research institutes and Joint Usage / Research Centers as core institutes. Together with providing technical support towards individual research projects and providing advanced problem solving methods to researchers, it provides an integral promotion of cooperation between researchers, interdisciplinary integration, and human resources development.

Applications for technical support etc. are open for each of the platforms below where it concerns research projects carried out through KAKENHI. Researchers desiring technical support etc. from each of the platforms are requested to check their respective websites etc. and actively apply.

\* "Technical Support etc." points to the sharing of equipment with researchers from a wide range of research fields, technical support and the collecting, conservation, and providing of resources (documents, data, experiment samples, specimen, etc.), and support for conservation techniques etc.

"Advanced Technology Support Platform Program" has scientific value and an advanced nature through the combination of multiple facilities and equipment, and provides shared use of equipment and technical support to researchers in a wide variety of research areas.

"Research Platform Resource Support Program" Collects, conserves, and supplies the resources that are the basis of research (documents, data, experiment samples, specimen, etc.) and also conducts support for conservation techniques etc.

Area	Platform Name	Core Institution	Support Function
orm Program	Platform of Advanced Bioimaging Support (*)	National Institute for Physiological Sciences National Institute for Basic Biology	<ul> <li>Advanced technical support and user training for :</li> <li>Light microscopy</li> <li>Electron microscopy</li> <li>Magnetic resonance imaging</li> <li>Imaging analysis</li> </ul>
Support Platfo	Platform of Advanced Animal Model Support(*)	The Institute of Medical Science The University of Tokyo	Support for constructing animal models, Support for pathological analysis, Support for physiological analysis, and Support for molecular profiling
Advanced Technology Support Platform Program	Platform for Advanced Genome Science (*)	National Institute of Genetics	Advanced genome analysis (de novo genome sequencing; re-sequencing for genome variation detection; analysis of transcriptome, epigenome and metagenome; ultra-high sensitivity analysis for single cells, single molecules, etc.; big-data analysis and advanced bioinformatics; by using of the latest facilities and technologies)

Area	Platform Name	Core Institution	Support Function					
n	Platform for Integration and	National Museum	Digital Picture Library for Area					
rar	Sophistication of Image	of Ethnology	Studies					
m go	Information on Area Studies							
Platform port Program	Supply Platform of Short-lived	Research Center	Supply short-lived radioisotopes					
ort ort	Radioisotopes for Fundamental	for Nuclear	produced by accelerators for					
цц	Research	Physics, Osaka	fundamental research in various					
		University	scientific fields.					
Research ource Sup	Platform of Supporting Cohort	The Institute of	Support for cohort study using					
Re	Study and Biospecimen	Medical Science	bioresources, Support for maintaining					
Resea	Analysis (*)	The University of	and utilizing human brain resources,					
R		Tokyo	and Support using biospecimen					

Also, Committee on Promoting Collaboration in Life Sciences that functions as a general information point and coordinator across the 4 platforms marked with an (\*) above is set up. (Core Institution: The Institute of Medical Science, The University of Tokyo)

Each platform's website can be found in the link collection below: URL : <u>http://www.mext.go.jp/a\_menu/shinkou/hojyo/1367903.htm</u>

#### 2. Concerning the Promotion of the Shared Use of Research Equipment

In "Reform of Competitive Research Funds: Towards a Sustained Output of Research Achievements (Interim Summary)" (June 24, 2015, Competitive Research Fund Reform Review meeting) it was decided that, when the original research objectives were fully achieved, versatile and large equipment should, in principle, be shared.

Furthermore, in "On the Management of Research Organizations and the Introduction of a New, Unified System for the Shared Use of Research Equipment" (November, 2015, Science and Technology Council Advanced Research Foundation Subcommittee), the establishment and operation of a "research equipment sharing system on the research organization level" (hereinafter referred to as equipment sharing system) is demanded of universities and national research and development agencies etc.

With this in mind, when purchasing equipment with competitive research funds, please actively work on the use of equipment purchased with other research funds, and the purchase and shared use of equipment from several research funds where it concerns especially large and versatile equipment. Please also make ensure that sharing is possible within the rules of the said competitive research funds, and no obstacle is made to the execution of the research project.

