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

FY2020

Specially Promoted Research,
Scientific Research (S/A/B/C),
Challenging Research (Pioneering/Exploratory),
and
Early-Career Scientists

This English version is provided for convenience of prospective KAKENHI applicants who experience difficulty in reading the Japanese original, which should be referred to, in case of dispute.

September 1, 2019

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

Introduction

This document describes the procedures and other matters relevant to the "Call for Proposals for the Grants-in-Aid for Scientific Research-KAKENHI- for FY2020" including the "Specially Promoted Research", the "Scientific Research (S/A/B/C)", the "Challenging Research (Pioneering/Exploratory)", and the "Early-Career Scientists".

The contents are：

"Ⅲ Call for Proposals" provides for each of the Research Categories, such basic issues as the subjects in the research categories to be called, the range of envisaged total budget, a project period, etc. The schedule from the call for proposals, through the proposal submission and the review, to the grant delivery is also described.

The subsequent sections, "Ⅳ Instructions for Prospective Applicants", "Ⅴ Instructions for Grant Recipients" and "Ⅵ Instructions for Administrative Staff of Research Institution" describe conditions for application, required procedures, and other matters, to be followed by the respective actors.

This Call for Proposals is announced prior to the finalization of the national budget for FY2020, so as to let prospective applicants proceed with an early preparation for the review and enable to commence their research activities as soon as possible. It is, therefore, to be reminded that, depending on the situation of the national budget enactment, details on the grant allocation and other matters may be subject to change at a later stage.

The major changes in the FY2020 call for proposals are listed on the following pages.

- Grants-in-Aid for Scientific Research is a competitive funding intended to provide financial support for creative and pioneering research conducted by individual researchers. Therefore, the contents of the Research Proposal Document must be original planned by the applicant.
  In preparing Research Proposal Document, plagiarism and/or misappropriation of the research contents of others are strictly impermissible. Applicants must comply with research ethics.

- The research using the KAKENHI fund should be carried out by the researcher(s)' own initiative and responsibility. Therefore, the implementation of a KAKENHI research project and publication of the research results are solely attributed to the researcher(s)' responsibility and view, and do not reflect that of the funding sector nor of the government.

- To ensure the quality of scientific knowledge and to gain trust of society on scientists and scientific communities, it is essential to exercise fair and conscientious research activities with the adherence to the code of conduct for scientists. Applicants must understand and practice the contents of both the Statement "Code of Conduct for Scientists -Revised Version-" (section I. "Responsibilities of Scientists") by the Science Council of Japan and the booklet "For the Sound Development of Science - The Attitude of a Conscientious Scientist -" (especially section I "What Is a Responsible Research Activity?") issued by the Japan Society for the Promotion of Science (JSPS).

< Major Changes in the Call for Proposals for Fiscal Year 2020 >

(1) To encourage young researchers' challenge to planning of larger scale research, the restrictions on parallel grant application to "Early-Career Scientists (Second Time)" and "Scientific Research (S/A/B)" and the restrictions on parallel grant receipt of "Grant-in-Aid for Research Activity Start-up" and other research categories are relaxed. (See pages 16, 30, 31, 34 and 48.)

(2) To promote challenge by a wider range of researchers, the restrictions on parallel grant application/receipt for "Challenging Research (Pioneering)" and "Scientific Research (B)" is relaxed. (See pages 19, 33 and 48.)

(3) Starting from the FY2019 call for proposals, the "Research Achievements" column in the Research Proposal Document format has been renamed to "Applicant's Ability to Conduct the Research and the Research Environment". In view of the prevailing misunderstandings of the purpose of the format revision, it is re-emphasized that research achievements (publications, etc.) which the applicant thinks relevant to the proposed research plan can be included in the description of this column as appropriate. (See page 20.)

(4) A new research category "Grant-in-Aid for Transformative Research Areas (A/B)" is to be established as a form of constructive renovation of the former category "Grant-in-Aid for Scientific Research on Innovative Areas (Research in a Proposed Research Area)". The official announcement of call for proposals for the new research category is scheduled in January 2020 (after the decision of the FY2020 budget bill). The restrictions on parallel grant application/receipt between the said research category and other research categories are explained in this document as preannouncement. Researchers who are planning to submit proposal(s) to the said research category should be well acquainted with the rules. The call for proposals for "Publicly Invited Research" in the on-going research areas (adopted in FY2017 and FY2019) of "Grant-in-Aid for Scientific Research on Innovative Areas (Research in a Proposed Research Area)" is scheduled in September 2019 by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). (See pages 23, 54.)

(5) It is re-emphasized that researchers who are/were KAKENHI recipients are requested to be cooperative when asked to participate in the peer review process, as the KAKENHI system relies on the peer review scheme. (See page 69.)

(6) There is a change in the submission deadline of the "Self-Assessment Checklist on the Improvement of the System" and the "Checklist on the Research Misconduct"

to be filed by the research institution. (Formerly submission of those documents were required at the time of grant application.) Researchers affiliated to a research institution which has not turned in the said checklists cannot receive the official grant decision. Therefore, research institutions should make sure to submit these checklists. (See page 78.)

Table of Contents

[References]

The application forms (Research Proposal Document) and other application materials are contained in separate files. Please refer to "Supplementary edition to the Application Procedures for Grants-in-Aid for Scientific Research-KAKENHI- for FY2020; Specially Promoted Research, Scientific Research (S/A/B/C), Challenging Research (Pioneering/Exploratory), and Early-Career Scientists (Forms/Procedures for Preparing and Entering a Research Proposal Document)".

* The application forms (Research Proposal Document) and other application materials can be downloaded from the JSPS website (cf. URL below).

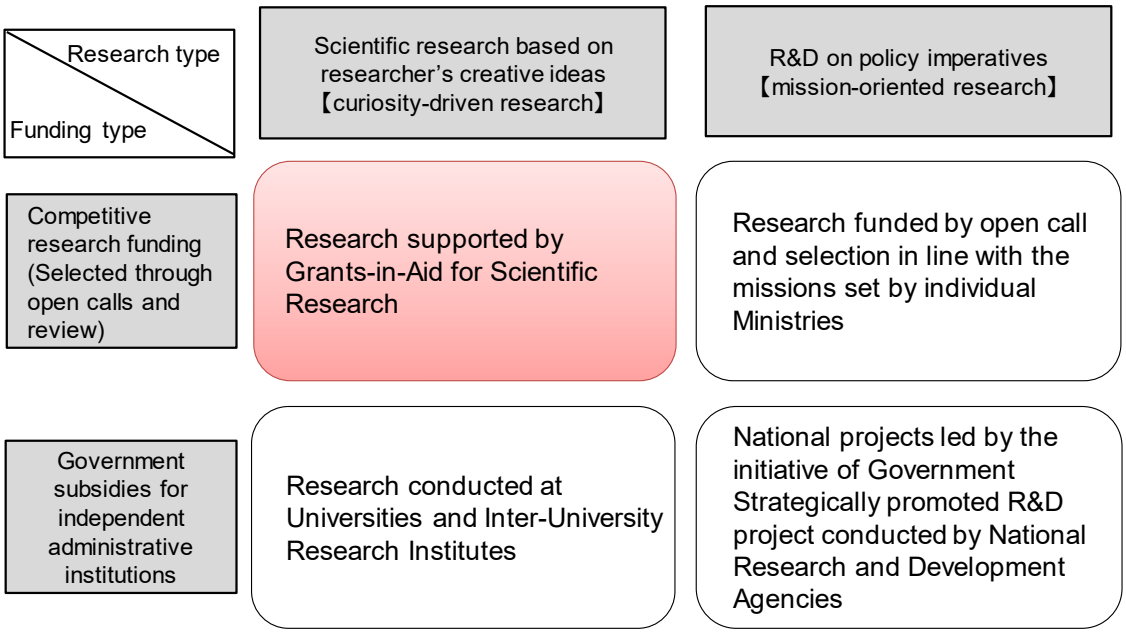
URL: https://www.jsps.go.jp/j-grantsinaid/index.html

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 (hereinafter referred to as "KAKENHI") 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 September 2019

Research categories	Purposes and description of each research category	Type of fund*1
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 researchers 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 (only in a truly necessary case, budget exceeding 500 million yen is asked for.).	SG

*1 SG: Series of Single-year Grants, MF: Multi-year Fund

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 that are expected to lead to development and heightening of Japan's research level in the respective fields, 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 per fiscal year per proposed area.)	SG	
Grant-in-Aid for Scientific Research	(S): Creative/pioneering research conducted by one or a relatively small number of researchers. 5 years (in principle) 50 million to 200 million yen (A), (B), (C): Creative/pioneering research conducted by one researcher or jointly by multiple researchers. (A) 3 to 5 years 20 million to 50 million yen (B) 3 to 5 years 5 million to 20 million yen (C) 3 to 5 years 5 million yen or less	(S)	SG
		(A)	SG
		(B)	SG
		(C)	MF
Grant-in-Aid for Challenging Research (Pioneering/Exploratory)	Research conducted by a single or multiple researchers that aims at radically transforming the existing research framework and/or changing the research direction and has a potential of rapid development. The scope of the (Exploratory) category encompasses research proposals that are highly exploratory and/or are in their budding stages. (Pioneering) 3 to 6 years 5 million to 20 million yen (Exploratory) 2 to 3 years 5 million yen or less	Pione-ering	SG
		Explo-ratory	MF
Grant-in-Aid for Young Scientists	[No new proposals have been called since FY2017.] (A), (B): Research conducted individually by a researcher of age 39 or younger. (A) 2 to 4 years 5 million to 30 million yen (B) 2 to 4 years 5 million yen or less	(A)	SG
		(B)	MF
Grant-in-Aid for Early-Career Scientists	[A call for proposals started from FY2018.] Research conducted by an individual researcher (*2) who is less than 8 years after Ph.D. acquisition. As a transitional measures, a non-Ph.D. researcher who is 39 years old or younger can also apply. 2 to 4 years 5 million yen or less	MF	
Grant-in-Aid for Research Activity Start-up	Research conducted by a single researcher who has been freshly appointed to a research position, or who has returned from his/her maternity, childcare or other kinds of leave. Up to2 years Up to 1.5 million per fiscal year	MF	
Grant-in-Aid for Encouragement of Scientists	Research conducted by an individual who is ineligible for application for other KAKENHI categories (e.g. Individuals who belong to educational or research institutions, private companies, etc. and engage in the researches to contribute to the promotion of the science). 1 year 100 thousand to 1 million yen	SG	
Grant-in-Aid for Special Purposes	Research projects of pressing urgency and importance.	MF	
Grant-in-Aid for Publication of Scientific Research Results		SG	
Publication of Research Results	Subsidy for publication and/or international dissemination of research achievements of high academic values executed by academic associations and other organizations.		
Enhancement of International Dissemination of Information	Subsidy for efforts by academic societies and other scholarly organizations to strengthen international dissemination of academic information for the purpose of international academic exchange.		
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.		

*2 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 childcare leave can be excluded.

Grant-in-Aid for JSPS Fellows	Funding period is up to 3 years for research conducted by JSPS Fellows (including Foreign JSPS Fellows). As for Cross-border Postdoctoral Fellowship (CDP) the period is up to 5 years	SG
Fund for the Promotion of Joint International Research		MF
Fostering Joint International Research	(A) 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 grant seeks to markedly advance research plans for the root research project and to foster independent researchers who can be internationally competitive. (The budget is up to 12 million yen.) (The category name is changed from FY2018 call for proposals.) (B) Support of joint international research project conducted by multiple domestic researchers and a researcher who belongs to overseas research institution. In addition to the development of scientific research, the grant seeks to build out infrastructure of joint international research or further strengthen joint international research and to foster researchers who can be internationally competitive. (The period is 3 to 6 years. The budget is up to 20 million yen.)	
International Activities Supporting Group	Support of international activities within Scientific Research on Innovative Areas. (Set period of the Area, up to 15 million yen per fiscal year) *After FY2018 call for proposal, "International Activities Supporting Group" have been incorporated into "Grant-in-Aid for Scientific Research on Innovative Areas "Administrative Group".	
Home-Returning Researcher Development Research	Support of research to be conducted by a Japanese researcher with current affiliation abroad who is to be newly appointed at university or research institution in Japan. (The period is up to 3 years. The budget is up to 50 million yen.)	
Generative Research Field	[No new proposals have been called since FY2020.] This category set for "Scientific Research (B/C)" is open to research proposals for which review 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.)	MF

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 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 September 2019

Research category	**Call for proposals, Review** Preparation of the document(s) for procedures, Reception of proposal submission	**Grant delivery** 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

KAKENHI (Series of Single-year Grants) are governed by the "Law on Optimizing Implementation of Budgets Relating to Subsidies" (Law No. 179, 1955), the "Procedures on the Handling of Grants-in-Aid for Scientific Research" (Announcement of MEXT), the "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.

KAKENHI (Multi-year Fund) are governed by the application with modifications of the "Law on Optimizing Implementation of Budgets Relating to Subsidies" (Law No. 179, 1955) and the application of the "Basic Policy on the Management of the KAKENHI (Multi-year Fund) (Decision by the Minister of Education, Culture, Sports, Science and Technology)", the "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, and other progress assessment of granted projects.
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 September 2019

	Application Rules	Assessment Rules	Spending Rules
KAKENHI (Series of Single-year Grants)	MEXT Application Procedures	MEXT Rules concerning the assessment for Grants-in-Aid for Scientific Research 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"	JSPS For researchers: Supplementary conditions 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
KAKENHI (Multi-year Fund)	JSPS Application Procedures	JSPS Rules concerning the review and assessment for Grants-in-Aid for Scientific Research ***The review and assessment rules for FY2020 are scheduled to be made public in early October.**	JSPS 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 the KAKENHI is used efficiently and effectively, for example through planning for the communal use of purchased items.

Researchers receiving the KAKENHI have a duty to comply with the related laws, regulations and utilization rules by researchers (supplementary conditions or funding conditions), and also to use such grants appropriately. To facilitate the appropriate use of KAKENHI, research institutions to which the researchers belong are responsible for the management of 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. To prevent 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 institutions 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)

A research project submitted to the categories of KAKENHI (Series of Single-year Grants), if adopted, 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 cannot be completed within the fiscal year, owing to reason(s) unforeseeable at the time of grant delivery, the grant can be carried over to the next fiscal year after going through the due procedure. Firstly a Principal Investigator submits an application for carry-forward of grant through his/her affiliated research institution to JSPS. After reviewing it by JSPS and MEXT, the Minister of MEXT makes a request to the Minister of Finance for the carry-forward of grant to obtain his/her approval.

On the other hand, the KAKENHI (Multi-year Fund) is 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 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"

1) The "Report on the Research Achievements" plays the important role in making the achievements of the research funded by the 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.

   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. 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.

(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", etc.

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

1) 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".

- **Cases 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 .**
- **Cases 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.**
- **Cases where there is duplication in the use of research funds among more than one research projects.**
- **Other 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.**
- **Cases where the purchase of unnecessarily expensive equipment is carried out.**
- **Other cases corresponding to the cases mentioned above.**

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

○ "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.

1) **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 improper grant spending or fraudulent grant acquisition of competitive funding other than the 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 the KAKENHI for the fixed period of time.

Note: This applies to those schemes newly starting a call for proposals in FY2020 (and onward) for "competitive funding other than KAKENHI" as well. It also applies to those schemes that ended before FY2019. Refer to the website below for the schemes to which this specifically applies at present.
URL: https://www8.cao.go.jp/cstp/compefund/kyoukin31_seido_ichiran.pdf

○Period of KAKENHI suspension

[Improper Grant Spending and Fraudulent Grant Acquisition of KAKENHI]

Researcher categories	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 of KAKENHI and researchers who conspired in such acts	2. Other than 1.	(1) Cases of major seriousness and maliciousness	5 years
		(2) Cases other than (1) and (3)	2 to 4 years
		(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.	－		The upper limit is 2 years and the lower limit is 1 year depending on the degree of the breach of duty by the researchers who have the duty of care as a good manager. .

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 case II above, the researchers in case that the influence on society and the maliciousness of their conducts are judged to be insignificant and the amount of money involved is small.
2. Among the case IV above, the researchers in case that the influence on society and the maliciousness of their conducts are judged to be insignificant.

[Research Misconduct]

<table>
<tr><th colspan="3">Individual Involvement in the Misconducts</th><th>Negative Impacts on Science and on Public at Large Degree of Maliciousness</th><th>Period of KAKENHI Suspension</th></tr>
<tr><td rowspan="4">Subject of Research Misconduct</td><td colspan="2">(a) Particularly malicious individual(s) who, for example, had intention of research misconduct from the very beginning of the research</td><td></td><td>10 years</td></tr>
<tr><td rowspan="3">(b) Author(s) of paper(s), etc. related to the research in which research misconduct (s) have been identified (other than (a) above)</td><td rowspan="2">Responsible author(s) of the paper(s) in question (corresponding author, lead author or other authors bearing equivalent responsibilities)</td><td>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</td><td>5 to 7 years</td></tr>
<tr><td>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</td><td>3 to 5 years</td></tr>
<tr><td>Author(s) of the paper(s) in question other than the responsible author(s) described above</td><td></td><td>2 to 3 years</td></tr>
<tr><td colspan="2">(c) Individual(s) involved who are not the authors of the research paper(s) for which research misconduct(s) are identified.</td><td></td><td>2 to 3 years</td></tr>
<tr><td colspan="3" rowspan="2">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</td><td>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</td><td>2 to 3 years</td></tr>
<tr><td>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</td><td>1 to 2 years</td></tr>
</table>

* 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 research 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 research 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 1) and 2) above. The negative impacts 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 18, 2014), Ordered by the Minister of Education, Culture, Sports, Science and Technology" and the "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.

In case where the status of the system improvement in line with these guidelines is recognized inadequate based on the survey results, the measures such as the reduction in indirect cost of all kinds of grants disbursed by MEXT or the independent administrative legal entities under the control of MEXT to the research institution(s) in question can be taken.

○ "Guidelines on the Management and Audit of Public Research Funds at Research Institutions"
URL: http://www.mext.go.jp/a_menu/kansa/houkoku/1343904.htm

○ "Guidelines for Responding to Research Misconduct"
URL: http://www.mext.go.jp/a_menu/jinzai/fusei/index.htm

Note: Examples of improper grant spending, fraudulent grant acquisition and research misconduct of KAKENHI.

○ Improper grant spending
- **Someone instructed a trader to forge fictitious transaction pretending to have purchased expendables, made the university pay a 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 a KAKENHI for them.**
- **Someone instructed his/her students to submit false work attendance sheets, made the university pay a 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 the 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.

○ Fraudulent grant acquisition
- **A researcher ineligible for the KAKENHI funding made application and acquired a KAKENHI grant.**

○ Research misconduct
- **Someone manipulated or forged experimental data or figures in a research paper published as an achievement of the research supported by the KAKENHI.**
- **Someone published books of his/her achievement with KAKENHI which contained an article translated from an original English research paper with no prior consent from the author(s) nor proper quotation statement.**

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, the KAKENHI can be used to cover such outreach-related expenses as preparation of website or printing of pamphlets. The 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, the KAKENHI grantees are encouraged to participate in the "HIRAMEKI ☆ TOKIMEKI SCIENCE" program, 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) The acknowledgement for 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.

〈Example〉
【English】This work was supported by JSPS KAKENHI Grant Number JP12K34567.
【Japan】本研究は JSPS 科研費 JP12K34567 の助成を受けたものです。

(2) The implementation of the fair and conscientious research activities

The research using the KAKENHI should be carried out based on researcher's own self-awareness and responsibility. Therefore the publication on the implementation of the research or research achievements, etc. should not come from the government request and the views and responsibilities on the research achievements should be attributed to the researchers themselves.

On the occasion such as researchers release the research achievements using the KAKENHI broadly to the public, the examples of the indication noting that the research achievements are based on the personal views are given below.

〈Example〉
【English】Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the author(s)' organization, JSPS or MEXT.
【Japan】本研究の成果は著者自らの見解等に基づくものであり、所属研究機関、資金配分機関及び国の見解等を反映するものではありません。

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

The 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:
URL: https://www.jsps.go.jp/data/Open_access.pdf

[Reference 1: What is “Open Access”]

Open access refers to the basic idea that research papers published in peer-reviewed journals, etc. 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.

7. Code of Conduct for Scientists to Adhere

To ensure the quality of scientific knowledge and to gain trust of society on scientists and scientific communities, it is essential to exercise fair and conscientious research activities with the adherence to the code of conduct for scientists. Applicants must understand and practice the contents of both the Statement “Code of Conduct for Scientists -Revised Version-” (section I. “Responsibilities of Scientists”) by the Science Council of Japan and the booklet “For the Sound Development of Science -The Attitude of a Conscientious Scientist-” (especially section I “What Is a Responsible Research Activity?”) issued by the Japan Society for the Promotion of Science (JSPS).

And also take note that upon the formal application for grant delivery, it shall be confirmed through the electronic application system whether the Principal Investigator and Co-investigator(s) will have taken the research ethics education coursework, etc. (see page 67)

[Extraction from the Statement "Code of Conduct for Scientists -Revised Version-" by the Science Council of Japan dated on 25 January 2013]

I Responsibilities of Scientists

(Basic Responsibilities of Scientists)

1 Scientists shall recognize that they are responsible for assuring the quality of the specialized knowledge and skills that they themselves create, and for using their expert knowledge, skills and experience to contribute to the health and welfare of humankind, the safety and security of society and the sustainability of the global environment.

(Attitude of Scientists)

2 Scientists shall always make judgments and act with honesty and integrity, endeavoring to maintain and improve their own expertise, abilities and skills, and shall make the utmost effort to scientifically and objectively demonstrate the accuracy and validity of the knowledge they create through scientific research.

(Scientists in Society)

3 Scientists shall recognize that scientific autonomy is upheld by public trust and the mandate of the people, understand the relationships between science, technology, society, and the natural environment from a wide-ranging perspective, and act in an appropriate manner.

(Research that Answers to Social Wishes)

4 Scientists shall recognize that they are responsible for answering to the wishes of society to investigate into truths and to achieve various issues. When using research funds that are to be provided for establishing the research environment and for conducting research scientists shall always recognize that such broad social expectations exist.

(Accountability and Disclosure)

5 Scientists shall strive to disclose and actively explain the roles and significance of their own research, evaluate the possible effects of their research on people, society and the environment as well as the changes that their research might engender, neutrally and objectively disclose the results of this evaluation, and build a constructive dialogue with society.

(Dual Use of Scientific Research Outcomes)

6 Scientists shall recognize that there exist possibilities that their research results, contrary to their own intentions, may be used for destructive actions, and shall select appropriate means and methods as allowed by society in conducting research and publicizing the results.

* URL: http://www.scj.go.jp/ja/scj/kihan/

["For the Sound Development of Science – The Attitude of a Conscientious Scientist –" by the Japan Society for the Promotion of Science (JSPS)]

(Japanese version (text version)) ("For the Sound Development of Science" Editorial Committee on JSPS)

* URL: https://www.jsps.go.jp/j-kousei/data/rinri.pdf

II. System Improvements in the Call for Proposals for Fiscal Year 2020

The following improvements are made to the schemes for the FY2020 call for proposals.

1. Relaxation of Restrictions on Parallel Grant Application/Receipt

In the KAKENHI system, different "Research Categories" are established on the basis of budget scale, contents, 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 high-level 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. (For details of restrictions on parallel grant application/receipt, see page 41.)

For the FY2020 call for proposals, some of the restrictions on parallel grant application/receipt have been relaxed in light of deliberation at the Subdivision on Grants-in-Aid for Research in the Subdivision on Science, Council for Science and Technology and elsewhere. The aim of the relaxation is to expand the opportunities for young researchers to take on challenges in research categories with larger budgets, and to promote challenging and high-level researches by a wider range of researchers.
For the contents of deliberation at the Council for Science and Technology and elsewhere, refer to the following documents:

○ Documents distributed at the 3rd meeting of Subdivision on Grants-in-Aid for Research in the Subdivision on Science, the 10th Council for Science and Technology

-Document 2-1 "Immediate Initiatives for KAKENHI Reform (Basic idea, etc. toward budgetary requests for FY2020) (draft)"

-Document 2-2 "Immediate Initiatives for KAKENHI Reform (Basic idea, etc. toward budgetary requests for FY2020) (draft) [Pertinent Material]"

http://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu4/045/shiryo/1418448.htm

○ Summary of Discussions by the KAKENHI Reform Promotion Taskforce (Revised Edition), Japan Society for the Promotion of Science (March 15, 2019)

http://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu4/045/shiryo/__icsFiles/afieldfile/2019/04/15/1415283_010.pdf

Expansion of Challenge Opportunities for Young Researchers

○Relaxation of Restrictions on Parallel Grant Application for "Grant-in-Aid for Early-Career Scientists (Second Time)" and for "Grant-in-Aid for Scientific Research (S/A/B)"

The FY2019 budget for the Grants-in-Aid for Scientific Research was significantly increased. The funding to high-level young researchers was substantially strengthened by radical budget

allocation for grant categories targeting mainly young researchers, "Early-Career Scientists[1]" and "Research Activity Start-up[2]" in particular. (The number of "Early-Career Scientists" grants newly adopted in FY2018: 6,256 (adoption rate: 30.7%) → that in FY2019: 7,831 (adoption rate: 40.0%).)

On the other hand, follow-up inspection of the influence of the discontinuation of call for proposals in the "Young Scientists (A)" since FY2017 has revealed the following trends: While a certain fraction of the researcher population that formally applied to the "Young Scientists (A)" category shifted to the "Scientific Research (B)" category comparable in budget scale, a greater fraction of the researcher population actually shifted to the "Scientific Research (C)" category with smaller budget scale. Furthermore, the number of young researchers applying to the "Scientific Research (S/A)" category with larger budget scale was extremely small, as ever. One of the conceivable reasons for such trends could be the difficulties young researchers are facing in their attempt to take risk of aiming higher for the development of their own research, under the current environment for young researchers in Japan with such problems as insecurity of research posts.

In order to advance the research capability of Japan amidst greater sophistication of research and intensification of international competition, it is essential to take a measure to encourage high-level young researchers to take risk of aiming higher for larger scale research. In the FY2020 call for proposals, the system improvement with the relaxation of restrictions on parallel grant application as described in the followings has been implemented, to reduce the risks in aiming higher for larger scale research as the next step, for those young researchers who have gained a certain level of experience through conducting research with an "Early-Career Scientists" grant, and thereby expanding the challenge opportunities for young researchers.

Relaxation of Restrictions on Parallel Grant Application for "Early-Career Scientists (Second Time) (*)" and for "Scientific Research (S/A/B)"

(*) In the FY2020 call for proposals, "Early-Career Scientists (Second Time)" shall mean "Early-Career Scientists" applied for by a researcher who is currently in the final fiscal year of an on-going research project receiving an "Early-Career Scientists (First Time)" grant, or a researcher who has finished receiving the first time "Early-Career Scientists" grant in the past (in FY2018 or earlier) and is eligible to apply for the second time "Early-Career Scientists" grant. Note that the "Early-Career Scientists" category hereby encompasses the "Young Scientists (S/A/B)" categories in the former scheme. For details on the restrictions on parallel grant application for the "Early-Career Scientists" category, see page 34.

(Note) Researchers cannot simultaneously receive an "Early-Career Scientists (Second Time)" grant and a "Scientific Research (S/A/B)" grant. (In case the both proposals are adopted, that in the "Scientific Research (S/A/B)" category shall be given priority.)

[1] Research conducted by an individual researcher who is less than 8 years after Ph.D. acquisition.

[2] Research to be conducted by a single researcher who has been freshly appointed to a research position, or who has returned from his/her maternity, childcare, or other kind of leave.

(Reference) Adoption of proposals of young researchers in FY2019 KAKENHI
The adoption rate of proposals of young researchers (researchers of age 39 or under) are relatively high compared to the overall adoption rate.

Research category		Number of applications	Number of adoptions	Adoption rate
Scientific Research (A)	Age 39 or under	84	29	34.5%
	Overall	2,412	605	25.1%
Scientific Research (B)	Age 39 or under	1,368	473	34.6%
	Overall	11,396	3,327	29.2%
Scientific Research (C)	Age 39 or under	4,751	1,945	40.9%
	Overall	45,758	12,918	28.2%

○Relaxation of Restrictions on Simultaneous Receipt of a Grant in the "Grant-in-Aid for Research Activity Start-up" Category and Grants in Other Research Categories

The "Research Activity Start-up" is a research category targeted at young researchers and others who were not able to apply at the time of the regular application period for the "Scientific Research" and other research categories (call for proposals in September of the fiscal year prior to the grant delivery), to support the start-up phase of their research activities so as to smoothen the step-up to their subsequent research stage. The recipient of a "Research Activity Start-up" grant can submit new KAKENHI proposal(s) to the "Scientific Research" and other research categories in subsequent fiscal years. However, formerly he/she was not allowed to receive the both grants simultaneously if the latter application(s) were adopted. (In that case, the second fiscal year grant for the "Research Activity Start-up" would not be delivered.).

It is observed that the recipients of the "Research Activity Start-up" grants are overwhelmingly young researchers (researchers of age 39 or under). (The fraction of young researchers in the grantees of the "Research Activity Start-up" category in FY2018 was 85%.) It is also considered that letting the "Research Activity Start-up" grant recipient complete his/her research plan would contribute to more effective execution of research. For these reasons, starting from the FY2020 call for proposals, the above-mentioned restriction on simultaneous receipt of grants is eliminated, and thereby encouraging young researchers and others endowed with fresh and flexible ideas in their newly appointed research positions toward more ambitious challenges.

Relaxation of Restrictions on Simultaneous Receipt of a Grant in the "Research Activity Start-up" Category and Grants in Other Research Categories

-The recipient of a "Research Activity Start-up" grant which is on-going in FY2020 can newly receive grant(s) in the "Scientific Research" and other research categories in FY2020 if the latter are adopted, without giving up the former.

Promotion of Challenging Research

○Relaxation of Restrictions on Parallel Grant Application/Receipt for "Grant-in-Aid for Challenging Research (Pioneering)" and for "Grant-in-Aid for Scientific Research (B)"

"Challenging Research" is a research category started from the FY2017 call for proposals established by a constructive reorganization of the former "Challenging Exploratory Research" category so as to enable support of longer-term/larger scale research plans. The aim of this research category is to promote bold challenges that may transform the existing framework of science.

As for the "Challenging Research (Pioneering)" category, it has been recognized that the applicants/grantee population tends to lean toward relatively senior generation of researchers. The reason for this trend may be partly because parallel grant application was only permitted with the "Scientific Research (S/A)" category and partly because highly selective screening was exercised for this category as compared to the "Scientific Research" and other research categories as indicated by the adoption rate of about 10%.

In the FY2020 call for proposals, the system improvement with the relaxation of restrictions on parallel grant application/receipt as described in the followings has been implemented, with the perspective of further strengthening pioneering explorations of emerging interdisciplinary research areas, by promoting challenging high-level researches by a wider range of researchers.

Relaxation of Restrictions on Parallel Grant Application/Receipt for "Challenging Research (Pioneering)" and for "Scientific Research (B)"

-Formerly, grant application in parallel with an application to the "Scientific Research (B)" category was only permitted with the "Challenging Research (Exploratory)" category. Starting from the FY2020 call for proposals, grant application/receipt in parallel with the "Scientific Research (B)" category is also permitted with the "Challenging Research (Pioneering)" category.

-The "Challenging Research (Pioneering)" is scheduled to be transferred to the Multi-year Fund from FY2020 onward.

2. Description of Research Achievements in the Research Proposal Document

○ Clarification that research achievements (publications, etc.) can be entered in the "Applicant's Ability to Conduct the Research and the Research Environment" column

The research achievements in the Research Proposal Document format is intended as a column to verify the applicant's ability to carry through the proposed research plan. To make this point clear, based on the deliberations at the Council for Science and Technology and elsewhere, the former "Research Achievements" column in the Research Proposal Document has been renamed to "Applicant's Ability to Conduct the Research and the Research Environment" starting from the FY2019 call for proposals.

Upon this revision, it was intended that the applicant explains his/her ability to conduct the proposed research plan by appropriately citing selected research achievements (publications, etc.) in the revised "Applicant's Ability to Conduct the Research and the Research Environment" column. This intention based on the problem recognition and basic measures deliberated at the Council for Science and Technology and elsewhere has been stated in the Application Procedures and other documents. However, it appears that the intent of the format revision is not necessarily properly disseminated generating misunderstandings as if the research achievements are no longer allowed or no longer required in this column.

To clear the confusion, the intent of the format revision is more clearly stated in this "Application Procedures" document (see Reference 1). In addition, to further clarify that the applicant can include appropriately selected items of his/her research achievements in the "Applicant's Ability to Conduct the Research and the Research Environment" column, examples of format for citing selected publications appropriate in explaining the applicant's ability to conduct research in the Research Proposal Document are provided (see Reference 2).

Reference1: The summary on the discussion including in the Subdivision on Research Grant Screening Section of the Academic Deliberation in the Subdivision on Science, Council for Science and Technology

(Problem recognition, etc.)

