

On campus use only

Handbook for Grants-in-Aid for Scientific Research (*Kakenhi*)

~ To ensure acquisition of *Kakenhi* ~

Applications for FY 2019

Center for Research Strategy/ Research Promotion Division

Waseda University

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Part I. Basics: What is *Kakenhi*?

Chapter 1: Obtaining *Kakenhi* for the conduct of your research

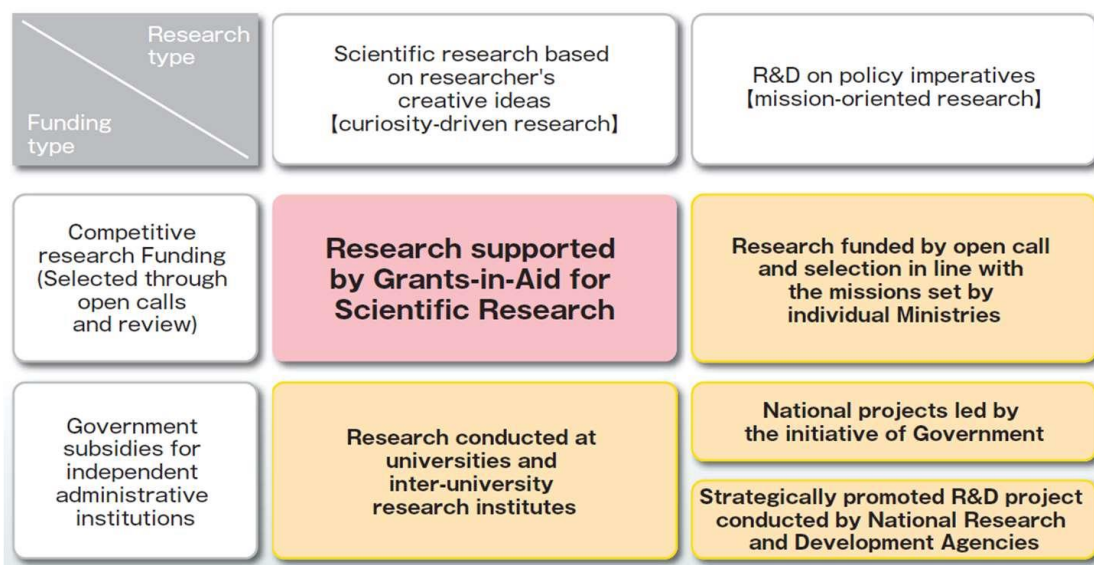
This chapter provides an overview of *Kakenhi* and its place in research activities; and the application schedule.

1. What is *Kakenhi*?

Kakenhi (the short name in Japanese for Grants-in-Aid for Scientific Research) is competitive funding, provided by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and Japan Society for the Promotion of Science (JSPS), to **support outstanding development of academic research, ranging from foundation research to applied research, in all fields of the humanities, social sciences and natural sciences.** In

particular, it is intended to support “curiosity-driven research” within the category of academic research, as described below.

The placement of *Kakenhi* in the policy on the promotion of science, technology and scientific research in Japan (from the official *Kakenhi* Handbook for 2018)



Based on the results of peer review screening, this project provides funds (ranging from several million yen to several hundred million yen) for creative and pioneering research over a three- to five-year research period (one to two years for some categories).

For the pursuit of research in research institutes such as universities, it is important to obtain competitive funds such as *Kakenhi* from an early career stage so as to keep producing good results. Also, **consistently obtaining *Kakenhi* is an indicator that the researcher's research achievement is steadily advancing.**

In addition, since *Kakenhi* is intended as a **research subsidy for an individual researcher, it is an extremely useful type of funding in that it can be utilized continuously** even if the researcher moves from one research institute to another.

2. Research career enhancement based on *Kakenhi*

It is important that the researcher enhance his/her research career after acquiring *Kakenhi*. Some examples of research career enhancement:

- a) Launching a research project as an independent researcher, using *Kakenhi* such as *Early-Career Scientists* or *Scientific Research (B)* or (C).
- b) Accumulating achievements to obtain *Kakenhi* grants such as *Scientific Research(S)* and (A) so as to significantly develop one's research.
- c) With research results achieved using *Kakenhi*, contributing to society by cooperation and collaboration with industry and/or local government.
- d) Participating in a national project aimed at the solution of social issues.
- e) Participating in a large-scale project which requires an international framework.

3. Types of *Kakenhi*

There are a number of research categories in *Kakenhi*, according to the objectives and content of the research. It is important to choose a category that matches the research project you are applying for, since scales and types are varied. The details about types/categories will be provided in Chapter 3.

4. Schedule

Each year open call for applications is announced in September and the submission deadline is early November (except *Grant-in-Aid for Research Activity Start-up*, for which open call starts in March and the submission deadline is early May). Peer review by researchers specialized in the applicant's area is done between December and March and the selection is decided informally in early April. When that result is announced, the applicant applies for the grant and granting is decided officially in late June.

Since Waseda University collects all *Kakenhi* applications internally and submits them as a batch, please note carefully that the deadline for **internal submission is about two weeks earlier than the deadline set by JSPS.**

Schedule from application to grant decision (example of 2019 *Grant-in-Aid for Young Scientist*) (tentative)

Announcement of open call: September 1, 2018

Internal deadline: late October

Peer review: between December 2018 and March 2019

Informal decision: early April

Applications for grant: late April

Grant decisions: late June

Schedule from application to grant decision (example of 2019 *Grant-in-Aid for Research Activity Start-up*)

Announcement of open call: March 1, 2018

Internal deadline: late April

Peer review: between June and mid-August

Informal decision: late August

Applications for grant: late September

Grant decisions: early October

Chapter 2: Preparing to apply

This chapter explains the formal preparation to apply, methods of gathering information and assessing your research proposal document.

1. Formal preparation

(a) Confirming eligibility

First, your eligibility must be confirmed as specified in the JSPS Application Procedure. Applicants must be Waseda University affiliated researchers who have been conducting research activities.

(b) Obtaining a Researcher Number

Once your eligibility is confirmed, please promptly obtain a *Kakenhi* researcher number, since *Kakenhi* applications must be made via the *Kakenhi* electronic application system, operated within **e-Rad (the Cross-Ministerial Research and Development Management System)**, which requires *Kakenhi* researcher number. For the details, please inquire to the staff member in charge at your department (e.g. undergraduate school, graduate school or research center).

2. Information gathering

(a) Information related to *Kakenhi*

Information related to *Kakenhi* can be obtained through the website of JSPS or from books. JSPS (<https://www.jsps.go.jp/english/index.html>) operates various research support projects including *Kakenhi*, which is grants-in-aid for scientific research projects.

Usually by August of each year, application information for the previous year is on the web; this can give you some idea of the procedures and necessary documents. Current information about

applications for grants will be available in September when the open call for the next year is announced. In addition, the Research Promotion Division of Waseda University provides its regular *Kakenhi News* for your information.



(caption) from JSPS website

(b) Analyzing your application

In the **Grants-in-Aid for Scientific Research (*Kakenhi*) Database** at <https://kaken.nii.ac.jp/en/> you can view various information including selected research subjects, research categories, research fields, research institutions, principle investigators (including individual name, institution name and position) and research period. Since it is not permissible to view entire applications, please ask your colleagues to show you their previous applications. In addition, Waseda University discloses approximately 100 model research proposal documents on its *Kakenhi* application support site. And of course this *Handbook for Grants-in-Aid for Scientific Research (Kakenhi)*, prepared by the university, is a good resource.