○"On the Management of Research Organizations and the Introduction of a New, Unified System for the Shared Use of Research Equipment"

(November 25, 2015 Science and Technology Council Advanced Research Foundation Subcommittee)

URL: http://www.mext.go.jp/b menu/shingi/gijyutu/gijyutu17/houkoku/1366220.htm

O"A Reform of Competitive Research Funds: Towards a Sustained Output of Research Achievements (Interim Summary)"

(June 24, 2015 Competitive Research Fund Reform Review meeting)

URL: http://www.mext.go.jp/b menu/shingi/chousa/shinkou/039/gaiyou/1359306.htm

On the unification of usage rules for competitive funds

(March 31, 2015 agreement of the related ministries liaison conference on competitive funds) URL: http://www8.cao.go.jp/cstp/compefund/shishin3\_siyouruuru.pdf

# **3.** On the Promotion of the 'Dialogue on Science and Technology with Citizens' (A Basic Approach Policy)

In "On the Promotion of the 'Dialogue on Science and Technology with Citizens' (A Basic Course of Action)" (June 19, 2010, the Minister of State for Science and Technology Policy and the Experts of the Council for Science and Technology Policy) which has been compiled in June 2010, the activity in which researchers explain the content and achievements of their research activities to society and citizens in an easy-to-understand form is placed in the above-mentioned 'Dialogue on Science and Technology with Citizens'. Researchers and other researchers who have received an allotment of public research funds amounting more than 30 million yen per year per case are requested to positively work on the 'Dialogue on Science and Technology with Citizens'. Universities and other research institutions are also requested to make positive efforts in order to ensure the proper implementation of the Dialogue on Science and Technology between Citizens, on the one hand, and researchers and other researchers who have received public research funds, on the other hand, for example, by setting up support systems.

For KAKENHI, there is the question "Are you positively trying to publicize and disseminate the research content and research achievements?", especially in the research progress assessment of Specially Promoted Research, for which researchers receive a relatively high amount of research funds, and the interim assessment of Scientific Research on Innovative Areas (Research in a proposed research area). Therefore, based on the above-mentioned Basic Approach Policy, researchers should disseminate the achievements of research funded with KAKENHI to society and citizens in an even more positive way.

#### 4. Cooperation with the National Bioscience Database Center

The National Bioscience Database Center (<u>http://biosciencedbc.jp/</u>) has been established in the Japan Science and Technology Agency (JST, a National Research and Development Agency), in order to promote the integrated use of databases in the area of life science that have been created by various research institutions and other institutions.

This Center spurs the active participation of related institutions, and based on four pillars, namely (1) the planning of strategies, (2) creation and operation of portal websites, (3) research on and development of core technology for the integration of databases and (4) the promotion of the integration of biotechnology-related databases, it is promoting projects aiming at the integration of databases in the area of life science. In this way, through wide sharing and utilization in the researchers community of the research achievements in the area of life science produced in Japan, the Center aims at invigorating overall research in the area of life science, including research and development connected to basic research and industrial applied research.

JSPS would like to request researchers to cooperate by providing to the Center copies of raw data related to achievements published in research papers and other output in the area of life science, or copies of created open databases.

Moreover, the copies provided will be able to be utilized on a non-exclusive basis as reproductions, alterations, or in other necessary forms. Furthermore, JSPS would like researchers to understand in advance that, in response to requests of the institutions that received copies, it would also like request researchers to cooperate by providing all the information necessary for utilizing the copies.

Furthermore, the National Bioscience Database Center has developed guidelines for data on humans, in order to promote the sharing and use of data related to research in the area of life science, with due considerations to the protection of personal information.

NBDC human data sharing guidelines

URL: http://humandbs.biosciencedbc.jp/guidelines/

< Inquiries >

Japan Science and Technology Agency, National Bioscience Database Center Telephone: 03-5214-8491

#### 5. On the Inter-University Bio-Backup Project

The purpose of the Inter-University Bio-Backup Project is to "back up" biological genetic resources, which are indispensable research resources in various research areas, and to avoid damage or loss of biological genetic resources due to unforeseen accidents, disasters, etc. The project newly commenced from 2012.

In the National Institute for Basic Biology of the Inter-University Research Institute Corporation National Institutes of Natural Sciences, which is the core of this project, the IBBP Center (Inter-University Bio-Backup Project for Basic Biology) (<u>http://www.nibb.ac.jp/ibbp/</u>) has been established as a backup center for biological genetic resources. It is equipped with the newest equipment necessary for the backup of biological genetic resources.