- ○ During the review process, there seems to be a reality which is easily enable to distort what an application and a review per se should be, including the possibility to enumerate unnecessarily the achievements irrelevant to the research project in the "Research Achievements" column.
- ○ There seems to be a possibility that the "Research Achievements" column gives a wrong recognition that without filling in the column spaces with many of research achievements as possible, it might be disadvantage for applicants at the review.
- ○ There is still a room for consideration on the "way to make applicants describe" their research achievements and so on although it is necessary to verify them to assess their ability to conduct the research corresponding to the shared responsibility of the Principal Investigator and the Co-Investigators.
- ○ If there might be a possibility to provide applicants and others with a recognition that as if a performance over-emphasis principle be prevailing at the review in the KAKENHI, a rectification of it should be attempted as far as possible and a consideration to contrive to do so is required.
- ○ In case making continuous use of the "Research Achievements" column, a consideration enabling applicants to properly describe information necessary to assess their ability to conduct the research is required. (An impression as if the "filling in the column is just an important thing" should be dispelled.)
- ○ Regarding the assessment on the ability to conduct the research by using such as the research achievements, an attempt to foster a correct recognition for both sides of applicants and reviewers is required.

(Basic policy, etc. for the revision of the Research Proposal Document)

- ○ At the review of the KAKENHI, as for research projects proposed by the Principal Investigator, in association with considering a scientific significance and creativity, a clarification of research objectives and so on, it is also intended to assess the researchers' ability to conduct the research strictly and to select appropriate research projects.
- ○ The positioning of the research achievements in the Research Proposal Document is for judging a practical feasibility of the research described in the Research Proposal Document before rolling out the research.
- ○ Based on the understandings above, the research achievements should be clearly defined that they are regarded as verifying the ability to conduct the research for the research plan.

Reference 2: Excerpt from Research Proposal Document "3 Applicant's Ability to Conduct the Research and the Research Environment" for Scientific Research (C)

Note:

1. *The description in this column is to explain the feasibility of the research plan. On citing research achievements (research papers, books, patents, invited talks, etc.) they should be given not as an exhaustive list but as supporting evidence to prove the applicant's ability to conduct the proposed research.*
2. *Sufficient information should be given so that the reviewers can identify the research achievements.*

   In the case of a research paper, for example, the relevant bibliographic information, including the title of the paper, the author(s), the title and the volume of the journal, the publication year, and the pages of the article should be given.
3. *The research papers that can be cited are only those already published or accepted for publication.*
4. *These notes written in italics should be deleted when filling this column.*

(For details, please see the relevant pages for each research category in the Application Procedures for Grants-in-Aid for Scientific Research-KAKENHI- (Supplement))

3. Establishment of Grant-in-Aid for Transformative Research Areas

The "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" category has discontinued call for proposals of new areas in FY2020. Instead, a new research category "Transformative Research Areas" is to be established with the aim to lead the way to radical transformation of and change in the existing framework and/or direction of research from various perspectives. Such transformative researches are to be achieved by organic coordination of diverse research groups and with the participation of researchers who shall be bearers of the next generation of research. Although the call for proposals by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) is scheduled in January 2020 and beyond, after the decision of the FY2020 budget bill, the restrictions on parallel grant application/receipt between the said research category and the other research categories are described in advance in this call for proposal document. Researchers who intend to submit research proposal(s) should be well acquainted with the rules given below. (For details of the restrictions on parallel grant application/receipt, see page 54.)

Note that MEXT will announce the call for proposals for the "Publicly Invited Research" for the on-going research areas (areas adopted in FY2017 and FY2019) in the former "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" category in September 2019.

(Background of Establishment)

The research category "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" was established in FY2008 for the purpose of supporting research projects to be conducted by multiple research groups involving a wide range of researchers in related research areas so as to develop new research areas that will lead to upgrade and level-up of scientific research in Japan. Approximately 250 research areas have been adopted in the past 12 years.

This scheme of group research in this category has proved instrumental in achieving, for example, creation of new ideas through discussions among interdisciplinary researchers gathered in the research area, establishment of a framework to address the new issues/themes systematically transcending the disciplines, invigoration of the research fields by enabling young researchers to participate in the research area, and human resources development. With a basic recognition that this research category has been successful, the "Transformative Research Areas" is to be newly established in order to achieve greater success, with the following perspectives:

- In addition to supporting researchers engaged in the formation of large scale research areas from the beginning of the research, it is necessary to support researchers who conduct challenging and exploratory research on a small scale, in small groups, and in short term, then based on the results consequently engage in large scale research areas.
- In order to create research areas that will lead to the radical transformation of and change in the existing framework and/or direction of research, it is necessary to further encourage the participation of a wide range of relevant researchers.
- For the upgrade of research capacity in Japan with a midterm perspective, it is necessary to

further promote participation of researchers who will be the bearers of the next generation of research, with expectation that they will lead emerging and interdisciplinary research areas 10 years from now.

(Outline of the Research Category)

The name of the new research category shall be “Transformative Research Areas”. The purpose of this research category is to promote the creation of research areas that will radically transform and change the existing framework and/or direction of research with proactive involvement of researchers who will be bearers of the next generation of research (researchers of age 45 or under[3]). According to such factors as the grant scale, research period, and others, two sections are to be installed; “Grant-in-Aid for Transformative Research Areas (A)” and “Transformative Research Areas (B)”.

“Transformative Research Areas (A)” is a section replacing the former “Scientific Research on Innovative Areas (Research in a Proposed Research Area)”. This section is open to research proposals that aim to generate renovation and/or transformations in academic areas so as to create emerging and interdisciplinary areas transcending the existing framework of academic disciplines, or research proposals that aim for a truly drastic advancement of the leading-edge portions of a particular academic discipline. For this section, in view of the future development of the research areas, “Publicly Invited Research” will be installed so as to encourage participation of diverse researchers, while taking appropriate measures for nurturing of young researchers.

“Transformative Research Areas (B)” is a section to be established with a new concept. It is a section for more challenging and exploratory research conducted by a compact group of researchers in a short term and with a smaller budget scale. It is expected that it will lead to “Transformative Research Areas (A)” in the future. It is open to research proposals that aim to generate new changes and transformations in academic areas, consequently to create emerging and interdisciplinary areas beyond existing academic disciplines. In view of a midterm development of the research areas, in order to nurture the ability to lead and manage the group research, the Head Investigator shall be a researcher who will be a bearer of the next generation of research.

[3] Age as of April 1 of the fiscal year when grant will be delivered. Namely, in case of the FY2020 call for proposals the researchers of age 45 or under as of April 1, 2020.

III. Call for Proposals

1. Research Categories for Which a Call for Proposals is Organized

The following shows the research categories for which the Japan Society for the Promotion of Science is organizing a call for proposals:

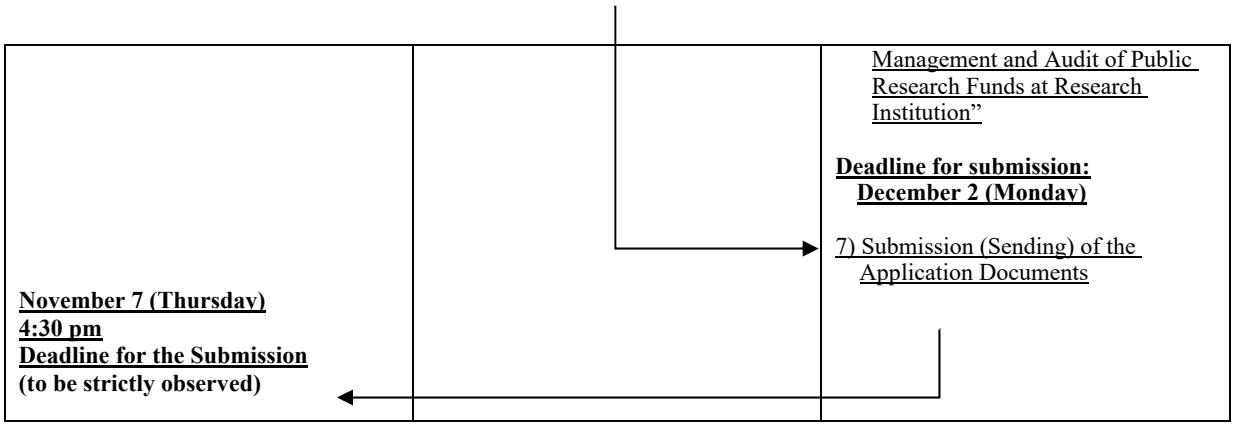
Specially Promoted Research, Scientific Research (S/A/B/C), Challenging Research (Pioneering/Exploratory), and Early-Career Scientists

2. Schedule from Application to Grant Delivery

(1) Procedures that Need to Be Completed Prior to the Deadline for the 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 the Principal Investigator (See "IV. Instructions for Prospective Applicants" and "V. Instructions for Grant Recipients")	Procedures to be Performed by the Research Institution (See "VI. Instructions for Administrative Staff of Research Institution")
From September 1 (Sunday), 2019 Start of the Call for Proposals		[Procedures to be completed, if the need arises] 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.) *The issue of the ID and the Password takes about 2 weeks. 2) Registration of the Researcher Information in e-Rad and other matters. 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.)
	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.	
	[Procedures to be completed, if the need arises] 2) Participation process of the Co-Investigator-to-be joining as a project member	[Procedures to be completed, if the need arises] 4) The researchers who belong to the Institutions give a consent to become the Co-Investigator.
	3) 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.	5) ・Submission of the "Checklist Pertaining to the Current Status" based on the "Guidelines for Responding to Misconduct in Research" **Deadline for submission: September 30 (Monday)** 6) ・Submission of the "Self-Assessment Checklist on the Improvement of the System" based on the "Guidelines on the



Notes:

1. After the Principal Investigator submit (Sending) to the application to the research institution (mentioned in "Procedures to be Performed by the Principal Investigator" 3)), 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" 7)).
   Next, he or she should verify the section "Preparing the Application and Submitting the Application" (pages 56-66), 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. The research institution should submit 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)" 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" 5 and 6)). If it has not been submitted, no official grant decision will be made for the researchers belonging to the research institution in question.

4. If the project members are organized with some Co-Investigators, the Principal Investigator should conduct the consent process to register the Co-Investigators through the electronic application system (mentioned in "Procedures to be Performed by the Principal Investigator" 2)). And the Co-Investigators-to-be need to obtain a necessary consent to become a Co-Investigator from their research institutions, and so on (mentioned in "Procedures to be Performed by the Research Institution" 4)).
   The Principal Investigator cannot submit (send) the Research Proposal Document to his/her research institutions until the research institutions to which the Co-Investigators-to-be belong give the consent to become a Co-Investigator in the research project, and so on. For this purpose, the Principal Investigator is asked to organize the project members immediately (see page 63).

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

Specially Promoted Research	Scientific Research (S)	Scientific Research (A/B/C), Early-Career Scientists
December 2019 to April 2020: Review Late April 2020: Provisional grant decision Middle of May: Formal application for grant delivery Late June: Official grant decision Around July: Disclosure of review results Middle of July: Grant delivery (part of the first term) * Around October: Grant delivery (part of the second term) *	December 2019 to May 2020: Review Late June 2020: Provisional grant decision Middle of July: Formal application for grant delivery Late July: Official grant decision Middle of August: Grant delivery (part of the first term) * Around August: Disclosure of review results Around October: Grant delivery (part of the second term) *	December 2019 to March 2020: Review Early April 2020: Provisional grant decision Late April: Formal application for grant delivery Around April: Disclosure of review results Late June: Official grant decision Middle of July: Grant delivery (part of the first term) * Around October: Grant delivery (part of the second term) *

Challenging Research （Pioneering/Exploratory）
December 2019 to June 2020: Review Late of June 2020: Provisional grant decision Middle July: Formal application for grant delivery Middle of August: Official grant decision Late August: Grant delivery (part of the first term) * Around August: Disclosure of review results Around October: Grant delivery (part of the second term) *

Note:

* The amount requested for funding or the amount requested for payment (direct costs) will be remitted separately in two installments, i.e. one during the first term (from April until September) and the other during the second term (from October until March), if this amount for the fiscal year in question is 3 million yen or more, and it will be remitted in a lump sum during the first term, if it is less than 3 million yen.

3. Details of Each Research Category

(1) Specially Promoted Research: KAKENHI (Series of Single-year Grants)

A) Funding target:

Outstanding and distinctive **research plan, conducted by a single or a relatively small number of researchers**, is expected to yield excellent research results and to open up a new scientific field

B) Range of total budget (total budget throughout the research period the same applies below):

200 million to 500 million yen

The upper limit of the total budget per research project is set at 500 million yen. If truly needed, however, application exceeding this upper limit is not excluded.

* Handling of research projects with a total budget exceeding 500 million yen

The reason why such a budget is needed should be stated in detail in the appropriate column of the research proposal document. The necessity of the budget will be scrutinized.

C) Research period: 3 to 5 years

* If it is truly needed, application with a longer research period (up to 7 years) is possible.

D) Number of research projects to be adopted: Around 10 in total

E) Review Section and Review Method:

Review Section: Either of "Humanities and Social Sciences", "Science and Engineering" and "Biological Sciences"

Review Method: Comprehensive Review (Document Review and Panel Review)

* Review comments written by a few nominated researchers (domestic and overseas) in the field of specialization are utilized in document review and panel review. Interview of the applicant will be conducted at the final review stage.

(See page 65 for Review Section and page 158 for Review Method)

F) Objectives of the research category:

Starting from the FY2018 call for proposals, the positioning of Grant-in-Aid for Specially Promoted Research has been redefined as "an outstanding and distinctive research plan that opens up new scientific fields". Emphasis is placed on supporting a "challenge" towards the development of new academic research aiming at breakthrough beyond conventional research activities, rather than merely supporting continuation and development of "current world leading research". The objective and basic idea of the reframing of this research category is described in "On the Strengthening of Support for Challenging Research

through KAKENHI" (December 20, 2016, Subdivision on Grants-in-Aid for Research in the Subdivision on Science, Council for Science and Technology). Applicants are advised to read this report carefully before preparing the research proposal.
URL: http://www.mext.go.jp/a_menu/shinkou/hojyo/1284543.htm

G) Important points:

- From the FY2018 call for proposals on, restriction on repetitive receipt of the grant in this category is enacted, so as to give many researchers the opportunity of challenge. Acquisition of the grant in this category as PI is limited to once in his/her lifetime. However, if the research theme is totally different, exceptional receipt is not excluded (*1).
- Allocation of the grants to the adopted proposals will be made with utmost consideration of the requested budget. .
- For each adopted research project, an interim assessment will be conducted around the middle of the research period (*2). An ex-post assessment will be conducted in the fiscal year following the end of the research period. On the basis of the interim assessment, adjustment of grant allocation for the subsequent years, cancellation of the project or other measures may be taken as needed.

Notes:

*1: ・Acquisition of a Specially Promoted Research grant prior to FY2018 is not counted for this restriction.
・From FY2018 on, if an adopted Specially Promoted Research project is withdrawn from the formal grant delivery application or is abolished in the middle of the research period it will be counted for the restriction.

*2: ・An interim assessment will be conducted in the 2nd year for research projects with 3-year research period, in the 3rd year for research projects with 4- or 5-year research period, and in the 4th year for research projects with 6- or 7-year research period.

(2) Scientific Research (S): KAKENHI (Series of Single-year Grants)

A) Funding target:

Research plan conducted by a single or a relatively small number of researchers that aims at achieving a major development in creative and pioneering research

B) Range of total budget: 50 million to 200 million yen

C) Research period: 5 years as a general rule

* As an exception, the research period may be set at three or four years, in case any of the researchers are expected to leave the research institution, due to reaching retirement age, or for any other reason.

D) Review section and Review method:

Review Section: Broad Section

Review Method: Comprehensive Review (Document Review and Panel Review)

* Review comments written by a few domestic researchers in the field of specialization are utilized in document review and panel review. Interview of the applicant will be conducted at the final review stage.

(See page 95 for Review Section and page 158 for Review Method)

E) Important points:

- The restrictions on parallel grant application to "Early-Career Scientists (Second Time)" and "Scientific Research (S)" is relaxed from the FY2020 call for proposals. For details see the Table of Restriction on Parallel Grant Application/Receipt on page 48.
- An interim assessment will be conducted at the mid-term of the research period. Based on the results of interim assessment, an increase or a reduction of the research budget, cancellation of the research, or other measures may subsequently be implemented, if the need arises. An ex-post assessment will be conducted in the fiscal year following the end of the research.

(3) Scientific Research (A/B/C)

Scientific Research (A): KAKENHI (Series of Single-year Grants)
Scientific Research (B): KAKENHI (Series of Single-year Grants)
Scientific Research (C): KAKENHI (Multi-year Fund)

A) Funding target:

Research plan conducted by a single or multiple researchers that aims at achieving a major development in creative and pioneering research

B) Range of total budget:

Applications are to be made to one of the following three divisions, according to the range of total budget.

Research category	Range of total budget
Scientific Research (A)	**20 million to 50 million yen**
Scientific Research (B)	**5 million to 20 million yen**
Scientific Research (C)	**5 million yen or less**

C) Research period:

3 to 5 years

D) Application section "General":

In order to distinguish the research proposals in "Scientific Research (A/B/C)" categories

from the ones in FY2019 call and earlier for which the application sections such as "Generative Research Fields", "Overseas Scientific Investigation", etc., the application section "General" in the current category "Scientific Research A/B/C)" should be adopted.

E) Review section and Review method:

Research Category	Review Section	Review Method
Scientific Research (A)	Medium-sized Section	Comprehensive Review (Document Review & Panel Review)
Scientific Research (B)	Basic Section	Two-Stage Document Review
Scientific Research (C)	Basic Section	Two-Stage Document Review

(See page 95 for Review Section and page 159 for Review Method)

F) Important points

- The restrictions on parallel grant application to "Early-Career Scientists (Second Time)" and "Scientific Research (A/B)" is relaxed from the FY2020 call for proposals. For details see the Table of Restriction on Parallel Grant Application/Receipt on page 48.
- As a result of the suspension of the call for new proposal in "Grant-in-Aid for Young Scientists (A)" in FY2018 and after a certain scheme of preferential adoption of research proposals by young researchers of age 39 or under as of April 1, 2020 in the review of "Scientific Research (B)" has been set up as a transitional measure. (See page 34 for the objectives, etc. of the reform of "Grants-in-Aid for Early-Career Scientists" from the FY2018 call for proposals on.)

(4) Challenging Research (Pioneering/Exploratory)

Challenging Research (Pioneering): KAKENHI (Multi-year Fund)

Challenging Research (Exploratory): KAKENHI (Multi-year Fund)

A) Funding target:

Research plan conducted by a single or multiple researchers that aims at radically transforming the existing research framework and/or changing the research direction and has a potential of rapid development.

The "Exploratory" category encompasses research plans that are of exploratory nature, or are in the budding stage.

* While there are cases in which simultaneous submission of research proposals to this and other categories is permitted, the research proposal to be submitted to this category must be clearly distinct from those for the other categories. Note in particular that this research category, being targeted to the truly challenging research projects as described above, carries different review criteria from those for other categories such as "Scientific Research".

B) Range of total budget:

Challenging Research (Pioneering) **5 million to 20 million yen**

Challenging Research (Exploratory) **5 million yen or less**

C) Research period:

Challenging Research (Pioneering) 3 to 6 years

Challenging Research (Exploratory) 2 to 3 years

D) Review section and Review method:

Review Section: Medium-sized Section or Generative Research Fields Review Division

Review Method: Comprehensive Review (Document Reviews and Panel Reviews)

(See pages 95 and 157 for Review Section and page 159 for Review Method)

E) Objectives of the research category:

The objectives of the reform and basic ideas of this research category are detailed in “On the Strengthening of Support for Challenging Research through KAKENHI” (December 20, 2016, Subdivision on Grants-in-Aid for Research in the Subdivision on Science, Council for Science and Technology). Applicant is encouraged to read this report carefully before drafting his/her research proposal document.

URL：http://www.mext.go.jp/a_menu/shinkou/hojyo/1284543.htm

F) “Generative Research Fields Review Divisions”:

The areas in "Generative Research Fields Review Divisions" are proposed by the Research Center for Science Systems of the JSPS on the basis of analyses of latest academic trend, and established through deliberation in the Council for Science and Technology, Subdivision on Science, MEXT. The areas are set up within the framework of “Challenging Research (Pioneering/Exploratory)” for specified duration as deemed necessary so as to supplement the review sections of “Grants-in-Aid for Scientific Research-KAKENHI-, Review Section Table”.

In the new Review Section Table put into operation from the FY2018 call for proposals, individual review sections are defined as “○○-related” so as to secure sufficient flexibility in the scope, and to cope with new research trends. At the same time, seeds of new science are constantly budding in all fields, and among them are expected to grow new fields and trends of science.

In order to meet such expectation, “Generative Research Fields Review Divisions” are set up for timely promotion of research in emerging areas that are deemed highly needed. For this purpose, JSPS shall provide opportunities for the PIs of adopted projects to get together know and stimulate each other. Such opportunities shall promote budding of new science and creation of new research trends. For the FY2020 call for proposals, the following two

Generative Research Fields Review Divisions have been set up.

○ A New Phase of Our Advanced Science and Technology Society

○ Studies on the Super-Aging Society

G) Important points:

・The restrictions on parallel grants application/receipt to “Challenging Research (Pioneering)” and “Scientific Research (B)” is relaxed from the FY2020 call for proposal. For details see the Table of Restriction on Parallel Grant Application/Receipt on page 48.

・The grant adoption shall be limited to a certain number (*) so as to support only selected research projects in line with the objectives of this research category. In order to ensure the best implementation of the challenging research plan, grant allocation shall be made with the utmost respect for the budget plan in the application document.

(*) Status on FY2019 application/adoption

Research category	Number of application	Number of adoption
Challenging Research (Pioneering)	746	86
Challenging Research (Exploratory)	11,103	1,425

・In a review section for which the number of applications exceeds a certain threshold, a pre-screening review based on the “Research Proposal Document (Outline)" shall be conducted.

(5) Early-Career Scientists: KAKENHI (Multi-year Fund)

A) Funding target:

Research plan conducted by **an individual researcher (*) who is less than 8 years after his/her acquisition of Ph.D. (as of April 1st, 2020)**, that contains ideas of prospective future development.

As a transitional measure for approximately 3 years on and after FY2018 call for proposals, non-Ph.D. researchers of age 39 or under (as of April 1st, 2020) are eligible.

(*) Including those researchers in prospect of acquiring Ph.D. by April 1, 2020 and those acquired their Ph.D. within less than 8 years by exempting the period of maternity/childcare leave(s) as of April 1, 2020.

B) Range of total budget: 5 million yen or less

C) Research period: 2 to 4 years

D) Review Section and Review Method:

Review Section: Basic Section

Review Method: Two-Stage Document Review

(See page 95 for Review Section and page 159 for Review Method)

E) Objectives of the research category:

- The objective and significance of "Early-Career Scientists" are, "To provide researchers in their early research career with opportunities to obtain research grants and to assist them for their good start as researcher" and "to support them in their developing stage to establish their own firm foothold of growth through various trials that leads to cutting-edge research in the future." This category is design to offer special grants to those who have started their career as researcher with excellent ideas expected to lead to future development for a certain period of time.
- From the FY2018 call for proposals on, the eligibility for application to "Early-Career Scientists" (former "Young Scientists") has been changed from the age limitation ("individual of age 39 or under") to a criterion based on the number of years after Ph.D. acquisition ("individual who is less than 8 years after his/her Ph.D. acquisition ".

  From the FY2018 call for proposals the former "Young Scientists (A)" has been integrated into "Scientific Research" so that new proposals were not called in FY2018. The former "Young Scientists (B)" is renamed as "Early-Career Scientists". As a transitional measure associated with the termination of "Young Scientist (A)", a certain scheme of preferential adoption of research proposals by young researchers of age 39 or under as of April 1, 2020 in the review of "Scientific Research (B)" has been set up.

  The details on the objective, basic ideas and related measures of the reform of "Grant-in-Aid for Young Scientists" are published in "On the Strengthening of Support for Challenging Research through KAKENHI" (December 20, 2016, Subdivision on Grants-in-Aid for Research in the Subdivision on Science, Council for Science and Technology).

  URL: http://www.mext.go.jp/a_menu/shinkou/hojyo/1284543.htm

F) Important points:

- The restrictions on parallel grant application to "Early-Career Scientists (Second Time)" (For Restriction on Repeated Grant Acquisition, refer to the explanation below.) and "Scientific Research (S/A/B)" are relaxed from the FY2020 call for proposals. For details see Table of Restrictions on Parallel Grants Application/Receipt on page 48.
- Restriction on Repeated Grant Acquisition

  The same as before the number of grant acquisition in "Early-Career Scientists" and "Young Scientists (S/A/B)" has been limited to 2 ("Receiving a grant" here means, a research proposal being adopted and the official decision of grant delivery being issued. The "number of times of grant acquisition" is counted as one in case of a Series of Single-year Grants research project for which the official decision of grant delivery is issued on a yearly basis (under the same project number)).

  Therefore, for the FY2020 call for proposals an individual who has received grants in any of the categories "Early-Career Scientists" and "Young Scientists (S/A/B)" twice until the FY2019 call for proposals cannot apply for the "Early-Career Scientists".

(*) Each of the following cases is counted as one grant reception.

- A case in which, the PI of an adopted project to decline grant delivery or to abolish the project amid the

research period, after he/she received the official decision of grant delivery.

・A case in which the applicant received a grant in FY2006 for a "Grant-in-Aid for Special Purposes (Trial of Multiple Applications per Year)" that was equivalent to "Young Scientists".

Note that the following cases are ***not*** counted as acquisition of grant.

・A case in which the PI of a provisionally adopted research project opted not to submit an application for grant delivery and hence did not actually receive the grant. (The same applies for a case in which the PI opted not to apply for the official decision of grant delivery, after withholding submission of the formal application.)

・Change in the official grant decision as a consequence of a research proposal adopted in the category "Early-Career Scientists (Trial of Independent Basic Ground Formulation)" is not counted as acquisition of grant.

・For a research project which granted in FY2001 in the category "Encouragement of Scientists (A)" with project number "13****** which was subsequently transferred to the category "Grant-in-Aid for Young Scientists (B)" in FY2002, there is no "repeated grant acquisition", even if the researcher would have received the official grant decision.

・On the entry of "Date of Ph.D. Acquisition" n the e-Rad system for those applying for the Early-Career Scientists" category

From the FY2018 Call for Proposals, the eligibility for application to the "Early-Career Scientists" category, the application requirements is based on "the number of years after acquiring Ph.D." (see page 34). The verification of the eligibility of an applicant will be made by the registered information of the "Date of Ph.D. Acquisition" in the e-Rad system.

The applicant for the "Early-Carrier Scientist" category, should select one of the four classifications for application eligibility given below, when he/she prepares a Research Proposal Document on the KAKENHI Electronic Application System.

(1) An applicant who is less than 8 years after the acquisition of his/her Ph.D. as of April 1, 2020. (A researcher who acquired Ph.D. between April 2, 2012 and the time of proposal submission)

(2) An applicant who does not carry a degree at the time of proposal submission, but is in prospect of acquire Ph.D. by April 1, 2020, and is over 40 years of age as of April 1, 2020.

(3) An applicant who is deemed less than 8 years after acquisition of his/her Ph.D. as of April 1, 2020 by exempting (*) the period(s) of childcare leave, etc. (prenatal/postpartum break, childcare leave).
(*) Calculate the sum total of the leave periods, round up the total period to the fiscal year unit and then subtract it from the number of years after Ph.D. acquisition.
(Example: If the applicant has taken 6-month childcare leave three times, the fiscal years to be subtracted will be 2 (1 year and 6 months → 2 fiscal years).)

(4) < A transitional measure: approximately for 3 years on and after the call for FY2018>
An applicant who does not carry a degree, and is 39 years of age or under, as of April 1, 2020.

An applicant with the eligibility in the classification (1) or (3) must register the "Date of Ph.D. Acquisition" in the e-Rad system at the time of proposal submission. Since the registration to the e-Rad system cannot be made by the applicant him/herself, the applicant should request the administrative section of his/her institution to register the Date of Ph.D. Acquisition in the e-Rad system in time for the proposal submission. If the applicant has more than one Ph.D. degree, enter the first acquisition date.

For details on registration to the e-Rad system and the eligibility for the "Early-Career Scientists" category, refer to "Regarding the registration work to the Cross-ministerial Research and Development Management System (e-Rad) in connection with the change of the application requirements of Grants-in-Aid for Scientific Research (Early-Career Scientists)" on July 6, 2017.

URL:http://www.mext.go.jp/a_menu/shinkou/hojyo/1362786.htm

IV. Instructions for Prospective Applicants

1. Procedures to Be Completed Prior to Application

The following three items must be completed prior to the submission of the 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 (KAKINHI) as Principal Investigator (PI) must meet the requirements ① and ② stated below.

A researcher carrying KAKENHI eligibility through more than one research institution can submit application(s) through either of the research institutions. However, in the event of parallel submissions, they have to comply with the rules on restrictions on the parallel grant application/receipt (see page 41).

JSPS Research Fellows (DC) and Foreign JSPS Fellows are not eligible for KAKENHI application. In general, graduate students are not eligible either. (See the notes below for exceptions.) Therefore, individuals with the status of student in a research institution are not eligible even if they also hold a position to conduct research in that or other research institution.

(Note1) 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.

(Note2) If JSPS Research Fellows (SPD, PD, RPD, or CPD) meet the following application requirements at their research institutions which they register as their host research institutions, **they can also apply only from the host research institutions for below research categories other than the "Grant-in-Aid for JSPS Fellows (JSPS Research Fellow)"**.

1) Publicly Offered Research within Grant-in-Aid for Scientific Research on Innovative Areas (Research in a Proposed Research Area)
2) Grant-in-Aid for Scientific Research (B/C)
3) Grant-in-Aid for Challenging Research (Exploratory)
4) Grant-in-Aid for Early-Career Scientists
5) Fund for the Promotion of Joint International Research (Fostering Joint International Research (A))

① **At 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 a job assignment including a 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 a 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 a research activity as his/her main job (e.g., a university teaching staff, a researcher belonging to a company, etc.), and holds a student status at the same time is ineligible.)

(*): 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 73):
< 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 FY2020, 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 working hours on his/her 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.

The PIs and the Co-Is constitute the "members of funded projects", as stipulated in the Law on the Improvement of the Administration of the Budget for Grants-in-Aid (1955, Law no. 179). In an event that they have committed improper grant spending, fraudulent grant acquisition, research misconduct, etc. the eligibility for KAKENHI application will be suspended for a period of time specified by the rule.
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.

(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, it is important for the researcher to ascertain proper registration of his/her Researcher Information in the e-Rad system.
The registration in the e-Rad system is handled by the research institution 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.

*** On the entry of "Date of Ph.D. Acquisition" in the e-Rad system for those applying for the "Early-Career Scientists" category**

From the FY2018 Call for Proposals, the eligibility for application to the "Early-Career Scientists" category, the application requirements is based on "the number of years after acquiring Ph.D." (see page 34). The verification of the eligibility of an applicant will be made by the registered information of the "Date of Ph.D. Acquisition" in the e-Rad system. The applicant for the Early-Carrier Scientist" category, should select one of the four classifications for application eligibility given below, when he/she prepares a research proposal document on the KAKENHI Electronic Application System.

(1) An applicant who is less than 8 years after the acquisition of his/her Ph.D. as of April 1, 2020. (A researcher who acquired Ph.D. between April 2, 2012 and the time of proposal submission)
(2) An applicant who does not carry a degree at the time of proposal submission, but is in prospect of acquire Ph.D. by April 1, 2020, *and* is over 40 years of age as of April 1, 2020.
(3) An applicant who is deemed less than 8 years after acquisition of his/her Ph.D. as of April 1, 2020 by exempting (*) the period(s) of childcare leave etc. (prenatal/postpartum break, childcare leave).
(*) Calculate the sum total of the leave periods, round up the total period to the fiscal year unit and then subtract it from the number of years after Ph.D. acquisition
(Example: If the applicant has taken 6-month childcare leave three times, the fiscal years to be subtracted will be 2 (1 year and 6 months → 2 fiscal years).)
(4) < A transitional measure: approximately for 3 years on and after the call for FY2018>
An applicant who does not carry a degree, and is 39 years of age or under, as of April 1, 2020.

An applicant with the eligibility in the classification (1) or (3) must register the "Date of Ph.D. Acquisition" in the e-Rad system at the time of proposal submission. Since the registration to the e-Rad system cannot be made by the applicant him/herself, the applicant should request the administrative section of his/her institution to register the Date of Ph.D. Acquisition in the e-Rad system in time for the proposal submission. If the applicant has more than one Ph.D. degree, enter the first acquisition date.
For details on registration to the e-Rad system and the eligibility for the "Early Career Scientists" category, refer to "Regarding the registration work to the Cross-ministerial Research and Development Management System (e-Rad) in connection with the change of the application requirements of Grants-in-Aid for Scientific Research (Early-Career Scientists)" on July 6, 2017.
URL: http://www.mext.go.jp/a_menu/shinkou/hojyo/1362786.htm

(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 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.

(Reference) On "Grant-in-Aid for Research Activity Start-up"

The "Grant-in-Aid for Research Activity Start-up" is aimed at supporting researchers who are not able to apply for this round of call for proposals, such as those who are newly obtaining research position, and those who are returning from their leave of absence for childcare etc. after the regular submission deadline.
The FY2020 call for Proposals in this category is scheduled for March 2020, and the provisional conditions of the eligibility for application is as follows:

① An individual who could not submit a KAKENHI proposal, because he/she obtained the eligibility for KAKENHI application only after the application deadline (November 7, 2019) to the research categories (*) of which the Call for Proposals is announced in September 2019 by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and by the Japan Society for the Promotion of Science (JSPS).
② An individual who could not submit a KAKENHI proposal to the research categories (*) for which the Call for Proposals is announced in September 2019 by MEXT and JSPS., because he/she was on a leave of absence for childcare etc. in FY2019.