If you were rejected when you applied in the previous fiscal year, we recommend that you determine the reason(s) for your rejection by examining the review results and consulting materials about how to create a research proposal document. It may be useful to ask a third party to view your rejected application and give some comments. Furthermore, it would be a great help to participate in the *Kakenhi* seminars offered by the university.

(c) Identifying research trends

Since *Kakenhi* supports research which is creative and pioneering, it is important to collect information regularly about research trends in your field and confirm the viability of your strategy. It is also essential to clarify the position of the research subject that will be the academic background for the research that you are going to apply for. The above mentioned Kakenhi Database is a useful resource in this regard.

(d) Accumulation of achievements

In order to obtain *Kakenhi*, it is important to confirm not only that your research subject is good but also that you have the capacity to execute the project and achieve desirable results. Since past achievements are an essential criterion for selection, you should accumulate achievements, such as publishing papers in international peer reviewed journals and such, as evidence of your ability. It is also important to arrange your past research record, including research performance, experimentation results and research outcome presentations.

(e) Examination of research proposal document

It is necessary as a matter of course to carefully consider the research subject for which you will apply for *Kakenhi*. In order to convince the reviewers (at least four to six people) that your research subject is creative and pioneering and has academic significance, you should select your research subject on the basis of objective information, the estimated potential of the subject for future development, and your research capability, rather than your personal satisfaction. Even if your research proposal document sounds wonderful, if it is not realistic or has low feasibility, it won't be selected. Furthermore, be sure to note that you should carefully select co-investigators if you are applying for *Scientific Research S* or *A*.

Chapter 3: Types of *Kakenhi* (research categories)

This chapter explains the major research categories for the various types of *Kakenhi*. For categories which are not included here, please refer to the chart below and/or the JSPS website.

1. Grants-in-Aid for Scientific Research (*Kakenhi*)

The research categories of *Kakenhi* correspond to grant purpose and grant amount. These include: *Scientific Research* (S, A, B and C); *Challenging Research (Pioneering)* and *(Exploratory)*; and *Scientific Research on Innovative Areas*. The figure below shows the major *Kakenhi* categories after the 2018 *Kakenhi* reform.

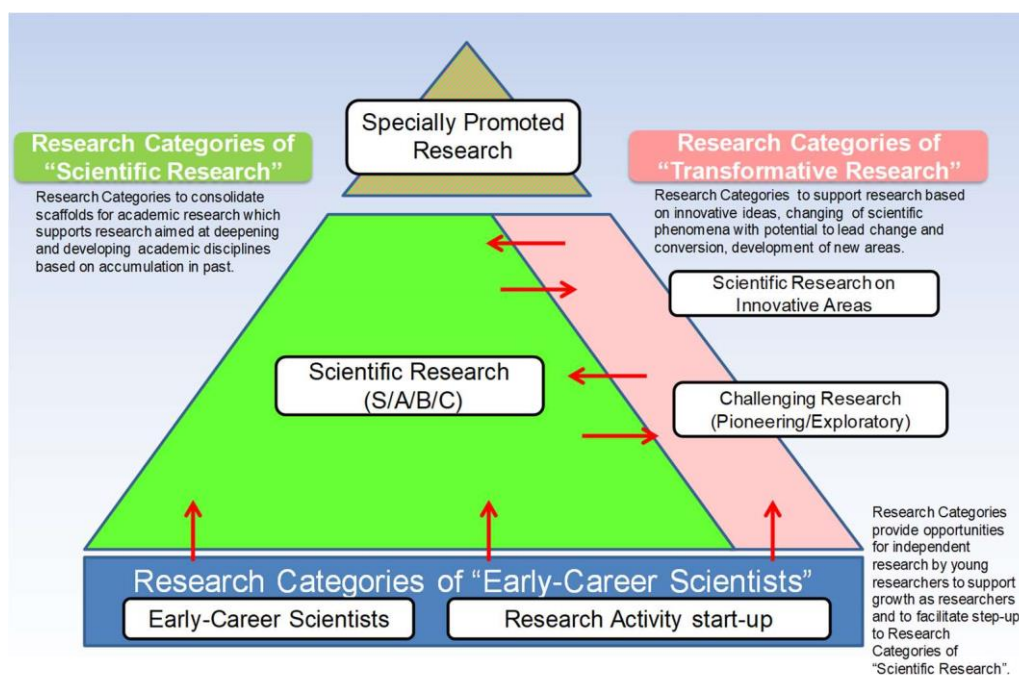


Diagram of the 2018 research category system (from the 2017 JSPS *Kakenhi* handbook, *Outline of Grants-in-Aid for Scientific Research <KAKENHI>*)

1) Grant category: *Early-Career Scientists*

(a) *Early career scientists*

Depending on the research period and the scale of funding, **young scientists who have recently obtained a doctorate degree and who are applying for *Kakenhi* for the first time should aim at this young scientists category**, The research should be independently conducted by a researcher who has obtained a doctorate within the past eight years; the research period should be two to four years; and the total amount applied for may be up to five million yen. Since the selection rate for this young scientists category is set at about 30% (which is slightly higher than that for other categories), this grant is a suitable target. However, there is a limitation: an individual **may not receive a grant in this category more than twice**. If you have already received grants in this category twice, you should apply for a higher level grant, *Scientific Research* (B or C).

Research categories	Purposes and description of each research category
Grants-in-Aid for Scientific Research	
Grant-in-Aid for Specially Promoted Research	Outstanding and distinctive research conducted by one or a relatively small number of 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 per project (only in a truly necessary case, budget exceeding 500 million yen is asked for.).
Grant-in-Aid for Scientific Research on Innovative Areas	(Research in a proposed research area) This category is intended to foster novel research areas proposed by diverse groups of researchers 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.)
Grant-in-Aid for Scientific Research	(S): Creative/pioneering research conducted by one or a relatively small number of researchers. (The period is 5 years. The budget ranges from 50 to 200 million yen per project.) (A), (B), (C): Creative/pioneering research conducted by one researcher or jointly by multiple researchers. (The period is 3 to 5 years.) (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 *Classification of (A)/(B)/(C) is according to the budget range.
Grant-in-Aid for Challenging Exploratory Research	[No new proposals are called for FY2018.] Early-stage research conducted by one or multiple researchers which, based on a unique idea, sets a high and challenging goal. (The period is 1 to 3 years. The budget is up to 5 million yen per project.)
Grant-in-Aid for Challenging Research (Pioneering/Exploratory)	(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. The research period and total budget range are as follows; (Pioneering) 3 to 6 years 5 million to 20 million yen (Exploratory) 2 to 3 years 5 million yen or less

Grant-in-Aid for Young Scientists	[No new proposals are called for FY2018.] (A), (B): Research conducted individually by a researcher of age 39 or younger. The research period and total budget range are as follows; (A) 2 to 4 years 5 million to 30 million yen (B) 2 to 4 years 5 million yen or less *Classification of (A)/(B) is according to the budget range.
Grant-in-Aid for Early-Career Scientists	[Starting a call for proposals from FY2018.] Research conducted by an individual researcher (*) who is less than 8 years after Ph.D. acquisition. As an interim measures, a non-Ph.D. researcher who is 39 years old or younger can also apply. (The period is 2 to 4 years. The budget is up to 5 million yen per project.)
Grant-in-Aid for Research Activity Start-up	Research conducted by a single researcher who has been freshly appointed to a research position, or who has returned from his/her maternity, childcare or other kinds of leave. (The period is up to 2 years. The budget is up to 1.5 million per fiscal year.)
Grant-in-Aid for Encouragement of Scientists	Research conducted by an individual who is ineligible for application for other KAKENHI categories (e.g. technical staffs of research institutions, school teachers, company employees, etc.). (The period is 1 year. The budget range is between 100 thousand and 1 million yen per project.)
Grant-in-Aid for Special Purposes	Research projects of pressing urgency and importance.
Grant-in-Aid for Publication of Scientific Research Results	
Publication of Research Results	Subsidy for publication and/or international dissemination of research achievements of high 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.
Grant-in-Aid for JSPS Fellows	Funding for research conducted by JSPS Fellows (including Foreign JSPS Fellows). (The period is up to 3 years.)
Fund for the Promotion of Joint International Research	
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 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 year) *After FY2018 call for proposal, "International Activities Supporting Group" will be 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 to 50 million yen.)
Generative Research Field	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.)