Any researcher who belongs to a university or a research institution may apply for storage. Biological genetic resources that can be stored in IBBP are samples that can be proliferated (amplified) or cryopreserved (for vegetable seeds, the refrigeration or deep-freezing preservation condition needs to be definite), and being not pathogenic is also a condition. Since backup is provided free of charge, researchers should make use of IBBP.

Any researcher who belongs to a university or a research institution may apply for storage. Biological genetic resources that can be stored in IBBP are samples that can be proliferated (amplified) or cryopreserved (for vegetable seeds, the refrigeration or deep-freezing preservation condition needs to be definite), and being not pathogenic is also a condition. Since backup is provided free of charge, researchers should make use of IBBP.

< Inquiries >

Inter-University Research Institute Corporation National Institutes of Natural Sciences, IBBP Center, Executive Office

Telephone: 0564-59-5930, 5931

#### 6. National BioResource Project

NBRP (National BioResource Project) strategically collects and preserves important bioresources that are the basic and foundation of life science research at the core bases of this project and provides them to universities and research institutes, thereby contributing to the development of life science research in Japan. In the future, in order to contribute to the development of life science research in Japan, it is necessary to continually collect useful bioresources.

For that matter, please deposit (\*) available bioresources among bioresources developed by Grant-in-Aid for Scientific Research (limited to the bioresource targeted for NBRP). Please cooperate with the NBRP collecting activities.

(\*) Deposit: This is a procedure to approve the use (preservation / provision) in this project without transferring the various rights related to the resource. By specifying specific provision conditions in the deposit agreement, you can add usage conditions such as restrictions on usage and quotation of articles to users.

List of NBRP core bases representative agencies

URL: http://www.nbrp.jp/center/center.jsp

< Inquiries >

Bio-Bank Division, Japan Medical Research and Development Organization Basic Research Division Telephone: 03-6870-2228

#### 7. Registration of the Researcher Information in researchmap

"Researchmap" (formerly "Read&Research map" <u>http://researchmap.jp/</u>) is, as a general guide to Japanese researchers, Japan's largest researcher information database. Registered information on research results can be openly disseminated over the Internet. As research map is linked to e-Rad and many university faculty databases, it allows registered information to be accessed by other systems. Furthermore, the Japanese Government has planned to utilize further the research map, please register researcher information in research map.

< Inquiries >

National Institute of Advanced Industrial Science and Technology

Knowledge base information department service support center (in charge of Researchmap)

Web inquiry form: <u>https://researchmap.jp/public/inquiry/</u> Telephone: 03-5214-8490

(Open hours: 9:30 - 12:00, 13:00 - 17:00)

#### 8. Security Export Control Policy

In Japan, export controls (\*) are carried out under the Foreign Exchange and Foreign Trade Act (Act No. 228 of 1949) (hereinafter referred to as "Foreign Exchange Law"). Therefore, in principle, in order to export (provide) cargo and technology regulated by the Foreign Exchange Law, it is necessary to obtain permission of the Minister of Economy, Trade and Industry.

(\*) Japan's Security Export Control System established on the basis of international agreements mainly consists of ① "List rules" which require permission of the Minister of Economy, Trade and Industry in principle when exporting cargo or providing technology that carry specifications and/or functions higher than certain levels, such as carbon fiber and numerically controlled machine tool etc., and ② "Catch-all regulation" which requires permission of the Minister of Economy, Trade and Industry when exporting cargo or providing technology that are not subject to regulation under the List rules but do fall under certain regulatory requirements (application requirements, consumer requirements and/or informed requirements).

Not only export of cargo but also provision of technology will be subject to the regulation by the Foreign Exchange Law. When providing a "List rules" technology to nonresidents or providing it in a foreign country, prior permission for provision is required. "Provision of technology" includes not only providing technical information such as design drawings, specifications, manuals, samples, and prototypes via storage media such as paper, mail, CD, USB memory, but also providing work knowledge and technical assistance at seminars through technical instruction, skill training etc. Researchers should be aware that there may be case in which technologies subject to regulation by the Foreign Exchange Law are involved when mentoring foreign students and/or joint research activities with oversea groups.

For this reason, research institutions are asked to take systematic measures to ensure that in implementation their various research activities, including research projects funded with KAKENHI, WMD technologies are not transferred to WMD developers, terrorist organizations, or people carrying out other dubious activities by way of their participation in research that can be converted to military purposes.