(For the details, the Application Procedures for the "Grant-in-Aid for Research Activity Start-up" to be announced in March 2020 should be referred to.)
Since the registration to the e-Rad system is handled by the research institution, researchers who may come to fall under the category ① above, should act accordingly by contacting the administrative section of his/her prospective research institution.

(*) Here, the relevant research categories are "Scientific Research on Innovative Areas", "Specially Promoted Research", "Scientific Research", "Challenging Research" and "Early-Career Scientists" among the Grants-in-Aid for Scientific Research for FY2020.

(Note) JSPS Research Fellows (SPD, PD, RPD, or CPD) are not eligible for application to the "Grant-in-Aid for Research Activity Start-up", even if they satisfy the above application conditions.

2. Restriction 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.

- ○ Give considerations so as to ensure that as many excellent researchers as possible can be supported with limited funding resources.
- ○ 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.
- ○ 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).
- ○ 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

Accordingly**, the applicant should be well acquainted with the description the rules given below, and the "Table of Restriction on Parallel Grant Application/Receipt" (see pages 48 - 55).**

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 7), 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 Cases in which the applicant intends to submit two research proposals as the "Principal Investigator" for both. .
【"PI → PI" type】(see page 48)

Every researcher can make only one application as PI in one and the same research category at the same time. Therefore, if a researcher holds an on-going KAKENHI research

project in a particular category, he/she cannot submit a new KAKENHI research proposal in the same research category.

(cases marked with "—" in the Table)

In case an applicant intends to submit two research proposals (to different research categories) as PI for both, the following rules (cases A to C) of restrictions on parallel grant application /receipt apply.

Cases in which a researcher extended the research period for a KAKENHI grant (Multi-year Fund) or a KAKENHI grant (Partial Multi-year Fund) in the final fiscal year (except the extension of research period due to maternity/childcare leave, research stay abroad, etc.), and the cases of "Research proposal submission in the fiscal year previous to the final fiscal year of the research period of an on-going research project" (see "Special Provisions for the Restriction on Parallel Grant Application/Receipt" on page 45) constitute exception to the rules given below.

A Cases where a researcher can submit only one research proposal as PI .

(cases marked with "×" in the Table)

B Cases where a researcher cannot submit a new research proposal, as he/she holds an on-going research project.

(cases marked with "▲" in the Table)

C Cases where a researcher can make parallel submission of research proposals to a research category in the column A and to another category in the column B. If both proposals are adopted, only one of them is granted, as indicated by the symbols in the Table.

For cases marked with "■", the research category in the column A is given priority.
For cases marked with "□", the research category in the column B is given priority.

② Cases in which an applicant submitting a research proposal as PI to a category in column A participates as Co-I in another research proposal submitted to a category in column B 【"PI → Co-I" type】(see page 50)

For cases in which a researcher submitting a certain research proposal as a PI intends to participate in another research project as a Co-I, or a researcher who is a PI of the prospected on-going project in FY2020 intends to participate in another research project as a Co-I, there are no restrictions in general so that the researcher can participate in both projects.

However, for some research categories, chiefly "Specially Promoted Research", the following rules (cases A to C) of restrictions on parallel grant application/receipt as stated below do apply.

A Cases in which the researcher cannot be a CI of the other project

(cases marked with "×" in the Table)

B Cases where the researcher cannot be a Co-I of the other project, because of his/her on-going project.

(cases marked with "▲" in the Table)

C Cases where a researcher can participate in the other proposal as Co-I, but, if both are adopted, he/she has to carry out the project in the column A.

For cases marked with "■", the research category in the column A is given priority.

③ Cases where a researcher who participates as Co-I in a newly-submitted research proposal or a researcher who is a Co-I of an on-going project in FY2018 intends to submit a new research proposal as the PI of another research project.
【"Co-I → PI" type】(see page 52)

For cases in which a researcher participating in a certain research project (on-going or newly submitted) as a Co-I intends to submit another research proposal as a PI, or a researcher who is a Co-I of the prospected on-going project in FY2020 intends to submit another research proposal as a PI, there are no restrictions in general, so that the researcher can participate in both projects.
However, for some research categories, chiefly "Specially Promoted Research", the following rule of restrictions on parallel grant application/receipt as stated below do apply.

〔**For cases marked with "□", the research category in the column B is given priority.**〕

④ Cases in which a researcher who participates as Co-I in more than one research projects (on-going or newly submitted) also intends to participate as Co-I in another research proposal.
【"Co-I → Co-I" type】

For cases in which a researcher participating in a certain research project (on-going or newly submitted) as a Co-I intends to participate in another research project as a Co-I, or a researcher who is a Co-I of the prospected on-going project in FY2020 intends to participate in another research project as a Co-I, there are no restrictions in general, so that the researcher can participate in both projects.
However, for Specially Promoted Research, a researcher cannot participate in more than one research projects as Co-I. If a researcher is already a Co-I of an on-going Specially Promoted Research project, he/she cannot commit him/herself as Co-I to a new project in the Specially Promoted Research category.

(3) Restrictions on Simultaneous Receipt of Grants

According to the "Restriction on Parallel Grant Application/Receipt", cases in which parallel submission of research projects is permitted, but only one of them can be granted even if both are adopted, are handled as follows.

Handling of the cases marked with "■" or "□", when both projects are adopted

A For the "PI → PI" type (such as the case of PI of a Specially Promoted Research project and PI of another project in other research categories), the researcher must decline the grant delivery of the project in the lower priority category, or abolish the on-going project in the lower priority. The relative priority of the research categories is indicated by the marks "■" and "□" in the Table.

B If the PI of a newly adopted Specially Promoted Research project has been acting as Co-I of on-going project(s) in other research categories, he/she must withdraw the Co-I status of the latter project(s).
In an event that the withdrawal of the Co-I status makes the implementation of the latter project(s) unsustainable, the said project(s) have to be discontinued.

(4) Important Notes

1) Even for the cases in which parallel grant application/receipt is not prohibited by the rules, the applicant should give a careful consideration so as not to fall in such situation that he/she cannot carry his/her responsibility as PI or Co-I, by committing him/herself to too many research projects. The applicant should be well acquainted with the content of "Elimination of Unreasonable Duplication and/or Excessive Concentration in the Grant Allocation" mentioned on page 7.
2) 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. This may happen, for example, in a case where the said proposal becomes in conflict with the "Restrictions on Parallel Submission of Research Proposals" by a change in the project members of an on-going research project. The applicant should check against such possibility before submitting the research proposal document.
3) 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.
4) In regard to the "Table of Restrictions on Parallel Grant Application/Receipt", the participation to the "Summarizing Group" in the "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" is deemed exceptional (see "Application Procedures for Grants-in-Aid for Scientific Research-KAKENHI- FY2020 (MEXT)"). See also "II System Improvements in the Call for Proposals for Fiscal Year 2020" on page 16. The following points should be noted.

   A The PI of the "Administrative Group" and the PI of "Supporting Group for International Activities" of a project in the "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" category should check the restriction on parallel submission of proposal as PI or Co-I of other research proposals he/she intends to submit in parallel by referring to the relevant entries of the "Table of Restrictions on Parallel Grant Application/Receipt.

   B The Co-I of "Administrative Group" of a project in the "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" should check the **relation with participation as PI or Co-I to the "Planned Research (Planned research other than the "Administrative Group" and the "Supporting Group for International Activities") of the project, in addition to the restrictions stated in the item A above.**"
5) In regard to the Restrictions on Parallel Grant Application/Receipt relevant to "the researcher submitting a research proposal as a PI/Co-I" or "the PI/Co-I of the prospected on-going project in FY2020" for the research categories for which the call for proposals is announced by the MEXT, applicants should refer to the Attached Table 1.

6) When an individual who is a JSPS Research Fellow (SPD, PD, RPD, or CPD) has obtained the eligibility for KAKENHI application at the research institution which he/she has registered as his/her host institution, he/she can submit a research proposal in the following research categories; the "Publicly Offered Research within Scientific Research on Innovative Areas (Research in a Proposed Research Area)", "Scientific Research (B/C) ", "Challenging Research (Exploratory)" , "Early-Career Scientists" and "Fund for the Promotion of Joint International Research (Fostering Joint International Research (A)".

   As for the restrictions on parallel grant application/receipt for JSPS Fellows (SPD, PD, RPD, or CPD), the applicant should read the description in the section "Grant-in-Aid for JSPS Fellows (JSPS Research Fellow)" of the "Table of Restrictions on Parallel Grant Application/Receipt", even if he/she does not receive the "Grant-in-Aid for JSPS Fellows".

7) If an individual is granted his/her application in those research categories for which the rule of restrictions on parallel grant application/receipt applies ("Specially Promoted Research", "Planned Research in Scientific Research on Innovative Areas (Research in a Proposed Research Area) (including Administrative Group), "Scientific Research (S/A)" , "Challenging Research (Pioneering)" and "Grant-in-Aid for Research Activity Start-up"), and if subsequently he/she is adopted as JSPS Fellow, he/she has to choose either the JSPS fellowship or the KAKENHI project.

   During the period of his/her term, a JSPS Research Fellow (SPD, PD, RPD, or CPD) cannot submit any research proposals to those research categories for which the rule of restrictions on parallel grant application/receipt applies. Therefore, even after a submitted proposal has been duly filed in the Electronic Application System, it may be eliminated from the subsequent review process by the rule of restriction on parallel grant application/receipt. The applicant should check against such possibility before submitting the research proposal document.

8) There are no restrictions on parallel grant application/receipt between KAKENHI and other competitive funding schemes. Still, applicants should read the description in the column "Eliminate Unreasonable Duplication and/or Excessive Concentration in the Grant Allocation" on page 7. **Particularly in the review process of "Specially Promoted Research", such research projects that are deemed as more suitable for funding schemes aiming at promoting strategic and creative research (such as JST Strategic Basic Research Programs) will, in principle, not be adopted. Consequently, the applicant should give a careful consideration on this point.**

(5) Special Provisions for the Restriction on Parallel Grant Application/Receipt (Research Proposal Submission in the Fiscal Year Previous to the Final Fiscal Year of the Research Period of an On-going Research Project)

1) **A PI currently conducting a research project with research period of 4 years or more and**

in either of the categories of "Specially Promoted Research" or "Scientific Research" (excluding "Scientific Research (B/C)" application section "Generative Research Fields"), or a PI currently conducting a research project with research period of 3 years or more and in either of the categories of "Young Scientists" or "Early-Career Scientists" may choose to restructure the on-going project with consideration of the development of the project and submit a new research proposal, if the FY2020 is final FY of the said on-going project. The special provision above is also applicable to a PI currently conducting a research project in "Young Scientists (A/B)" category adopted in FY2017 or earlier.

Only a single new research proposal can be submitted on the basis of the restructuring of the on-going research project.

2) The research categories for which new applications can be made, as "Research proposal submission in the fiscal year previous to the final fiscal year of the research period of an on-going research project", are "Specially Promoted Research", "Scientific Research (S)", and "Scientific Research (A/B/C)".

For the case of on-going research projects in the category "Early-Career Scientists and Young Scientists (A/B)", it is possible to submit a new proposal to the categories "Scientific Research (S)" and "Scientific Research (A/B/C)" in the FY previous to the final FY year if the research period of the on-going project is 4 years. If the research period is 3 years the categories to which a new proposal can be submitted are "Scientific Research (S)" and "Scientific Research (A/B)".

Research category of the on-going research project which is to be restructured for submission of a new proposal in the FY previous to the final FY	Research categories to which submission of a new proposal can be submitted in the FY previous to the final FY of the on-going project
"Specially Promoted Research", "Scientific Research (S/A/B/C)" whose research period is 4 years or more (except application section "Generative Research Fields")	"Specially Promoted Research", "Scientific Research (S)", "Scientific Research (A/B/C) "
"Early-Career Scientists", "Young Scientists (A/B)" whose research period is 4 years	"Scientific Research (S)", "Scientific Research (A/B/C) "
"Early-Career Scientists", "Young Scientists (A/B)" whose research period is 3 years	"Scientific Research (S)", "Scientific Research (A/B) "

3) It is not possible to submit a new proposal as the "Research proposal submission in the fiscal year previous to the final fiscal year of the research period of an on-going research project" by restructuring an on-going project in "Scientific Research (B/C) (application section "Generative Research Fields")" category.

4) **The restriction on parallel grant application/receipt does not apply** between a new research proposal submitted by use of the "Research proposal submission in the fiscal year previous to the final fiscal year of the research period of an on-going research project" and the on-going research project on which the new application is based. (Still, the restriction on simultaneous grant receipt does apply, if the new proposal is granted, as detailed in the next item.) On the other hand, the

restriction on parallel grant application/receipt does apply between these and other research proposal(s) by the same PI.

5) **When a new research proposal submitted to "Scientific Research (A/B/C)" by use of the "Research proposal submission in the fiscal year previous to the final fiscal year of the research period of an on-going research project" is adopted, the grant (KAKENHI (Series of Single-year Grants)) in FY2020 for the on-going research project on which the new proposal is based is not to be delivered and the grant (KAKENHI (Multi-year Fund)) must be abolished in FY2019. When a new research proposal is submitted to "Specially Promoted Research" or "Scientific Research (S)" by use of the "Research proposal submission in the fiscal year previous to the final fiscal year of the research period of an on-going research project" is adopted, the provisional grant decision will be in late April and after, so that the grant for the on-going project need to be returned in full if it might have already been delivered upon abolishing the on-going project.**

Therefore, the research proposal document to be newly submitted should include the necessary expenditures for the implementation of the on-going research project in FY2020.

The expenditure for the preparation of a report on the research achievements for the on-going project, which the PI has to submit by June 30, 2021 should be also appropriated.

(Handling of the Restrictions on Parallel Grant Application/Receipt in Relation to Extension of the Research Period)

1) When a PI of an on-going project of KAKENHI (Multi-year Fund) or KAKENHI (Partial Multi-year Fund) opts to use the extension of the research period in the final FY (except in the case of maternity/childcare leave, research stay abroad, etc.), **the restriction on parallel grant application/receipt does not apply** between the on-going project and a new research proposal he/she intends to submit.

2) On the other hand, the restriction on parallel grant application/receipt does apply between the new research proposal and other new research proposal(s) or other on-going project(s) by the same PI.

Attached Table 1　Table of Restriction on Parallel Grant Application/Receipt

1－1) Type “Principal Investigator (New Proposal/Continued) (Column A) → Principal Investigator (Column B)”

Column A				Column B: Specially Promoted Research	Scientific Research (S)	Scientific Research (A) General	Scientific Research (B) General	Scientific Research (C) General	Early-Career Scientists (First Time)	Early-Career Scientists (Second Time)*1	Scientific Research on Priority Areas / Research in a proposed research area: Publicly invited research	Challenging Research: Pioneering	Challenging Research: Exploratory	Fostering Joint International Research (B)*2
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PI
Specially Promoted Research		New Proposal	PI	－	■	■	■	■	■	■	■	■	■	■
		Continued	PI	－	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Scientific Research (S)		New Proposal	PI	□	－	■	×	×	×	■				■
		Continued	PI	□	－	▲	▲	▲	▲	▲				▲
Scientific Research (A)	General	New Proposal	PI	□	□	－	×	×	×	■				
		Continued	PI	□	▲	－	▲	▲	▲	▲				
	Overseas Scientific Investigation	Continued	PI	□	▲	★	★	★	▲	▲				▲
Scientific Research (B)	General	New Proposal	PI	□	×	×	－	×	×	■				
		Continued	PI	□	▲	▲	－	▲	▲	▲				
	Overseas Scientific Investigation	Continued	PI	□	▲	★	★	★	▲	▲				▲
	Generative Research Fields	Continued	PI	□	□							▲	▲	
Scientific Research (C)	General	New Proposal	PI	□	×	×	×	－	×	×		×	×	
		Continued	PI	□	▲	▲	▲	－	▲	▲		▲	▲	
	Generative Research Fields	Continued	PI	□	□							▲	▲	
Young Scientists(A)		Continued	PI	□	▲	▲	▲	▲	▲	▲		▲		▲
Young Scientists(B)		Continued	PI	□	▲	▲	▲	▲	－	－		▲	▲	▲
Early-Career Scientists		New Proposal (First Time)	PI	□	×	×	×	×	－	－		×	×	□
		New Proposal (Second Time)*1	PI	□	□	□	□	×	－	－		×	×	□
		Continued	PI	□	▲	▲	▲	▲	－	－		▲	▲	▲
Challenging Research	Pioneering	New Proposal	PI	□				×	×	×	×	－	×	
		Continued	PI	□				▲	▲	▲	▲	－	▲	
	Exploratory	New Proposal	PI	□				×	×	×		×	－	
		Continued	PI	□				▲	▲	▲		▲	－	
Challenging Exploratory Research		Continued	PI	□				▲	▲	▲		▲	▲	
Research Activity Start-up		Continued	PI											
JSPS Fellows (JSPS Research Fellow)		Continued	PI	▲	▲	▲						▲		▲
Fostering Joint International Research (B)		Continued	PI	□	□				▲	▲				－
Fostering Joint International Research		Continued	PI											×
Fostering Joint International Research (A)		Continued	PI											×
Home-Returning Researcher Development Research		Continued	PI	□	□	□	□	□	□	□	□	□	□	□

Blank cell: The researcher can apply for both research projects.

－: A researcher can only apply for one research project in one and the same research category (application section) (In case he/she has a continued research project mentioned in column A, he/she cannot apply for a research project mentioned in column B)

×: The researcher can only apply for one research project (in case he/she applied for a research project mentioned in column A, he/she cannot apply for a research project mentioned in column B).

▲: The researcher cannot apply for a research project mentioned in column B (He/she only implements the research of a continued research project mentioned in column A).

■: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in A.

□: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in B.

★: As a rule parallel grant application are not accepted. (This does not apply to cases where it is necessary to conduct two clearly different research projects within the same fiscal year.)

*1 The case of application for a second time grant acquisition in the research category, “Grant-in-Aid for Early-Career Scientists”. As for the eligibility of application for a second time “Early-Career Scientists” grant, refer to page 34 of the “Application Procedures for Grants-in-Aid for Scientific Research”.

*2 As for the Fostering Joint International Research (B), a call for proposals is scheduled in April 2020.

1－2) Type “Principal Investigator (New Proposal/Continued) (Column A) → Principal Investigator (Column B)”

This table shows the restriction on parallel grant application/receipt in case of "a person who tries to apply as Principal Investigator for a research project mentioned in column A (research categories for which MEXT organizes a call for proposals), or a person who has already become Principal Investigator of a research project that is scheduled to be continued in FY2020 (continued research project) mentioned in column A" applies as Principal Investigator for mentioned in column B.

Column A				Column B: Specially Promoted Research	Scientific Research (S)	Scientific Research (A) General	Scientific Research (B) General	Scientific Research (C) General	Early-Career Scientists	Challenging Research: Pioneering	Challenging Research: Exploratory
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				PI	PI	PI	PI	PI	PI	PI	PI
Scientific Research on Innovative Areas (Research in a proposedresearch area)	Administ-rative group (*)	Continued	PI	▲	▲					▲	
	Planned research	Continued	PI	□						▲	
	Publicly offered research	New Proposal	PI	□						×	
		Continued	PI	□						▲	

(*) The "International Activities Supporting Group" has the same restrictions on duplications as the "Administrative Group".

Blank cell: The researcher can apply for both research projects.

×: The researcher can only apply for one research project (in case he/she applied for a research project mentioned in column A, he/she cannot apply for a research project mentioned in column B).

▲: The researcher cannot apply for a research project mentioned in column B (He/she only implements the research of a continued research project mentioned in column A).

□: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in B.

2－1) Type “Principal Investigator (New Proposal/Continued) (Column A) → Co-Investigator (Column B)”

This table shows the restriction on parallel grant application/receipt in case of "a person who tries to apply as Principal Investigator for a research project mentioned in column A (research categories for which JSPS organizes a call for proposals), or a person who has already become Principal Investigator of a research project that is scheduled to be continued in FY2020 (continued research project) mentioned in column A" participates in a research project mentioned in column B as Co-Investigator.

Column A \ Column B				Specially Promoted Research	Scientific Research (S)	Scientific Research (A)	Scientific Research (B)	Scientific Research (C)	Challenging Research	
						General	General	General	Pioneering	Exploratory
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				Co-I	Co-I	Co-I	Co-I	Co-I	Co-I	Co-I
Specially Promoted Research		New Proposal	PI	×	■	■	■	■	■	■
		Continued	PI	▲	▲	▲	▲	▲	▲	▲
Scientific Research (S)		New Proposal	PI							
		Continued	PI							
Scientific Research (A)	General	New Proposal	PI							
	General	Continued	PI							
	Overseas Scientific Investigation	Continued	PI							
Scientific Research (B)	General	New Proposal	PI							
	General	Continued	PI							
	Overseas Scientific Investigation	Continued	PI							
	Generative Research Fields	Continued	PI							
Scientific Research (C)	General	New Proposal	PI							
	General	Continued	PI							
	Generative Research Fields	Continued	PI							
Young Scientists(A)		Continued	PI							
Young Scientists(B)		Continued	PI							
Early-Career Scientists		New Proposal	PI							
		Continued	PI							
Challenging Research	Pioneering	New Proposal	PI							
	Pioneering	Continued	PI							
	Exploratory	New Proposal	PI							
	Exploratory	Continued	PI							
Challenging Exploratory Research		Continued	PI							
Research Activity Start-up		Continued	PI							
JSPS Fellows (JSPS Research Fellow)		Continued	PI							
Fostering Joint International Research(B)		Continued	PI							
Fostering Joint International Research		Continued	PI							
Fostering Joint International Research(A)		Continued	PI							
Home-Returning Researcher Development Research		Continued	PI							

Blank cell: The researcher can apply for both research projects.

×: The researcher can only apply for one research project (in case he/she applied for a research project mentioned in column A, he/she cannot apply for a research project mentioned in column B).

▲: The researcher cannot apply for a research project mentioned in column B (He/she only implements the research of a continued research project mentioned in column A).

■: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in A.

2－2) Type “Principal Investigator (New Proposal/Continued) (Column A) → Co-Investigator (Column B)”

This table shows the restriction on parallel grant application/receipt in case of "a person who tries to apply as Principal Investigator for a research project mentioned in column A (research categories for which MEXT organizes a call for proposals), or a person who has already become Principal Investigator of a research project that is scheduled to be continued in FY2020 (continued research project) mentioned in column A" participates in a research project mentioned in column B as Co-Investigator.

Column A				Column B: Specially Promoted Research	Scientific Research (S)	Scientific Research (A) General	Scientific Research (B) General	Scientific Research (C) General	Challenging Research Pioneering	Challenging Research Exploratory
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				Co-I	Co-I	Co-I	Co-I	Co-I	Co-I	Co-I
Scientific Research on Innovative Areas (Research in a proposedresearch area)	Administ-rative group (*)	Continued	PI	▲						
	Planned research	Continued	PI							
	Publicly offered research	New Proposal	PI							
		Continued	PI							

(*) The "International Activities Supporting Group" has the same restrictions on duplications as the "Administrative Group".

Blank cell: The researcher can apply for both research projects.

▲: The researcher cannot apply for a research project mentioned in column B (He/she only implements the research of a continued research project mentioned in column A).

3－1) Type “Co-Investigator (New Proposal/Continued) (Column A) → Principal Investigator (Column B)”

This table shows the restriction on parallel grant application/receipt in case of "a person who tries to participate as Co-Investigator in a research project mentioned in column A (research categories for which JSPS organizes a call for proposals), or a person who has already become Co-Investigator of a research project that is scheduled to be continued in FY2020 (continued research project) mentioned in column A" applies as Principal Investigator for mentioned in column B.

Column A \ Column B				Specially Promoted Research	Scientific Research (S)	Scientific Research (A)	Scientific Research (B)	Scientific Research (C)	Early-Career Scientists	Challenging Research		JSPS Fellows (JSPS Research Fellow)	Scientific Research on Priority Areas
						General	General	General		Pioneering	Exploratory		Research in a proposed research area
													Publicly offered research
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				PI	PI	PI	PI	PI	PI	PI	PI	PI	PI
Specially Promoted Research		**New Proposal**	**Co-I**	×									
		Continued	**Co-I**	▲									
Scientific Research (S)		**New Proposal**	**Co-I**	□									
		Continued	**Co-I**	□									
Scientific Research (A)	**General**	**New Proposal**	**Co-I**	□									
		Continued	**Co-I**	□									
	Overseas Scientific Investigation	**Continued**	**Co-I**	□									
Scientific Research (B)	**General**	**New Proposal**	**Co-I**	□									
		Continued	**Co-I**	□									
	Overseas Scientific Investigation	**Continued**	**Co-I**	□									
	Generative Research Fields	**Continued**	**Co-I**	□									
Scientific Research (C)	**General**	**New Proposal**	**Co-I**	□									
		Continued	**Co-I**	□									
	Generative Research Fields	**Continued**	**Co-I**	□									
Challenging Research	**Pioneering**	**New Proposal**	**Co-I**	□									
		Continued	**Co-I**	□									
	Exploratory	**New Proposal**	**Co-I**	□									
		Continued	**Co-I**	□									
Challenging Exploratory Research		**Continued**	**Co-I**	□									
Fostering Joint International Research(B)		**Continued**	**Co-I**	□									

Blank cell: The researcher can apply for both research projects.

×: The researcher can only apply for one research project (in case he/she applied for a research project mentioned in column A, he/she cannot apply for a research project mentioned in column B).

▲: The researcher cannot apply for a research project mentioned in column B (He/she only implements the research of a continued research project mentioned in column A).

□: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in B.

3－2) Type “Co-Investigator (New Proposal/Continued) (Column A) → Principal Investigator (Column B)”

This table shows the restriction on parallel grant application/receipt in case of "a person who tries to participate as a new Co-Investigator in a research project mentioned in column A (research categories for which MEXT organizes a call for proposals), or a person who has already become Co-Investigator of a research project that is scheduled to be continued in FY2020 (continued research project) mentioned in column A" applies as Principal Investigator for mentioned in column B.

Column A				Column B	Specially Promoted Research	Scientific Research (S)	Scientific Research (A)	Scientific Research (B)	Scientific Research (C)	Early-Career Scientists	Challenging Research		JSPS Fellows (JSPS Research Fellow)
							General	General	General		Pioneering	Exploratory	
					New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
					PI	PI	PI	PI	PI	PI	PI	PI	PI
Scientific Research on Innovative Areas (Research in a proposed research area)	Planned research	New Proposal	Co-I		□								
		Continued	Co-I		□								

Blank cell: The researcher can apply for both research projects.

□: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in B.

4) Table of Restriction on Parallel Grant Application/Receipt between “Grant-in-Aid for Transformative Research Areas” and other research categories

The table below shows the restriction on parallel grant application/receipt between research categories for the current round of call for proposals and the prospective research category "Grant-in-Aid for Transformative Research Areas" for which the call for proposals by MEXT will be opened in January 2020. Accordingly, researchers planning to apply for the "Grant-in-Aid for Transformative Research Areas" should be well acquainted with the restrictions shown in the table.

- ○The restriction on parallel grant application/receipt for the "Grant-in-Aid for Transformative Research Areas (A)" is the same as that applied to the "Grant-in-Aid for Scientific Research on Innovative Areas (Research in a Proposed Research Area)".
- ○The restriction on parallel grant application/receipt for the "Grant-in-Aid for Transformative Research Areas (B)" is the same as above except that the restriction is alleviated for the following cases:

【Additional cases for which parallel grant application/receipt is permitted】
- ・Head Investigator of “Transformative Research Areas (B)” and Principal Investigator of “Scientific Research (S)”
- ・Head Investigator and/or Principal Investigator of planned research of “Transformative Research Areas (B)” and Principal Investigator of “Challenging Research (Pioneering)”
- ・Head Investigator of “Transformative Research Areas (B)” and Co-Investigator of “Specially Promoted Research”

4-1) Type "Principal Investigator (New Proposal) (Column A)〉→ Principal Investigator (Column B)"

This table shows the restriction on parallel grant application/receipt in cases of "a person who tries to apply as Principal Investigator for a research project mentioned in column A (Transformative Research Areas)" applies as Principal Investigator for mentioned in column B.

Column A				Column B: Specially Proposed Research	Scientific Research (S)	Scientific Research (A) General	Scientific Research (B) General	Scientific Research (C) General	Early-Career Scientist	Challenging Research Pioneering	Challenging Research Exploratory
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				PI	PI	PI	PI	PI	PI	PI	PI
Transformative Research Areas (A)	Administrative Group	New Proposal	PI	×	■					×	
	Planned Research	New Proposal	PI	□						×	
Transformative Research Areas (B)	Administrative Group	New Proposal	PI	×							
	Planned Research	New Proposal	PI	□							

Blank cell: The researcher can apply for both research projects.

×: The researcher can only apply for one research project (in case he/she applied for a research project mentioned in column A, he/she cannot apply for a research project mentioned in column B).

■: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in A.

□: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in B.

4-2) Type "Principal Investigator (New Proposal) (Column A)〉→ Co-Investigator (Column B)"

This table shows the restriction on parallel grant application/receipt in case of "a person who tries to apply as Principal Investigator for a research project mentioned in column A (Transformative Research Areas) participates in a research project mentioned in column B as Co-Investigator.

Column A				Column B: Speially Proposed Research	Scientific Research (S)	Scientific Research (A)	Scientific Research (B)	Scientific Research (C)	Challenging Research	
						General	General	General	Pioneering	Exploratory
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				Co-I	Co-I	Co-I	Co-I	Co-I	Co-I	Co-I
Transformative Research Areas (A)	Administrative Group	New Proposal	PI	×						
	Planned Research	New Proposal	PI							
Transformative Research Areas (B)	Administrative Group	New Proposal	PI							
	Planned Research	New Proposal	PI							

4-3) Type "Co-Investigator (New Proposal) (Column A)〉→ Principal Investigator (Column B)"

This table shows the restriction on parallel grant application/receipt in case of "a person who tries to participate as Co-Investigator in a research project mentioned in column A (Transformative Research Areas) applies as Principal Investigator for mentioned in column B.

Column A				Column B: Speially Proposed Research	Scientific Research (S)	Scientific Research (A)	Scientific Research (B)	Scientific Research (C)	Early-Career Scientist	Challenging Research	
						General	General	General		Pioneering	Exploratory
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				PI	PI	PI	PI	PI	PI	PI	PI
Transformative Research Areas (A)	Planned Research	New Proposal	Co-I	□							
Transformative Research Areas (B)	Planned Research	New Proposal	Co-I	□							

4-4) Type "Co-Investigator (New Proposal) (Column A)〉→ Co-Investigator (Column B)"

This table shows the restriction on parallel grant application/receipt in case of "a person who tries to participate as Co-Investigator in a research project mentioned in column A (Transformative Research Areas) participates in a research project mentioned in column B as Co-Investigator.

Column A				Column B: Speially Proposed Research	Scientific Research (S)	Scientific Research (A)	Scientific Research (B)	Scientific Research (C)	Challenging Research	
						General	General	General	Pioneering	Exploratory
				New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal	New Proposal
				Co-I	Co-I	Co-I	Co-I	Co-I	Co-I	Co-I
Transformative Research Areas (A)	Planned Research	New Proposal	Co-I							
Transformative Research Areas (B)	Planned Research	New Proposal	Co-I							

Blank cell: The researcher can apply for both research projects.

×: The researcher can only apply for one research project (in case he/she applied for a research project mentioned in column A, he/she cannot apply for a research project mentioned in column B).

□: The researcher can apply for both research projects. However, in case both are adopted, he/she only implements the research of the research project in B.

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

Grants-in-Aid for Scientific Research is a competitive funding intended to provide financial support for creative and pioneering research conducted by individual researchers. Therefore, the contents of the Research Proposal Document must be original planned by the applicant.
In preparing Research Proposal Document, plagiarism and/or misappropriation of the research contents of others are strictly impermissible. Applicants must comply with research ethics.

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) Revision of the Research Proposal Document

As for the Research Proposal Document, in the Reform of the KAKENHI Review System, since April 2018, the definition of the "Collaborating Researcher" has been abolished as a revision of the definition of the research members in conjunction with some revisions such as the disapproval of the description on the research achievements by the "Collaborating Researcher" on and after the FY2018 call for proposals in September 2017. In addition, on and after the FY2019 call for proposals in September 2018, the revision including the way to describe the achievements in the column of research achievements has been made, and with the Research Proposal Document some changes such as followings have been applied. When preparing the Document, your careful confirmation is requested on the contents of the booklet, the Application Procedures for Grants-in-Aid for Scientific Research-KAKENHI- (Supplement) "Forms/Procedures for Preparing and Entering a Research Proposal Document".

- The "Research Achievements of the Principal Investigator (PI) and Co-Investigator(s) (Co-I(s))" column in the Research Proposal Document is to be revised as the "Applicant's Ability to Conduct the Research and the Research Environment" column in accordance with the rating elements.

Furthermore, the summary on the discussion related to this revision such as in the Subdivision on Research Grant Screening Section of the Academic Deliberation in the Subdivision on Science, Council for Science and Technology is as follows.

(Reference) The summary on the discussion including in the Subdivision on Research Grant Screening Section of the Academic Deliberation in the Subdivision on Science, Council for Science and Technology

(Problem recognition, etc.)