(*) 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.

(caption) List of research categories (from the 2018 JSPS *Kakenhi* handbook, *Outline of Grants-in-Aid for Scientific Research <KAKENHI>*)

(b) *Research Activity Start-up*

This grant is for research conducted by a single researcher freshly appointed to a research position, or one who is returning from maternity, childcare or some other kind of leave. The period of this grant is up to two years and the budget is up to 1.5 million yen per fiscal year. **Eligibility is limited to researchers who could not apply at the time of the open call in September in the previous year (i.e. researchers who had obtained a *Kakenhi* researcher number at that time are not eligible.)** Open call for *Research Activity Start-up* grants begins in April, unlike that for other categories.

2) Grant category: *Scientific Research*

(a) *Scientific Research* (A, B or C)

If you are not eligible for the *Early-Career Scientists* grant, you can apply for *Scientific Research* (A, B or C). These grants are for creative and pioneering research conducted by a single researcher

or jointly by multiple researchers with a research period of three to five years. Grant value ranges from 20 million to 50 million yen for *Scientific Research A*, five million to 20 million yen for *Scientific Research B* and up to five million yen for *Scientific Research C*.

Usually **it is advisable to apply for C initially**, unless the scale of research is larger, i.e. corresponding to A or B. Please apply for the category that is appropriate for your proposed research.

(b) *Scientific Research (S)*

If you wish to pursue research on a larger scale, you can consider applying for *Scientific Research (S)*. This grant is intended to support **the further development of creative and pioneering research** conducted by a single researcher or a relatively small number of researchers, for a research period of five years. The total amount of the grant is 50 to 200 million yen per project.

3) Grant category: *Transformative Research*

(a) *Challenging Research (pioneering/exploratory)*

If you have **a research proposal document aiming at radically transforming or converting some existing academic research framework or direction, based on innovative ideas**, you can **apply for *Challenging Research (pioneering/exploratory)***. This grant is to support research conducted by one or more researchers. Depending on the research period and the total grant amount, there are two sub-categories: *Pioneering* (three to six years, five to 20 million yen); and *Exploratory* (two to three years, up to five million yen). The *Exploratory* category also encompasses **research proposal documents that are highly exploratory and/or are at the budding stage**.

Challenging Research allows multiple applications along with *Scientific Research (S or A)*. In addition, in the *Exploratory* sub-category, you can apply at the same time for a grant of type *Scientific Research (B)* or *Scientific Research on Innovative Areas*. Please **consider making a double application** since research aimed at pioneering wisdom is strongly sought. (However, in FY 2017 the

selection rate for these sub-categories was low: 8.4 % for *Pioneering*, 10.9 % for *Exploratory*.)

Researchers are discouraged from applying for this category instead of *Early-Career* or *Scientific Research* if they have only a small number of research achievements. **Researcher capability for conducting research** was added to the factors for review for this category after the *Kakenhi* reform of 2017.

(b) *Scientific Research on Innovative Areas* (planned research and publicly invited research)

This grant category is intended to promote research in innovative areas proposed by a varied group of researchers, so as to improve and strengthen Japan's academic standard through efforts such as joint research, the fostering of research human resources, and the joint use of facilities. The grant is for a period of five years and consists of planned research and open call research.

Innovative Areas (planned research) is for research promoted in a planned way by a group of researchers organized by a research representative, in order to develop a relevant innovative area. The budget is 10 million to 300 million yen per year per research area, in principle.

Innovative Areas (open call research) is for research conducted by one researcher in collaboration with a planned research project, aimed at developing a relevant innovative area with a research period of two years (the second and third years and the fourth and the fifth years of the set period of this grant). Open call is done in the first year and the third year of the set period for the *Scientific Research on Innovative Areas* grant. It is permissible to apply for and receive grants for up to two open call projects as well as for some other category (e.g., *Scientific Research* (S, A, B or C); *Early-Career Scientists*; or *Challenging Research (exploratory)*). The average yearly selection rate for *Innovative Areas* (open call research) is about 20%, although it varies by area—for some areas, there could be a rate of 50% set as a selection limitation. If you can create a proposal for research that corresponds to the open call concept in the relevant area, please consider applying.

2. *Grants-in-Aid for Publication of Scientific Research Result*

This subsidy is aimed at **publication of research results, strengthening international dissemination of information and creation and disclosure of a database**. Since the application for this subsidy is quite different from that of other research categories, please read the application guidelines carefully before you apply.

Chapter 4: Screening of *Kakenhi* Proposals

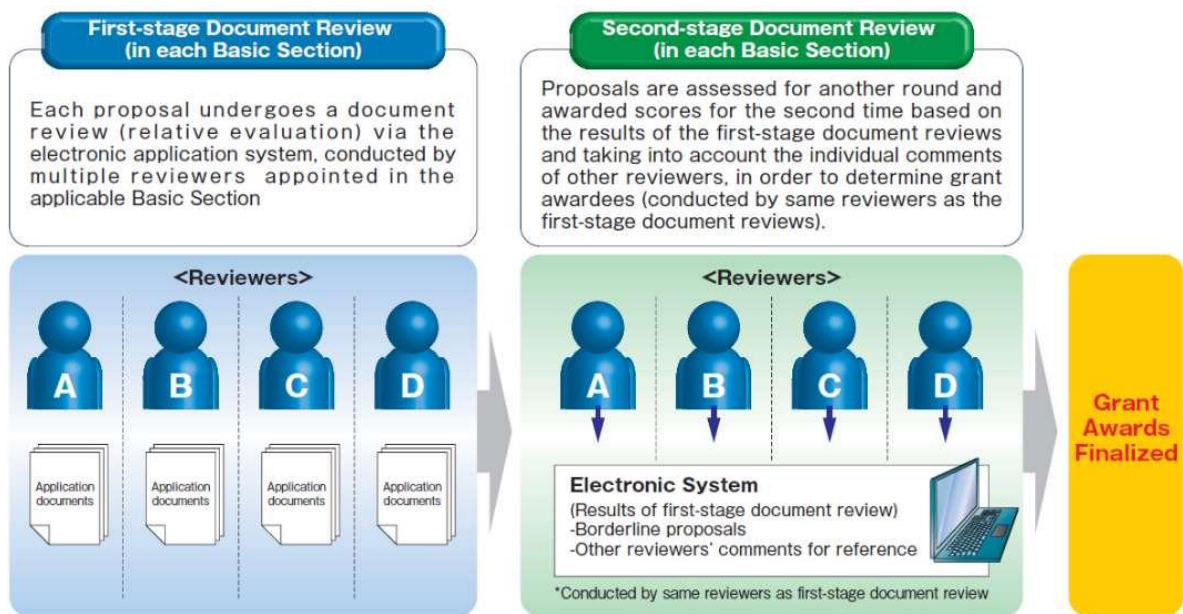
This chapter explains how research proposal documents are reviewed. Knowing the review mechanism is useful information for creating an effective research proposal document.