Reference: Stature to strengthen the export control system in universities and public research institutions (proposed)

http://www.mext.go.jp/b\_menu/shingi/gijyutu/gijyutu8/toushin/06082811/015/001.htm

As for the details on "Security Export Control Policy", please see as below. Ministry of Economy, Trade and Industry: Security Trade Control (General) Division URL: <u>http://www.meti.go.jp/policy/anpo/</u>

< Inquiries >

Ministry of Economy, Trade and Industry, Trade and Economic Cooperation Bureau, Trade Management Department, Security Trade Control Division Telephone: 03-3501-2800 FAX: 03-3501-0996

# (Reference 1) Review Panels and Other Matters

## 1. Concerning KAKENHI Review Omitted

#### 2. Review Methods, and Other Matters

The review for KAKENHI is carried out by the Scientific Research Grant Committee of the Japan Society for the Promotion of Science (JSPS), and it is based on the Research Proposal Document. The review of "Grant-in-Aid for Research Activity Start-up" are performed by each Review Section. Reviewers of 4 will conduct document reviews in two-stage and panel reviews will not be conducted. ("Two-Stage Document Review")

The review takes place behind closed doors. The submitted Research Proposal Document is not returned to the applicants.

The details on "assessment rules" such as assessment criteria for each research category (Rules concerning the review and assessment for Grants-in-Aid for Scientific Research, called "review and assessment rules" below) can be checked on the JSPS website:

(URL : <u>http://www.jsps.go.jp/j-grantsinaid/index.html</u>).

#### 3. Notification of the Review Results

- 1) JSPS will issue a notification in writing to the research institution on whether the research project has been adopted or not, based on the results of the review. (Planned for the end of August)
- 2) To Principal Investigators whose proposal have not been adopted and who wish to request for disclosure on the first stage of the review, JSPS is planning to disclose the approximate ranking per the Review Section, the score (average score), and the "standard-format opinion" via the electronic application system.

(Reference 2)

**Procedures on the Handling of Grants-in-Aid for Scientific Research** (Omitted)

(Reference 3)

Procedures on the Handling of JSPS Grants-in-Aid for Scientific Research (KAKENHI (Series of Single-year Grants)) (Omitted)