- ○ During the review process, there seems to be a reality which is easily enable to distort what an application and a review per se should be, including the possibility to enumerate unnecessarily the achievements irrelevant to the research project in the "Research Achievements" column.
- ○ There seems to be a possibility that the "Research Achievements" column gives a wrong recognition that without filling in the column spaces with many of research achievements as possible, it might be disadvantage for applicants at the review.
- ○ There is still a room for consideration on the "way to make applicants describe" their research achievements and so on although it is necessary to verify them to assess their ability to conduct the research corresponding to the shared responsibility of the Principal Investigator and the Co-Investigators.
- ○ If there might be a possibility to provide applicants and others with a recognition that as if a performance over-emphasis principle be prevailing at the review in the KAKENHI, a rectification of it should be attempted as far as possible and a consideration to contrive to do so is required.
- ○ In case making continuous use of the "Research Achievements" column, a consideration enabling applicants to properly describe information necessary to assess their ability to conduct the research is required. (An impression as if the "filling in the column is just an important thing" should be dispelled.)
- ○ Regarding the assessment on the ability to conduct the research by using such as the research achievements, an attempt to foster a correct recognition for both sides of applicants and reviewers is required.

(Basic policy, etc. for the revision of the Research Proposal Document)

- ○ At the review of the KAKENHI, as for research projects proposed by the Principal Investigator, in association with considering a scientific significance and creativity, a clarification of research objectives and so on, it is also intended to assess the researchers' ability to conduct the research strictly and to select appropriate research projects.
- ○ The positioning of the research achievements in the Research Proposal Document is for judging a practical feasibility of the research described in the Research Proposal Document before rolling out the research.
- ○ Based on the understandings above, the research achievements should be clearly defined that they are regarded as verifying the ability to conduct the research for the research plan.

(2) Preparation of KAKENHI Research Proposal Document

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

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:

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 (URL: https://www.jsps.go.jp/j-grantsinaid/index.html), and by uploading the filled form to the KAKENHI Electronic Application System so as to compile a PDF file of the research proposal document. **(Paper-based applications will not be accepted.)**

<table>
<tr><td rowspan="2">Research category
Application Section</td><td colspan="3">Research Proposal Document</td></tr>
<tr><td>Items to be entered in the Website
(First part)</td><td>Forms to be uploaded
(File ID)</td><td>Items to be entered in the Website
(Second part)</td></tr>
<tr><td>Specially Promoted Research (New Proposal)</td><td rowspan="11">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.)</td><td>S-1 (1)
S-1 (2)
S-1 (3)
Items to be entered in the Website (Second part) will be inserted between S-1 (2) and (3)</td><td rowspan="11">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.)</td></tr>
<tr><td>Specially Promoted Research (Continued)</td><td>S-2</td></tr>
<tr><td>Scientific Research (S)</td><td>S-11</td></tr>
<tr><td>Scientific Research (A)</td><td>S-12</td></tr>
<tr><td>Scientific Research (B)</td><td>S-13</td></tr>
<tr><td>Scientific Research (C)</td><td>S-14</td></tr>
<tr><td>Challenging Research (Pioneering)</td><td>S-41-1
S-41-2</td></tr>
<tr><td>Challenging Research (Exploratory)</td><td>S-42-1
S-42-2</td></tr>
<tr><td>Early-Career Scientists</td><td>S-21</td></tr>
<tr><td>Continued Research Project (in case of a major change in the research plan)</td><td>S-99</td></tr>
</table>

* Forms can be downloaded from the "Grants-in-Aid for Scientific Research-KAKENHI-" page within the JSPS website (URL: https://www.jsps.go.jp/j-grantsinaid/index.html) even before the obtaining of the e-Rad ID and password.

(3) Electronic Submission of the Research Proposal Document

1) An applicant to the research category "Specially Promoted Research" 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 "FY2020 Procedures for Preparing and Entering a Research Proposal Document for Specially Promoted Research (New Proposal)".

2) For all other research categories, 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 "FY2020 Procedures for Preparing and Entering a Research Proposal Document" and "FY2020 Procedures for Preparing and Entering a Research Proposal Document (Items to be entered in the Website)".

3) The compiled books of the submitted KAKENHI Research Proposal Documents to be sent to the reviewers are **in black-and-white (gray scale) print**. Therefore, in preparing the Research Proposal Document, the applicant should pay attention to the clarity of the figures when printed in gray scale.

4) The Research Proposal Documents are collected and submitted to JSPS by the research institution to which the PIs (applicant) belong. Therefore, the applying PI **should submit his/her Research Proposal Document to the administrative section of his/her research institution by the deadline set by the institution. (It is not allowed to submit the Research Proposal Document directly to JSPS.)**

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.

5) 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 is to be provided to the e-Rad system. (The information registered in the e-Rad system is utilized for proper assessment of research and development by national funding, development of effective and efficient comprehensive strategy, planning and development of resource allocation policy, etc. Therefore 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 and his/her affiliated research institution, the grant to be delivered, research period, 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.

The researchers and their affiliated research institutions are requested to carry out the application procedures (including 4) above) with full understanding of the information handling (utilization, provision and disclosure) stated above.

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 on page 62) may organize a research team with appropriate combination of Co-Investigator(s) (Co-I) (see 2 on page 63), and Research Collaborators(s) (see 3 on page 64), as needed by the nature of the research project.

As is the case for PI, **Co-Investigator(s) is also subject to verification of their KAKENHI eligibility by their respective research institute by the time of proposal submission (See Notes below).**

On the other hand, to be a Research Collaborators, registration to the e-Rad system is not a requirement.

(Note 1) A JSPS Research Fellow (SPD, PD, RPD or CPD) who meets the following application requirements at his/her host research institution can participate in a KAKENHI research project as Co-I. There are no restrictions on the research categories in which he/she can participate as Co-I unlike in the case of participating as PI.

(Note 2) JSPS Research Fellows (DC), Foreign JSPS Fellows and graduate students (or students of any other category) cannot be a PI or Co-I of a KAKENHI project.

< Requirements >

1) **The applicant must be an individual belonging to a research institution with a 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 a 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 a research activity as his/her main job (e.g., a university teaching staff, a researcher belonging to a company, etc.), and holds a student status at the same time is ineligible.)

(*): 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 73):

< 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.

KAKENHI employee is generally bound by their employment contract to concentrate on the research work relevant to the 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 working hours on his/her 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. In this case, he/she can apply as PI, or participate to other KAKENHI project(s) as Co-I.

- 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.

The PIs and the Co-Is constitute the "members of funded projects", as stipulated in the Law on the Improvement of the Administration of the Budget for Grants-in-Aid (1955, Law no. 179). In an event that they have committed improper grant spending, fraudulent grant acquisition or research

misconduct, the eligibility for KAKENHI application will be suspended for a period of time specified by the rule.

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.

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 caused by PI's own accord, should refrain from becoming a PI. (See Note below)

(Note)

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 his/her own accord so that is anticipated to be unable to carry through the responsibility, should refrain from becoming a Principal Investigator. Substitutions of the PI of an on-going KAKENHI project are not permitted.

As an exception, for the "Planned research" of "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" replacements of the PI may be accepted by going through appropriate procedures.

(B) **When organizing project members, the Principal Investigator must obtain a consent to become a Co-Investigator from the researcher via electronic application system in advance.**

(C) 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 FY2020 (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.

2) Co-Investigator (Co-I)

(A) The Co-Investigator is a recipient of the grant who, in cooperation with the PI, bears responsibility for the implementation of the research project in accordance with the clear share of his/her roles. The Co-I must be a member of the project who receives a share of the grant based on the contents of the share as a recipient of the grant. (This rule applies even when the Co-I belongs to the same institution as the PI.)

An individual who is anticipated to become unable to carry through the Co-I's responsibility over the entire research period due to, for example, the loss of the KAKENHI eligibility caused by Co-I's own accord, should refrain from becoming a Co-I.

(B) The Co-I must be registered in the e-Rad system as being "Eligible for KAKENHI Application". It is also required that he/she is *not* designated as being "ineligible for grant receipt" in FY2020 (a suspension of eligibility), as a penalty for such misconducts as an improper grant spending, a fraudulent grant acquisition or a research misconduct associated with the KAKENHI or any other competitive funding.

＜About the Process of Participation of Co-Investigator in Project Members＞

A consent process to become a Co-Investigator is conducted via the electronic application system if the applicant adds a Co-Investigator to project members. Following processes for both Principal Investigator and Co-Investigators are necessary in the application process.

[Actions to be taken by the Principal Investigator]

・By submitting (sending) Research Proposal Document to his/her research institution, Principal Investigator must enter the information on the researcher whom Principal Investigator wants to add to the project members in the "Project Members List" column on the "Application Information Input" screen, request the researcher to become a Co-Investigator, and obtain a consent from the Co-Investigator-to-be.

[Actions to be taken by the researcher who is requested to become a Co-Investigator]

・If the researcher is requested to become a Co-Investigator by the Principal Investigator via the electronic application system, the researcher must select "Consent" or "Dissent" after confirming the contents to be consented.

Procedures to be Performed by the Principal Investigator	Procedures to be Performed by the Co-Investigator-to-be	Procedures to be Performed by the Research Institutions to which Co-Investigator-to-be belongs
① Request to become a Co-Investigator →	② Give a consent to become a Co-Investigator →	③ Give a consent to become a Co-Investigator as a standpoint of the research institutions
The Principal Investigator requests to the researcher who is to be requested to become a Co-Investigator to participate in the project members as a Co-Investigator via the electronic application system	The Co-Investigator-to-be is requested to participate in the project members as a Co-Investigator from the Principal Investigator via the electronic application system and then the Co-Investigator-to-be selects a consent (or a dissent).	The information consented by the Co-Investigator-to-be is shown via the electronic application system and then the research institutions also conducts the process such as giving consents to him/her.

- The organization of the project members should be completed through all necessary procedures mentioned above to be carried out with the approximate target of **two weeks prior to the deadline for the submission of the application documents**. (All application procedures are workable on the system after two weeks prior to the deadline for the submission of the application documents. To submit (send) application documents to the research institution to which the Principal Investigator belongs, it is necessary to obtain consents from all the Co-Investigators-to-be.

* Please refer to the Kakenhi (Grants-in-Aid for Scientific Research) Electronic Application System Operation Manual (URL: https://www-shinsei.jsps.go.jp/kaken/topkakenhi/shinsei_ka.html) for the detailed information such as operating environments, operating methods, and so on.

* After the researcher has given a consent to become a Co-Investigator, the information on the Co-Investigator-to-be will be shown to the research institution to which he/she belongs via the electronic application system, and then it will be necessary to obtain a consent, etc. from the research institution as well.

Since the Principal Investigator cannot submit (send) the Research Proposal Document to his/her research institution until the research institution to which the Co-Investigator-to-be belongs gives the consent, etc., be sure to finish the process in time for the dead line of the submission.

3) Research Collaborator

(A) Research Collaborator is an individual who cooperates in the implementation of a research project other than the PI and the Co-I(s).

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

For example, following person can also participate in the research project as a Research Collaborator: a postdoctoral researcher, a graduate student, a research assistant (RA), a JSPS Research Fellows (DC), JSPS Research Fellows (SPD, PD, RPD or CPD) who are not registered as eligible for KAKENHI application in their host research institution, 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.

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 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 all the research categories of this call for proposals. 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

1) Application to the category "Specially Promoted Research"

The applicant should **select one of the three categories;** "Humanities and Social Sciences", "Science and Engineering" and "Biological Sciences" as a suggested category for review of his/her research proposal.

2) Application to the categories "Scientific Research" (Scientific Research (S), Scientific Research (A/B/C)), and "Early-Career Scientists"

The applicant should **select one of the review sections** from Attached Table 2 "The Review Section Table for Grants-in-Aid for Scientific Research" (see page 95) as a suggested review section for his/her research proposal.

Review Sections and Review Methods are different for different research categories (and

application sections) to which the research proposal in question is submitted as shown in the table below.

[Review Section and Review Method for "Scientific Research" and "Early-Career Scientists"]

Research Category	Review Section	Review Method
Scientific Research (S)	**Broad Section**	**Comprehensive Review (Document reviews and Panel reviews) *with the help of written comments by domestic researchers *interview of the applicant.**
Scientific Research (A)	**Medium-sized Section**	**Comprehensive Review (Document reviews and Panel reviews)**
Scientific Research (B)	**Basic Section**	**Two-Stage Document Review**
Scientific Research (C)	**Basic Section**	**Two-Stage Document Review**
Early-Career Scientists	**Basic Section**	**Two-Stage Document Review**

3) Application to the category "Challenging Research"

The applicant should **select either one** of the Medium-sized Sections in Attached Table 2 "The Review Section Table for Grants-in-Aid for Scientific Research" (see page 95), or one out of the two fields listed as Generative Research Fields Review Divisions in Attached Table 3 (see page 157), as the suggested review section for his/her research proposal.

4. Completion of Research Ethics Education Coursework, etc.

Principal Investigators and Co-Investigators taking part in a research funded by the KAKENHI, are requested to have completed properly the following procedures including research ethics, by the time they submit the formal application for grant delivery of a newly adopted research project in the FY2020 Grants-in-Aid for Scientific Research, and upon the formal application for a grant delivery, it shall be confirmed through the electronic application system whether they will have taken the research ethics education coursework, etc.

If a PI or Co-I completed the research ethics related procedures in the past, or has moved from the research institute at which he/she completed the procedure, he/she should check with the administrative section of his/her current institution for the validity of the procedure he/she conducted in the past.

[Actions to be taken by the Principal Investigator]

- The PI must either read through and learn the teaching materials by oneself concerning the research ethics education coursework such as “For the Sound Development of Science - The Attitude of a Conscientious Scientist” published by the Editorial Committee of the JSPS named “For the Sound Development of Science, the “e-Learning Course on Research Ethics [eL CoRE] or “APRIN e-learning program (eAPRIN)”, etc., or attend a lecture on research ethics conducted by research institutes based on the “Guidelines for Responding to Misconduct in Research” (adopted by the MEXT on August 26, 2014), by the time of the formal application for grant delivery.
- The PI must understand thoroughly and exercise the proper research practices in conducting their research, from amongst the contents of both the Statement “Code of Conduct for Scientists -Revised Version-” by the Science Council of Japan and the booklet “For the Sound Development of Science -The Attitude of a Conscientious Scientist-” issued by the JSPS, by the time of the formal application for grant delivery.
- From each Co-Investigator-to-be, the PI must
  ① obtain a consent of participation in the research project as a Co-I through the electronic application system and also a consent expressing “the completion of a seminar attendance or other kinds of coursework relevant to research ethics by the time of the formal application for the grant delivery of the research project in question”, by the time of submitting (sending) the Research Proposal Document to the research institution which the PI belongs to, and;
  ② ascertain that the Co-I has actually completed the coursework such as an attendance at the lecture on research ethics by the time of the formal application for the grant delivery.

[Actions to be taken by the Co-Investigator]

- The Co-I must provide the PI with both a consent of the participation in the research project as a Co-Investigator via the electronic application system and a consent expressing “the completion

of a seminar attendance or other kinds of coursework relevant to research ethics by the time of the formal application for the grant delivery of the research project in question".

- The Co-I must either read through and learn the teaching materials by oneself concerning the research ethics education coursework such as "For the Sound Development of Science - The Attitude of a Conscientious Scientist" published by the Editorial Committee of the JSPS named "For the Sound Development of Science, the "e-Learning Course on Research Ethics [eL CoRE] or "APRIN e-learning program (eAPRIN)", etc., or attend a lecture on research ethics conducted by research institutes based on "Guidelines for Responding to Misconduct in Research (adopted by the MEXT on August 26, 2014), and report the PI to the effect that he/she has done, by the time of the formal application for the grant delivery by the PI.
- The Co-I must understand thoroughly and exercise the proper research practices in conducting their research, from amongst the contents of both the statement "Code of Conduct for Scientists -Revised Version-" by the Science Council of Japan and the booklet "For the Sound Development of Science -The Attitude of a Conscientious Scientist-" issued by the JSPS, and report the PI to the effect that he/she has done, by the time of the formal application for the grant delivery by the PI.

5. Registration of the Researcher Information in Researchmap

The "Researchmap (https://researchmap.jp/)" is the Japan's largest researcher information database as a general guide to Japanese researchers. The information on the research achievements registered in the Researchmap is ready to be openly available over the Internet and the database itself is linked to the e-Rad, other many university faculty databases and so on, and also the Japanese Government as a whole is going to further utilize the Researchmap.

Furthermore, since the posted information in the Researchmap and/or the database of the Grants-in-Aid for Scientific Research (KAKEN) is to be handled as a reference according to the necessity in the review of the KAKENHI, the registration of the researcher information into the Researchmap is encouraged. In addition, when doing so, make sure to register the "Researcher Number" because the posted information is to be searched with the "Researcher Number" when referring to the posted information in the Researchmap at the review.

< Inquiries >

National Institute of Advanced Industrial Science and Technology

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

Web inquiry form: https://researchmap.jp/public/inquiry/

Telephone: 03-5214-8490

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

6. Cooperation to Review

The Grants-in-Aid for Scientific Research-KAKENHI- adopts a peer review process in which the researchers selected from their own community engaged themselves in the assessment and reviewing of each research proposals on the basis of its scientific merit. The KAKENHI review is conducted every year thanks to the cooperation of more than 7,000 researchers as reviewers. The peer review forms the basis of the autonomy of academic community and plays an important role in ensuring quality of scientific research and its improvement. The review of applications is carried out with the constructive and mutually critical spirit of scientists and based on the purely academic value. It is no exaggeration to say that the KAKENHI review system is indispensable in supporting Japan's scientific research into the future among other research funds.

Therefore JSPS has registered the Principal Investigators' information including their names and affiliated research institutions in the Reviewer Candidate Database (103,000 entries as of FY2018) and has utilized it so as to select the fair and excellent reviewers.

The Principal Investigators are expected to further develop their own research through conducting the adopted research projects and to be a peer reviewer which is the credit and responsibility for the promotion of science. Furthermore the experience as a reviewer leads to further expand their academic perspective. When they are requested to be the reviewer by MEXT or JSPS, their positive cooperation is appreciated.

JSPS requests updating the Principal Investigators' data registered in the Reviewer Candidate Database through their affiliated research institutes every year (usually in April) in order to keep them latest. Cooperation to the data update is also appreciated.

V. Instructions for Grant Recipients

1. Handling of a Research Project that is to be Continued in FY2020 (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. It is in principle not permitted to withdraw a continued KAKENHI project in order to apply for a new KAKENHI grant. If the PI intends to make a major plan change for his/her continued research project, the necessary procedures and handling of the case differ for different research categories, as described below.

(1) Specially Promoted Research

1) A case in which the PI intends to make a major change in the research plan of the continued project

If the applicant intends to make a major change in the research plan of the continued project, he/she needs to submit a revised Research Proposal Document reflecting the intended change. The procedure for submission of the revised Research Proposal Document is the same as for "Preparation of the KAKENHI Application Form (Research Proposal Document)" (see page 56) which the PI should refer to. When preparing the revised Research Proposal Document, the same review section as that at the time of adoption should be selected.

Note that, in this case, the revised Research Proposal Document shall be reviewed afresh. It may happen that the proposed change not be approved. In that case, the provisional grant money to be delivered in FY2020 on will not be delivered.

Here, "major changes" in the research plan in this context include (1) a change in the research objective or a change in the title of the research project, (2) a change in the annual delivery plan of the grant in FY2020 and after (a change by use of the Adjustment Funds is excluded), (3) a change in the overall grant (increase or decrease), or a shortening of the research period, etc. In order to know whether the change the PI intends to make falls under these categories, he/she should contact in advance to the Scientific Research Aid Division II of the Research Program Department via research institution (see "Inquiries" on page 163).

(2) Research Categories Other than Specially Promoted Research

1) A case in which the PI intends to make a major change in the research plan of a continued project

Concerning research fields other than Scientific Research (B/C) (application section "Generative Research Field"), if the PI intends to make a major change in the research plan, he/she needs to submit a revised Research Proposal Document. For specifics concerning the application procedure, the PI should refer to the "Preparation of the KAKENHI Application Form (Research

Proposal Document)" (see page 56). In principle, an application asking for a grant increase for continued research project will not be accepted.

It is reminded that changes in the annual plan of grant spending within the framework allowed for the KAKENHI (Multi-year Fund), the fund-based-grant type of KAKENHI (Partial Multi-year Fund) and KAKENHI (Series of Single-year Grants) using the Adjustment Funds; however, it is not allowed for the "major changes" concerned here. Note that, when a revised Research Proposal Document with a major change in the research plan is submitted, it shall be reviewed afresh. It may happen that the proposed change not be approved. In that case, the provisional grant to be delivered in FY2020 on will not be delivered. Therefore, the PI should consult in advance with the Research Aid Division I of the Research Program Department, in order to know whether the change the PI intends to make falls under these categories (see "Inquiries" on page 163).

2) A case in which a continued research project has proceeded beyond expectation, and the original research goal has already been reached

If the PI of the continued project decides that his/her project proceeded beyond expectation and research goal has already been reached, and he/she intends to pursue a new research development (*) by transferring to another research category, he/she may opt to apply for a new KAKENHI grant, after submitting a "Notice of Completion of Research Project" and a "Statement of Reason" (refer to the supplementary edition "Forms/Procedures for Preparing and Entering a Research Proposal Document") by October 17, 2019 (Thursday). (Documents that arrive later will not be accepted.)

Note that, if the content of the "Statement of Reason" is deemed inappropriate by the review panel, the new KAKENHI proposal is excluded from the review. Even in this case, the grant for the continued research project of which the PI has already filed the "Notice of Completion of Research Project" cannot be reclaimed for FY2020 or after.

(*) Here, the "case in which the PI intends to pursue a new research development by transferring to another research category" refers to such cases as changing over from a continued project in the "Scientific Research (C)" category to a new proposal in the "Scientific Research (B)" category. Changing over to the "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" category is not acceptable.

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, the information such as the name of the

research 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. For a continued research project upon the formal application for a grant delivery or request for payment in every fiscal year, it shall be confirmed through the electronic application system whether the PI and Co-I(s) have taken the research ethics education coursework, etc.

In case that the PI intends to add a new Co-Investigator to the continued project in FY2020, the PI has to obtain a consent to become a Co-Investigator from the researcher via the electronic application system in advance.

In this case, the Co-Investigator-to-be has to complete the followings prior to the formal application for grant delivery and report to the PI what he/she has done. (Or, in case the grant has been already delivered, he/she has to do the followings by the time the "application for approval of change of the Co-Investigator" is submitted by the PI to JSPS).

- Either to read through and learn the teaching materials by oneself concerning the research ethics education coursework such as "For the Sound Development of Science - The Attitude of a Conscientious Scientist" published by the Editorial Committee of the JSPS named "For the Sound Development of Science, the "e-Learning Course on Research Ethics [eL CoRE] or "APRIN e-learning program (eAPRIN)", etc., or to attend a lecture on research ethics conducted by research institutes based on "Guidelines for Responding to Misconduct in Research (adopted by the MEXT on August 26, 2014)
- To understand thoroughly and to exercise the proper research practices in conducting their research, from amongst the contents of both the statement "Code of Conduct for Scientists -Revised Version-" by the Science Council of Japan and the booklet "For the Sound Development of Science -The Attitude of a Conscientious Scientist-" issued by the JSPS

VI. Instructions for Administrative Staff of Research Institution

1. Sharing the Purpose and Aim of the KAKENHI System

The KAKENHI provides a financial support for the creative and pioneering researches based on the original ideas of researchers.

Review of the submitted research proposals is conducted by the peer review process, in which researchers selected from their own community engage themselves in the assessment and reviewing of each research proposals on the basis of its scientific merit. The KAKENHI review process is based on the cooperation of more than 7,000 reviewers every year.

While the KAKENHI review process has been continually improved by, for instance, the introduction of new review methods from the FY2018 grant, the growing needs of KAKENHI have resulted in the number of new applications exceeding one hundred thousand in recent years. The workload on the researchers who are cooperating as reviewers is getting heavier along with the increase in the applicant number. Pressing concern is that if the burden on the reviewers keeps increasing to be excessive, it may seriously affect the reviewers' own research and educational activities, and may also result in deterioration of the quality of the review process. One of the possible factors for the recent increase in the application number may be attributed to the fact that some of research institutions seem to set the KAKENHI application as one of their organizational activity indicators. Application for the KAKENHI grant per se should be made on the basis of the initiative of the researchers. Therefore, such action on the part of research institutions as to set quota to the constituent researchers is undesirable.

All research institutions are requested to share and disseminate within themselves the primary purpose and aim of the KAKENHI system afresh.

2. 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 the 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 (MEXT).

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 a 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 a 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 the KAKENHI, **the research institution should meet the requirements mentioned below**.

< Requirements >

1) **The research institution must authorize the research project for which the KAKENHI is granted, as its proper activity.**
2) **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 A) and B) below. Therefore, they should sufficiently verify these requirements with the research institution.

If JSPS Research Fellows (SPD, PD, RPD, or CPD) meet the following application requirements at their research institutions which they register as their host research institutions, they can also apply only from the host research institutions for below research categories other than the "Grant-in-Aid for JSPS Fellows (JSPS Research Fellow)". (Cf. "Table of Restriction on Parallel Grant Application/Receipt".) In this case, the research institution should operate in a way that it recognizes applications where the research period exceeds the period of JSPS support.

1) Publicly Offered Research within Grant-in-Aid for Scientific Research on Innovative Areas (Research in a Proposed Research Area)
2) Grant-in-Aid for Scientific Research (B/C)
3) Grant-in-Aid for Challenging Research (Exploratory)
4) Grant-in-Aid for Early-Career Scientists
5) Fund for the Promotion of Joint International Research (Fostering Joint International Research (A))

Moreover, research institutions should bear in mind that JSPS Research Fellows (DC) and Overseas JSPS Fellows, graduate students or other students cannot apply, even if they hold a position in which they conduct research activities in the research institution to which they belong or in another research institution.

Researchers who try to apply for KAKENHI should meet following Eligibility to Apply.
(See page 36)

① **At 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 is ineligible.)

② **The individual must not be categorized as ineligible for grant acquisition in FY2020, as a penalty for his/her improper grant spending, fraudulent grant acquisition, or research misconduct.**

KAKENHI employee is generally bound by their employment contract to concentrate on the research work relevant to the 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 working hours on his/her 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. In this case, he/she can apply as PI, or participate to other KAKENHI project(s) as Co-I.

- 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.

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

In addition to the Principal Investigator who tries to apply, the Co-Investigator who makes up the

Project Members should be limited to whom the 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)".

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

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.

*** On the entry of "Date of Ph.D. Acquisition" in the e-Rad system for those applying for the "Early-Career Scientists" category**

From the FY2018 Call for Proposals, the eligibility for application to the "Early-Career Scientists" category, the application requirements is based on "the number of years after acquiring Ph.D." (See page 34). The verification of the eligibility of an applicant will be made by the registered information of the "Date of Ph.D. Acquisition" in the e-Rad system.
The applicant for the "Early-Carrier Scientist" category, will select one of the four classifications for application eligibility given below, when he/she prepares a research proposal document on the KAKENHI Electronic Application System.

(1) An applicant who is less than 8 years after the acquisition of his/her Ph.D. as of April 1, 2020. (A researcher who acquired Ph.D. between April 2, 2012 and the time of proposal submission)
(2) An applicant who does not carry a degree at the time of proposal submission, but is in prospect of acquire Ph.D. by April 1, 2020, *and* is over 40 years of age as of April 1, 2020.
(3) An applicant who is deemed less than 8 years after acquisition of his/her Ph.D. as of April 1, 2020 by exempting (*) the period(s) of childcare leave etc. (prenatal/postpartum break, childcare leave).
(*) Calculate the sum total of the leave periods, round up the total period to the fiscal year unit and then subtract it from the number of years after Ph.D. acquisition.
(Example: If the applicant has taken 6-month childcare leave three times, the fiscal years to be subtracted will be 2 (1 year and 6 months → 2 fiscal years).)
(4) < A transitional measure: approximately for 3 years on and after the call for FY2018> An applicant who does not carry a degree, and is 39 years of age or under, as of April 1, 2020.

An applicant with the eligibility in the classification (1) or (3) must register the "Date of Ph.D. Acquisition" in the e-Rad system at the time of proposal submission. Since the registration to the e-Rad system cannot be made by the applicant him-/herself, the applicant should request the administrative section of his/her institution to register the Date of Ph.D. Acquisition in the e-Rad system in time for the proposal submission. If the applicant has more than one Ph.D. degree, enter the first acquisition date.
For details on registration to the e-Rad system and the eligibility for the "Early-Career Scientists" category, refer to "Regarding the registration work to the Cross-ministerial Research and Development Management System (e-Rad) in connection with the change of the application requirements of Grants-in-Aid for Scientific Research (Early-Career Scientists)" on July 6, 2017.
URL: http://www.mext.go.jp/a_menu/shinkou/hojyo/1362786.htm

(Reference) On "Grant-in-Aid for Research Activity Start-up"

The "Grant-in-Aid for Research Activity Start-up" is aimed at supporting researchers who are not able to apply for this round of call for proposals, such as those who are newly appointed to a research position, and those who are returning from their leave of absence for childcare etc. after the regular submission deadline.
The FY2020 call for Proposals in this category is scheduled for March 2020, and the provisional conditions of the eligibility for application are as follows:

① An individual who could not submit a KAKENHI proposal, because he/she obtained the eligibility for KAKENHI application only after the application deadline (November 7, 2019) to the research categories (*) of which the Call for Proposals is announced in September 2019 by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and by the Japan Society for the Promotion of Science (JSPS).

② An individual who could not submit a KAKENHI proposal to the research categories (*) for which the call for proposals is announced in September 2019 by MEXT and JSPS, because he/she was on a leave of absence for childcare etc. in FY2019.

(For the details, the Application Procedures for the "Grant-in-Aid for Research Activity Start-up" to be announced in March 2020 should be referred to.)
Since the registration to the e-Rad system is handled by the research institution, researchers who may come to fall under the category ① above, should act accordingly by contacting the administrative section of his/her prospective research institution.

(*) Here, the relevant research categories are "Scientific Research on Innovative Areas", "Specially Promoted Research", "Scientific Research", "Challenging Research" and "Early-Career Scientists" among the Grants-in-Aid for Scientific Research for FY2020.

(Note) JSPS Research Fellows (SPD, PD, RPD, or CPD) are not eligible for application to the "Grant-in-Aid for Research Activity Start-up", even if they satisfy the above application conditions.

(4) Obtainment of an ID and a Password for the Researcher Belonging to the Research Institution

In order to apply for KAKENHI, researchers should perform the procedures, by accessing the "Electronic Application System", he/she should retain the ID and the Password for e-Rad.

For this reason, the research institution should verify whether researchers who are scheduling to apply have an ID and a Password, or not.

In the case where there is a researcher who has scheduled to apply and who has neither ID nor Password, the research institution should provide him or her with an ID or password in accordance with the following procedure.

1) 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 "the How to Apply for the Registration on Research Institutions." (URL: https://www.e-rad.go.jp/organ/entry.html) 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.

2) After obtaining an ID and a Password for use of the research institution, the administrative staff in the research institution should provide this ID and password to the researcher who is planning to apply as a Principal Investigator. The ID and password for each researcher is issued through registration of the researcher information in e-Rad. Please refer to the "Manual for Research Institutions to which the Researchers Belong" (the section on the Procedures for Researchers; for Research Institution Office Representatives and for Research Institution Office Workers) for information on the concrete way how to provide them.

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.

(5) Submission of the "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)"

When implementing the adopted research projects with KAKENHI grant the research institutions must comply with the content of the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions (Implementation Standards)" (Adopted by the Minister of MEXT. Revised on February 18, 2014.), 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 by submitting 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)" (hereinafter referred to as "Self-Assessment Checklist on the Improvement of the System").

Therefore, "those research institutions which Principal Investigators and Co-Investigators applying for KAKENHI in FY2020 belong to" and "those research institutions which Principal

Investigators and Co-Investigators continuing research projects using KAKENHI are scheduled to belong to in FY2020" **must submit in accordance with the procedure and forms posted on the MEXT website (URL: http://www.mext.go.jp/a_menu/kansa/houkoku/1324571.htm) the "Self-Assessment Checklist on the Improvement of the System" to the Office of Research Funding Administration, Promotion Policy Division, Research Promotion Bureau of the MEXT by December 2, 2019 (Monday) via e-Rad**. If the "Self-Assessment Checklist on the Improvement of the System" has already been submitted in April 2019 or later, it is not necessary to submit it again.

Researchers affiliated to a research institution which has not turned in the said checklist cannot receive the official grant decision.

Note: When using e-Rad, an ID and a password for the research institution are necessary.

< Inquiries >

(Concerning forms and submission of the Guidelines on Public Research Funds)

Office of Research Funding Administration, Promotion Policy Division, Research Promotion Bureau, 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 (e-Rad) 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: https://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 the "Guidelines for Responding to Research Misconduct"

When implementing the research projects with KAKENHI grant the research institutions must comply with the content of the "Guidelines for Responding to Research Misconduct" (Adopted by the Minister of MEXT on 26 August 2014) and submit a "Checklist Pertaining to the Current Status based on the Guidelines for Responding to Research Misconduct" (hereinafter referred to as "Checklist on the Research Misconduct") .