1. Screening mechanism

The screening of *Kakenhi* applications, consisting of peer review of the academic value of each proposal, is done by researchers appointed by JSPS based on their conscience as scientists. Since the open call for proposals in September 2017, two new review methods have been employed: 1) **two-tier screening**, in which the same reviewers review the documents twice; and 2) **comprehensive screening**, in which the same reviewers do both a document review and a panel review.

2. Review method

1) Two-tier screening

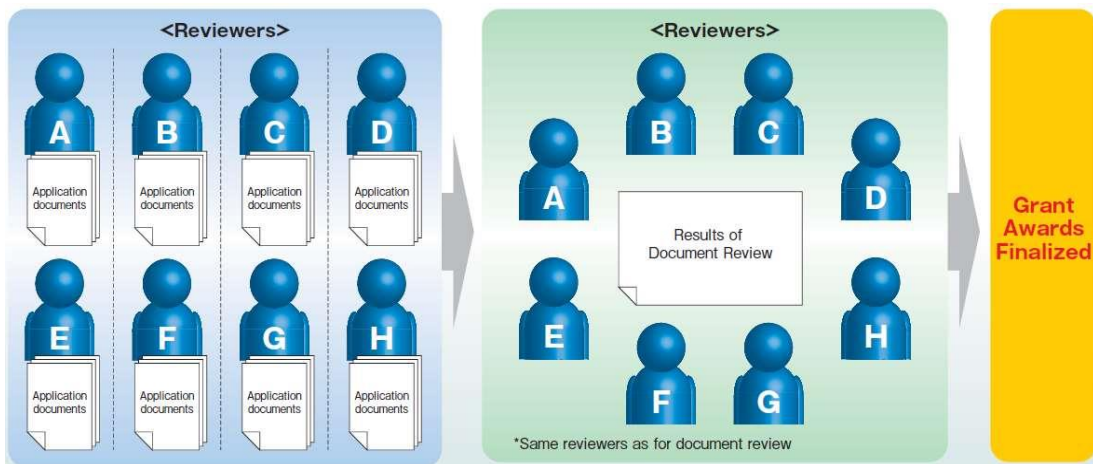


(from the JSPS 2018 *Kakenhi* handbook)

This review method is used for applications for *Scientific Research B* and *C* and *Early-Career Scientists* grants. *Scientific Research (B)* is reviewed by six reviewers per proposal, *Scientific Research (C)* and *Early-Career Scientists* by four reviewers per **basic section**.

2) Comprehensive screening

For applications for *Scientific Research (A)* and *Challenging Research*, six to eight reviewers conduct (a) **document review** of each **medium-sized section** and (b) multi-faceted **panel review**. *Scientific Research (S)*, includes not only the above comprehensive review of each **broad section**, but also review comments by researchers in closely-related specializations, with consideration of the specialized nature of proposal.



(from the JSPS 2018 *Kakenhi* Handbook)

3. Review criteria

For example, *Scientific Research* (B and C) and *Early-Career Scientists* applications are reviewed by two-stage document review, as follows:

1) First stage document review

Based on assessment of review elements (a) to (d) described below, an **absolute evaluation** (4: Excellent, 3: Good, 2: Insufficient to some extent, 1: Insufficient) is provided.

- (a) Academic significance and validity of the research subject
- (b) Validity of the research plan and method
- (c) Capability of the researcher(s) to conduct the research and suitability of the research environment
- (d) Potential ripple effect of the research topic

If you get an evaluation of 1 or 2 at this stage, selection will be unlikely.

Next, in line with the following score distribution, relative evaluation points will be assigned.

Score	Evaluation criteria	Score distribution standard
4	Excellent	10%
3	Superior	20%

2	Ordinary	40%
1	Inferior	30%
-	Unable to evaluate due to conflict of interest	-

2) Second stage document review

Referring to the review opinions submitted by all reviewers, each reviewer makes a comprehensive judgment and assigns a four-part score in accordance with the distribution indicated separately. If a reviewer assigns an extremely low score to one research topic, that topic will be considered separately.

Score	Evaluation criteria	Score distribution standard
A	Should be selected with high priority	Specify separately
B	Should be selected proactively	Same as above
C	Could be selected	Same as above
D	A to C above do not apply	Same as above
-	Unable to evaluate due to conflict of interest	-

Chapter 5: How to choose your *Kakenhi* review section

This chapter explains how to choose from among the *Basic section*, the *Medium-sized section* and the *Broad section* when applying for *Kakenhi*.

1. Importance of choosing your review section when you apply

Review of *Kakenhi* research proposal documents is done in three

sections, depending on the research category: **the broad section** (Scientific Research S), **the medium sized section** (*Scientific Research A, Challenging Research (Pioneering/Exploratory)*) and **the basic section** (*Scientific Research B and C, Early-Career Scientists*). This does not apply to some research categories such as *Grant-in-Aid for Specially Promoted Research*. It is permissible to choose special review section for *Challenging Research (Pioneering/Exploratory)*. Before making your selection, first please analyze your research proposal document and carefully **consider which section has reviewers who can properly evaluate your proposal**.

Each reviewer is likely to be an expert in an academic field related to section she/he is assigned to. For your research proposal document to be properly assessed, it is extremely important that it be reviewed by reviewers who are in an academic field closely related to your research theme.

Choose your review section from among those in the Review Section Table in Attached Table 2 of the *Application Procedures for Grants-in-Aid*. You do not have to apply for the area or field to which your academic society belongs. **If you make a mistake in selecting your review section, the probability of your being selected will be lower**, even if you have prepared a good research proposal document.

The Review Section Table may change in any fiscal year, so you should check the latest version. Also, as far as your strategy for *Kakenhi* application, it is important to know the number of applications and the number of selections per review section so please check the *Kakenhi* Database page of Grants-in-Aid for Scientific Research, JSPS.

2. How to choose your review section

Since there are many different fields in the sections, it may be difficult to determine which reviewers in which section would best understand your research and thus evaluate it fairly. If you do have trouble identifying the best research section for your proposal, we recommend you to try the following methods.

1) Choose by keywords

You need to select a section close to your research theme from the Review Section Table in the *KAKENHI* Application Guidelines, Attached Table 2. Rather than judging by the names of review sections, you should refer to the *Examples of related research content* provided in each basic section before you choose.

2) Choose by examining research projects selected in the past

Information on past selected projects is available in the *Kakenhi* Database at <https://kaken.nii.ac.jp/en/>. You can view the information about studies similar to yours that have been accepted.

3) Choose by referring to the list of reviewers

The list of past reviewers (in Japanese) can be viewed on the JSPS website at https://www.jsps.go.jp/j-grantsinaid/14_kouho/meibo.html (in Japanese). You can look there for reviewers who would know your research area well.

Chapter 6: *Kakenhi* Spending Rules

This chapter explains briefly the *Kakenhi* rules of use. For the details, please refer to materials such as: the *Public Research Funds Manual* (published by the Waseda University Research Promotion Division) and the *Kakenhi* Spending Rules on the JSPS website, downloadable from https://www.jsps.go.jp/jgrantsinaid/16_rule/data/30_dl/30_spending_rules.pdf.

1. Duties of the Principal Investigator and the management of *Kakenhi*

- 1) Please conduct your *Kakenhi* granted project rigorously in line with the stated purpose of *Kakenhi*, bearing in mind that *Kakenhi* is funded by the taxes paid by Japanese citizens.
- 2) Waseda University manages *Kakenhi* in accordance with the rules such as the *Act on Regulation of Execution of Budget Pertaining to*

Subsidies and the rules governing JSPS Grants-in-Aid for Scientific Research.

2. Research project starting date and contracts

If your proposal is newly selected, you can commence your research, and conclude contracts necessary to the performance of your research, the day after your informal selection. However, you should consult with staff in charge in your department about the date when disbursements will be possible.