# (Reference 4) State of Allocation of Grants-in-Aid for Scientific **Research for FY2017 and Other Matters**

1. State of Allocation of Grants-in-Aid for Scientific Research for FY2017

(1) New Projects

As of October 2017

	Numbe	r of	proposed pr	roje	ects			Amount all	ocat	ed per project	_
Research category	Applications		pplications approved	A	pproval rate		Amount allocated	Average		Maximum	_
ants-in-Aid for Scientific Research	[ 105,317 ] 105,312		# 27,413 ] 26,045	ſ	% 26.0 ] 24.7	(	64,667,602	(1,000 yen) [ 2,379 ] 2,483	ſ	(1,000 yen) 170,700 <b>141,500</b>	
Grants-in-Aid for Specially Promoted Research	[ 107 ] 111	ĺ	14 ] 13	ſ	13.1 ] 11.7		1,387,900	[ 98,871 ] 106,762	ĺ	170,700 <b>141,500</b>	
Grants-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area)	[ 6,143 ] <b>5,908</b>	ĺ	1,051 ] 996	٢	17.1 ] 16.9	(	6,482,521	[ 6,193 ] 6,509	ĺ	137,200 <b>129,100</b>	
Grants-in-Aid for Scientific Research (S)	[ 654 ] 645	ſ	95 ] 81	ſ	14.5 ] 12.6		3,343,200	41,274	ĺ	75,000 <b>89,600</b>	
Grants-in-Aid for Scientific Research (A)	[ 2,601 ] 2,567	ſ	634 ] 636	ſ	24.4 ] 24.8		7,157,300	( 11,513 ) 11,254	ĺ	30,700 <b>32,000</b>	
Grants-in-Aid for Scientific Research (B)	[ 11,369 ] 11,041	ſ	2,813 ] 2,729	٢	24.7 ] 24.7		13,757,100	( 5,134 ) 5,041	ĺ	12,700 <b>13,500</b>	
Grants-in-Aid for Scientific Research (C) (*1)	[ 38,049 ] 40,486	ĺ	11,392 ] 11,983	٢	29.9 ] <b>29.6</b>		15,608,300	[ 1,331 ] 1,303	[	3,500 <b>3,400</b>	
Grants-in-Aid for Challenging Exploratory Research(*1 *2)	[ 17,895 ] _	ſ	3,613 ]	ſ	20.2 ]	(	_	[ <u>1</u> ,348 ] 	[	2,900	
Grant-in-Aid for Challenging Research (Pioneering)(*3)	[ — ] 1,116	ĺ	— 〕 94	٢	- ] 8.4		643,900	6,850	ĺ	16,200	
Grant-in-Aid for Challenging Research (Exploratory)(*3)	[ — ] 14,491	ĺ	— 〕 1,586	ſ	— 〕 10.9		3,769,800	2,377	[		
Grants-in-Aid for Young Scientists (A)	[ 1,721 ] 1,837	[	423 ] 433	ſ	24.6 ] 23.6		3,277,700	[ 7,563 ] 7,570	[	18,400 <b>18,100</b>	
Grants-in-Aid for Young Scientists (B) (*1)	[ 18,996 ] 19,271	ĺ	5,716 〕 5,817	[	30.1 ] 30.2		7,913,600	[ 1,304 ] 1,360	ĺ	3,200 <b>3,200</b>	
Grants-in-Aid for Research Activity Start-up	[ 3,699 ] 3,774	ſ	925 ] 945	ſ	25.0 ] 25.0		976,300	1,033	[	1,500 <b>1,500</b>	
Grants-in-Aid for Encouragement of Scientists	( 4,083 ) 4,065	ĺ	737 ] 732	ſ	18.1 ] <b>18.0</b>	٢	350,284 〕 <b>349,981</b>	( 475 ] 478	[	900 <b>820</b>	
ints-in-Aid for Publication of Scientific earch Results	[ 946 ] 1,048	ſ	419 ] 386	(	44.3 ] 36.8	(	871,100 〕 781,900	[ 2,079 ] 2,026	[	17,600 <b>10,200</b>	
nts-in-Aid for JSPS Research Fellows	[ 2,694 ] 2,336	ſ	2,694 ] 2,336	(	- ] -		2,312,600	[ 902 ] 990	[	3,000 <b>3,000</b>	
Total	[ 108,957 ] 108,696	ſ	30,526 〕 28,767	(	28.0 ] 26.5		67,762,102	[ 2,245 ] 2,356	ſ	170,700 <b>141,500</b>	

Notes:

Notes: 1. The figures in [ ] indicate the previous fiscal year 2. The figures in [ ] indicate indirect costs (excluded from the total) 3. (\*1) As these grants are covered under the multi-year Fund, the columns "Amount allocated" and "Amount allocated per project" are calculated based on the projects "initial plans for FY 2017. 4. (\*2) No new proposals are called after FY2017 5. (\*3) New proposals are called from FY2017 6. "Grant-in-Aid for Scientific Research on Innovative Areas (Platforms for Advanced Technologies and Research Resources)", "Grant-in-Aid for Scientific Research (B Grant-in-Date Duranch [Jult])" (Control in Aid of Scientific Research (B) (Generative Research Field)", "Grant-in-Aid for Special Puroposes", "Fund for the Promotion of Joint International Research (Fostering Joint International Research, R Researcher Development Research)", "Grant-in-Aid for Specially Designated Research Promotion" are excluded.