Therefore “those research institutions which the Principal Investigators and Co-investigators applying for KAKENHI in FY2020 belong to” and “those research institutions which Principal Investigators and Co-Investigators continuing research projects using KAKENHI are scheduled to belong to in FY2020” **must submit in accordance with the procedure and forms posted on the MEXT website (URL: http://www.mext.go.jp/a_menu/jinzai/fusei/1415332.htm) the “Checklist on the Research Misconduct” to the Office for Research Integrity Promotion, Human Resources Policy Division, Science and Technology Policy Bureau of the MEXT by September 30, 2019 (Monday) via e-Rad.** If the “Checklist on the Research Misconduct” has already been submitted in April 2019 or later it is not necessary to submit it again.
Researchers affiliated to a research institution which has not turned in the said checklist cannot receive the official grant decision.

Note: Please note that while the “Checklist on the Research Misconduct” is the same in using e-Rad for submission with the “Self-Assessment Checklist on the Improvement of the System”, the submission destination is different. Both checklists must be submitted.

Note: When using e-Rad, an ID and a password for the research institution are necessary.

< Inquiries >

(Concerning the format and submission of Guidelines for Responding to Research Misconduct)

* Differs from the contact information for the Guidelines on Public Research Funds.

Office for Research Integrity Promotion, Human Resources Policy Division,
Science and Technology Policy Bureau, MEXT
e-mail: kiban@mext.go.jp
URL：http://www.mext.go.jp/a_menu/jinzai/fusei/index.htm

(Concerning the research institute e-Rad registration)

The Helpdesk of the Cross-ministerial Research and Development Management System (e-Rad) 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: https://www.e-rad.go.jp/organ/entry.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)
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 Coursework Based on the "Guidelines on Research Misconduct", etc.

Principal Investigators and Co-Investigators taking part in a new research project have to complete followings before the formal application for grant delivery.

- Either to read through and learn the teaching materials by oneself concerning the research ethics education coursework such as "For the Sound Development of Science -The Attitude of a Conscientious Scientist-" (Editing Committee "For the Sound Development of Science", JSPS), the "e-Learning Course on Research Ethics (eL CoRE)", the "APRIN e-learning program (eAPRIN)", etc., or to attend a lecture on research ethics conducted by research institutions based on the "Guidelines on Research Misconduct."
- To understand thoroughly and to exercise the proper research practices in conducting their research, from amongst the contents of both the Statement "Code of Conduct for Scientists -Revised Version-" by the Science Council of Japan and the booklet "For the Sound Development of Science -The Attitude of a Conscientious Scientist-" issued by JSPS

To that end, each research institution is requested to disseminate broadly what the researchers should consider, in conducting of their researches as well as carrying out an ethics education in research training session based on the Guidelines on 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

3. 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 and the Co-Investigator(s) listed in the Research Proposal Document are researchers who meet the requirements that are stipulated in the Application Procedures (see page 36), and also whether the researcher information is registered in e-Rad as "Eligible to Apply for KAKENHI".

Moreover, it should be verified certainly that they must not be categorized as ineligible for grant acquisition in FY2020 in KAKENHI and other competitive funding, as a penalty for their improper grant spending, fraudulent grant acquisition, or research misconduct.

(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 with the Principal Investigator

The research institution should verify whether the Principal Investigator and the Co-Investigator(s) who have been listed in the Research Proposal Document have completed the Research Proposal Document, after confirming the description in the column "III. Call for Proposals" in this Application Procedures for Grants-in-Aid for Scientific Research.

(4) The Process of the Participation of Co-Investigator in Project Members

A research institution should conduct the process such as giving a consent with regard to the researcher of the research institution becoming a Co-Investigator via the electronic application system.

When the information on the Co-Investigator-to-be is presented to the research institution to which the Co-Investigator-to-be belongs via the electronic application system after the researcher who was requested to become a Co-Investigator from the Principal Investigator gave a consent to

do so in the electronic application system, then the research institution need to give a consent to do so, etc. as well.

Since the Principal Investigator cannot submit (send) the Research Proposal Document to his/her research institution until the Co-Investigators-to-be' research institution gives a consent to do so, etc., the research institution should proceed with the consent process in time for the deadline of the submission.

* Please refer to the Kakenhi (Grants-in-Aid for Scientific Research) Electronic Application System Operation Manual (URL: https://www-shinsei.jsps.go.jp/kaken/topkakenhi/shinsei_ka.html) for the detail information such as operating environment, operating method, and so on.

(5) Verification of the Application Forms

It should be verified whether the application format is in conformity with the prescribed format. As for the forms to be uploaded, in particular, verify not only the total number of pages but also the numbers of pages instructed for each column is met. For example neither following case 1 in which the total number of pages is different nor following case 2 in which the total number of pages is same but the numbers of pages instructed for each column are different are inconformity with prescribed format.

(Example) Forms to be Uploaded : Scientific Research (A) (Form S-12)

Unit: page(s)

	Number of page(s) of each column					Total Number of Pages
	"Research Objectives, Research Method, etc." Column	"Research Development Leading to Conception of the Present Research Proposal, etc." Column	"Applicant's Ability to Conduct the Research and the Research Environment" Column	"Issues Relevant to Human Right Protection and Legal Compliance" Column	"Items to be Entered When New Application is Made in the Fiscal Year Previous to the Final Year of the Research Period of an On-Going KAKENHI Project" Column	
Correct Number of Pages	**5**	**1**	**2**	**1**	**1**	**10**
Incorrect Number of Case 1	4	1	2	1	1	9
Incorrect Number of Case 2	4	2	2	1	1	10

The format and other matters of the application forms for each research category are as follows.

<table>
<tr><td rowspan="2">Research category
Application Section</td><td colspan="3">Research Proposal Document</td></tr>
<tr><td>Items to be entered in the Website
(First half)</td><td>Forms to be uploaded
(File ID)</td><td>Items to be entered in the Website
(Second half)</td></tr>
<tr><td>Specially Promoted Research (New Proposal)</td><td rowspan="11">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.)</td><td>S-1 (1)
S-1 (2)
S-1 (3)
Items to be entered in the Website (Second part) will be inserted between S-1 (2) and (3)</td><td rowspan="11">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.)</td></tr>
<tr><td>Specially Promoted Research (Continued)</td><td>S-2</td></tr>
<tr><td>Scientific Research (S)</td><td>S-11</td></tr>
<tr><td>Scientific Research (A) Application Section</td><td>S-12</td></tr>
<tr><td>Scientific Research (B) Application Section</td><td>S-13</td></tr>
<tr><td>Scientific Research (C) Application Section</td><td>S-14</td></tr>
<tr><td>Challenging Research (Pioneering)</td><td>S-41-1
S-41-2</td></tr>
<tr><td>Challenging Research (Exploratory)</td><td>S-42-1
S-42-2</td></tr>
<tr><td>Early-Career Scientists</td><td>S-21</td></tr>
<tr><td>Continued Research Project (in the case of a major change in the research project)</td><td>S-99</td></tr>
</table>

4. 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:

November 7, 2019 (Thursday), 4:30 pm (This deadline should be strictly observed.)

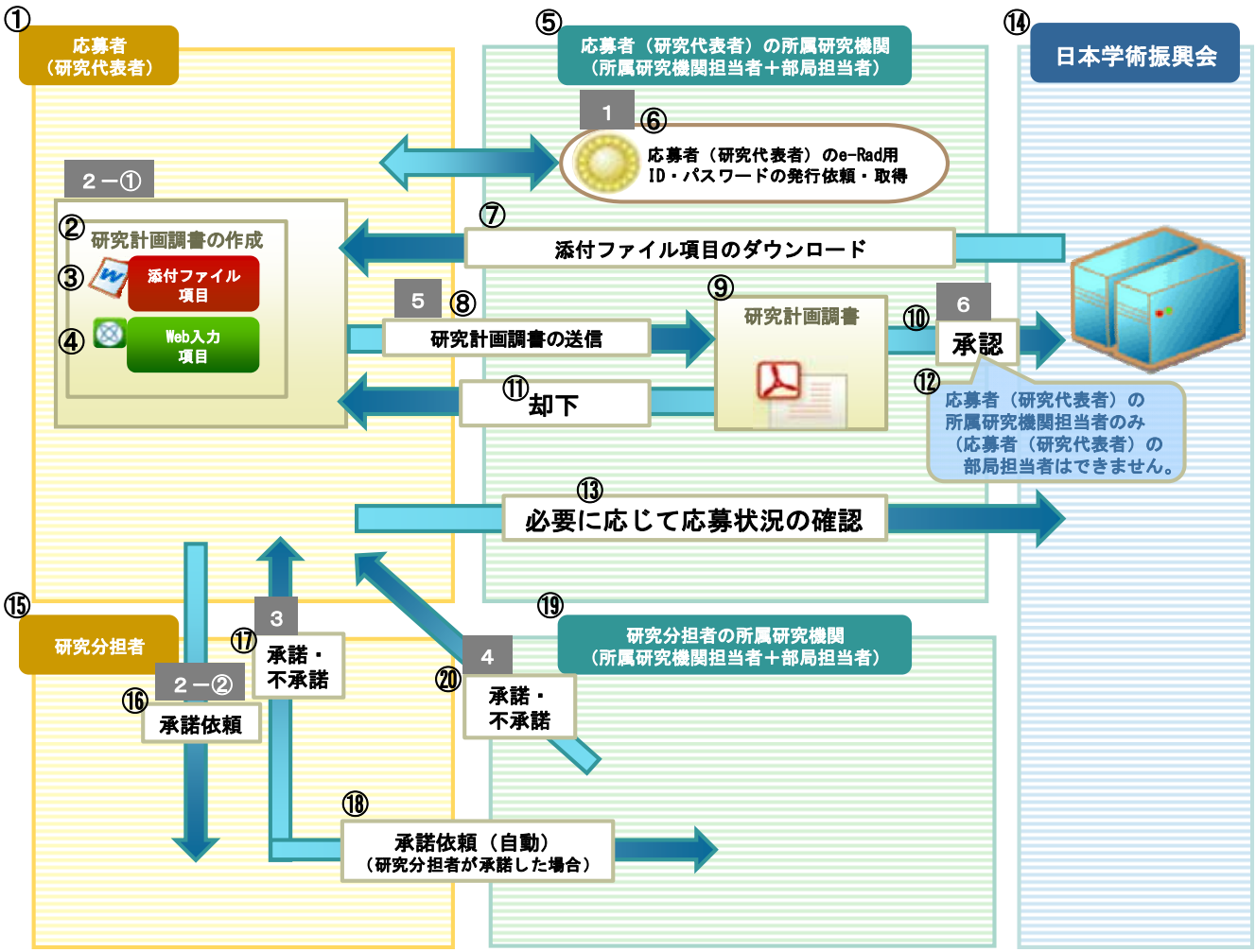
Note 1: Research Proposal Document that is submitted after this deadline will not be accepted for any reason. Therefore, the documents should be submitted well in advance.

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: https://www-shinsei.jsps.go.jp/kaken/topkakenhi/shinsei_ka.html

Outline of the Electronic Application Procedures



① Applicant (Principal Investigator)
② Preparation of Research Proposal Document
③ Forms to be uploaded
④ Items to be entered in the website
⑤ The research institution to which the applicant (Principal Investigator) belongs (Administrative staff in the research institution + Administrative staff in the department)
⑥ Request for issue and acquisition of the applicant's (Principal Investigators') ID and password for e-Rad
⑦ Downloading of the forms to be uploaded and the Letter of Intent
⑧ Sending the Research Proposal Document
⑨ Research Proposal Document
⑩ Approval
⑪ Rejection
⑫ Only the administrative staff in the research institution to which the applicant (Principal Investigator) belongs (The administrative staff in the department of the applicant (Principal Investigator) cannot make an approval.)
⑬ Confirmation of the state of the application as necessary
⑭ JSPS
⑮ Co-Investigator
⑯ Request for consent

⑰ Consent/Dissent
⑱ Request automatically for consent (in case the Co-Investigator gave a consent)
⑲ The research institution to which the Co-Investigator belongs (Administrative staff in the research institution + Administrative staff in the department)
⑳ Consent/Dissent

[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 file. In addition, the applicant requests the overseas joint researcher to confirm the Letter of Intent and give a signature on it.

2 - (2) The applicant enters the researcher whom the applicant wants to add to the project members and requests his/her to give a consent to become a Co-Investigator in the "Project Members List" column of the "Application Information Input" screen in the electronic application system.

[The researcher who is requested to become a Co-Investigator]

3 The researcher is requested to participate in the project members as a Co-Investigator from the applicant (Principal Investigator) via the electronic application system and then the Co-Investigator selects "Consent" or "Dissent" after confirming the contents of the consent.

[The administrative staff in the research institution to which the Co-Investigator belongs]

4 When the Co-Investigator gave a consent in the electronic application system, the research institution to which the Co-Investigator belongs selects "Consent/Confirm" or "Dissent".

[The applicant (Principal Investigator)]

5 If there are no mistakes in the Research Proposal Document (PDF file) and Letter of Intent the applicant prepared, he or she submits the Research Proposal Document (PDF file) to the research institution to which he or she belongs, by performing the "completed and submission" process. Note that the applicant cannot submit (send) the Research Proposal Document until he/she obtains the consents from all the Co-Investigators and Co-Investigators' research institutions listed in the Project Members List of the Research Proposal Document.

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

6 By approving the Research Proposal Document (PDF file), etc. 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), etc. 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.

VII. 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
Advanced Technology Support Platform Program	Platform of Advanced Bioimaging Support (*)	National Institute for Physiological Sciences National Institute for Basic Biology	Advanced technical support and user training for : ・ Light microscopy ・ Electron microscopy ・ Magnetic resonance imaging ・ Imaging analysis
	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
	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
Research Platform Resource Support Program	Platform for Integration and Sophistication of Image Information on Area Studies	National Museum of Ethnology	Digital Picture Library for Area Studies
	Supply Platform of Short-lived Radioisotopes for Fundamental Research	Research Center for Nuclear Physics, Osaka University	Supply short-lived radioisotopes produced by accelerators for fundamental research in various scientific fields.
	Platform of Supporting Cohort Study and Biospecimen Analysis (*)	The Institute of Medical Science The University of Tokyo	Support for cohort study using bioresources, Support for maintaining and utilizing human brain resources, 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：http://www.mext.go.jp/a_menu/shinkou/hojyo/1367903.htm

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

○"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

(Revised version of the March 31, 2015 agreement of the related ministries liaison conference on competitive funds on April 20, 2017)

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)*" (Adopted by the Minister of State for Science and Technology Policy and the Experts of the Council for Science and Technology Policy on June 19, 2010) 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 (URL: https://biosciencedbc.jp/) 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: https://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) (URL: http://www.nibb.ac.jp/ibbp/) 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.

It is recommended to utilize the already improved resources of NBRP from the viewpoint such as efficient implementation of research.

(*) 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. 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: http://www.meti.go.jp/policy/anpo/

< 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

Attached Table 2

Grants-in-Aid for Scientific Research-KAKENHI-

“Review Section Table”

December 22, 2016

Subdivision on Research Grant Screening Section of the Academic Deliberation
in the Subdivision on Science, Council for Science and Technology

About the Review Section Table

○The Review Section Table is classified by sections for the KAKENHI's review criteria. Applicants should select a review section that is most suitable for their own research proposal.

○There are three review sections: Basic, Medium-sized and Broad. The Review Section Table contains 1) Overview, 2) Table for Basic Section, 3) Table for Medium-sized and Broad Sections. Looking at the Overview, the applicants can understand an overall picture of sections. In addition, check the each Review Section Table for the detailed contents of each section and select a review section for their research proposal.

○The Basic Section is the fundamental unit. The Basic Section applies to "Grant-in-Aid for Scientific Research (B/C) (application section "General")" and for "Grant-in-Aid for Early-Career Scientists". Each item of Basic Section offers some examples related research contents. They help applicants understand the concrete contents. However, it does not exclude proposal of contents other than if applicants' contents are not included the examples.

○The Medium-sized Section applies to "Grant-in-Aid for Scientific Research (A) (application section "General")" and "Grant-in-Aid for Challenging Research (Pioneering/Exploratory)". Several Basic Sections are attached to indicate the scope of review for the Middle-sized Section. However, it does not exclude proposal of contents other than the Basic Sections included in the Middle-sized Section. In addition, some items of Basic Sections belong to multiple Middle-sized Sections, so applicants can select a Middle-sized Section that seems to be most suitable for their own research proposal.

○The Broad Section applies to "Grant-in-Aid for Scientific Research (S)".
Several Medium-sized Sections are attached to indicate the scope of review of the Broad Section. However, it does not exclude proposal of contents other than the Medium-sized Sections included in the Broad Section. Some items of Medium-sized Sections belong to several Broad Sections, so applicants can select a Broad Section that seems to be most suitable for their own research proposal.

○To respond flexibly to research diversity in the review process, application in the Basic, Medium-sized and Broad Sections is made in the following formats: Basic Section: "○○ -related"; Medium-sized Section: "○○ and related fields," and Broad Section: listed alphabetically.

The Review Section Table (Overview)

Broad Section A		
Medium-sized Section 1 : Philosophy, art, and related fields		
	Basic Section	
	01010	Philosophy and ethics-related
	01020	Chinese philosophy, Indian philosophy and Buddhist philosophy-related
	01030	Religious studies-related
	01040	History of thought-related
	01050	Aesthetics and art studies-related
	01060	History of arts-related
	01070	Theory of art practice-related
	01080	Sociology of science, history of science and technology-related
	90010	Design-related
Medium-sized Section 2 : Literature, linguistics, and related fields		
	Basic Section	
	02010	Japanese literature-related
	02020	Chinese literature-related
	02030	English literature and literature in the English language-related
	02040	European literature-related
	02050	Literature in general-related
	02060	Linguistics-related
	02070	Japanese linguistics-related
	02080	English linguistics-related
	02090	Japanese language education-related
	02100	Foreign language education-related
	90020	Library and information science, humanistic and social informatics-related
Medium-sized Section 3 : History, archaeology, museology, and related fields		
	Basic Section	
	03010	Historical studies in general-related
	03020	Japanese history-related
	03030	History of Asia and Africa-related
	03040	History of Europe and America-related
	03050	Archaeology-related
	03060	Cultural assets study-related
	03070	Museology-related
Medium-sized Section 4 : Geography, cultural anthropology, folklore, and related fields		
	Basic Section	
	04010	Geography-related
	04020	Human geography-related
	04030	Cultural anthropology and folklore-related
	80010	Area studies-related
	80020	Tourism studies-related
	80030	Gender studies-related

Broad Section A (continued)		
Medium-sized Section 5 : Law and related fields		
	Basic Section	
	05010	Legal theory and history-related
	05020	Public law-related
	05030	International law-related
	05040	Social law-related
	05050	Criminal law-related
	05060	Civil law-related
	05070	New fields of law-related
Medium-sized Section 6 : Political science and related fields		
	Basic Section	
	06010	Politics-related
	06020	International relations-related
	80010	Area studies-related
	80030	Gender studies-related
Medium-sized Section 7 : Economics, business administration, and related fields		
	Basic Section	
	07010	Economic theory-related
	07020	Economic doctrines and economic thought-related
	07030	Economic statistics-related
	07040	Economic policy-related
	07050	Public economics and labor economics-related
	07060	Money and finance-related
	07070	Economic history-related
	07080	Business administration-related
	07090	Commerce-related
	07100	Accounting-related
	80020	Tourism studies-related
Medium-sized Section 8 : Sociology and related fields		
	Basic Section	
	08010	Sociology-related
	08020	Social welfare-related
	08030	Family and consumer sciences, and culture and living-related
	80020	Tourism studies-related
	80030	Gender studies-related

Broad Section A (continued)		
Medium-sized Section 9 : Education and related fields		
	Basic Section	
	09010	Education-related
	09020	Sociology of education-related
	09030	Childhood and nursery/pre-school education-related
	09040	Education on school subjects and primary/ secondary education-related
	09050	Tertiary education-related
	09060	Special needs education-related
	09070	Educational technology-related
	09080	Science education-related
	02090	Japanese language education-related
	02100	Foreign language education-related
Medium-sized Section 10 : Psychology and related fields		
	Basic Section	
	10010	Social psychology-related
	10020	Educational psychology-related
	10030	Clinical psychology-related
	10040	Experimental psychology-related
	90030	Cognitive science-related

Broad Section B		
Medium-sized Section 11 : Algebra, geometry, and related fields		
	Basic Section	
	11010	Algebra-related
	11020	Geometry-related
Medium-sized Section 12 : Analysis, applied mathematics, and related fields		
	Basic Section	
	12010	Basic analysis-related
	12020	Mathematical analysis-related
	12030	Basic mathematics-related
	12040	Applied mathematics and statistics-related
Medium-sized Section 13 : Condensed matter physics and related fields		
	Basic Section	
	13010	Mathematical physics and fundamental theory of condensed matter physics-related
	13020	Semiconductors, optical properties of condensed matter and atomic physics-related
	13030	Magnetism, superconductivity and strongly correlated systems-related
	13040	Biophysics, chemical physics and soft matter physics-related
Medium-sized Section 14 : Plasma science and related fields		
	Basic Section	
	14010	Fundamental plasma-related
	14020	Nuclear fusion-related
	14030	Applied plasma science-related
	80040	Quantum beam science-related
Medium-sized Section 15 : Particle-, nuclear-, astro-physics, and related fields		
	Basic Section	
	80040	Quantum beam science-related
	15010	Theoretical studies related to particle-, nuclear-, cosmic ray and astro-physics
	15020	Experimental studies related to particle-, nuclear-, cosmic ray and astro-physics
Medium-sized Section 16 : Astronomy and related fields		
	Basic Section	
	16010	Astronomy-related
Medium-sized Section 17 : Earth and planetary science and related fields		
	Basic Section	
	17010	Space and planetary sciences-related
	17020	Atmospheric and hydrospheric sciences-related
	17030	Human geosciences-related
	17040	Solid earth sciences-related
	17050	Biogeosciences-related

Broad Section C

Medium-sized Section 18 : Mechanics of materials, production engineering, design engineering, and related fields

Basic Section	
18010	Mechanics of materials and materials-related
18020	Manufacturing and production engineering-related
18030	Design engineering-related
18040	Machine elements and tribology-related

Medium-sized Section 19 : Fluid engineering, thermal engineering, and related fields

Basic Section	
19010	Fluid engineering-related
19020	Thermal engineering-related

Medium-sized Section 20 : Mechanical dynamics, robotics, and related fields

Basic Section	
20010	Mechanics and mechatronics-related
20020	Robotics and intelligent system-related

Medium-sized Section 21 : Electrical and electronic engineering and related fields

Basic Section	
21010	Power engineering-related
21020	Communication and network engineering-related
21030	Measurement engineering-related
21040	Control and system engineering-related
21050	Electric and electronic materials-related
21060	Electron device and electronic equipment-related

Medium-sized Section 22 : Civil engineering and related fields

Basic Section	
22010	Civil engineering material, execution and construction management-related
22020	Structure engineering and earthquake engineering-related
22030	Geotechnical engineering-related
22040	Hydroengineering-related
22050	Civil engineering plan and transportation engineering-related
22060	Environmental systems for civil engineering-related

Medium-sized Section 23 : Architecture, building engineering, and related fields

Basic Section	
23010	Building structures and materials-related
23020	Architectural environment and building equipment-related
23030	Architectural planning and city planning-related
23040	Architectural history and design-related
90010	Design-related

Medium-sized Section 24 : Aerospace engineering, marine and maritime engineering, and related fields

Basic Section	
24010	Aerospace engineering-related
24020	Marine engineering-related

Medium-sized Section 25 : Social systems engineering, safety engineering, disaster prevention engineering, and related fields

Basic Section	
25010	Social systems engineering-related
25020	Safety engineering-related
25030	Disaster prevention engineering-related

Broad Section D

Medium-sized Section 26 : Materials engineering and related fields

Basic Section	
26010	Metallic material properties-related
26020	Inorganic materials and properties-related
26030	Composite materials and interfaces-related
26040	Structural materials and functional materials-related
26050	Material processing and microstructure control-related
26060	Metals production and resources production-related

Medium-sized Section 27 : Chemical engineering and related fields

Basic Section	
27010	Transport phenomena and unit operations-related
27020	Chemical reaction and process system engineering-related
27030	Catalyst and resource chemical process-related
27040	Biofunction and bioprocess engineering-related

Medium-sized Section 28 : Nano/micro science and related fields

Basic Section	
28010	Nanometer-scale chemistry-related
28020	Nanostructural physics-related
28030	Nanomaterials-related
28040	Nanobioscience-related
28050	Nano/micro-systems-related

Medium-sized Section 29 : Applied condensed matter physics and related fields

Basic Section	
29010	Applied physical properties-related
29020	Thin film/surface and interfacial physical properties-related
29030	Applied condensed matter physics-related

Medium-sized Section 30 : Applied physics and engineering and related fields

Basic Section	
30010	Crystal engineering-related
30020	Optical engineering and photon science-related

Medium-sized Section 31 : Nuclear engineering, earth resources engineering, energy engineering, and related fields

Basic Section	
31010	Nuclear engineering-related
31020	Earth resource engineering, Energy sciences-related

Medium-sized Section 90 : Biomedical engineering and related fields

Basic Section	
90110	Biomedical engineering-related
90120	Biomaterials-related
90130	Medical systems-related
90140	Medical technology assessment-related
90150	Medical assistive technology-related

Broad Section E

Medium-sized Section 32: Physical chemistry, functional solid state chemistry, and related fields

Basic Section	
32010	Fundamental physical chemistry-related
32020	Functional solid state chemistry-related

Medium-sized Section 33: Organic chemistry and related fields

Basic Section	
33010	Structural organic chemistry and physical organic chemistry-related
33020	Synthetic organic chemistry-related

Medium-sized Section 34: Inorganic/coordination chemistry, analytical chemistry, and related fields

Basic Section	
34010	Inorganic/coordination chemistry-related
34020	Analytical chemistry-related
34030	Green sustainable chemistry and environmental chemistry-related

Medium-sized Section 35: Polymers, organic materials, and related fields

Basic Section	
35010	Polymer chemistry-related
35020	Polymer materials-related
35030	Organic functional materials-related

Medium-sized Section 36 : Inorganic materials chemistry, energy-related chemistry, and related fields

Basic Section	
36010	Inorganic compounds and inorganic materials chemistry-related
36020	Energy-related chemistry

Medium-sized Section 37: Biomolecular chemistry and related fields

Basic Section	
37010	Bio-related chemistry
37020	Chemistry and chemical methodology of biomolecules-related
37030	Chemical biology-related

Broad Section F

Medium-sized Section 38 : Agricultural chemistry and related fields

Basic Section	
38010	Plant nutrition and soil science-related
38020	Applied microbiology-related
38030	Applied biochemistry-related
38040	Bioorganic chemistry-related
38050	Food sciences-related
38060	Applied molecular and cellular biology-related

Medium-sized Section 39: Agricultural and environmental biology and related fields

Basic Section	
39010	Science in plant genetics and breeding-related
39020	Crop production science-related
39030	Horticultural science-related
39040	Plant protection science-related
39050	Insect science-related
39060	Conservation of biological resources-related
39070	Landscape science-related

Medium-sized Section 40: Forestry and forest products science, applied aquatic science, and related fields

Basic Section	
40010	Forest science-related
40020	Wood science-related
40030	Aquatic bioproduction science-related
40040	Aquatic life science-related

Medium-sized Section 41: Agricultural economics and rural sociology, agricultural engineering, and related fields

Basic Section	
41010	Agricultural and food economics-related
41020	Rural sociology and agricultural structure-related
41030	Rural environmental engineering and planning-related
41040	Agricultural environmental engineering and agricultural information engineering-related
41050	Environmental agriculture-related

Medium-sized Section 42: Veterinary medical science, animal science, and related fields

Basic Section	
42010	Animal production science-related
42020	Veterinary medical science-related
42030	Animal life science-related
42040	Laboratory animal science-related

Broad Section G

Medium-sized Section 43 : Biology at molecular to cellular levels, and related fields

Basic Section	
43010	Molecular biology-related
43020	Structural biochemistry-related
43030	Functional biochemistry-related
43040	Biophysics-related
43050	Genome biology-related
43060	System genome science-related

Medium-sized Section 44 : Biology at cellular to organismal levels, and related fields

Basic Section	
44010	Cell biology-related
44020	Developmental biology-related
44030	Plant molecular biology and physiology-related
44040	Morphology and anatomical structure-related
44050	Animal physiological chemistry, physiology and behavioral biology-related

Medium-sized Section 45 : Biology at organismal to population levels and anthropology, and related fields

Basic Section	
45010	Genetics-related
45020	Evolutionary biology-related
45030	Biodiversity and systematics-related
45040	Ecology and environment-related
45050	Physical anthropology-related
45060	Applied anthropology-related

Medium-sized Section 46 : Neuroscience and related fields

Basic Section	
46010	Neuroscience-general-related
46020	Anatomy and histopathology of nervous system-related
46030	Function of nervous system-related

Broad Section H

Medium-sized Section 47 : Pharmaceutical sciences and related fields

Basic Section	
47010	Pharmaceutical chemistry and drug development sciences-related
47020	Pharmaceutical analytical chemistry and physicochemistry-related
47030	Pharmaceutical hygiene and biochemistry-related
47040	Pharmacology-related
47050	Environmental and natural pharmaceutical resources-related
47060	Clinical pharmacy-related

Medium-sized Section 48 : Biomedical structure and function and related fields

Basic Section	
48010	Anatomy-related
48020	Physiology-related
48030	Pharmacology-related
48040	Medical biochemistry-related

Medium-sized Section 49 : Pathology, infection/immunology, and related fields

Basic Section	
49010	Pathological biochemistry-related
49020	Human pathology-related
49030	Experimental pathology-related
49040	Parasitology-related
49050	Bacteriology-related
49060	Virology-related
49070	Immunology-related

Broad Section I		
Medium-sized Section 50 : Oncology and related fields		
	Basic Section	
	50010	Tumor biology-related
	50020	Tumor diagnostics and therapeutics-related
Medium-sized Section 51 : Brain sciences and related fields		
	Basic Section	
	51010	Basic brain sciences-related
	51020	Cognitive and brain science-related
	51030	Pathophysiologic neuroscience-related
Medium-sized Section 52 : General internal medicine and related fields		
	Basic Section	
	52010	General internal medicine-related
	52020	Neurology-related
	52030	Psychiatry-related
	52040	Radiological sciences-related
	52050	Embryonic medicine and pediatrics-related
Medium-sized Section 53 : Organ-based internal medicine and related fields		
	Basic Section	
	53010	Gastroenterology-related
	53020	Cardiology-related
	53030	Respiratory medicine-related
	53040	Nephrology-related
	53050	Dermatology-related
Medium-sized Section 54 : Internal medicine of the bio-information integration and related fields		
	Basic Section	
	54010	Hematology and medical oncology-related
	54020	Connective tissue disease and allergy-related
	54030	Infectious disease medicine-related
	54040	Metabolism and endocrinology-related
Medium-sized Section 55 : Surgery of the organs maintaining homeostasis and related fields		
	Basic Section	
	55010	General surgery and pediatric surgery-related
	55020	Digestive surgery-related
	55030	Cardiovascular surgery-related
	55040	Respiratory surgery-related
	55050	Anesthesiology-related
	55060	Emergency medicine-related
Medium-sized Section 56 : Surgery related to the biological and sensory functions and related fields		
	Basic Section	
	56010	Neurosurgery-related
	56020	Orthopedics-related
	56030	Urology-related
	56040	Obstetrics and gynecology-related
	56050	Otorhinolaryngology-related
	56060	Ophthalmology-related
	56070	Plastic and reconstructive surgery-related

Broad Section I (continued)		
Medium-sized Section 57 : Oral science and related fields		
	Basic Section	
	57010	Oral biological science-related
	57020	Oral pathobiological science-related
	57030	Conservative dentistry-related
	57040	Regenerative dentistry and dental engineering-related
	57050	Prosthodontics-related
	57060	Surgical dentistry-related
	57070	Developmental dentistry-related
	57080	Social dentistry-related
Medium-sized Section 58 : Society medicine, nursing, and related fields		
	Basic Section	
	58010	Medical management and medical sociology-related
	58020	Hygiene and public health-related: including laboratory approach
	58030	Hygiene and public health-related: excluding laboratory approach
	58040	Forensics medicine-related
	58050	Fundamental of nursing-related
	58060	Clinical nursing-related
	58070	Lifelong developmental nursing-related
	58080	Gerontological nursing and community health nursing-related
Medium-sized Section 59 : Sports sciences, physical education, health sciences, and related fields		
	Basic Section	
	59010	Rehabilitation science-related
	59020	Sports sciences-related
	59030	Physical education, and physical and health education-related
	59040	Nutrition science and health science-related
Medium-sized Section 90 : Biomedical engineering and related fields		
	Basic Section	
	90110	Biomedical engineering-related
	90120	Biomaterials-related
	90130	Medical systems-related
	90140	Medical technology assessment-related
	90150	Medical assistive technology-related

Broad Section J

Medium-sized Section 60 : Information science, computer engineering, and related fields

Basic Section	
60010	Theory of informatics-related
60020	Mathematical informatics-related
60030	Statistical science-related
60040	Computer system-related
60050	Software-related
60060	Information network-related
60070	Information security-related
60080	Database-related
60090	High performance computing-related
60100	Computational science-related

Medium-sized Section 61 : Human informatics and related fields

Basic Section	
61010	Perceptual information processing-related
61020	Human interface and interaction-related
61030	Intelligent informatics-related
61040	Soft computing-related
61050	Intelligent robotics-related
61060	Kansei informatics-related
90010	Design-related
90030	Cognitive science-related

Medium-sized Section 62 : Applied informatics and related fields

Basic Section	
62010	Life, health and medical informatics-related
62020	Web informatics and service informatics-related
62030	Learning support system-related
62040	Entertainment and game informatics-related
90020	Library and information science, humanistic and social informatics-related

Broad Section K

Medium-sized Section 63 : Environmental analyses and evaluation and related fields

Basic Section	
63010	Environmental dynamic analysis-related
63020	Radiation influence-related
63030	Chemical substance influence on environment-related
63040	Environmental impact assessment-related

Medium-sized Section 64 : Environmental conservation measure and related fields

Basic Section	
64010	Environmental load and risk assessment-related
64020	Environmental load reduction and remediation-related
64030	Environmental materials and recycle technology-related
64040	Social-ecological systems-related
64050	Sound material-cycle social systems-related
64060	Environmental policy and social systems-related

The Review Section Table (Table for Basic Section)

When selecting a review section, applicants should first acquire an overall picture of the review sections based on the Review Section Table (Overview). In addition, check the Review Section Table (Table for Basic Section) for the detailed contents of each section and select a review section for their research proposal.