3. Submission of documents such as performance report and research outcome report

Documents such as performance report and research outcome report must be submitted after the end of each fiscal year. Those documents will be disclosed in the *Kakenhi* Database at <https://kaken.nii.ac.jp/en/>.

4. Publication and presentation of research outcomes

In the case of presenting outcomes of research conducted using *Kakenhi*, it is necessary to indicate that the research outcomes were achieved using *Kakenhi*. Also, if you publish such outcomes in newspapers, books and magazines, or if your findings resulted in a patent, you are obliged to report that each time in your research outcome report.

(Example)

- Please write your acknowledgement (for project number 123456) as follows:
“This work was supported by JSPS KAKENHI Grant Number 123456.”

5. Ensuring the ethicality of your research activities

- 1) When conducting a *Kakenhi* research activity, you must absolutely avoid:

- misconduct of research** (**fabrication** or **falsification** of data; **plagiarism** of research outcomes or of the data reported in the published research outcomes) or
 - other action involving misconduct of research.**
- 2) When conducting research which requires: **social consensus; consideration in the handling of personal information; or effort to ensure bioethics and safety measures**, please **observe all related laws.**

6. Filing and storing research related documentation

It is necessary to: create an account book for recording revenue and expenditures related to the *Kakenhi* project; file related documentation such as receipts; and store such account books and documentation until five years after the end of the *Kakenhi* period.

Part II. Research Proposal Document: Writing a comprehensible application

Chapter 1: How to create a research proposal document (general guide)

This chapter provides key points for writing a proposal for *Kakenhi*.

1. Introduction

Your *Kakenhi* research theme is required to be academically creative and pioneering. However, even if your content is excellent, if the reviewers find your application difficult to understand, it is unlikely to be selected.

At the first stage of document screening, **the reviewers screen up to 100 proposals in a short period of time**, about one month; thus you should ensure that the reviewers can quickly comprehend the objective(s), plan, originality, innovative point(s) and feasibility of your proposed research. In order to do so, it is essential that you write your proposal in **a compelling and easily comprehensible form**. In fact, committee members should be able to **easily grasp the nature of your research by reading only your research objective**

and plan (i.e. they shouldn't have to refer to various places in the proposal to find such things as definitions of concepts or terms).

Since *Kakenhi* screening is done by peer review, a hastily prepared application with shallow content is very unlikely to be selected. You should devote considerable care over a substantial period of time to the writing of your proposal. The *Kakenhi* application schedule changes little from year to year, so you can begin your planning and writing far in advance. If you only start writing when the call for proposals comes out, you may well not have enough time to do a careful job of your proposal.

In addition, rather than submitting your proposal immediately after writing it, you will have a greater chance of success if you polish your proposal over time, asking third parties for comment, and refining the appearance of the document. Even in peer review, some of the reviewers may not have detailed knowledge of your research area, so you should write your proposal in a style that **a layman (equivalent to a fourth year undergraduate or first year graduate student) can readily understand**. Of course the main criterion is that the proposal be written in full detail, and in full compliance with the instructions.

2. Objectives and characteristics of *Kakenhi*

Kakenhi is competitive funding, granted to researchers, using taxpayer money and is aimed at supporting significant academic research. Please keep this in mind when you apply for this grant: it is for the conduct of academically and socially meaningful research activities.

When a young researcher applies for this funding as a principal investigator, he/she **should demonstrate that his/her research is original and that he/she is conducting it as an independent researcher, rather than under the direction of a supervisor**. This is true even if he/she the applicant is working in some other researcher's lab.

3. Ingenuity value of your research project title

It is important to write your research project title so that **the research content can be understood immediately, from the title alone**. It is also good

strategy to include **keywords with high impact** that point to your work's innovativeness and originality. When you have completed your entire proposal, you should go back and review your project title to be sure that it is clear and effective.

Seven tips for drawing up *Kakenhi* applications

- 1) Readable font and font size (use bold font for highlighted parts)
- 2) No unnecessary blank space
- 3) Concrete, easy-to-understand research plan
- 4) Clear demonstration of the rationality of the proposal and the need for any expensive devices and/or large expenditures listed
- 5) Convincing demonstration of your high research ability
- 6) Writing that is accessible and persuasive for examiners from other fields
- 7) Easy-to-understand graphics and diagrams that will display clearly when published in black and white

4. Format tips

- Please be sure to **refer to the application guidelines for the year of your application**, not those for a previous year, since items such as research category, research items, and application documents can change by year.
- Please complete the form **in line with the instructions from *the Procedures for Preparing and Entering a Research Proposal Document***.
- Do not alter the layout of the form in any way. Please make sure that the pages are properly aligned.
- Since a proposal is a document for review, please avoid unreadable elements such as extremely small font size, overly small spacing between lines, and insufficient spacing between letters. **Size 11 font or higher** should be used in the Research Objective section.
- Please avoid blurring when printing, since the proposals sent to the reviewers will be printed in black and white.
- If any part of your research will require societal approval or will be required to comply with laws related to bioethics and safety measures, please state your planned measures to meet those requirements in

detail.

[Column] Tips for creating an effective application

1. Application as a project proposal

Let's think of your *Kakenhi* application as a **project proposal**, a request for budget allocation to support your research activities (with the funds to be drawn from the *Kakenhi* budget frame allocated to MEXT by the government).

We often see applicants with little experience of successful *Kakenhi* selection who focus simply on the research objective and the research period they are applying for. On the other hand, many successful applications give a clear impression of being proposals of research projects. In such projects, researchers are required to achieve a substantial result in a limited time frame using a limited amount of budget. If you think of *Kakenhi* as a project, it will be easier to consider your application as a project proposal.

Since a proposal needs to specify the rationale for the project and the means of achieving it, you may find it useful to use the 5W1H outline (When, Where, Who, What, Why and How). Your proposal will reach an even better level if you extend that outline by stating clearly the expected significance and ripple effect of the outcomes of your research. “Scientific question” has been a prominent item in reviews lately, so it is important to argue the significance of your research from that perspective.

Research proposal document 5W1H

When (by when):	Research schedule
Where:	Research venue (e.g. experimental facility, field work venue (in Japan or overseas))
Whom:	Research team (i.e. principal investigator (the applicant), co-investigator(s), research collaborator(s))

What:	Research subject
How:	Research method (not too much details but not too vague)
Why:	Research issues awareness (e.g. background of research related issues and scientific questions)

2. Three stages of communication

To communicate your research design, consider a delicate balance of **‘what,’ ‘how’** and **‘to what extent.’** Address the questions of ‘how’ and ‘to what extent’ bearing in mind three points: 1) explicitness; 2) comprehensibility; and 3) interest factor. Among them, explicitness comes first. If your proposal also has high comprehensibility, the purpose of communication is achieved. However, if you place priority on making your communication ‘comprehensible’ and ‘interesting’ with insufficient attention to ‘explicitness,’ your reader may find it difficult to believe you are conveying academic information. You should give priority to ‘explicitness.’

<Three communication stages diagram>

High interest	e.g. novels, columns, essays
Comprehensible	e.g. <i>Kakenhi</i> applications, outlines, expository writing
Explicit	e.g. academic papers, reports, examination questions/answers

Academic papers are a medium in which experts convey specialized information; in general it is sufficient to communicate your information in conformity with formal specifications. The readers of this genre read papers because they want the information in them, so as long as the

writing is in the formal academic genre and structure, the reviewers generally won't care much about the finer points of writing. Also, some other genres such as examination questions and answers and task reports will have a good chance of success if they are written explicitly. In the diagram here, showing three communication stages, the upper level is the interest value of the content. This applies mainly to reading material such as novels, columns and essays, so it is not a main criterion for *Kakenhi* applications.