#### (2) Newly approved and continued

#### As of October 2017

	Number of pro	posed projects		Amount allo	ocated per project
Research category	Applications	Applications approved	Amount allocated	Average	Maximum
ants-in-Aid for Scientific Research	# [ 154,160 ] <b>155,799</b>	[ 76,027 ] 76,295	(1,000 yen) [ 161,661,754 ] 163,174,895 [ 48,847,474 ]	(1,000 yen) [ 2,126 ] 2,139	(1,000 yen) [ 170,700 ] 172,000
Grants-in-Aid for Specially Promoted Research	[ 166 ] 166	[ 73 ] 68	[ 5,585,100 ] 5,558,200 [ 1,667,460 ]	[ 76,508 ] 81,738	[ 170,700 172,000
Grants-in-Aid for Scientific Research on Innovative Areas (Research in a proposed research area)	[ 7,746 ] 7,555	[ 2,654 ] 2,643	[ 21,624,350 ] 21,799,821 [ 6,539,946 ]	[ 8,148 ] 8,248	[ 137,200 129,100
Grants-in-Aid for Scientific Research(S)	[ 990 ] 990	[ 431 ] 425	[ 12,407,500 ] 12,050,100 [ 3,615,030 ]	[ 28,788 ] 28,353	[ 75,000 94,600
Grants-in-Aid for Scientific Research(A)	[ 4,214 ] 4,167	[ 2,233 ] 2,220	[ 18,613,000 ] 18,471,700 [ 5,541,510 ]	[ 8,335 ] 8,321	( 30,700 <b>32,000</b>
Grants-in-Aid for Scientific Research(B)(*1)	[ 17,701 ] 17,752	[ 9,102 ] 9,393	[       32,475,400       ]         33,080,533       [       9,924,160       ]	[ 3,568 ] 3,522	[ 12,700 13,500
Grants-in-Aid for Scientific Research(C)(*2)	[ 60,810 ] 64,621	[ 34,121 ] 36,081	[       37,028,220 ]         38,384,070         [       11,515,221 ]	[ 1,085 ] 1,064	[ 3,500 3,400
Grants-in-Aid for Challenging Exploratory Research(*2 *3)	[ 23,103 ] 4,949	〔 8,821 〕 <b>4,949</b>	[ 9,963,940 ] 4,590,400 [ 1,377,120 ]	( 1,130 ) 928	( 2,900 2,300
Grant-in-Aid for Challenging Research (Pioneering)(*4)	[ _ ] 1,116	[ – ] 94	[ _ ] 643,900 [ 193,170 ]	( – ) 6,850	[ – 16,200
Grant-in-Aid for Challenging Research (Exploratory)(*2 *4)	[ _ ] 14,491	[ _ ] 1,586	[ ] 3,769,800 [ _ 1,130,940 ]	( _ ) 2,377	( – 4,700
Grants-in-Aid for Young Scientists(A)(*1)	[ 2,712 ] 2,874	[ 1,407 ] 1,459	[       6,534,800 ]         6,878,400 [       2,063,520 ]	[ 4,644 ] 4,714	[ 18,400 18,100
Grants-in-Aid for Young Scientists(B) (*2)	[ 28,000 ] 28,353	[ 14,709 ] 14,875	[         15,294,309         ]           15,823,970         [         4,747,191         ]	[ 1,040 ] 1,064	[ 3,200 3,200
Grants-in-Aid for Research Activity Start-up	[ 4,635 ] 4,700	〔 1,739 〕 1,770	[ 1,784,851 ] 1,774,020 [ 532,206 ]	[ 1,026 ] 1,002	[ 1,500 1,500
Grants-in-Aid for Encouragement of Scientists	[ 4,083 ] 4,065	[ 737 ] 732	[ 350,284 ] 349,981	( 475 ) 478	[ 900 820
ants-in-Aid for Publication of Scientific search Results	[ 1,024 ] 1,137	〔 497 〕 475	[ 1,310,300 ] 1,319,900	[ 2,636 ] 2,779	[ 37,300 42,100
ants-in-Aid for JSPS Research Fellows	[ 6,561 ] 5,894	[ 6,561 ] 5,894	[ 5,918,920 ] 5,343,809 [ 432,199 ]	[ 902 ] 907	( 3,000 3,000
Total	[ 161,745 ] 162,830	[ 83,085 ] 82,664	[ 168,890,974 ] 169,838,604 [ 49,279,673 ]	[ 2,033 ] 2,055	[ 170,700 172,000

Notes:

This chart combines the figures for newly selected and continuing projects.
 The figures in [ ] indicate the previous fiscal year.

3. The figures in [ ] indicate indirect costs (excluded from the total).

4. (\*1) Among these projects, there are projects that are partially covered under the multi-year Fund, which is approved from FY2012 to FY2014; their columns "Amount allocated" and "Amount allocated per project" are calculated based on the projects' initial plans for FY 2017.
5. (\*2) Among these projects, there are new project covered under the multi-year Fund, which is approved after FY2011; their columns "Amount allocated" and "Amount allocated based on the projects' initial plans for FY 2017.
6. (\*2) Omong these project" are calculated based on the projects' initial plans for FY 2011; their columns "Amount allocated" and "Amount allocated based on the projects' initial plans for FY 2017.

(\*3) Only continued research projects are appropriated.
 (\*4) New proposals are called from FY2017

8. State of allocation of "Fund for the Promotion of Joint International research (International Group)" for FY 2015 and FY 2016 is included in "Grant-in-Aid for Scientific Research on Innovative Areas (Research in aProposed Area)".