Also, some items of Basic Section may be presented in plural Medium-sized and Broad Sections. The items of Basic Section presented in plural Medium-sized Section are 9 and 3 items among 9 are presented in plural Medium-sized and Broad Sections (as shown below).

In addition, five other Basic Sections (90110-90150) may be presented in only one Medium-sized Section and two Broad Sections.

When selecting a Medium-sized or Broad Section, applicants should refer to the Attachment 2 “Review Section Table (Table for Medium-sized and Broad Sections), and select the one that seems to be most suitable for their own research proposal.

【Basic sections may be presented in plural Medium-sized and Broad Section】

Basic Section Item	Basic Section Description	Medium-sized Sections corresponding Basic Sections	Broad Sections corresponding Basic Sections
02090	Japanese language education-related	２，９	A
02100	Foreign language education-related	２，９	A
80010	Area studies-related	４，６	A
80020	Tourism studies-related	４，７，８	A
80030	Gender studies-related	４，６，８	A
80040	Quantum beam science-related	１４，１５	B
90010	Design-related	１，２３，６１	A，C，J
90020	Library and information science, humanistic and social informatics-related	２，６２	A，J
90030	Cognitive science-related	１０，６１	A，J
90110	Biomedical engineering-related	９０	D，I
90120	Biomaterials-related	９０	D，I
90130	Medical systems-related	９０	D，I
90140	Medical technology assessment-related	９０	D，I
90150	Medical assistive technology-related	９０	D，I

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
01010	Philosophy and ethics-related Philosophy in general, Ethics in general, Western philosophy, Western ethics, Japanese philosophy, Japanese ethics, Applied ethics, etc.	1	A
01020	Chinese philosophy, Indian philosophy and Buddhist philosophy-related Chinese philosophy/thought, Indian philosophy/thought, Buddhist philosophy, Bibliography, Philology, etc.	1	A
01030	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.	1	A
01040	History of thought-related History of thought in general, History of Western thought, History of Eastern thought, History of Japanese thought, etc.	1	A
01050	Aesthetics and art studies-related Philosophy of art, Aesthetics, Miscellaneous art studies, etc.	1	A
01060	History of arts-related Japanese art, Eastern art, Western art, Contemporary art, Craft, Design, Architecture, Costume, Photography, etc.	1	A
01070	Theory of art practice-related Art expression, Arts management, Art policy, Art production, etc.	1	A
01080	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.	1	A
02010	Japanese literature-related Japanese literature in general, Ancient literature, Medieval literature, Chinese classics in Japan, Bibliography, Philology, Premodern literature, Modern literature, Contemporary literature, Literary theory, etc.	2	A
02020	Chinese literature-related Chinese literature, Bibliography, Philology, Literary theory, etc.	2	A
02030	English literature and literature in the English language-related English literature, American literature, Literature in the English language, Literary theory, Bibliography, Philology, etc.	2	A
02040	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.	2	A
02050	Literature in general-related Literature in other languages and areas, Literary theory, Comparative literature, Bibliography, Philology, Literature education, etc.	2	A
02060	Linguistics-related Phonetics/phonology, Semantics/pragmatics, Morphosyntax, Sociolinguistics, Contrastive linguistics, Psycholinguistics, Neurolinguistics, Historical linguistics, Corpus linguistics, Endangered and minority languages, etc.	2	A

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
02070	Japanese linguistics-related Phonetics/phonology, Writing systems, Lexicon and semantics, Grammar, Stylistics, Pragmatics, Language life, Dialect, History of the Japanese language, History of Japanese linguistics, etc.	2	A
02080	English linguistics-related 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.	2	A
02090	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.	2, 9	A
02100	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.	2, 9	A
03010	Historical studies in general-related Historical theory, Historical methodology, Research in historical materials, Memory and medium, World history, History of cultural and diplomatic exchange, Comparative history, etc.	3	A
03020	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.	3	A
03030	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.	3	A
03040	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.	3	A
03050	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.	3	A
03060	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.	3	A

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
03070	Museology-related Exhibition studies, Museum pedagogy, Museum informatics, Museum business management, Public finance and administration of museums, Museum material resources, History of museology, etc.	3	A
04010	Geography-related Geography in general, Land use, Landscape, Environmental system, Geomorphology, Climatology, Hydrology, Cartography, Geographic information system, Regional planning, etc.	4	A
04020	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.	4	A
04030	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.	4	A
80010	Area studies-related Area studies in general, Cross-regional comparative studies, Aid, International cooperation, Interregional exchange, Environment, Transnationalism, Globalization, Social development, etc.	4, 6	A
80020	Tourism studies-related Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.	4, 7, 8	A
80030	Gender studies-related Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.	4, 6, 8	A
05010	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.	5	A
05020	Public law-related Constitutional law, Administrative law, Tax law, etc.	5	A
05030	International law-related Public international law, Private international law, International human rights law, International economic law, EU law, etc.	5	A
05040	Social law-related Labor law, Economic law, Social security law, Education law, etc.	5	A
05050	Criminal law-related Criminal law, Criminal procedure, Criminology, Criminal justice policy, Juvenile law, Law and psychology, etc.	5	A
05060	Civil law-related Civil law, Commercial law, Civil procedure, Insolvency law, Alternative dispute resolution, etc.	5	A
05070	New fields of law-related Environmental law, Medical law, Information law, Consumer law, Intellectual property law, Law and gender, Legal profession, etc.	5	A

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
06010	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.	6	A
06020	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.	6	A
07010	Economic theory-related Microeconomics, Macroeconomics, Game theory, Behavioral economics, Experimental economics, Economic theory, Evolutionary economics, Economic institutions, Economic systems, etc.	7	A
07020	Economic doctrines and economic thought-related Economic doctrines, Economic thought, Social thought, Economic philosophy, etc.	7	A
07030	Economic statistics-related Statistical system, Statistical research, Population statistics, Income/wealth distribution, National accounts, Econometrics, Financial econometrics, etc.	7	A
07040	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.	7	A
07050	Public economics and labor economics-related Public finance, Public economics, Health economics, Labor economics, Social security, Education economics, Law and economics, Political economy, etc.	7	A
07060	Money and finance-related Monetary economics, Finance, International finance, Corporate finance, Financial engineering, Insurance, etc.	7	A
07070	Economic history-related Economic history, Business history, Industrial history, etc.	7	A
07080	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.	7	A
07090	Commerce-related Marketing, Consumer behavior, Distributive sciences, Logistics, Commerce in general, etc.	7	A
07100	Accounting-related Financial accounting, Management accounting, Auditing, Accounting in general, etc.	7	A
08010	Sociology-related Sociology in general, Community, Family, Labor, Sociology of welfare, Gender, Media, Ethnicity, Social movements, Social research, Sociology of medicine, Social demography, etc.	8	A

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
08020	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.	8	A
08030	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.	8	A
09010	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.	9	A
09020	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.	9	A
09030	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.	9	A
09040	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.	9	A
09050	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.	9	A
09060	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.	9	A
09070	Educational technology-related Curriculum development, Teaching-learning support systems, Utilization of media, Utilization of ICT, Teacher's education, Information literacy, etc.	9	A
09080	Science education-related Science education, Science communication, Scientific literacy, Science and society, etc.	9	A
10010	Social psychology-related Social psychology in general, Self, Group, Attitude and behavior, Affection/emotion, Interpersonal relation, Social issues, Culture, etc.	10	A
10020	Educational psychology-related Educational psychology in general, Development, Family, School, Clinical practice, Personality, Learning, Assessment and evaluation, etc.	10	A

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
10030	Clinical psychology-related Clinical psychology in general, Psychological disorder, Assessment, Psychological intervention, Training, Mental health, Crime and delinquency, Community, etc.	10	A
10040	Experimental psychology-related Experimental psychology in general, Sensation, Perception, Attention, Memory, Language, Emotion, Learning, etc.	10	A
11010	Algebra-related Group theory, Ring theory, Representation theory, Algebraic combinatorics, Number theory, Arithmetic geometry, Algebraic geometry, Algebraic analysis, etc.	11	B
11020	Geometry-related Differential geometry, Riemannian geometry, Symplectic geometry, Complex geometry, Topology, Differential topology, Low dimensional topology, etc.	11	B
12010	Basic analysis-related Functional analysis, Complex analysis, Probability theory, Harmonic analysis, Operator theory, Spectral analysis, Operator algebras, Algebraic analysis, Representation theory, etc.	12	B
12020	Mathematical analysis-related Functional equations, Real analysis, Dynamical system, Variational method, Nonlinear analysis, Applied analysis, etc.	12	B
12030	Basic mathematics-related Mathematical logic and foundations, Information theory, Discrete mathematics, Computer mathematics, etc.	12	B
12040	Applied mathematics and statistics-related Numerical analysis, Mathematical modelling, Optimal control, Game theory, Statistical mathematics, etc.	12	B
13010	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.	13	B
13020	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.	13	B
13030	Magnetism, superconductivity and strongly correlated systems-related Magnetism, Strongly correlated electron systems, Superconductivity, Quantum fluids and solids, Molecular solids, etc.	13	B
13040	Biophysics, chemical physics and soft matter physics-related Physics of biological phenomena, Physics of biological matters, Liquids and glasses, Soft matters, Rheology, etc.	13	B
14010	Fundamental plasma-related Basic plasmas, Magnetized plasmas, Laser plasmas, Strongly coupled plasmas, Plasma diagnostics, Astrophysical and space plasmas, etc.	14	B
14020	Nuclear fusion-related Plasma confinement, Plasma control, Plasma heating, Plasma diagnostics, Edge plasma, Plasma wall interaction, Inertial fusion, Fusion material, Fusion system, etc.	14	B

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
14030	Applied plasma science-related Plasma processing, Plasma photonics, Plasma material science, General plasma applications, etc.	14	B
80040	Quantum beam science-related Accelerators, Beam physics, Radiation detectors, Beam control, Applied quantum beam science, etc.	14, 15	B
15010	Theoretical studies related to particle-, nuclear-, cosmic ray and astro-physics Particle physics, Nuclear physics, Cosmic-ray physics, Astrophysics, Relativity, Gravity, etc.	15	B
15020	Experimental studies related to particle-, nuclear-, cosmic ray and astro-physics Particle physics, Nuclear physics, Cosmic-ray physics, Astrophysics, Relativity, Gravity, etc.	15	B
16010	Astronomy-related Optical/infrared astronomy, Radio astronomy, Solar physics, Astrometry, Theoretical astronomy, X-ray/γ-ray astronomy, etc.	16	B
17010	Space and planetary sciences-related Solar-terrestrial physics, Aeronomy, Planetary science, Exoplanetary science, Extraterrestrial material science, etc.	17	B
17020	Atmospheric and hydrospheric sciences-related Climate system, Atmospheric science, Ocean science, Limnology, Glaciology, Paleoclimatology, etc.	17	B
17030	Human geosciences-related Geoenvironmental science, Natural disaster science, Geospatial information science, Quaternary research, Earth resources science, etc.	17	B
17040	Solid earth sciences-related Solid earth geophysics, Geology, Earth's interior material science, Solid earth geochemistry, etc.	17	B
17050	Biogeosciences-related Origin and evolution of life, Extremophile biology, Biogeochemistry, Paleoenvironmental science, Paleontology, etc.	17	B
18010	Mechanics of materials and materials-related Structural mechanics, Fatigue, Fracture, Biomaterials, Material design, Material characteristics, Material evaluation, etc.	18	C
18020	Manufacturing and production engineering-related Machine tools, Machining, Non-traditional machining, Ultraprecision machining, Additive manufacturing, Precision metrology, Manufacturing systems, Computer-aided technology, Process planning, etc.	18	C
18030	Design engineering-related Product design, Service design, Design for reliability, Maintainability design, Lifecycle engineering, Reverse engineering, Safety design, Design engineering, etc.	18	C
18040	Machine elements and tribology-related Machine elements, Mechanisms, Tribology, Actuators, Micromachines, etc.	18	C
19010	Fluid engineering-related Fluid machinery, Flow measurement, Computational fluid dynamics, Turbulence, Multiphase flow, Compressible flow, Incompressible flow, etc.	19	C

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
19020	Thermal engineering-related Heat transfer, Convection, Combustion, Thermophysical properties, Refrigeration and air-conditioning, Heat engine, Energy conversion, etc.	19	C
20010	Mechanics and mechatronics-related Kinematics, Kinetics, Vibration, Acoustics, Automation, Learning control, Mechatronics, Micro/nano mechatronics, Biomechanics, etc.	20	C
20020	Robotics and intelligent system-related Robotics, Intelligent system, Human mechanical system, Human interface, Planning, Intelligent spatial system, Virtual reality, Augmented reality, etc.	20	C
21010	Power engineering-related Electrical energy-related, Energy conservation, Power system engineering, Electric machinery, Power electronics, Effective utilization of electric energy, Electromagnetic compatibility, etc.	21	C
21020	Communication and network engineering-related Information theory, Nonlinear theory, Signal processing, Wired/wireless communication systems, Modulation/demodulation, Antennas, Networks, Multimedia, Cryptography/security, etc.	21	C
21030	Measurement engineering-related Measurement theory, Measuring instruments, Applied wave metrology, Measurement systems, Signal processing, Sensing devices, etc.	21	C
21040	Control and system engineering-related Control theory, System theory, Control systems, Knowledge-based control systems, System information processing, System control applications, Biosystems engineering, etc.	21	C
21050	Electric and electronic materials-related Semiconductor, Dielectric materials, Magnetic materials, Organic materials, Superconductor, Composite materials, Thin films, Quantum structures, Thick films, Fabrication/characterization methods, etc.	21	C
21060	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.	21	C
22010	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.	22	C
22020	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.	22	C
22030	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.	22	C
22040	Hydroengineering-related Hydraulics, Environmental hydraulics, Hydrology, River engineering, Water resource engineering, Coastal engineering, Port and harbor engineering, Ocean engineering, etc.	22	C
22050	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.	22	C

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
22060	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.	22	C
23010	Building structures and materials-related Load theory, Structural analysis, Structural design, Structures, Earthquake resistant design, Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.	23	C
23020	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.	23	C
23030	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.	23	C
23040	Architectural history and design-related Architectural history, Urban history, Architectural theory, Design, Landscape, Preservation, Renovation, etc.	23	C
24010	Aerospace engineering-related Thermo-fluid dynamics, Structural strength, Propulsion, Aerospace craft design, Production engineering, Aircraft system, Specific aircraft, Aerodynamics, Spacecraft system, Space utilization, etc.	24	C
24020	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.	24	C
25010	Social systems engineering-related Social systems, Industrial engineering, Operations research, Industrial management, Reliability engineering, Policy science, Regulatory science, Quality control, etc.	25	C
25020	Safety engineering-related Safety engineering, Safety system, Risk engineering, Risk management, Work safety, Product safety, Safety information, Human engineering, Liability engineering, etc.	25	C
25030	Disaster prevention engineering-related Disaster prediction, Hazard map, Building prevention against disaster, Lifeline prevention against disaster, Regional disaster prevention planning, Risk evaluation of disaster, Disaster prevention policy, Disaster resilience, etc.	25	C
26010	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.	26	D
26020	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.	26	D

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
26030	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.	26	D
26040	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 materials, Environment functional materials, etc.	26	D
26050	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, etc.	26	D
26060	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.	26	D
27010	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.	27	D
27020	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.	27	D
27030	Catalyst and resource chemical process-related Catalysis, Catalyst preparation, Catalytic function, Energy conversion process, Energy development, Energy-saving technology, Resources effective utilization technology, etc.	27	D
27040	Biofunction and bioprocess engineering-related Biocatalyst engineering, Biofunction engineering, Food engineering, Medicochemical engineering, Bioproduction process, Nano-bioprocess, Bioreactor, Bioseparation, Biosensor, Biorefinery, etc.	27	D
28010	Nanometer-scale chemistry-related Nanostructure creation, Clusters, Nanoparticles, Mesoscopic chemistry, Superstructures, Nanometer-scale surfaces and interfaces, Self-assembly, Nanocarbons, Molecular devices, Nanometer-scale optical devices, etc.	28	D
28020	Nanostructural physics-related Physics in nanoscale materials and structures, Nanoprobes, Quantum effects, Quantum dots, Quantum devices, Electron devices, Spin devices, Nanotribology, Nanocarbon physics, etc.	28	D
28030	Nanomaterials-related Creation of nanomaterials, Analysis of nanomaterials, Nanosurfaces, Nanointerfaces, Functional nanomaterials, Nanostructures, Nanoparticles, Carbon nanomaterials, Nanocrystalline materials, Nanocomposites, Nanodefects, Nanofabrication process, etc.	28	D
28040	Nanobioscience-related Biomolecular devices, Molecular manipulation, Molecular imaging, Nanomeasurements, Nanosynthesis, Single molecule science, Nano-bio interfaces, Biomolecular array, Genome engineering, etc.	28	D

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
28050	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.	28	D
29010	Applied physical properties-related Magnetic materials, Superconductors, Dielectrics, Fine particles, Organic molecules, Liquid crystals, New functional materials, Organic molecules and bioelectronics, Spintronics, etc.	29	D
29020	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.	29	D
29030	Applied condensed matter physics-related Elementary quantities, Standards, Units, Physical quantity measurements and detection, Energy conversion, etc.	29	D
30010	Crystal engineering-related Metals, Semiconductors, Ceramics, Amorphous materials, Crystal growth, Artificial structures, Crystal characterization, Plasma materials engineering, Plasma processing, Plasma engineering, etc.	30	D
30020	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.	30	D
31010	Nuclear engineering-related 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.	31	D
31020	Earth resource engineering, Energy sciences-related 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.	31	D
32010	Fundamental physical chemistry-related Theoretical chemistry, Molecular spectroscopy, Structural chemistry, Electronic state dynamics, Chemical reaction dynamics, Surface/interface, Cluster and nano materials, Bio-related physical chemistry, Liquid structure dynamics, Solid state properties, Molecular properties, etc.	32	E
32020	Functional solid state chemistry-related Optical properties, Electron spin, Molecular electronics and devices, Supermolecules, Liquid crystals, Crystals, Surface/interface, Nano particles, Colloids, Electrochemistry, Electronic properties, etc.	32	E
33010	Structural organic chemistry and physical organic chemistry-related Organic crystals, Molecular recognition, Supermolecules, Organic functional materials, Extended π-electron system compounds, Heterocyclic chemistry, Organoelement chemistry, Organic reaction mechanism, Organic photochemistry, Theoretical organic chemistry, etc.	33	E
33020	Synthetic organic chemistry-related Selective reactions, Asymmetric synthesis, Organometallic complex/catalysis, Catalyst design, Organocatalysts, Biocatalysis, Sustainable organic synthesis, Natural product synthesis, Process chemistry, Organic electrochemistry, etc.	33	E

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
34010	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.	34	E
34020	Analytical chemistry-related Spectrometric analysis, Advanced measurements, Surface/interface analysis, Separation analysis, Analytical reagents, Radiochemical analysis, Electrochemical analysis, Bioanalysis, New analysis methods, etc.	34	E
34030	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, Environmental radioactivity, etc.	34	E
35010	Polymer chemistry-related 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.	35	E
35020	Polymer materials-related Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers, Gel, Biopolymers, Polymer composites, Polymer processing, etc.	35	E
35030	Organic functional materials-related Organic semiconductors, Liquid crystals, Optical materials, Device-related materials, Electrically conductive materials, Hybrid materials, Molecular functional materials, Organic hybrid materials, Materials for energy conversion, etc.	35	E
36010	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.	36	E
36020	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.	36	E
37010	Bio-related chemistry Bioorganic chemistry, Bioinorganic chemistry, Biological reaction engineering, Biofunctional chemistry, Biofunctional materials, Biotechnology, etc.	37	E
37020	Chemistry and chemical methodology of biomolecules-related Natural product chemistry, Biologically active compounds, Molecular mechanism of biological activities, Biofunctional molecules, Combinatorial chemistry, Metabolomic analysis, etc.	37	E
37030	Chemical biology-related In vivo functional expression, Intracellular chemical reactions, Drug discovery science, Chemical library, Structure-activity relationship, Chemical probes, Biomolecular measurements, Molecular imaging, Proteomics, etc.	37	E
38010	Plant nutrition and soil science-related Plant metabolism and physiology, Nutritional elements in plants, Soil classification, Soil physical chemistry, Soil organisms, etc.	38	F

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
38020	Applied microbiology-related Microbial genetics/breeding, Microbial function, Microbial metabolism and physiology, Microbial applications, Control of microbes, Microbial ecology, Production of useful materials, etc.	38	F
38030	Applied biochemistry-related Cellular biochemistry, Applied biochemistry, Structural biology, Regulation of bioactivity, Metabolism and physiology, Cellular function, Molecular function, Production of useful materials, etc.	38	F
38040	Bioorganic chemistry-related Bioactive substances, Signal molecules, Natural products chemistry, Biosynthesis, Structure-activity relationship, Synthetic organic chemistry, Chemical biology, etc.	38	F
38050	Food sciences-related Food function, Food chemistry, Nutritional chemistry, Food analysis, Food engineering, Food safety, Functional food, Nutritional epidemiology, Clinical nutrition, etc.	38	F
38060	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.	38	F
39010	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.	39	F
39020	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.	39	F
39030	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.	39	F
39040	Plant protection science-related Plant pathology, Clinical plant science, Agricultural insect pest, Natural enemy, Weed, Agricultural chemicals, Integrated pest management, etc.	39	F
39050	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.	39	F
39060	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.	39	F
39070	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.	39	F
40010	Forest science-related Forest ecology, Forest biodiversity, Forest genetics and breeding, Silviculture, Forest protection, Forest environments, Erosion control, Forest planning, Forest policy, etc.	40	F

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
40020	Wood science-related Wood structure, Wood property, Lignocellulose, Trace element, Fungus, Wood processing, Biomass-refinery, Wood based material, Wooden building, Forest products education, etc.	40	F
40030	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.	40	F
40040	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.	40	F
41010	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.	41	F
41020	Rural sociology and agricultural structure-related Farm organization, Farm management, Agricultural structure, Agricultural market, Agricultural history, Rural society, Rural life, Agricultural cooperative, etc.	41	F
41030	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.	41	F
41040	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.	41	F
41050	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.	41	F
42010	Animal production science-related Breeding/genetics, Reproduction, Nutrition/feeding, Anatomy/physiology, Product, Environment, Behavior, Therapy, Grassland, Grazing, etc.	42	F
42020	Veterinary medical science-related Basic veterinary science, Pathological veterinary science, Applied veterinary science, Clinical veterinary science, Animal nursing, Animal welfare, Wildlife, etc.	42	F
42030	Animal life science-related Homeostasis, Cellular function, Biological defense, Integrated genetics, Development/differentiation, Biotechnology, etc.	42	F
42040	Laboratory animal science-related Genetic engineering, Developmental engineering, Animal models of disease, Facility management, Laboratory animal welfare, Laboratory animal-related technology, Bioresource, etc.	42	F

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
43010	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.	43	G
43020	Structural biochemistry-related Proteins, Nucleic acids, Lipids, Carbohydrates, Biological membrane, Molecular recognition, Denaturation, Three-dimensional structural analysis, Three-dimensional structural prediction, Molecular dynamics, etc.	43	G
43030	Functional biochemistry-related Enzymes, Sugar chain, Bioenergy conversion, Biological trace elements, Physiologically active substances, Cell signaling, Membrane transport, Proteolysis, Molecular recognition, etc.	43	G
43040	Biophysics-related Structure biology, Physical property of biomolecules, Biomembrane, Photobiology, Molecular motor, Biometrics, Bioimaging, Systems biology, Synthetic biology, Theoretical biology, etc.	43	G
43050	Genome biology-related Genome organization, Genome function, Genome diversity, Molecular evolution of genome, Genome repair/maintenance, Trans-omics, Epigenome, Gene resource, Genome dynamics, etc.	43	G
43060	System genome science-related Network analyses, Synthetic biology, Biological databases, Bioinformatics, Genome analysis technology, Genome biotechnology, etc.	43	G
44010	Cell biology-related Cytoskeleton, Proteolysis, Organelle dynamics, Nuclear structure and function, Extracellular matrix, Signal transduction, Cell cycle, Cell motility, Cell-cell interaction, Cellular genetics, etc.	44	G
44020	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.	44	G
44030	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.	44	G
44040	Morphology and anatomical structure-related Animal and plant morphology, Micro-organismal morphology, Molecular morphology, Microstructure, Tissue organization, Morphogenesis, Comparative endocrinology, Microscopic technology, Imaging, etc.	44	G
44050	Animal physiological chemistry, physiology and behavioral biology-related Metabolic physiology, Neurophysiology, Neuroethology, Behavioral physiology, Animal physiological chemistry, Chronobiology, Comparative physiology, etc.	44	G
45010	Genetics-related Genetic mechanism, Molecular genetics, Cellular genetics, Population genetics, Evolutionary genetics, Developmental genetics, Behavioral genetics, Genetic diversity, etc.	45	G
45020	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.	45	G

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
45030	Biodiversity and systematics-related Taxonomic characters, Taxon, Classification system, Biodiversity, Phylogenetics, Evolution, Natural history, Speciation, etc.	45	G
45040	Ecology and environment-related Chemical ecology, Molecular ecology, Physiological ecology, Evolutionary ecology, Behavioral ecology, Population ecology, Community ecology, Ecosystem, Conservation ecology, Natural environment, etc.	45	G
45050	Physical anthropology-related Molecular anthropology and genetics, Morphology and function, Bioarchaeology, Behavior and cognition, Ecology, Primates, Evolution, Development and ontogeny, Variation and diversity, etc.	45	G
45060	Applied anthropology-related Physiological anthropology, Ergonomics, Forensic anthropology, Medical anthropology, Physiological polymorphisms, Environmental adaptability, Somatic and physiological function, Anthropometry and bioengineering, etc.	45	G
46010	Neuroscience-general-related Neurochemistry, Neuron, Glia, Genome, Epigenetics, Neurobiology, Information processing, Synapse, Neurogenesis, etc.	46	G
46020	Anatomy and histopathology of nervous system-related Neural development, Anatomy of nervous system, Neural network structure, Neuropathology, etc.	46	G
46030	Function of nervous system-related Neurophysiology, Neuropharmacology, Neurotransmission, Neuroinformatics, Behavioral neuroscience, Neural system physiology, Cerebral blood flow, Autonomic nervous system, etc.	46	G
47010	Pharmaceutical chemistry and drug development sciences-related Inorganic chemistry, Organic chemistry, Medicinal chemistry, Medicinal molecular design, Drug discovery, Bio-related materials, Chemical biology, etc.	47	H
47020	Pharmaceutical analytical chemistry and physicochemistry-related Environmental analysis, Bioanalysis, Physicochemistry, Biophysics, Structural biology, Radiochemistry, Bioimaging, Drug formulation design, Computer science, Information science, etc.	47	H
47030	Pharmaceutical hygiene and biochemistry-related Environmental hygiene, Healthful nutrition, Disease prevention, Toxicology, Drug metabolism, Host defense, Molecular biology, Cell biology, Biochemistry, etc.	47	H
47040	Pharmacology-related Pharmacology, Pharmacogenomics, Applied pharmacology, Signal transduction, Drug interactions, Drug response, Pharmacotherapy, Pharmacotoxicology, etc.	47	H
47050	Environmental and natural pharmaceutical resources-related Environmental resource science, Natural products chemistry, Bioactive natural compounds, Medicinal resources, Medicinal foods, Pharmaceutical microbiology, etc.	47	H
47060	Clinical pharmacy-related Pharmacokinetics, Medical informatics, Social pharmacy, Clinical pharmacy, Pharmaceutics, Regulatory science, Education for the pharmacist, etc.	47	H
48010	Anatomy-related Macroscopic anatomy, Histology, Embryology, etc.	48	H

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
48020	Physiology-related General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.	48	H
48030	Pharmacology-related Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.	48	H
48040	Medical biochemistry-related Biofunctional molecular and medical biochemistry, Genome medical sciences, Human genetics, Disease model, etc.	48	H
49010	Pathological biochemistry-related Molecular pathology, Metabolic disorders, Molecular diagnosis, etc.	49	H
49020	Human pathology-related Molecular pathology, Cyto- and histo-pathology, Diagnostic pathology, etc.	49	H
49030	Experimental pathology-related Disease models, Pathological regulation, Tissue regeneration, etc.	49	H
49040	Parasitology-related Parasite, Vector organism, Parasite pathogenicity, Epidemiology of parasites, Control of parasite infections, etc.	49	H
49050	Bacteriology-related Bacterium, Fungus, Antimicrobial resistance, Bacterial pathogenicity, Epidemiology of bacteria, Control of bacterial infections, etc.	49	H
49060	Virology-related Virus, Prion, Viral pathogenicity, Epidemiology of viruses, Control of viral infections, etc.	49	H
49070	Immunology-related Immune system, Immune response, Inflammation, Immune-related disorder, Immune regulation, etc.	49	H
50010	Tumor biology-related Cancer and gene, Tumor development, Invasion, Metastasis, Cancer microenvironment, Cancer and signal transduction, Characteristics of cancer cells, etc.	50	I
50020	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.	50	I
51010	Basic brain sciences-related Brain-machine interface, Model animal, Computational brain science, Brain information decoding, Control technologies, Brain imaging, Brain biometrics, etc.	51	I
51020	Cognitive and brain science-related Social behavior, Communication, Emotion, Decision making, Consciousness, Learning, Neuroeconomics, Neuropsychology, etc.	51	I
51030	Pathophysiologic neuroscience-related Clinical neuroscience, Dolorology, Sensory impairment, Movement disorder, Neurological disorder, Neurogenesis, Neuroimmunology, Cellular degeneration, Disease model, etc.	51	I

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
52010	General internal medicine-related Laboratory medicine, General practice, Geriatrics, Psychosomatic internal medicine, Oriental medicine, Palliative medicine, etc.	52	I
52020	Neurology-related Neurology, Neurofunctional imaging, etc.	52	I
52030	Psychiatry-related Clinical psychiatry, Biological psychiatry, Forensic mental health, etc.	52	I
52040	Radiological sciences-related Diagnostic radiology, Therapeutic radiology, Radiation biology, Radiological technology, etc.	52	I
52050	Embryonic medicine and pediatrics-related Fetal medicine, Neonatal medicine, Pediatrics, etc.	52	I
53010	Gastroenterology-related Upper digestive tract, Lower digestive tract, Liver, Biliary tract, Pancreas, etc.	53	I
53020	Cardiology-related Ischemic heart disease, Valvular heart disease, Arrhythmia, Cardiomyopathy, Heart failure, Peripheral arterial disease, Arteriosclerosis, Hypertension, etc.	53	I
53030	Respiratory medicine-related Respiratory medicine, Asthma, Diffusive lung disease, COPD, Lung cancer, Pulmonary hypertension, etc.	53	I
53040	Nephrology-related Acute renal failure, Chronic kidney disease, Diabetic nephropathy, Hypertension, Aqueous electrolyte metabolism, Artificial dialysis, etc.	53	I
53050	Dermatology-related Dermatology, Cutaneous immune disease, Cutaneous infection, Cutaneous tumor, etc.	53	I
54010	Hematology and medical oncology-related Hematological oncology, Hematological immunology, Anemia, Thrombosis and hemostasis, Chemotherapy, etc.	54	I
54020	Connective tissue disease and allergy-related Connective tissue disease, Allergy, Clinical immunology, Inflammation, etc.	54	I
54030	Infectious disease medicine-related Infection diagnostics, Infection therapeutics, Host defense, International infection science, etc.	54	I
54040	Metabolism and endocrinology-related Energy balance, Glucose metabolism, Lipid metabolism, Purine metabolism, Bone metabolism, Electrolyte balance, Endocrinology, Neuroendocrinology, Reproductive endocrinology, etc.	54	I
55010	General surgery and pediatric surgery-related Surgical basic principles, Breast surgery, Endocrine surgery, Pediatric surgery, Transplant surgery, Artificial organs science, Regeneration, Operation support, etc.	55	I