What about *Kakenhi* applications? If you only convey the content of your proposal 'explicitly,' it will be difficult to obtain a high evaluation. In most selected proposals a lot of effort has gone into making the writing comprehensible. Of course if the research content is outstanding it may be selected, but in most cases, don't forget that proposals will be selected **by a comparative review** across a number of research subjects.

To convey content comprehensibly means that the other party finds it easy to understand. Please remember that the degree of comprehensibility depends on the reader.

If you think of your *Kakenhi* application as a tool for communication with the reviewers, then your mission is complete when the content you want to convey reaches the reviewers effectively. To communicate effectively means communicating in accordance with the nature and situation of the receivers, so it is important to frequently reflect on the reviewers and their situation.

Kakenhi reviewers screen a large number of applications in a short period of time. Also, often the content of an application is not entirely within the reviewer's field of expertise. In other words, although the reviewers will have sufficient expertise to grasp the content to some extent, in many cases they will not have a deep understanding of everything in a proposal.

Then how you can convey your proposal comprehensibly to such reviewers? This *Handbook for Grants-in-Aid for Scientific Research (Kakenhi)* gives you a number of ideas about how to communicate effectively with reviewers. **Chapter 8 lists some techniques for improving the comprehensibility and effectiveness of your writing**, contributed by

~~successful *Kakenhi* applicants from Waseda University.~~

Please be sure to **prepare your application so that it is written explicitly and comprehensible.**

Chapter 2: Writing the *Research Objectives and Research Method*

This chapter provides key points for writing about your research objectives and research method.

1. What content should be included in the research objectives and research method section?

A research proposal document has two sections: the summary section and the main text section.

The summary section, which must be written in about 10 lines, is an extremely important part of your application documentation. First give an overview of the content of your research (i.e. the background, objective and the implementation approach), including the novelty and significance of the proposed study. Then write an attractive outline as if your research outcomes had actually been achieved. The purpose of this section is to **catch the reviewer's eye strongly that the reviewer will carefully read all of your research objective and method sections.**

In the main text part, you should write concretely and clearly about the following points:

- 1) Scientific background for the proposed research, and the “key scientific question” comprising the core of the research plan
- 2) The purpose, scientific significance and originality of the research project
- 3) What will be elucidated, and to what extent and how will it be pursued during the research period

If your research project involves Co-Investigator(s), a concrete description of the role-sharing between the Principal Investigator and

Co-Investigator(s), should be given. An effective approach is to **specify what you intend to demonstrate through this research, in a concrete and simple description**. Please note that studies on some research subjects are expected to have significant academic impact and social ripple effect: such proposals might obtain high overall scores even if they do not have particular novelty or creativity.

2. Scientific background for the proposed research, and the “key scientific question” comprising the core of the research plan

1) One way to achieve comprehensibility is to compose along the following storyline:

- present the related academic or social issues,
- identify the limits reached by previous research,
- determine the issues left unresolved in the previous research,
- demonstrate the need for the resolution of those issues and
- state the significance of the expected outcome(s).

2) Write in a concise way, referring to international and domestic research trends related to your research project.

3) Write objectively when you explain what was achieved in your previous research. If you are going to indicate that you have already commenced your research, it is necessary not just to refer to your ideas, but also to describe your concrete progress (outcomes to that point), although you should not explain your research outcomes at great length at this point. It is best to describe the content of your research in the sections of *Research Development Leading to Conception of the Present Research Proposal*, as appropriate.

Your “scientific question,” which is the core of the research plan, is extremely important as support for your research content: it can provide a strong rationale for your research. This is also known as the “research question,” so it is necessary to write clearly and logically about what scientific and/or social significance your outcomes would have, writing from the initial point of unsolved scientific problems identified in previous studies and surveys.

3. Scientific significance and originality of the research project

- 1) When writing about expected research outcomes, divide the writing into two parts, “originality and creativity of the research” and “expected outcomes and their significance.”
- 2) Explain concretely the originality and creativity of your proposed study and the way in which your study differs from others.
- 3) If you are going to write that the originality and creativity of your research is based on the fact that no similar study has been conducted previously, explain why there has been no research on this topic as yet (rather than just mentioning the absence of previous research), and identify some scientific and/or social issues that may be resolved as a result of your outcomes.

4. What will be elucidated, and to what extent and how will it be pursued during the research period?

- 1) Describe your vision of what sort of development will be enabled if your research questions are answered within the research period.
- 2) It is desirable to provide a timeline of what will be achieved, and by when (milestones).
- 3) Avoid jumps in logic.
- 4) Explain what will be performed in your research and specify the differences between your proposed study and other previous studies (including what you did) and similar research projects.
- 5) Establish a proper hypothesis and a quantitative target.
- 6) It is better to conclude with targets, i.e. what will be confirmed/achieved within the frame of this research and its direction or regularity will be clarified.
- 7) Take care not to write in an overly simple manner referring only to the collection of materials and compilation of a database (rather, specify what you will clarify using such materials and database).

Chapter 3: Research Development Leading to Conception of the Present Research Proposal

This chapter explains an item newly included in the 2018 Research Proposal Document (to go into effect for applications made in FY 2017). It is important that applicants understand the intention of this item change.

1. Revised points

Before this revision, applicants were required to explain the research development leading to conception of the present proposed research, based on the applicant's previous research outcomes, in the section, *1. Scientific background of the research*, within *Research Objectives*.

In the revised version, *Chapter 1. Research Objectives, Research Method* is followed by *Chapter 2. Research Development Leading to Conception of the Present Research Proposal*, which is divided into three sections:

- 1) the applicant's research history leading to the conception of this research proposal;
- 2) domestic and overseas trends related to the proposed research and the positioning of this research in the relevant field; and
- 3) the preparation status and feasibility of the research plan

Although the intention of JSPS in this revision has not yet been clearly signaled, it can be inferred that Chapter 1 evaluates the proposed research project itself and Chapter 2 evaluates points such as: the way the applicant conceived of the concept of the research; the applicant's understanding of the position of the proposed study in the field; the applicant's ability to conduct the proposed research; and the environment where the research will be conducted. There may be some overlap of content, e.g., between scientific background, described in Chapter 1, and research trends, presented in Chapter 2, but please provide a careful description of your proposal's positioning.

2. Applicant's research history leading to the conception of this research proposal and its preparation status

In this section, **ingenious description** is expected. You should provide rather personal background such as why you want to conduct this research, how you got this idea, or in what situation the idea emerged. Reviewers will not be engaged by quotes from published articles in media such as newspapers, science magazines and the MEXT, JST and JSPS websites. Please bear in mind that this is the only section in the entire application where **you can express the subjective and emotional aspects of your work and display your enthusiasm.**

3. Domestic and overseas trends related to the proposed research and the positioning of this research in the relevant field

This may overlap with the description of the scientific background of the study presented in the previous chapter, but you should clearly indicate the position of your research here, quoting both domestic and overseas research papers and **your own papers**, and looking back on your past research activities.

4. Preparation status and applicant's ability to conduct the research

If you have already achieved some results in preliminary experiments or examinations, please present them here; this will enhance the reliability of the application. If you already have materials, specimens, equipment, and/or facilities, you should **present the details of your research environment.**

Chapter 4: Writing about the applicant's research activities to date, the applicant's ability to conduct the research, and the research environment

This chapter explains how to write about: your research records (except in the case of applications for *Challenging Research (Pioneering/Exploratory)*); your ability to conduct the research; and the planned research environment.