9. "Grant-in-Aid for Scientific Research on Innovative Areas (Platforms) for Advanced Technologies and Research Resources)", "Grant-in-Aid for Scientific Research Resources)", "Grant-in-Aid for Scientific Research (B/C) (Generative Research Field)", "Grant-in-Aid for Special Puroposes", "Fund for the Promotion of Joint International Research (Fostering Joint International Content of Content Returning Researcher Development Research)", "Grant-in-Aid for Specially Designated Research Promotion" are excluded.

# 2. State of Allocation of Grants-in-Aid for Scientific Research (KAKENHI (Multi-year Fund)) for FY2017

As of October 2017

		Numbe	r of	proposed pr	ojec	ets				Amount allocated per project							
	Research category	Applications		Applications approved		Approval rate		Amount allocated		Average		Maximum					
Gra	nts-in-Aid for Scientific Research	# [ 57,045 ] <b>74,248</b>	٢	# 17,108 ] <b>19,386</b>	ſ	% 30.0 ] <b>26.1</b>	נ	64,049,300	נ	(1,000 yen) [ 3,154 ] <b>3,304</b>	ſ	(1,000 yen) 4,000 ] <b>5,000</b>					
	Grants-in-Aid for Scientific Research (C)	[ 38,049 ] 40,486	[	11,392 〕 <b>11,983</b>	[	29.9 ] <b>29.6</b>	(	38,115,240 39,527,200 11,858,160	) ]	( 3,346 ] 3,299	ĺ	4,000 ] 4,100					
	Grants-in-Aid for Challenging Exploratory Research	[ — ] 14,491	ĺ	- ] 1,586	[	— 〕 10.9	(	- 7,582,400 2,274,720	) ]	[ — ] 4,781	ĺ	— ] 5,000					
	Grants-in-Aid for Young Scientists (B)	[ 18,996 ] <b>19,271</b>	ĺ	5,716 〕 <b>5,817</b>	ĺ	30.1 ] 30.2	(	16,939,700		[ 2,772 ] 2,912	ĺ	3,700 ] <b>3,800</b>					
	Total	[ 57,045 ] 74,248	ſ	17,108 ] <b>19,386</b>	ſ	30.0 ] 26.1	(	64,049,300	) ]	[ 3,154 ] 3,304	ſ	4,000 ] <b>5,000</b>					

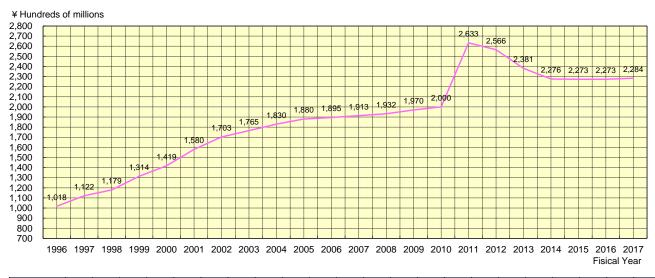
Notes:

1. The chart is adding up the multi-year Fund, "Grant-in-Aid for Scientific Research (C)", "Grant-in-Aid for Challenging Exploratory Research" and "Grant-in-Aid for Youn Scientists (B)", and is a part of reference4-1(1)
2. The figures in [ ] indicate the previous fiscal year.
3. The figures in [ ] indicate indirect costs (excluded from the total).

The amount allocated throughout the research project term is stated in the columns of "Amount allocated" and "Amount allocated per project"
 "Grant-in-Aid for Scientific Research (B/C) (Generative Research Fields)" is excluded

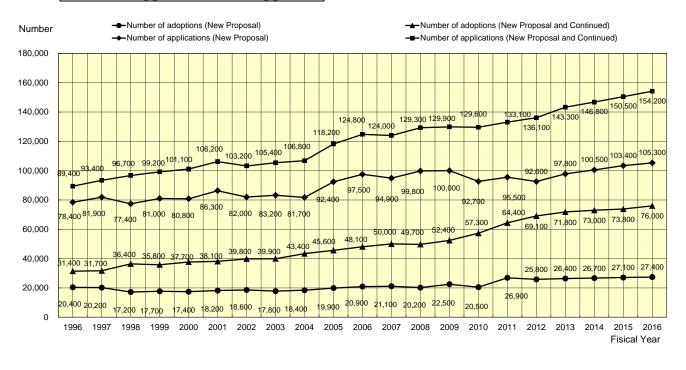
# 3. Changes in Budgets and Other Information