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
55020	Digestive surgery-related Upper gastrointestinal surgery, Lower gastrointestinal surgery, Hepatic surgery, Biliary surgery, Pancreatic surgery, etc.	55	I
55030	Cardiovascular surgery-related Coronary artery surgery, Heart valve surgery, Surgery for myocardial disease, Aortic surgery, Vascular surgery, Congenital heart surgery, etc.	55	I
55040	Respiratory surgery-related Lung surgery, Mediastinal surgery, Chest wall surgery, Respiratory tract surgery, etc.	55	I
55050	Anesthesiology-related Anesthesiology, Perioperative management, Pain management, Resuscitology, Palliative medicine, etc.	55	I
55060	Emergency medicine-related Intensive care medicine, Emergency resuscitation science, Trauma surgery, Disaster medicine, Disaster medical care, etc.	55	I
56010	Neurosurgery-related Neurosurgery, Spine and spinal cord diseases, etc.	56	I
56020	Orthopedics-related Orthopedics, Rehabilitation medicine, Sports medicine, etc.	56	I
56030	Urology-related Urology, Male genitalia science, etc.	56	I
56040	Obstetrics and gynecology-related Obstetrics, Reproductive endocrinology, Gynecologic oncology, Female health care medicine, etc.	56	I
56050	Otorhinolaryngology-related Otorhinolaryngology, Head and neck surgery, etc.	56	I
56060	Ophthalmology-related Ophthalmology, Ophthalmological optics, etc.	56	I
56070	Plastic and reconstructive surgery-related Plastic surgery, Reconstructive surgery, Aesthetic plastic surgery, etc.	56	I
57010	Oral biological science-related Oral anatomy, Oral histology and embryology, Oral physiology, Oral biochemistry, Pharmacology for hard tissues, etc.	57	I
57020	Oral pathobiological science-related Oral infectious diseases, Oral pathology, Oral experimental oncology, Immunity and inflammation, Laboratory medicine, etc.	57	I
57030	Conservative dentistry-related Operative dentistry, Endodontology, Periodontology, etc.	57	I

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
57040	Regenerative dentistry and dental engineering-related Regenerative dentistry, Biomaterial science, Dental materials science, Oral and maxillofacial prosthetics, Oral implantology, etc.	57	I
57050	Prosthodontics-related Prosthodontics, Oral rehabilitation, Gerodontology, etc.	57	I
57060	Surgical dentistry-related Oral and maxillofacial surgery, Oral maxillofacial reconstructive surgery, Dental anesthesiology, Psychosomatic medicine dentistry, Dental radiology, etc.	57	I
57070	Developmental dentistry-related Orthodontics, Pediatric dentistry, etc.	57	I
57080	Social dentistry-related Dental hygiene, Preventive dentistry, Oral health administration and management, Dental education, Forensic odontology, etc.	57	I
58010	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.	58	I
58020	Hygiene and public health-related: including laboratory approach Hygiene, Public health, Epidemiology, Global health, etc.	58	I
58030	Hygiene and public health-related: excluding laboratory approach Hygiene, Public health, Epidemiology, Global health, etc.	58	I
58040	Forensics medicine-related Forensic medicine, Forensic pathology, Forensic toxicology, Forensic genetics, Suicide, Abuse, Clinical forensic medicine, Sudden death, etc.	58	I
58050	Fundamental of nursing-related Fundamental of nursing, Nursing education, Nursing administration, etc.	58	I
58060	Clinical nursing-related Critical care and emergency nursing, Perioperative nursing, Nursing of chronic illness, Oncology nursing, Psychiatric nursing, Palliative care nursing, etc.	58	I
58070	Lifelong developmental nursing-related Women's health nursing, Maternal nursing, Midwifery, Family health nursing, Child health nursing, School nursing, etc.	58	I
58080	Gerontological nursing and community health nursing-related Gerontological nursing, Community health nursing, Public health nursing, Disaster nursing, etc.	58	I
59010	Rehabilitation science-related Rehabilitation medicine, Rehabilitation nursing, Rehabilitation medical care, Physicotherapeutics, Occupational therapy, Assistive technology, Speech and language therapy, etc.	59	I

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
59020	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.	59	I
59030	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.	59	I
59040	Nutrition science and health science-related Nutritional physiology, Nutritional biochemistry, Nutritional education, Clinical nutrition, Functional food, Lifestyle-related disease, Health promotion, Aging, etc.	59	I
60010	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.	60	J
60020	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.	60	J
60030	Statistical science-related Statistics, Data science, Modeling, Statistical inference, Multivariate analysis, Time series analysis, Statistical quality control, Applied statistics, etc.	60	J
60040	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.	60	J
60050	Software-related Programming language, Programming methodology, Operating system, Parallel and distributed computing, Software engineering, Virtualization technology, Cloud computing, Software dependability, Software security, etc.	60	J
60060	Information network-related Network architecture, Network protocol, Internet, Mobile network, Pervasive computing, Sensor network, IoT, Traffic engineering, Network management, Service platform technology, etc.	60	J
60070	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.	60	J
60080	Database-related Data model, Database system, Multimedia database, Information retrieval, Content management, Metadata, Big data, Geographic information system, etc.	60	J
60090	High performance computing-related Parallel processing, Distributed processing, Cloud computing, Numerical analysis, Visualization, Computer graphics, High performance computing application, etc.	60	J

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
60100	Computational science-related Mathematical engineering, Computational mechanics, Numerical simulation, Multi-scale modeling, Large-scale computing, Massively parallel computing, Numerical computing methods, Advanced algorithms, etc.	60	J
61010	Perceptual information processing-related Pattern recognition, Image processing, Computer vision, Visual media processing, Acoustic media processing, Media editing, Media database, Sensing, Sensor fusion, etc.	61	J
61020	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.	61	J
61030	Intelligent informatics-related Search, Inference, Machine learning, Knowledge acquisition, Intelligent system, Intelligent information processing, Natural language processing, Data mining, Ontology, Agent system, etc.	61	J
61040	Soft computing-related Neural network, Evolutionary computation, Fuzzy theory, Chaos, Complex systems, Probabilistic information processing, etc.	61	J
61050	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.	61	J
61060	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.	61	J
62010	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.	62	J
62020	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.	62	J
62030	Learning support system-related Media literacy, Learning media, Social media, Learning content, Learning management, Learning support, Remote learning, e-Learning, etc.	62	J
62040	Entertainment and game informatics-related Music information processing, 3D content, Animation, Game programming, Network entertainment, Media art, Digital museum, Experience design, etc.	62	J
63010	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.	63	K
63020	Radiation influence-related Radiation, Measurement, Control, Repair, Biological effects, Risk, etc.	63	K

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
63030	Chemical substance influence on environment-related Toxicology, Toxic substance to human, Trace chemical substance, Endocrine disruptor, Repair, etc.	63	K
63040	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.	63	K
64010	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.	64	K
64020	Environmental load reduction and remediation-related Removal of contamination, Treatment of waste material, Control of contamination source, Disposal of waste material, E nvironmental load reduction, Remediation measure of contamination, Noise and vibration reduction, Countermeasure of ground settlement, Bioremediation, Radioactive decontamination, etc.	64	K
64030	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.	64	K
64040	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.	64	K
64050	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.	64	K
64060	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.	64	K
90010	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.	1, 23, 61	A, C, J
90020	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.	2, 62	A, J
90030	Cognitive science-related Cognitive science in general, Cognitive models, Kansei, Human factors, Cognitive and brain science, Comparative cognition, Cognitive linguistics, Cognitive engineering, etc.	10, 61	A, J

Basic Section	Examples of related research content	Medium-sized Sections and Broad Section corresponding Basic Sections	
		Medium-sized Section	Broad Section
90110	Biomedical engineering-related Medical imaging, Medical modeling, Biological simulation, Biometrics, Artificial organs, Tissue engineering, Biophysical properties, Biocontrol, Biomechanics, Nanobio systems, etc.	90	D, I
90120	Biomaterials-related Biofunctional materials, Tissue engineering materials, Biocompatible materials, Nanobio materials, Drug delivery systems, Stimuli-sensitive materials, Genetic engineering material, etc.	90	D, I
90130	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.	90	D, I
90140	Medical technology assessment-related Regulatory science, Safety evaluation, Clinical study, Medical technology ethics, Medical devices, etc.	90	D, I
90150	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, Rehabilitation devices, Nursing science and engineering, etc.	90	D, I

The Review Section Table (Table for Medium-sized and Broad Sections)

When selecting a review section, applicants should first acquire an overall picture of the review sections based on the Review Section Table (Overview). In addition, check the Review Section Table (Table for Medium-sized and Broad Sections) for the detailed contents of each section and select a review section for their research proposal.

Also, some items of Basic Section may be presented in plural Medium-sized and Broad Sections. The items of Basic Section presented in plural Medium-sized Section are 9 and 3 items among 9 are presented in plural Medium-sized and Broad Sections (as shown below).

In addition, five other Basic Sections (90110-90150) may be presented in only one Medium-sized Section and two Broad Sections.

【Basic sections may be presented in plural Medium-sized and Broad Section】

Basic Section Item	Basic Section Description	Medium-sized Sections corresponding Basic Sections	Broad Sections corresponding Basic Sections
02090	Japanese language education-related	２，９	A
02100	Foreign language education-related	２，９	A
80010	Area studies-related	４，６	A
80020	Tourism studies-related	４，７，８	A
80030	Gender studies-related	４，６，８	A
80040	Quantum beam science-related	１４，１５	B
90010	Design-related	１，２３，６１	A，C，J
90020	Library and information science, humanistic and social informatics-related	２，６２	A，J
90030	Cognitive science-related	１０，６１	A，J
90110	Biomedical engineering-related	９０	D，I
90120	Biomaterials-related	９０	D，I
90130	Medical systems-related	９０	D，I
90140	Medical technology assessment-related	９０	D，I
90150	Medical assistive technology-related	９０	D，I

【Medium-sized section may be presented in plural Broad Section】

Medium-sized Section Item	Medium-sized section Description	Broad Sections corresponding Medium-sized Section
９０	Biomedical engineering and related fields	D，I

Broad Section A

Medium-sized Section 1 : Philosophy, art, and related fields

Basic Section	Examples of related research content
01010	Philosophy and ethics-related Philosophy in general, Ethics in general, Western philosophy, Western ethics, Japanese philosophy, Japanese ethics, Applied ethics, etc.
01020	Chinese philosophy, Indian philosophy and Buddhist philosophy-related Chinese philosophy/thought, Indian philosophy/thought, Buddhist philosophy, Bibliography, Philology, etc.
01030	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.
01040	History of thought-related History of thought in general, History of Western thought, History of Eastern thought, History of Japanese thought, etc.
01050	Aesthetics and art studies-related Philosophy of art, Aesthetics, Miscellaneous art studies, etc.
01060	History of arts-related Japanese art, Eastern art, Western art, Contemporary art, Craft, Design, Architecture, Costume, Photography, etc.
01070	Theory of art practice-related Art expression, Arts management, Art policy, Art production, etc.
01080	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.
90010	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.

Medium-sized Section 2 : Literature, linguistics, and related fields

Basic Section	Examples of related research content
02010	Japanese literature-related Japanese literature in general, Ancient literature, Medieval literature, Chinese classics in Japan, Bibliography, Philology, Premodern literature, Modern literature, Contemporary literature, Literary theory, etc.
02020	Chinese literature-related Chinese literature, Bibliography, Philology, Literary theory, etc.
02030	English literature and literature in the English language-related English literature, American literature, Literature in the English language, Literary theory, Bibliography, Philology, etc.
02040	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.

(Broad Section A)

02050	Literature in general-related
	Literature in other languages and areas, Literary theory, Comparative literature, Bibliography, Philology, Literature education, etc.
02060	Linguistics-related
	Phonetics/phonology, Semantics/pragmatics, Morphosyntax, Sociolinguistics, Contrastive linguistics, Psycholinguistics, Neurolinguistics, Historical linguistics, Corpus linguistics, Endangered and minority languages, etc.
02070	Japanese linguistics-related
	Phonetics/phonology, Writing systems, Lexicon and semantics, Grammar, Stylistics, Pragmatics, Language life, Dialect, History of the Japanese language, History of Japanese linguistics, etc.
02080	English linguistics-related
	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.
02090	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.
02100	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.
90020	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.

Medium-sized Section 3：History, archaeology, museology, and related fields

Basic Section	Examples of related research content
03010	Historical studies in general-related
	Historical theory, Historical methodology, Research in historical materials, Memory and medium, World history, History of cultural and diplomatic exchange, Comparative history, etc.
03020	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.
03030	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.
03040	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.
03050	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.

(Broad Section A)

03060	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.
03070	Museology-related
	Exhibition studies, Museum pedagogy, Museum informatics, Museum business management, Public finance and administration of museums, Museum material resources, History of museology, etc.

Medium-sized Section 4：Geography, cultural anthropology, folklore, and related fields

Basic Section	Examples of related research content
04010	Geography-related
	Geography in general, Land use, Landscape, Environmental system, Geomorphology, Climatology, Hydrology, Cartography, Geographic information system, Regional planning, etc.
04020	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.
04030	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.
80010	Area studies-related
	Area studies in general, Cross-regional comparative studies, Aid, International cooperation, Interregional exchange, Environment, Transnationalism, Globalization, Social development, etc.
80020	Tourism studies-related
	Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.
80030	Gender studies-related
	Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.

Medium-sized Section 5 ：Law and related fields

Basic Section	Examples of related research content
05010	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.
05020	Public law-related
	Constitutional law, Administrative law, Tax law, etc.
05030	International law-related
	Public international law, Private international law, International human rights law, International economic law, EU law, etc.
05040	Social law-related
	Labor law, Economic law, Social security law, Education law, etc.
05050	Criminal law-related
	Criminal law, Criminal procedure, Criminology, Criminal justice policy, Juvenile law, Law and psychology, etc.
05060	Civil law-related
	Civil law, Commercial law, Civil procedure, Insolvency law, Alternative dispute resolution, etc.

(Broad Section A)

05070	New fields of law-related
	Environmental law, Medical law, Information law, Consumer law, Intellectual property law, Law and gender, Legal profession, etc.

Medium-sized Section 6 : Political science and related fields

Basic Section	Examples of related research content
06010	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.
06020	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.
80010	Area studies-related
	Area studies in general, Cross-regional comparative studies, Aid, International cooperation, Interregional exchange, Environment, Transnationalism, Globalization, Social development, etc.
80030	Gender studies-related
	Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.

Medium-sized Section 7 : Economics, business administration, and related fields

Basic Section	Examples of related research content
07010	Economic theory-related
	Microeconomics, Macroeconomics, Game theory, Behavioral economics, Experimental economics, Economic theory, Evolutionary economics, Economic institutions, Economic systems, etc.
07020	Economic doctrines and economic thought-related
	Economic doctrines, Economic thought, Social thought, Economic philosophy, etc.
07030	Economic statistics-related
	Statistical system, Statistical research, Population statistics, Income/wealth distribution, National accounts, Econometrics, Financial econometrics, etc.
07040	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.
07050	Public economics and labor economics-related
	Public finance, Public economics, Health economics, Labor economics, Social security, Education economics, Law and economics, Political economy, etc.
07060	Money and finance-related
	Monetary economics, Finance, International finance, Corporate finance, Financial engineering, Insurance, etc.
07070	Economic history-related
	Economic history, Business history, Industrial history, etc.
07080	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.

(Broad Section A)

07090	Commerce-related
	Marketing, Consumer behavior, Distributive sciences, Logistics, Commerce in general, etc.
07100	Accounting-related
	Financial accounting, Management accounting, Auditing, Accounting in general, etc.
80020	Tourism studies-related
	Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.

Medium-sized Section 8 : Sociology and related fields

Basic Section	Examples of related research content
08010	Sociology-related
	Sociology in general, Community, Family, Labor, Sociology of welfare, Gender, Media, Ethnicity, Social movements, Social research, Sociology of medicine, Social demography, etc.
08020	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.
08030	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.
80020	Tourism studies-related
	Tourism studies in general, Tourism, Tourism resources, Tourism policy, Tourism industry, Regional development, Tourists, Pilgrimage, etc.
80030	Gender studies-related
	Gender studies in general, Feminism, Sexuality, Queer studies, Labor, Violence, Prostitution, Reproductive technology, Gender equality, etc.

Medium-sized Section 9 : Education and related fields

Basic Section	Examples of related research content
09010	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.
09020	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.
09030	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.
09040	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.
09050	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.

(Broad Section A)

09060	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.
09070	Educational technology-related
	Curriculum development, Teaching-learning support systems, Utilization of media, Utilization of ICT, Teacher's education, Information literacy, etc.
09080	Science education-related
	Science education, Science communication, Scientific literacy, Science and society, etc.
02090	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.
02100	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.

Medium-sized Section 10 : Psychology and related fields

Basic Section	Examples of related research content
10010	Social psychology-related
	Social psychology in general, Self, Group, Attitude and behavior, Affection/emotion, Interpersonal relation, Social issues, Culture, etc.
10020	Educational psychology-related
	Educational psychology in general, Development, Family, School, Clinical practice, Personality, Learning, Assessment and evaluation, etc.
10030	Clinical psychology-related
	Clinical psychology in general, Psychological disorder, Assessment, Psychological intervention, Training, Mental health, Crime and delinquency, Community, etc.
10040	Experimental psychology-related
	Experimental psychology in general, Sensation, Perception, Attention, Memory, Language, Emotion, Learning, etc.
90030	Cognitive science-related
	Cognitive science in general, Cognitive models, Kansei, Human factors, Cognitive and brain science, Comparative cognition, Cognitive linguistics, Cognitive engineering, etc.

Broad Section B

Medium-sized Section 11 : Algebra, geometry, and related fields

Basic Section	Examples of related research content
11010	Algebra-related
	Group theory, Ring theory, Representation theory, Algebraic combinatorics, Number theory, Arithmetic geometry, Algebraic geometry, Algebraic analysis, etc.
11020	Geometry-related
	Differential geometry, Riemannian geometry, Symplectic geometry, Complex geometry, Topology, Differential topology, Low dimensional topology, etc.

(Broad Section B)

Medium-sized Section 12: Analysis, applied mathematics, and related fields

Basic Section	Examples of related research content
12010	Basic analysis-related
	Functional analysis, Complex analysis, Probability theory, Harmonic analysis, Operator theory, Spectral analysis, Operator algebras, Algebraic analysis, Representation theory, etc.
12020	Mathematical analysis-related
	Functional equations, Real analysis, Dynamical system, Variational method, Nonlinear analysis, Applied analysis, etc.
12030	Basic mathematics-related
	Mathematical logic and foundations, Information theory, Discrete mathematics, Computer mathematics, etc.
12040	Applied mathematics and statistics-related
	Numerical analysis, Mathematical modelling, Optimal control, Game theory, Statistical mathematics, etc.

Medium-sized Section 13: Condensed matter physics and related fields

Basic Section	Examples of related research content
13010	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.
13020	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.
13030	Magnetism, superconductivity and strongly correlated systems-related
	Magnetism, Strongly correlated electron systems, Superconductivity, Quantum fluids and solids, Molecular solids, etc.
13040	Biophysics, chemical physics and soft matter physics-related
	Physics of biological phenomena, Physics of biological matters, Liquids and glasses, Soft matters, Rheology, etc.

Medium-sized Section 14: Plasma science and related fields

Basic Section	Examples of related research content
14010	Fundamental plasma-related
	Basic plasmas, Magnetized plasmas, Laser plasmas, Strongly coupled plasmas, Plasma diagnostics, Astrophysical and space plasmas, etc.
14020	Nuclear fusion-related
	Plasma confinement, Plasma control, Plasma heating, Plasma diagnostics, Edge plasma, Plasma wall interaction, Inertial fusion, Fusion material, Fusion system, etc.
14030	Applied plasma science-related
	Plasma processing, Plasma photonics, Plasma material science, General plasma applications, etc.
80040	Quantum beam science-related
	Accelerators, Beam physics, Radiation detectors, Beam control, Applied quantum beam science, etc.

(Broad Section B)

Medium-sized Section 15: Particle-, nuclear-, astro-physics, and related fields

Basic Section	Examples of related research content
80040	Quantum beam science-related Accelerators, Beam physics, Radiation detectors, Beam control, Applied quantum beam science, etc.
15010	Theoretical studies related to particle-, nuclear-, cosmic ray and astro-physics Particle physics, Nuclear physics, Cosmic-ray physics, Astrophysics, Relativity, Gravity, etc.
15020	Experimental studies related to particle-, nuclear-, cosmic ray and astro-physics Particle physics, Nuclear physics, Cosmic-ray physics, Astrophysics, Relativity, Gravity, etc.

Medium-sized Section 16: Astronomy and related fields

Basic Section	Examples of related research content
16010	Astronomy-related Optical/infrared astronomy, Radio astronomy, Solar physics, Astrometry, Theoretical astronomy, X-ray/γ-ray astronomy, etc.

Medium-sized Section 17: Earth and planetary science and related fields

Basic Section	Examples of related research content
17010	Space and planetary sciences-related Solar-terrestrial physics, Aeronomy, Planetary science, Exoplanetary science, Extraterrestrial material science, etc.
17020	Atmospheric and hydrospheric sciences-related Climate system, Atmospheric science, Ocean science, Limnology, Glaciology, Paleoclimatology, etc.
17030	Human geosciences-related Geoenvironmental science, Natural disaster science, Geospatial information science, Quaternary research, Earth resources science, etc.
17040	Solid earth sciences-related Solid earth geophysics, Geology, Earth's interior material science, Solid earth geochemistry, etc.
17050	Biogeosciences-related Origin and evolution of life, Extremophile biology, Biogeochemistry, Paleoenvironmental science, Paleontology, etc.

Broad Section C

Medium-sized Section 18: Mechanics of materials, production engineering, design engineering, and related fields

Basic Section	Examples of related research content
18010	Mechanics of materials and materials-related Structural mechanics, Fatigue, Fracture, Biomaterials, Material design, Material characteristics, Material evaluation, etc.
18020	Manufacturing and production engineering-related Machine tools, Machining, Non-traditional machining, Ultraprecision machining, Additive manufacturing, Precision metrology, Manufacturing systems, Computer-aided technology, Process planning, etc.

(Broad Section C)

18030	Design engineering-related
	Product design, Service design, Design for reliability, Maintainability design, Lifecycle engineering, Reverse engineering, Safety design, Design engineering, etc.
18040	Machine elements and tribology-related
	Machine elements, Mechanisms, Tribology, Actuators, Micromachines, etc.

Medium-sized Section 19: Fluid engineering, thermal engineering, and related fields

Basic Section	Examples of related research content
19010	Fluid engineering-related
	Fluid machinery, Flow measurement, Computational fluid dynamics, Turbulence, Multiphase flow, Compressible flow, Incompressible flow, etc.
19020	Thermal engineering-related
	Heat transfer, Convection, Combustion, Thermophysical properties, Refrigeration and air-conditioning, Heat engine, Energy conversion, etc.

Medium-sized Section 20: Mechanical dynamics, robotics, and related fields

Basic Section	Examples of related research content
20010	Mechanics and mechatronics-related
	Kinematics, Kinetics, Vibration, Acoustics, Automation, Learning control, Mechatronics, Micro/nano mechatronics, Biomechanics, etc.
20020	Robotics and intelligent system-related
	Robotics, Intelligent system, Human mechanical system, Human interface, Planning, Intelligent spatial system, Virtual reality, Augmented reality, etc.

Medium-sized Section 21: Electrical and electronic engineering and related fields

Basic Section	Examples of related research content
21010	Power engineering-related
	Electrical energy-related, Energy conservation, Power system engineering, Electric machinery, Power electronics, Effective utilization of electric energy, Electromagnetic compatibility, etc.
21020	Communication and network engineering-related
	Information theory, Nonlinear theory, Signal processing, Wired/wireless communication systems, Modulation/demodulation, Antennas, Networks, Multimedia, Cryptography/security, etc.
21030	Measurement engineering-related
	Measurement theory, Measuring instruments, Applied wave metrology, Measurement systems, Signal processing, Sensing devices, etc.
21040	Control and system engineering-related
	Control theory, System theory, Control systems, Knowledge-based control systems, System information processing, System control applications, Biosystems engineering, etc.
21050	Electric and electronic materials-related
	Semiconductor, Dielectric materials, Magnetic materials, Organic materials, Superconductor, Composite materials, Thin films, Quantum structures, Thick films, Fabrication/characterization methods, etc.
21060	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.

(Broad Section C)

Medium-sized Section 22 : Civil engineering and related fields

Basic Section	Examples of related research content
22010	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.
22020	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.
22030	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.
22040	Hydroengineering-related
	Hydraulics, Environmental hydraulics, Hydrology, River engineering, Water resource engineering, Coastal engineering, Port and harbor engineering, Ocean engineering, etc.
22050	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.
22060	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.

Medium-sized Section 23 : Architecture, building engineering, and related fields

Basic Section	Examples of related research content
23010	Building structures and materials-related
	Load theory, Structural analysis, Structural design, Structures, Earthquake resistant design, Foundation, Geotechnics, Structural material, Maintenance, Building construction method, etc.
23020	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.
23030	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.
23040	Architectural history and design-related
	Architectural history, Urban history, Architectural theory, Design, Landscape, Preservation, Renovation, etc.
90010	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.

Medium-sized Section 24 : Aerospace engineering, marine and maritime engineering, and related fields

Basic Section	Examples of related research content
24010	Aerospace engineering-related
	Thermo-fluid dynamics, Structural strength, Propulsion, Aerospace craft design, Production engineering, Aircraft system, Specific aircraft, Aerodynamics, Spacecraft system, Space utilization, etc.

(Broad Section C)

24020	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.

Medium-sized Section 25: Social systems engineering, safety engineering, disaster prevention engineering, and related fields

Basic Section	Examples of related research content
25010	Social systems engineering-related
	Social systems, Industrial engineering, Operations research, Industrial management, Reliability engineering, Policy science, Regulatory science, Quality control, etc.
25020	Safety engineering-related
	Safety engineering, Safety system, Risk engineering, Risk management, Work safety, Product safety, Safety information, Human engineering, Liability engineering, etc.
25030	Disaster prevention engineering-related
	Disaster prediction, Hazard map, Building prevention against disaster, Lifeline prevention against disaster, Regional disaster prevention planning, Risk evaluation of disaster, Disaster prevention policy, Disaster resilience, etc.

Broad Section D

Medium-sized Section 26: Materials engineering and related fields

Basic Section	Examples of related research content
26010	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.
26020	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.
26030	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.
26040	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 materials, Environment functional materials, etc.
26050	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, etc.
26060	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.

Medium-sized Section 27: Chemical engineering and related fields

Basic Section	Examples of related research content
27010	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.

(Broad Section D)

27020	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.
27030	Catalyst and resource chemical process-related
	Catalysis, Catalyst preparation, Catalytic function, Energy conversion process, Energy development, Energy-saving technology, Resources effective utilization technology, etc.
27040	Biofunction and bioprocess engineering-related
	Biocatalyst engineering, Biofunction engineering, Food engineering, Medicochemical engineering, Bioproduction process, Nano-bioprocess, Bioreactor, Bioseparation, Biosensor, Biorefinery, etc.

Medium-sized Section 28 : Nano/micro science and related fields

Basic Section	Examples of related research content
28010	Nanometer-scale chemistry-related
	Nanostructure creation, Clusters, Nanoparticles, Mesoscopic chemistry, Superstructures, Nanometer-scale surfaces and interfaces, Self-assembly, Nanocarbons, Molecular devices, Nanometer-scale optical devices, etc.
28020	Nanostructural physics-related
	Physics in nanoscale materials and structures, Nanoprobes, Quantum effects, Quantum dots, Quantum devices, Electron devices, Spin devices, Nanotribology, Nanocarbon physics, etc.
28030	Nanomaterials-related
	Creation of nanomaterials, Analysis of nanomaterials, Nanosurfaces, Nanointerfaces, Functional nanomaterials, Nanostructures, Nanoparticles, Carbon nanomaterials, Nanocrystalline materials, Nanocomposites, Nanodefects, Nanofabrication process, etc.
28040	Nanobioscience-related
	Biomolecular devices, Molecular manipulation, Molecular imaging, Nanomeasurements, Nanosynthesis, Single molecule science, Nano-bio interfaces, Biomolecular array, Genome engineering, etc.
28050	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.

Medium-sized Section 29 : Applied condensed matter physics and related fields

Basic Section	Examples of related research content
29010	Applied physical properties-related
	Magnetic materials, Superconductors, Dielectrics, Fine particles, Organic molecules, Liquid crystals, New functional materials, Organic molecules and bioelectronics, Spintronics, etc.
29020	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.
29030	Applied condensed matter physics-related
	Elementary quantities, Standards, Units, Physical quantity measurements and detection, Energy conversion, etc.

Medium-sized Section 30 : Applied physics and engineering and related fields

Basic Section	Examples of related research content
30010	Crystal engineering-related
	Metals, Semiconductors, Ceramics, Amorphous materials, Crystal growth, Artificial structures, Crystal characterization, Plasma materials engineering, Plasma processing, Plasma engineering, etc.

(Broad Section D)

30020	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.

Medium-sized Section 31: Nuclear engineering, earth resources engineering, energy engineering, and related fields

Basic Section	Examples of related research content
31010	Nuclear engineering-related
	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.
31020	Earth resource engineering, Energy sciences-related
	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.

Medium-sized Section 90: Biomedical engineering and related fields

Basic Section	Examples of related research content
90110	Biomedical engineering-related
	Medical imaging, Medical modeling, Biological simulation, Biometrics, Artificial organs, Tissue engineering, Biophysical properties, Biocontrol, Biomechanics, Nanobio systems, etc.
90120	Biomaterials-related
	Biofunctional materials, Tissue engineering materials, Biocompatible materials, Nanobio materials, Drug delivery systems, Stimuli-sensitive materials, Genetic engineering material, etc.
90130	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.
90140	Medical technology assessment-related
	Regulatory science, Safety evaluation, Clinical study, Medical technology ethics, Medical devices, etc.
90150	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, Rehabilitation devices, Nursing science and engineering, etc.

Broad Section E

Medium-sized Section 32: Physical chemistry, functional solid state chemistry, and related fields

Basic Section	Examples of related research content
32010	Fundamental physical chemistry-related
	Theoretical chemistry, Molecular spectroscopy, Structural chemistry, Electronic state dynamics, Chemical reaction dynamics, Surface/interface, Cluster and nano materials, Bio-related physical chemistry, Liquid structure dynamics, Solid state properties, Molecular properties, etc.
32020	Functional solid state chemistry-related
	Optical properties, Electron spin, Molecular electronics and devices, Supermolecules, Liquid crystals, Crystals, Surface/interface, Nano particles, Colloids, Electrochemistry, Electronic properties, etc.

(Broad Section E)

Medium-sized Section 33: Organic chemistry and related fields

Basic Section	Examples of related research content
33010	Structural organic chemistry and physical organic chemistry-related
	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.
33020	Synthetic organic chemistry-related
	Selective reactions, Asymmetric synthesis, Organometallic complex/catalysis, Catalyst design, Organocatalysts, Biocatalysis, Sustainable organic synthesis, Natural product synthesis, Process chemistry, Organic electrochemistry, etc.

Medium-sized Section 34: Inorganic/coordination chemistry, analytical chemistry, and related fields

Basic Section	Examples of related research content
34010	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.
34020	Analytical chemistry-related
	Spectrometric analysis, Advanced measurements, Surface/interface analysis, Separation analysis, Analytical reagents, Radiochemical analysis, Electrochemical analysis, Bioanalysis, New analysis methods, etc.
34030	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, Environmental radioactivity, etc.

Medium-sized Section 35: Polymers, organic materials, and related fields

Basic Section	Examples of related research content
35010	Polymer chemistry-related
	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.
35020	Polymer materials-related
	Properties of polymer materials, Synthesis of polymer materials, Functional polymer materials, Liquid crystal polymers, Textiles, Rubbers, Gel, Biopolymers, Polymer composites, Polymer processing, etc.
35030	Organic functional materials-related
	Organic semiconductors, Liquid crystals, Optical materials, Device-related materials, Electrically conductive materials, Hybrid materials, Molecular functional materials, Organic hybrid materials, Materials for energy conversion, etc.

Medium-sized Section 36: Inorganic materials chemistry, energy-related chemistry, and related fields

Basic Section	Examples of related research content
36010	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.
36020	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.

(Broad Section E)

Medium-sized Section 37: Biomolecular chemistry and related fields

Basic Section	Examples of related research content
37010	Bio-related chemistry
	Bioorganic chemistry, Bioinorganic chemistry, Biological reaction engineering, Biofunctional chemistry, Biofunctional materials, Biotechnology, etc.
37020	Chemistry and chemical methodology of biomolecules-related
	Natural product chemistry, Biologically active compounds, Molecular mechanism of biological activities, Biofunctional molecules, Combinatorial chemistry, Metabolomic analysis, etc.
37030	Chemical biology-related
	In vivo functional expression, Intracellular chemical reactions, Drug discovery science, Chemical library, Structure-activity relationship, Chemical probes, Biomolecular measurements, Molecular imaging, Proteomics, etc.

Broad Section F

Medium-sized Section 38: Agricultural chemistry and related fields

Basic Section	Examples of related research content
38010	Plant nutrition and soil science-related
	Plant metabolism and physiology, Nutritional elements in plants, Soil classification, Soil physical chemistry, Soil organisms, etc.
38020	Applied microbiology-related
	Microbial genetics/breeding, Microbial function, Microbial metabolism and physiology, Microbial applications, Control of microbes, Microbial ecology, Production of useful materials, etc.
38030	Applied biochemistry-related
	Cellular biochemistry, Applied biochemistry, Structural biology, Regulation of bioactivity, Metabolism and physiology, Cellular function, Molecular function, Production of useful materials, etc.
38040	Bioorganic chemistry-related
	Bioactive substances, Signal molecules, Natural products chemistry, Biosynthesis, Structure-activity relationship, Synthetic organic chemistry, Chemical biology, etc.
38050	Food sciences-related
	Food function, Food chemistry, Nutritional chemistry, Food analysis, Food engineering, Food safety, Functional food, Nutritional epidemiology, Clinical nutrition, etc.
38060	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.