1. For your research records (except applicants for *Challenging Research (Pioneering/Exploratory)*)

- The *Research Records of Principal Investigator and Co-Investigator(s)* section, in such research categories as *Specially Promoted Research*, *Scientific Research* (general) and *Early-Career Scientists*, will be eliminated from applications as of 2019. That section will be replaced by *Applicant's Ability to Conduct the Research and the Research Environment*. The reviewers can refer to information posted on *researchmap* (<https://researchmap.jp/?lang=english>) and the Kakenhi Database, as needed.
- Since your research record on *researchmap* is the available for viewing, be sure to confirm that your research record there is up to date.
- Login is at
https://researchmap.jp/index.php?action=login_view_main_init&lang=english

Your research record should be sufficient to convince the reviewers that you have the ability to produce the research results in your proposed project. If your record is not sufficient, you might even consider including as your co-investigator a researcher with a rich research record in order to enhance the research record supporting the application. Pay attention to the following points when writing about your record, and ensure that your record is strongly correlated with the demands of the research project for which you are applying.

- 1) Write the titles of published academic papers and books, industrial property rights and invited lectures by the Principal Investigator and Co-investigator(s).
- 2) In particular write the titles of academic papers related to the research subject presented in related academic societies and/or published in reviewed international journals (the page limit depends on the research category).
- 3) Indicate whether each academic paper was peer reviewed or not (give

priority to peer reviewed papers).

4) Reminders about format

- In the case of papers which are under submission, only papers which have been accepted for publication can be included.
- In the case of a paper co-written by the Principal Investigator, the Co-Investigator(s) and/or the Research Collaborator(s), the title of the paper should be included in the record of only one of the authors.
- The name of the Principal Investigator should be double underlined, that of the Co-investigator single underlined.

2. Writing the sections *Applicant's Ability to Conduct the Research* and *The Research Environment*

- The section, *Research Records of Principal Investigator and Co-Investigator(s)* for research categories such as *Specially Promoted Research*, *Scientific Research* (general) and *Early-Career Scientists* will be eliminated in the 2019 application and will be replaced by *Applicant's Ability to Conduct the Research* and *The Research Environment*.
- In this section, you write about (1) **your previous research activities** and (2) **your research environment, including research facilities, equipment and research materials relevant to the conduct of proposed research.**

(1) What should be written in the section, described as *the applicant's previous research activities*?

Write about your previous research activities in order from the present to the past. In the case of *Early-Career Scientists* and *Research Activity Start-up*, write about your research activities in graduate school, as needed. You can achieve good readability if you write, in a manner similar to that used for the examples in the following table, about your affiliated research institutions and positions, each accompanied by a brief description of the content of the research you conducted there. If you wish to add **special notes (e.g., history of prizes awarded)**, do not forget to include them along with the research content. If your research was

interrupted for a period of time, you can include an explanation of the period of absence here.

Examples

- 1) Waseda University, ____ Center, associate professor (since April 2016):

I obtained a university research grant (research title: ____) and have been conducting a study on ____ at ____ (research achievements 5, 6). With this research result, I was awarded ____ prize (March 2017).

- 2) ____ University Graduate School of ____ (specially-appointed researcher) (April 2014 - March 2016):

I was selected for *JSPS Research Fellowship for Young Scientists* (PD) and conducted an empirical study on the theory of ____, a topic I found in the course of my research during my doctoral studies at ____ . (research achievements 3, 4).

- 3) ____ University Graduate School of ____, Doctorate Program (April 2011 - March 2014):

Since I was interested in phenomena related to ____ at ____, I conducted research from the aspect of ____ . As a result, I found that ____ is ____, and I wrote my dissertation on that. I obtained a doctorate degree and was awarded ____ prize by the university for that research result.

- (2) What should be written in the section, *Research Environment* (including research facilities, equipment and research materials relevant to the conduct of proposed research)?

You should add some explanation here, showing concrete content of your research record, **to demonstrate your ability to conduct the proposed research**. It is also a good idea to list your relevant research performance, as appropriate.

Chapter 5: Issues relevant to human rights protection and legal compliance

This chapter provides key points for responding to issues relevant to human rights protection and legal compliance. Reference is made to cases of medical research with human subjects.

1. Examples

- **Ethical review and informed consent:** Prior to the commencement of the research, the applicant must obtain approval of his/her research plan from the Waseda University Academic Research Ethical Review Committee for Research with Human Subjects. After obtaining approval, based on *Ethical Guidelines for Medical and Health Research Involving Human Subjects*, the applicant must: give the research subject(s) sufficient explanation, both written and oral, of the research objective, the content of the research, and the safety of the experiment and possible dangers; and obtain consent to participate from the subject(s).

- **Safety measures:** It can be said that conduct of experiments is extremely safe, since surely non-invasive measurement methods established in the relevant field are used by those who are expert in such methods. The subject's physical condition is checked before the commencement of the experiment and if the subject complains of any physical or psychological change or abnormality during the experiment, the experiment must be promptly terminated and the subject must be given a medical examination by a doctor, as needed.

- **Handling of personal information:** Collecting personal information from the subject must be minimized, and paper media materials bearing personal information must be securely stored under lock and key. Data collected in the experiment must be anonymized using ID so that the individual cannot be identified, and such electronic data must be stored in an external hard disk which is managed securely in a safe under lock and key to avoid loss or theft. If the research result is presented at a meeting of an academic society or published in an academic journal, the researcher must take utmost care to avoid

disclosing information that identifies a certain individual. After the research is completed, data on paper media must be destroyed by shredding, and electronic data must be completely deleted from the storage medium.

2. Essential checklist

- 1) **Observance of laws and guidelines** related to research content.
- 2) **Approval** (or a plan to obtain approval) **of the ethical review committee** prior to the commencement of the research.

When obtaining approval from the ethical review committee, the content described in this section must be consistent with the content approved by the committee.

There are five ethical committees provided at Waseda University, as listed below. If you need an ethical review judged on the basis of the content of the research, you must apply to the relevant ethical review committee so as to obtain approval before starting the research.

- Ethical review committee concerning research with human subjects
- Ethical review committee related to human genome/gene analysis research
- Ethical review committee related to research using human ES cells
- Ethical review committee for animal experimentation
- Ethical review committee for genetic recombination experimentation

Even if your application for ethical review on previous research involving similar experimentation and/or surveys was approved in the past, when you start research newly selected for *Kakenhi*, you must prepare the necessary documents afresh to obtain approval from the committee. The committee does not do *post facto* approval, so you must check the schedule of committee meetings and your research commencement date so as to obtain approval before starting the research.

- 3) **Informed consent** of the research participant(s) is obtained in an appropriate manner before the commencement of the research.
- 4) **Safety conditions (safety of measurement and emergency communication)** for the research participant(s) are sufficiently ensured.

- 5) **Protection of personal information (e.g. data management)** is properly managed.

Chapter 6: Writing the sections *Research Expenditures and Their Necessity*, and *Status of Application for and Acquisition of Research Grants*

This chapter provides key points for writing the sections related to research expenditures and their necessity, and the status of application for and acquisition of research grants.

1. Writing the section *Research Expenses and Their Necessity*

Consistent with the content described in the section *Research Objectives and Research Method*, expenses necessary for conducting must be stated here. ***Kakenhi* is funded by tax money, so please be conscious of the taxpayers' perspective** when calculating research expenses. Especially in the case of research categories with selection rate as low as 10%, it is essential to avoid unnecessary point deductions, otherwise the appropriateness of the expense estimation might be questioned.

The reviewers will evaluate your research expenditures via the following procedure (**basic points for evaluating research expenditures**). Please check the points carefully with consideration for the reviews' perspective.