### 1. Changes in Budgets and Other Information



Fisical Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Budget (¥ hundreds of millions)	1,018	1,122	1,179	1,314	1,419	1,580	1,703	1,765	1,830	1,880	1,895	1,913	1,932	1,970	2,000	2,633	2,566	2,381	2,276	2,273	2,273	2,284
Year-on-year increase (%)	10.2	10.2	5.1	11.5	8.0	11.3	7.8	3.6	3.7	2.7	0.8	0.9	1.0	2.0	1.5	31.7	-2.5	-7.2	-4.4	-0.1	-0.1	0.5

### 2. State of Applications and Approvals



# **3.** Approval Rate (Upper Column: New Projects, Lower Column: New and Continued Projects)

Fisical Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Adoption rate (%)	26.1	24.6	22.2	21.8	21.6	21.1	22.7	21.4	22.5	21.6	21.5	22.2	20.3	22.5	22.1	28.1	27.9	27.0	26.6	26.2	26.0
Adoption rate (%)	35.1	34.0	37.6	36.1	37.3	35.8	38.5	37.9	40.7	38.6	38.6	40.4	38.4	40.3	44.2	48.4	50.8	50.1	49.7	49.1	49.3

# Inquiries

# **1.** Inquiries about the invitation of applications should be directed to the following divisions through the research institution.

#### (1) For inquiries concerning the invitation of applications:

Research Aid Division I, Research Program Department, Japan Society for the Promotion of Science

TelPhone: 03-3263-0976, 0980, 1041

FAX: 03-3263-9005

#### (2) For inquiries concerning the use of the KAKENHI electronic application system:

#### Call center: 0120-556-739 (toll-free)

\* Available from 9:30 to 17:30 every day except Saturdays, Sundays, National Holidays and the New Year Holidays (from December 29 until January 3)

#### The following phone numbers are also available: 03-3263-1902, 1913

System Management Team, Policy Planning, Information and Systems Division, Administration Department, Japan Society for the Promotion of Science

# (3) For inquiries concerning the use of the Cross-ministerial Research and Development management system (e-Rad):

e-Rad help desk: 0570-066-877 (Navi Dial)

\* Available from 9:00 to 18:00 except on Saturdays, Sundays, National Holidays and the New Year Holidays (from December 29 until January 3)

\* The following phone numbers are also available: 03-5625-3961

#### (4) For matters related to the "Self-Assessment Checklist on the Improvement of the System and Other Matters", based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)":

Office of Research Funding Administration, Promotion Policy Division, Research Promotion Bureau, the Ministry of Education, Culture, Sports, Science and Technology (MEXT)

TelPhone: 03-6734-4014

# (5) For matters related to Submission of the "Checklist pertaining to the Current Status" based on "Guidelines for Responding to Misconduct in Research" :

Office for Promotion of Correct Research, Knowledge Infrastructure Policy Division, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT) TelPhone : 03-5253-4111

#### (6) For matters related to "the National Bioscience Database":

National Bioscience Database Center, Japan Science and Technology Agency (JST) TelPhone: 03-5214-8491

#### (7)For matters related to the "Inter-University Bio-Backup Project":

Inter-University Research Institute Corporation National Institutes of Natural Sciences, IBBP Center, Executive Office TelPhone : 0564-59-5930, 5931

#### (8) For matters related to the "National BioResource Project":

Bio-Bank Division, Japan Medical Research and Development Organization Basic Research Division Telephone: 03-6870-2228

#### (9) For matters related to the "Researchmap":

National Institute of Advanced Industrial Science and Technology Knowledge base information department service support center (in charge of Researchmap) Telephone: 03-5214-8490 (Open hours: 9:30 - 12:00, 13:00 - 17:00)

#### (10) For matters related to the "Security Export Control Policy":

Ministry of Economy, Trade and Industry, Trade and Economic Cooperation Bureau, Trade Management Department, Security Trade Control Division Telephone: 03-3501-2800 FAX: 03-3501-0996

#### 2. The Application Procedures can be viewed on the JSPS website. Application forms can be downloaded from the following website.

JSPS's website on Grants-in-Aid for Scientific Research URL : https://www.jsps.go.jp/j-grantsinaid/index.html [Japanese] URL : https://www.jsps.go.jp/english/e-grants/index.html [English]