Medium-sized Section 39: Agricultural and environmental biology and related fields

Basic Section	Examples of related research content
39010	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.
39020	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.
39030	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.

(Broad Section F)

39040	Plant protection science-related
	Plant pathology, Clinical plant science, Agricultural insect pest, Natural enemy, Weed, Agricultural chemicals, Integrated pest management, etc.
39050	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.
39060	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.
39070	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.

Medium-sized Section 40 : Forestry and forest products science, applied aquatic science, and related fields

Basic Section	Examples of related research content
40010	Forest science-related
	Forest ecology, Forest biodiversity, Forest genetics and breeding, Silviculture, Forest protection, Forest environments, Erosion control, Forest planning, Forest policy, etc.
40020	Wood science-related
	Wood structure, Wood property, Lignocellulose, Trace element, Fungus, Wood processing, Biomass-refinery, Wood based material, Wooden building, Forest products education, etc.
40030	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.
40040	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.

Medium-sized Section 41 : Agricultural economics and rural sociology, agricultural engineering, and related fields

Basic Section	Examples of related research content
41010	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.
41020	Rural sociology and agricultural structure-related
	Farm organization, Farm management, Agricultural structure, Agricultural market, Agricultural history, Rural society, Rural life, Agricultural cooperative, etc.
41030	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.
41040	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.

(Broad Section F)

41050	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.

Medium-sized Section 42 : Veterinary medical science, animal science, and related fields

Basic Section	Examples of related research content
42010	Animal production science-related
	Breeding/genetics, Reproduction, Nutrition/feeding, Anatomy/physiology, Product, Environment, Behavior, Therapy, Grassland, Grazing, etc.
42020	Veterinary medical science-related
	Basic veterinary science, Pathological veterinary science, Applied veterinary science, Clinical veterinary science, Animal nursing, Animal welfare, Wildlife, etc.
42030	Animal life science-related
	Homeostasis, Cellular function, Biological defense, Integrated genetics, Development/differentiation, Biotechnology, etc.
42040	Laboratory animal science-related
	Genetic engineering, Developmental engineering, Animal models of disease, Facility management, Laboratory animal welfare, Laboratory animal-related technology, Bioresource, etc.

Broad Section G

Medium-sized Section 43 : Biology at molecular to cellular levels, and related fields

Basic Section	Examples of related research content
43010	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.
43020	Structural biochemistry-related
	Proteins, Nucleic acids, Lipids, Carbohydrates, Biological membrane, Molecular recognition, Denaturation, Three-dimensional structural analysis, Three-dimensional structural prediction, Molecular dynamics, etc.
43030	Functional biochemistry-related
	Enzymes, Sugar chain, Bioenergy conversion, Biological trace elements, Physiologically active substances, Cell signaling, Membrane transport, Proteolysis, Molecular recognition, etc.
43040	Biophysics-related
	Structure biology, Physical property of biomolecules, Biomembrane, Photobiology, Molecular motor, Biometrics, Bioimaging, Systems biology, Synthetic biology, Theoretical biology, etc.
43050	Genome biology-related
	Genome organization, Genome function, Genome diversity, Molecular evolution of genome, Genome repair/maintenance, Trans-omics, Epigenome, Gene resource, Genome dynamics, etc.
43060	System genome science-related
	Network analyses, Synthetic biology, Biological databases, Bioinformatics, Genome analysis technology, Genome biotechnology, etc.

Medium-sized Section 44 : Biology at cellular to organismal levels, and related fields

Basic Section	Examples of related research content
44010	Cell biology-related
	Cytoskeleton, Proteolysis, Organelle dynamics, Nuclear structure and function, Extracellular matrix, Signal transduction, Cell cycle, Cell motility, Cell-cell interaction, Cellular genetics, etc.

(Broad Section G)

44020	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.
44030	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.
44040	Morphology and anatomical structure-related
	Animal and plant morphology, Micro-organismal morphology, Molecular morphology, Microstructure, Tissue organization, Morphogenesis, Comparative endocrinology, Microscopic technology, Imaging, etc.
44050	Animal physiological chemistry, physiology and behavioral biology-related
	Metabolic physiology, Neurophysiology, Neuroethology, Behavioral physiology, Animal physiological chemistry, Chronobiology, Comparative physiology, etc.

Medium-sized Section 45 : Biology at organismal to population levels and anthropology, and related fields

Basic Section	Examples of related research content
45010	Genetics-related
	Genetic mechanism, Molecular genetics, Cellular genetics, Population genetics, Evolutionary genetics, Developmental genetics, Behavioral genetics, Genetic diversity, etc.
45020	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.
45030	Biodiversity and systematics-related
	Taxonomic characters, Taxon, Classification system, Biodiversity, Phylogenetics, Evolution, Natural history, Speciation, etc.
45040	Ecology and environment-related
	Chemical ecology, Molecular ecology, Physiological ecology, Evolutionary ecology, Behavioral ecology, Population ecology, Community ecology, Ecosystem, Conservation ecology, Natural environment, etc.
45050	Physical anthropology-related
	Molecular anthropology and genetics, Morphology and function, Bioarchaeology, Behavior and cognition, Ecology, Primates, Evolution, Development and ontogeny, Variation and diversity, etc.
45060	Applied anthropology-related
	Physiological anthropology, Ergonomics, Forensic anthropology, Medical anthropology, Physiological polymorphisms, Environmental adaptability, Somatic and physiological function, Anthropometry and bioengineering, etc.

Medium-sized Section 46 : Neuroscience and related fields

Basic Section	Examples of related research content
46010	Neuroscience-general-related
	Neurochemistry, Neuron, Glia, Genome, Epigenetics, Neurobiology, Information processing, Synapse, Neurogenesis, etc.
46020	Anatomy and histopathology of nervous system-related
	Neural development, Anatomy of nervous system, Neural network structure, Neuropathology, etc.
46030	Function of nervous system-related
	Neurophysiology, Neuropharmacology, Neurotransmission, Neuroinformatics, Behavioral neuroscience, Neural system physiology, Cerebral blood flow, Autonomic nervous system, etc.

Broad Section H

Medium-sized Section 47: Pharmaceutical sciences and related fields

Basic Section	Examples of related research content
47010	Pharmaceutical chemistry and drug development sciences-related Inorganic chemistry, Organic chemistry, Medicinal chemistry, Medicinal molecular design, Drug discovery, Bio-related materials, Chemical biology, etc.
47020	Pharmaceutical analytical chemistry and physicochemistry-related Environmental analysis, Bioanalysis, Physicochemistry, Biophysics, Structural biology, Radiochemistry, Bioimaging, Drug formulation design, Computer science, Information science, etc.
47030	Pharmaceutical hygiene and biochemistry-related Environmental hygiene, Healthful nutrition, Disease prevention, Toxicology, Drug metabolism, Host defense, Molecular biology, Cell biology, Biochemistry, etc.
47040	Pharmacology-related Pharmacology, Pharmacogenomics, Applied pharmacology, Signal transduction, Drug interactions, Drug response, Pharmacotherapy, Pharmacotoxicology, etc.
47050	Environmental and natural pharmaceutical resources-related Environmental resource science, Natural products chemistry, Bioactive natural compounds, Medicinal resources, Medicinal foods, Pharmaceutical microbiology, etc.
47060	Clinical pharmacy-related Pharmacokinetics, Medical informatics, Social pharmacy, Clinical pharmacy, Pharmaceutics, Regulatory science, Education for the pharmacist, etc.

Medium-sized Section 48: Biomedical structure and function and related fields

Basic Section	Examples of related research content
48010	Anatomy-related Macroscopic anatomy, Histology, Embryology, etc.
48020	Physiology-related General physiology, Pathophysiology, Comparative physiology, Environmental physiology, etc.
48030	Pharmacology-related Genomic pharmacology, Molecular and cellular pharmacology, Pathological pharmacology, Behavioral pharmacology, Pharmacology for drug discovery, Clinical pharmacology, etc.
48040	Medical biochemistry-related Biofunctional molecular and medical biochemistry, Genome medical sciences, Human genetics, Disease model, etc.

Medium-sized Section 49: Pathology, infection/immunology, and related fields

Basic Section	Examples of related research content
49010	Pathological biochemistry-related Molecular pathology, Metabolic disorders, Molecular diagnosis, etc.
49020	Human pathology-related Molecular pathology, Cyto- and histo-pathology, Diagnostic pathology, etc.

(Broad Section H)

49030	Experimental pathology-related
	Disease models, Pathological regulation, Tissue regeneration, etc.
49040	Parasitology-related
	Parasite, Vector organism, Parasite pathogenicity, Epidemiology of parasites, Control of parasite infections, etc.
49050	Bacteriology-related
	Bacterium, Fungus, Antimicrobial resistance, Bacterial pathogenicity, Epidemiology of bacteria, Control of bacterial infections, etc.
49060	Virology-related
	Virus, Prion, Viral pathogenicity, Epidemiology of viruses, Control of viral infections, etc.
49070	Immunology-related
	Immune system, Immune response, Inflammation, Immune-related disorder, Immune regulation, etc.

Broad Section I

Medium-sized Section 50 : Oncology and related fields

Basic Section	Examples of related research content
50010	Tumor biology-related
	Cancer and gene, Tumor development, Invasion, Metastasis, Cancer microenvironment, Cancer and signal transduction, Characteristics of cancer cells, etc.
50020	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.

Medium-sized Section 51 : Brain sciences and related fields

Basic Section	Examples of related research content
51010	Basic brain sciences-related
	Brain-machine interface, Model animal, Computational brain science, Brain information decoding, Control technologies, Brain imaging, Brain biometrics, etc.
51020	Cognitive and brain science-related
	Social behavior, Communication, Emotion, Decision making, Consciousness, Learning, Neuroeconomics, Neuropsychology, etc.
51030	Pathophysiologic neuroscience-related
	Clinical neuroscience, Dolorology, Sensory impairment, Movement disorder, Neurological disorder, Neurogenesis, Neuroimmunology, Cellular degeneration, Disease model, etc.

Medium-sized Section 52 : General internal medicine and related fields

Basic Section	Examples of related research content
52010	General internal medicine-related
	Laboratory medicine, General practice, Geriatrics, Psychosomatic internal medicine, Oriental medicine, Palliative medicine, etc.
52020	Neurology-related
	Neurology, Neurofunctional imaging, etc.

(Broad Section I)

52030	Psychiatry-related
	Clinical psychiatry, Biological psychiatry, Forensic mental health, etc.
52040	Radiological sciences-related
	Diagnostic radiology, Therapeutic radiology, Radiation biology, Radiological technology, etc.
52050	Embryonic medicine and pediatrics-related
	Fetal medicine, Neonatal medicine, Pediatrics, etc.

Medium-sized Section 53 : Organ-based internal medicine and related fields

Basic Section	Examples of related research content
53010	Gastroenterology-related
	Upper digestive tract, Lower digestive tract, Liver, Biliary tract, Pancreas, etc.
53020	Cardiology-related
	Ischemic heart disease, Valvular heart disease, Arrhythmia, Cardiomyopathy, Heart failure, Peripheral arterial disease, Arteriosclerosis, Hypertension, etc.
53030	Respiratory medicine-related
	Respiratory medicine, Asthma, Diffusive lung disease, COPD, Lung cancer, Pulmonary hypertension, etc.
53040	Nephrology-related
	Acute renal failure, Chronic kidney disease, Diabetic nephropathy, Hypertension, Aqueous electrolyte metabolism, Artificial dialysis, etc.
53050	Dermatology-related
	Dermatology, Cutaneous immune disease, Cutaneous infection, Cutaneous tumor, etc.

Medium-sized Section 54 : Internal medicine of the bio-information integration and related fields

Basic Section	Examples of related research content
54010	Hematology and medical oncology-related
	Hematological oncology, Hematological immunology, Anemia, Thrombosis and hemostasis, Chemotherapy, etc.
54020	Connective tissue disease and allergy-related
	Connective tissue disease, Allergy, Clinical immunology, Inflammation, etc.
54030	Infectious disease medicine-related
	Infection diagnostics, Infection therapeutics, Host defense, International infection science, etc.
54040	Metabolism and endocrinology-related
	Energy balance, Glucose metabolism, Lipid metabolism, Purine metabolism, Bone metabolism, Electrolyte balance, Endocrinology, Neuroendocrinology, Reproductive endocrinology, etc.

Medium-sized Section 55 : Surgery of the organs maintaining homeostasis and related fields

Basic Section	Examples of related research content
55010	General surgery and pediatric surgery-related
	Surgical basic principles, Breast surgery, Endocrine surgery, Pediatric surgery, Transplant surgery, Artificial organs science, Regeneration, Operation support, etc.

(Broad Section I)

55020	Digestive surgery-related
	Upper gastrointestinal surgery, Lower gastrointestinal surgery, Hepatic surgery, Biliary surgery, Pancreatic surgery, etc.
55030	Cardiovascular surgery-related
	Coronary artery surgery, Heart valve surgery, Surgery for myocardial disease, Aortic surgery, Vascular surgery, Congenital heart surgery, etc.
55040	Respiratory surgery-related
	Lung surgery, Mediastinal surgery, Chest wall surgery, Respiratory tract surgery, etc.
55050	Anesthesiology-related
	Anesthesiology, Perioperative management, Pain management, Resuscitology, Palliative medicine, etc.
55060	Emergency medicine-related
	Intensive care medicine, Emergency resuscitation science, Trauma surgery, Disaster medicine, Disaster medical care, etc.

Medium-sized Section 56：Surgery related to the biological and sensory functions and related fields

Basic Section	Examples of related research content
56010	Neurosurgery-related
	Neurosurgery, Spine and spinal cord diseases, etc.
56020	Orthopedics-related
	Orthopedics, Rehabilitation medicine, Sports medicine, etc.
56030	Urology-related
	Urology, Male genitalia science, etc.
56040	Obstetrics and gynecology-related
	Obstetrics, Reproductive endocrinology, Gynecologic oncology, Female health care medicine, etc.
56050	Otorhinolaryngology-related
	Otorhinolaryngology, Head and neck surgery, etc.
56060	Ophthalmology-related
	Ophthalmology, Ophthalmological optics, etc.
56070	Plastic and reconstructive surgery-related
	Plastic surgery, Reconstructive surgery, Aesthetic plastic surgery, etc.

Medium-sized Section 57：Oral science and related fields

Basic Section	Examples of related research content
57010	Oral biological science-related
	Oral anatomy, Oral histology and embryology, Oral physiology, Oral biochemistry, Pharmacology for hard tissues, etc.
57020	Oral pathobiological science-related
	Oral infectious diseases, Oral pathology, Oral experimental oncology, Immunity and inflammation, Laboratory medicine, etc.

(Broad Section I)

57030	Conservative dentistry-related
	Operative dentistry, Endodontology, Periodontology, etc.
57040	Regenerative dentistry and dental engineering-related
	Regenerative dentistry, Biomaterial science, Dental materials science, Oral and maxillofacial prosthetics, Oral implantology, etc.
57050	Prosthodontics-related
	Prosthodontics, Oral rehabilitation, Gerodontology, etc.
57060	Surgical dentistry-related
	Oral and maxillofacial surgery, Oral maxillofacial reconstructive surgery, Dental anesthesiology, Psychosomatic medicine dentistry, Dental radiology, etc.
57070	Developmental dentistry-related
	Orthodontics, Pediatric dentistry, etc.
57080	Social dentistry-related
	Dental hygiene, Preventive dentistry, Oral health administration and management, Dental education, Forensic odontology, etc.

Medium-sized Section 58 : Society medicine, nursing, and related fields

Basic Section	Examples of related research content
58010	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.
58020	Hygiene and public health-related: including laboratory approach
	Hygiene, Public health, Epidemiology, Global health, etc.
58030	Hygiene and public health-related: excluding laboratory approach
	Hygiene, Public health, Epidemiology, Global health, etc.
58040	Forensics medicine-related
	Forensic medicine, Forensic pathology, Forensic toxicology, Forensic genetics, Suicide, Abuse, Clinical forensic medicine, Sudden death, etc.
58050	Fundamental of nursing-related
	Fundamental of nursing, Nursing education, Nursing administration, etc.
58060	Clinical nursing-related
	Critical care and emergency nursing, Perioperative nursing, Nursing of chronic illness, Oncology nursing, Psychiatric nursing, Palliative care nursing, etc.
58070	Lifelong developmental nursing-related
	Women's health nursing, Maternal nursing, Midwifery, Family health nursing, Child health nursing, School nursing, etc.
58080	Gerontological nursing and community health nursing-related
	Gerontological nursing, Community health nursing, Public health nursing, Disaster nursing, etc.

(Broad Section I)

Medium-sized Section 59: Sports sciences, physical education, health sciences, and related fields

Basic Section	Examples of related research content
59010	Rehabilitation science-related
	Rehabilitation medicine, Rehabilitation nursing, Rehabilitation medical care, Physicotherapeutics, Occupational therapy, Assistive technology, Speech and language therapy, etc.
59020	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.
59030	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.
59040	Nutrition science and health science-related
	Nutritional physiology, Nutritional biochemistry, Nutritional education, Clinical nutrition, Functional food, Lifestyle-related disease, Health promotion, Aging, etc.

Medium-sized Section 90: Biomedical engineering and related fields

Basic Section	Examples of related research content
90110	Biomedical engineering-related
	Medical imaging, Medical modeling, Biological simulation, Biometrics, Artificial organs, Tissue engineering, Biophysical properties, Biocontrol, Biomechanics, Nanobio systems, etc.
90120	Biomaterials-related
	Biofunctional materials, Tissue engineering materials, Biocompatible materials, Nanobio materials, Drug delivery systems, Stimuli-sensitive materials, Genetic engineering material, etc.
90130	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.
90140	Medical technology assessment-related
	Regulatory science, Safety evaluation, Clinical study, Medical technology ethics, Medical devices, etc.
90150	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, Rehabilitation devices, Nursing science and engineering, etc.

Broad Section J

Medium-sized Section 60: Information science, computer engineering, and related fields

Basic Section	Examples of related research content
60010	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.
60020	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.

(Broad Section J)

60030	Statistical science-related
	Statistics, Data science, Modeling, Statistical inference, Multivariate analysis, Time series analysis, Statistical quality control, Applied statistics, etc.
60040	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.
60050	Software-related
	Programming language, Programming methodology, Operating system, Parallel and distributed computing, Software engineering, Virtualization technology, Cloud computing, Software dependability, Software security, etc.
60060	Information network-related
	Network architecture, Network protocol, Internet, Mobile network, Pervasive computing, Sensor network, IoT, Traffic engineering, Network management, Service platform technology, etc.
60070	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.
60080	Database-related
	Data model, Database system, Multimedia database, Information retrieval, Content management, Metadata, Big data, Geographic information system, etc.
60090	High performance computing-related
	Parallel processing, Distributed processing, Cloud computing, Numerical analysis, Visualization, Computer graphics, High performance computing application, etc.
60100	Computational science-related
	Mathematical engineering, Computational mechanics, Numerical simulation, Multi-scale modeling, Large-scale computing, Massively parallel computing, Numerical computing methods, Advanced algorithms, etc.

Medium-sized Section 61 : Human informatics and related fields

Basic Section	Examples of related research content
61010	Perceptual information processing-related
	Pattern recognition, Image processing, Computer vision, Visual media processing, Acoustic media processing, Media editing, Media database, Sensing, Sensor fusion, etc.
61020	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.
61030	Intelligent informatics-related
	Search, Inference, Machine learning, Knowledge acquisition, Intelligent system, Intelligent information processing, Natural language processing, Data mining, Ontology, Agent system, etc.
61040	Soft computing-related
	Neural network, Evolutionary computation, Fuzzy theory, Chaos, Complex systems, Probabilistic information processing, etc.
61050	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.
61060	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.
90010	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.

(Broad Section J)

90030	Cognitive science-related
	Cognitive science in general, Cognitive models, Kansei, Human factors, Cognitive and brain science, Comparative cognition, Cognitive linguistics, Cognitive engineering, etc.

Medium-sized Section 62 : Applied informatics and related fields

Basic Section	Examples of related research content
62010	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.
62020	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.
62030	Learning support system-related
	Media literacy, Learning media, Social media, Learning content, Learning management, Learning support, Remote learning, e-Learning, etc.
62040	Entertainment and game informatics-related
	Music information processing, 3D content, Animation, Game programming, Network entertainment, Media art, Digital museum, Experience design, etc.
90020	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.

Broad Section K

Medium-sized Section 63 : Environmental analyses and evaluation and related fields

Basic Section	Examples of related research content
63010	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.
63020	Radiation influence-related
	Radiation, Measurement, Control, Repair, Biological effects, Risk, etc.
63030	Chemical substance influence on environment-related
	Toxicology, Toxic substance to human, Trace chemical substance, Endocrine disruptor, Repair, etc.
63040	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.

Medium-sized Section 64 : Environmental conservation measure and related fields

Basic Section	Examples of related research content
64010	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.

(Broad Section K)		64020	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.
		64030	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.
		64040	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.
		64050	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.
		64060	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.

Attached Table 3　Generative Research Fields Review Division

This table applies only to the “Challenging Research (Pioneering/Exploratory)”.

○Divisions Designated for FY2020 Recruitment

Division	Detail	Division Number	Proposal Solicitation
A New Phase of Our Advanced Science and Technology Society	While the advance of science and technology has brought numerous benefits to humankind, it has also given rise to such problems as ecosystem destruction and pollution. Initially it was believed that these problems arose from the basic framework of society and could be overcome or avoided in the future. Today, however, astonishing advances in science and technology are opening the path toward processes that modify human beings themselves, throwing into question the standing of humans as rational beings in control of science and technology. Thus, as the basic framework of society itself becomes unsteady, we can conclude that our advanced science and technology society is entering a new phase. The elucidation of brain mechanisms, for example, along with its practical applications, will induce us to reconsider our notions of human autonomy and dignity, conceptual skills and creativity which are related to scholarly pursuits, and the meaning of societal concepts such as responsibility, justice, and fairness, and economic and political behavior. The development of reproductive techniques has contributed greatly to infertility treatment, but the possibility of pre-birth diagnosis, birth without parent-child relationship, genome editing, designer babies and the like has changed our concept of family and love, marriage, and gender, calling on us to re-examine the societal and legal systems involved in these matters. Transformations in human understanding and society brought about by advanced science and technology are observed in various areas. Artificial intelligence, which is starting to become a reality in daily life and the workplace, is expected not only to alter the quality of labor and the work environment but to lead to major structural changes in the social hierarchy. Information and communications technologies are changing existing media structures, thereby affecting the nature of economy, politics, society, and nations. Further, the impact of advanced science and technology is spreading to literature, the arts and other cultural activities as well as to the front lines of education, sports, medicine, and nursing and long-term care. Such areas as slow life, sustainability, ecology movements, anti-globalism, nationalism, and reactionism can also be seen as closely related to developments in advanced science and technology. This research field examines the relationship of human beings and society to science and technology — now indispensable to human existence — by identifying the current state and problems of the new phase being entered by our advanced science and technology society.	CN01	FY2018 — FY2020
Studies on the Super-Aging Society	Japan, with 26.7 percent of its population aged 65 or above as of 2015, is rapidly becoming a super-aging society. Among the factors contributing to the emergence of the super-aging society in Japan are high educational levels, provision of public sanitation, good nutrition, and wide availability of effective measures for treating diseases. The declining birth rate is another reason for the rapid increase in the percentage of the elderly in the population. The ways each individual lives in this new kind of society are many and varied, and to grasp the full picture is difficult. In Japan today, the gap between “healthy life span”—the time in which individuals can self-dependently live in society—and actual life span—the time until the end of life—is around ten years. One factor behind this gap is the state of medical care in Japan, which fully utilizes the most advanced medical techniques produced by modern life sciences and applied beyond treatments, endeavoring to avoid the extinction of life to the greatest extent possible. The super-aging society raises new questions concerning the human dignity of each individual, such as how to cope with the increase in dementia patients, the propriety of life-extension treatments with no endpoint, and death with dignity. Not only the mental, physical, and economic burden on the elderly themselves and the families caring for them, but also the burden on the whole society are increasing. In the United States, the “Choosing Wisely” campaign has been initiated, with the aim of withholding excessive medical treatment with thin evidence of its worth. Research is applying science and thanatology to comprehensively study appropriate measures for selecting optimal treatments, by predicting from various aspects how well a person can continue life. The World Health Organization defines health as including not only physical well-being but also mental and social well-being. In reality, a healthy life span is related to multiple factors throughout life; for the elderly, along with treatment oriented to prevention and recovery from illness, the significant factors are the “joy of living,” maintenance of living abilities, desire to work and contribute to society, connection with society, and existence of family or other people to communicate with. Various forms of preemptive intervention have been proposed for building up early in life a physical and mental constitution not prone to diseases. For the people in society as a whole, several matters such as countermeasures against the declining birth rate, child-rearing support, human resources for the elderly, and health insurance systems, are crucial for achieving the sustainability of society. With the increasing proportion of the elderly, the harmonious sharing of social resources based on tolerance and empathy, which we have never possessed in the past, will be vital for realizing symbiosis in society. While accepting the super-aging society, the new challenge facing all contemporary people is how to make our society sustainable and achieve a balance of well-being among all its members. In this research field, from the viewpoint of not only natural sciences but also humanities and social sciences, medical science and healthcare are studied with the view to maintaining well-being throughout the lifetime of each member of the super-aging society, analysis is conducted on how the existence of the elderly influences the people around them and society, and several topics including issues relating to social institutions are comprehensively studied.	CN02	

(Reference 1) Review Panels and Other Matters

1. Concerning KAKENHI Review

Omitted

2. Review Methods and Other Matters

The review for the 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 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 the Grants-in-Aid for Scientific Research, called "review and assessment rules" below) can be checked on the JSPS website:

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

(The "review and assessment rules" for FY2020 will be posted on the JSPS website around early October.)

(1) The review of the "Specially Promoted Research" is performed by the way that the eight to fourteen reviewers conduct the document reviews for all the applied research projects at the three separate committees of specialized fields below based on the Research Proposal Document, review comments which are finalized by close researchers in the field of specialization after being drafted by approx. three researchers each from domestic research institutions and overseas and so on. The specialized fields are the "Humanities and Social Sciences", the "Science and Engineering", and the "Biological Sciences". Afterward, the same reviewers who have engaged in the document reviews above will select projects for interview by conducting a discussion from a broad perspective on each research project at panel reviews and then proceed with interview reviews. (This is called a "Comprehensive Review".)

(2) The review of the "Scientific Research (S)" is performed by the way that the six reviewers conduct the document reviews for all the applied research projects by each Broad Section based on the Research Proposal Document, review comments which are finalized by close researchers in the field of specialization after being drafted by approx. three researchers from domestic research institutions and so on. Afterward, the same reviewers who have engaged in the document reviews above will select projects for interview by conducting a discussion from a broad perspective on each research proposal at panel reviews and then proceed with interview reviews. (the "Comprehensive Review")

(3) The review of the "Scientific Research (A)" is performed by each Medium-sized Section. The six to eight reviewers will conduct document reviews for all research proposals, and the same reviewers who have engaged in the document reviews above will conduct a discussion from a broad perspective on each research proposal at panel reviews. (the "Comprehensive Review")

(4) The reviews of the "Scientific Research (B/C)" and the "Early-Career Scientists" are performed by each Basic Section. The six reviewers for the "Scientific Research (B)" and four reviewers each for the "Scientific Research (C) and the "Early-Career Scientists" will conduct document reviews in two-stage. The panel reviews will not be conducted. (This is called a "Two-Stage Document Review")

(5) The review of the "Challenging Research" is performed by each Medium-sized Section or Generative Research Fields Review Division. The six to eight reviewers will conduct document reviews for all research proposals after the preliminary screening with the Research Proposal Document (Outline) as needed, and the same reviewers who have engaged in the document reviews above will conduct a discussion from a broad perspective on each research proposal at panel reviews. (the "Comprehensive Review") (Preliminary screening will not be conducted if the number of application is small.)

* The Review Section and Review Method have been revised since FY2019 Grants-in-Aid for Scientific Research-KAKENHI- (FY2018 Reform of the KAKENHI Review System). For details, please refer to the following report.

- "About Reform of the Review System for Grants-in-Aid for Scientific Research-KAKENHI-" (January 17, 2017, Subdivision on Science, Council for Science and Technology)
  URL: http://www.mext.go.jp/a_menu/shinkou/hojyo/1284543.htm
- KAKENHI Reform Briefing (Held at the University of Tokyo on June 8, 2017 and at Kansei Gakuin University on June 15, 2017). The materials and video are available as follows:
  URL: http://www.mext.go.jp/a_menu/shinkou/hojyo/1387297.htm

* In the review process, the reviewers can utilize, as necessary, the "Researchmap" and the database of Grants-in-Aid for Scientific Research (KAKEN). (see page 68)

3. Notification of the Review Results

(1) Specially Promoted Research

1) JSPS will issue a notification in writing to the research institution on the results of the selection of the research projects for which an interview will be organized. (This is scheduled in March.)
2) 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 in late April)
3) JSPS will issue a notification to the Principal Investigator of the adopted research project on the opinions expressed in the review results. If failed to be adopted, an approximate ranking per category and opinions expressed in the review results will be disclosed via the electronic application system. (Planned in July)
4) JSPS will open to the public the summary of the opinions expressed in the review results for the adopted research project including on the database of the Grants-in-Aid for Scientific Research (KAKEN). (Planned in August)

(2) Scientific Research (S)

1) JSPS will issue a notification in writing to the research institution on the results of the selection of research projects for which an interview will be organized. (Planned in April)
2) 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 in late June)
3) JSPS will issue a notification to the Principal Investigator of the adopted research project on the opinions expressed in the review results. If failed to be adopted and the Principal Investigator wishes to request for disclosure the results of the review, an approximate ranking per Broad Section and opinions expressed in the review results will be disclosed via the electronic application system. (Planned in August)
4) JSPS will open to the public the summary of the opinions expressed in the review results for the adopted research project including on the database of the Grants-in-Aid for Scientific Research (KAKEN). (Planned in November)

(3) Scientific Research (A)

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 in early April)
2) JSPS will issue a notification to the Principal Investigator of the adopted research project on the opinions expressed in the review results via the electronic application system. If failed to be adopted and the Principal Investigator wishes to request for disclosure the results of the review, an approximate ranking per Medium-sized Section and opinions expressed in the review results will be disclosed via the electronic application system. (Planned in April)
3) JSPS will open to the public the summary of the opinions expressed in the review results for the adopted research project including on the database of the Grants-in-Aid for Scientific Research (KAKEN). (Planned in July)

(4) Scientific Research (B/C) and Early-Career Scientists

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 in early April)
2) To Principal Investigators whose proposals have not been adopted and who wish to request for disclosure the results of the review at the first stage of the review, JSPS is ready to disclose the approximate ranking per the Basic Section, the score (average score), and the "standard-format opinion" via the electronic application system. (Planned in April)

(5) Challenging Research (Pioneering/Exploratory)

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 in late June).
2) To Principal Investigators whose proposals have not been adopted and who wish to request for disclosure the results of the review, JSPS is ready to disclose the approximate ranking per each section, etc. via the electronic application system. Moreover, in conjunction with the item mentioned above, JSPS is ready to disclose the "opinions expressed in the review results" in the case their proposals have not been adopted in panel reviews. (Planned in August)

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

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:

・ **General inquiries about the Application Procedures**

Research Aid Planning Division, Research Program Department, Japan Society for the Promotion of Science
Telephone: 03-3263-4796
FAX: 03-3263-9005

・ **Specially Promoted Research and Scientific research(S)**

Research Aid Division II, Research Program Department, Japan Society for the Promotion of Science
Telephone: 03-3263-4254 (Specially Promoted Research)
03-3263-4388 (Scientific Research (S))

・ **Scientific research (A/B/C) and Early-Career Scientists**

Research Aid Division I, Research Program Department, Japan Society for the Promotion of Science
Telephone: 03-3263-4724, 1003, 4779, 0996

・ **Challenging Research (Pioneering/Exploratory)**

Research Aid Planning Division, Research Program Department, Japan Society for the Promotion of Science
Telephone: 03-3263-0977

* Available every day except on Saturdays, Sundays, National Holidays, the New Year Holidays (from December 29 until January 3), and the Anniversary of the Foundation of JSPS (September 21).

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

・ **Call center:**

Telephone: 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:**

Institutional Research and Information Division, Policy Planning Department, Japan Society for the Promotion of Science
Telephone: 03-3263-1017, 1022, 1107, 1024

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

・ **e-Rad help desk:**

Telephone: 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: 03-6631-0622

< Important points >

① How to operate e-Rad
Manuals on how to operate e-Rad can be referred or downloaded from the portal site (URL: https://www.e-rad.go.jp). Please agree to the terms of service and apply.
② Time period when e-Rad is available

(Monday to Sunday) 00:00 - 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.

(4) For matters related to the "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)":
Office of Research Funding Administration, Promotion Policy Division, Research Promotion Bureau, MEXT
Telephone: 03-6734-4014

(5) For matters related to the "Checklist Pertaining to the Current Status" based on the "Guidelines for Responding to Misconduct in Research":
Office for Research Integrity Promotion, Human Resources Policy Division, Science and Technology Policy Bureau, MEXT
Telephone: 03-5253-4111

(6) For matters related to "the National Bioscience Database":
National Bioscience Database Center, Japan Science and Technology Agency (JST)
Telephone: 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
Telephone: 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)
Web inquiry form: https://researchmap.jp/public/inquiry/
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. 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]