- 1) First, reviewers read the research background and objectives stated in the application to determine whether the research for which expenditure is requested is an experimental study, a theoretical study, a study involving measurement of natural phenomena, or a survey with human subjects.
- 2) Then, they read the research method description, which should provide sufficient content so that they can form an impression of the amount of research expenditures necessary.
- 3) Finally, they confirm that **that impression is in conformity with the breakdown and estimation of research expenditures**.

◆ Points for creating the section *Research Expenditures* (estimation table)

In general, it is preferable to make an estimation of expenditures in accordance with the present state of the research plan, rather than inputting the same expenditures every year during the research period. You should consider that **usually the actual amount granted will be about 70% of the amount you applied for**. Please note the following points for each budget item when inputting expenditures.

1) Equipment costs and consumables expenses

- Write as concretely as possible what items and how much of each you need.
- **Write the total amount of expenditures for each year.**
- Costs for equipment are disbursed for items costing 100,000 yen or more, in principle. (for books as equipment, 50,000 yen or more).
- Minor costs related to equipment, such as installation costs, should be included in advance within the equipment cost (e.g. _____ equipment, including installation costs).
- For consumable expenses, write the product name of each, e.g., books (treated as consumables), chemicals, laboratory animals, and glassware.
- Software costing less than 100,000 yen is treated as consumables; that costing 100,000 yen or more as equipment.
- In the case of purchasing items with high versatility such as computers, it would be no problem if the item were properly positioned in terms of usage towards research objectives and methods, with appropriate capacity and price.

2) Domestic and Overseas Travel Expenses

- As for domestic and overseas travel expenses, enter the expenditure for each item, e.g., presentation of research results; investigation; research trip (including data collection); and research meetings, based on Waseda University criteria.
- Specify as concretely as possible the destination and the travel period.

- There is basically no problem with travel expenses related to research presentations, but travel for investigation needs careful attention: if the number of trips is rather small, the reviewers may think it will be unlikely to get investigation results due to the small amount of travel, and as a result give low points for evaluation.

3) Miscellaneous expenses

'Other' includes fees for computer use, equipment rental, meetings, printing, copying, developing and printing, correspondence, transport and presentation of research achievements.

After completing your estimate, please carefully check the following points:

- Is your research expenditure within the total amount allotted for this research category?
- Is the expenditure included for the conduct of the research plan appropriate?
 - a) Enter expense figures as accurately as possible since some reviewers are well acquainted with market prices.**
 - b) Do not forget the obvious expenses necessary for fieldwork and research outcome presentation fees (for presentation at an academic society or for publication).**
- Is your estimation of each item of expenditure adequate?
- Are you going to purchase unnecessary equipment or items which are not permissible for disbursement from *Kakenhi*?
 - a) Expenses for buildings, facilities which should usually be prepared by the research institute, or items which are not directly related to the research are not permissible.
- Are any expenses significantly padded?
- Are there any mistakes in the estimation or calculation of expenses?
 - a) Are the units correct? (e.g., unit of 1,000 yen or one yen)
 - b) Has the total amount for each year been entered?
- Please be careful: there are many errors every year in matters such as: failure to indicate "total," or "page number"; mistakes in the number of zeroes; miscalculations; inconsistency of the amount between the

first half (items on web for application information) and the second half; and alteration of the format.

◆ Points for writing the section concerning *the necessity of research expenditures*

Demonstrate as concretely as possible that the amount of research expenditures is reasonable for the conduct of the research described in the section *Research Objectives and Research Method*, and is necessary for the research activities. You should also state the necessity of expenses not included in this section due to the section size, e.g., equipment fees (e.g., books), travel expenses (the destination and the number of trips), personnel expenses (the assignment and workload). In the case where one expense item exceeds 90% of the entire research expenditure in one fiscal year, or where there is an item using an especially large proportion of the budget, please make sure to state the necessity of such expenditure(s).

Note: In this section, if you explicitly state that you **do not intend to add the expenses for equipment necessary for the research because they are already installed in lab, school or university**, it could lead to a good assessment by the reviewers since it shows that your professional potential is high and attests to your sincere attitude as shown by your adding only necessary items.

2. Points for writing the section *Status of Application for and Acquisition of Research Grants*

Please give concrete responses with attention to the following points.

- In the sections (1) *Grants in the Application Stage* and (2) *Research Grants Adopted and to be Delivered*, enter not only *Kakenhi* but also any other public research funds you have applied for or have been awarded.
- In the section *Research Expenditure (Research Expenditure for the Whole Period)*, enter **the amount (tentative) for use by the Principal Investigator or Co-Investigator**. In (), enter the amount (tentative)

for the entire research period for use by the Principal Investigator or Co-Investigator, in units of 1,000 yen.

- If you are a Principal Investigator for *Kakenhi*, enter the total amount of direct expenses for the entire research period. If you receive research expenditure of the whole period, just like a program leader of a Global COE Program, enter the amount received for the entire project in the section *Distinction of the research contents, and Reason for submission of this Kakenhi application in addition to some other project*. If you are granted a *Waseda University Grant for Special Research Project*, you can also enter that grant.

Chapter 7: The finishing touches on your Research Proposal Document

This chapter explains the finishing (i.e. final check and brushing up) of your completed Research Proposal Document.

1. Research Proposal Document Style

- 1) Use **subtitles** to make content easy to understand and readable for the reviewers.
- 2) Ensure that diagrams, photographs and charts are used properly.
 - Depending on the research, it may be easier to explain things using diagrams and charts rather than using just text and mathematical formula. If you use diagrams and charts, **make them easy to see and check that they convey the content well**. Overly complicated diagrams may actually be an obstacle to understanding. Be sure to indicate which part of the text is supported by those diagrams or charts.
- 3) Ensure that the document is easy to understand **in black and white**.
- 4) Use simple phrasing, avoid technical descriptions.
 - It is advisable to **add some explanation of terms (the first time they appear)** that might not be easily understood by reviewers, e.g., terms only used in your specific research field, terms with special meanings, and terms expressing new concepts. Try to avoid making the reviewer hunt for the definition of a term in your proposal document. It is also best to minimize the use of such

terms in the document.

- 5) The main points of the proposal must be presented in a brief, readable and easy to understand manner.
 - Emphasize important parts with underlining or **bold font**. It is preferable to write in such a way that **readers can catch the meaning even by reading only the emphasized parts**, so emphasize the parts that you want the reviewers to focus on. On the other hand, if you use too many emphases, those points may end up being passed over.
- 6) Avoid typographical errors; these can affect the reviewer's impression of your proposal.

2. Reexamining your research proposal document

You should take plenty of time to refine your research proposal document, and needless to say your research plan itself. Try this review technique: after you have completed the entire research proposal document, **wait for a while (at least one day), print the document in black and white, and re-read it, imagining that you are the reviewer**. Check to see if any part is difficult to understand, if any diagram or chart is not clear, if there are any leaps in logic, or if any important points are not emphasized. Check again that **the project title accurately indicates the content of the research plan**. Also check that the review section that you selected is appropriate for the research you proposed; you can do this by conducting a keyword search of the *Kakenhi* Database to find titles of research which was selected in the past.

One effective approach is to **ask a reliable third party to read your document and make comments**. You will likely hear something new. Also, you could ask your senior researcher or supervisor to check, or you could use the brush-up service provided by the university or your faculty.

3. Final advice

If you submit your application just before the deadline, you may encounter congestion in the *Kakenhi* online application system, or other unexpected trouble. It is advisable to allow ample time for the creation

and submission of your application. If you complete your application early, you will have time to check it and brush it up. Please note the above point carefully: it is a key factor for successful selection.