FY2022

科研費

KAKENHI

Grants-in-Aid for Scientific Research

Strategic Guide

指南書

3rd Edition

There is more to an excellent grant proposal than just a great idea!

A strategy is necessary to translate your idea into a great proposal that will communicate its message to reviewers clearly and effectively. This manual will guide you through the process of applying for Grants-in-Aid for Scientific Research (KAKENHI) in English.

落ちる申請書には理由があった！　科研費にも「死の谷」がある

科研費指南書-戦略編　外国人研究者がキャリアアップしていくなかで陥りがちな罠から免れるための手引き

Study Group to Support Foreign Researchers in Japan
外国人研究者支援勉強会

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Edition: Sep. 1, 2021

KAKENHI and Your Career 科研費と研究者キャリア

As a professional scientist, obtaining public research funding according to competitive criteria is an unavoidable task. Grants-in-Aid for Scientific Research (KAKENHI) program is Japan's largest competitive research funding program aimed at all scientific fields and levels. It uses a peer review system and are the most reliable source of domestic funding in Japan. These grants have long supported international researchers throughout development of their careers, whether the language of their application was in English or Japanese.

It is worth noting that international researchers are regarded as essential members of the Japanese scientific community that will change its mindset into one of greater inclusion. This is one of the reasons why university research administrators (URAs) throughout Japan have united to create this brief KAKENHI guide. We hope that you will find it useful.

Positioning of KAKENHI 科研費の位置づけ

Funding type \ Research type	Research based on a researcher's creative idea(s) (curiosity-driven research)	Mission oriented research (following policy imperatives)
Competitive research funding (through open calls and review)	Larger research projects supported by KAKENHI	Research funded by individual ministries (AMED, JST, etc.)
Basic funds (non-competitive)	Smaller research projects conducted at universities and inter-university	National projects and strategically promoted projects conducted by National R&D Agencies

Edited from "Handbook on the Grants-in- Aid for Scientific Research (KAKENHI) Program"
https://www.jsps.go.jp/english/e-grants/data/handbook.pdf

Considerations regarding Japanese Translated Proposals

If you plan to have your proposal translated into Japanese, it is essential that you be able to judge the quality of the translation. If you are not able to, then we recommend submitting the proposal in English. Generally speaking, the content of a proposal is much more important than the language used.

Schedule for Scientific Research “Kiban” (S), (A), (B), (C), and Early-Career Scientists “Wakate” for FY 2022
公募スケジュール（基盤研究 S,A,B,C, 若手研究）

KAKENHI are competitive funds that are intended to significantly develop all scientific research, ranging from basic to applied science, and from the humanities and social sciences to the natural sciences. KAKENHI grants provide financial support for creative, pioneering research that will become the foundation of social development. Research projects are selected using a peer-review screening process by multiple researchers whose fields are similar to that of the applicant.

<Major Changes in the Fiscal Year 2022 Call for Proposals>

The KAKENHI schedule now has earlier dates for both calls and proposal deadlines!

◆Scientific Research (S), (A)		◆Scientific Research (B), (C), Early-Career Scientists
July 1st 2021	**Call for proposals**[1,2] for grants available during the next fiscal year	August 1st 2021
Mid August	**Department/Institution deadlines** Researchers submit applications via the “e-Rad” system	**Mid September**
Sep. 6th 2021	**JSPS deadline** Research institution submits application documents	**Oct. 6th 2021**
(S) Early May (A) Late Feb. 2022	**Temporary decision to fund the grant** Request for fund disbursement may be initiated	Late Feb. 2022
(S) Late May (A) Early April 2022	**Formal application for funding** should be submitted	Late April 2022
(S) Early July (A) Late June 2022	**Official decision** of grant delivery is issued	Late June 2022

[1] The category “Research Activity: Start-up” has an earlier schedule.
[2] From FY2024, the call for “Scientific Research (S)” will start in mid April 2023. The provisional grant decision will be in Early February 2023.

For detailed information, please check the following links:

Japan Society for the Promotion of Science (JSPS)
https://www.jsps.go.jp/english/e-grants/index.html
KAKENHI Pamphlet 2020
https://www.jsps.go.jp/english/e-grants/data/kakenhi_pamph_e.pdf
Handbook on the KAKENHI Program FY2021 New!
https://www.jsps.go.jp/english/e-grants/data/handbook.pdf

Main Research Categories and the KAKENHI Review System
研究種目の概要と審査方法について

Researchers applying for KAKENHI must choose an appropriate research category, the selection of which depends on the stage, contents, and scale of the research plan. Researchers must also choose an appropriate review section. Considering which review section is best for a proposal is a key point[1]. The table below shows the pertinent information for research categories (S), (A), (B), (C) and Early-Career Scientists.

Pertinent Information / Research Category	Total Budget	Period	Review Section1	Review Method
Scientific Research (S)	50-200 million yen	5 years	Broad Section (11 sections)	Comprehensive Review
Scientific Research (A)	20-50 million yen	3-5 years	Medium-sized Section (64 Sections)	
Scientific Research (B)	5-20 million yen	3-5 years	Basic Section (306 Sections)	Two-Stage Document Review, (B): 6 reviewers; (C), Early-C: 4 reviewers
Scientific Research (C)	5 million yen or less	3-5 years		
Early-Career Scientists[2]	5 million yen or less	2-5 years		

[1] See 'Grants-in-Aid for Scientific Research-KAKENHI- "Review Section Table"' and select the appropriate option.
https://www.jsps.go.jp/english/e-grants/data/09/2022/review_section_table_e.pdf

[2] Less than 8 years after receiving Ph.D. (as of April 1 of the funding start year). Moreover, grants for "Early-Career Scientists" may not be awarded to the same individual more than twice.

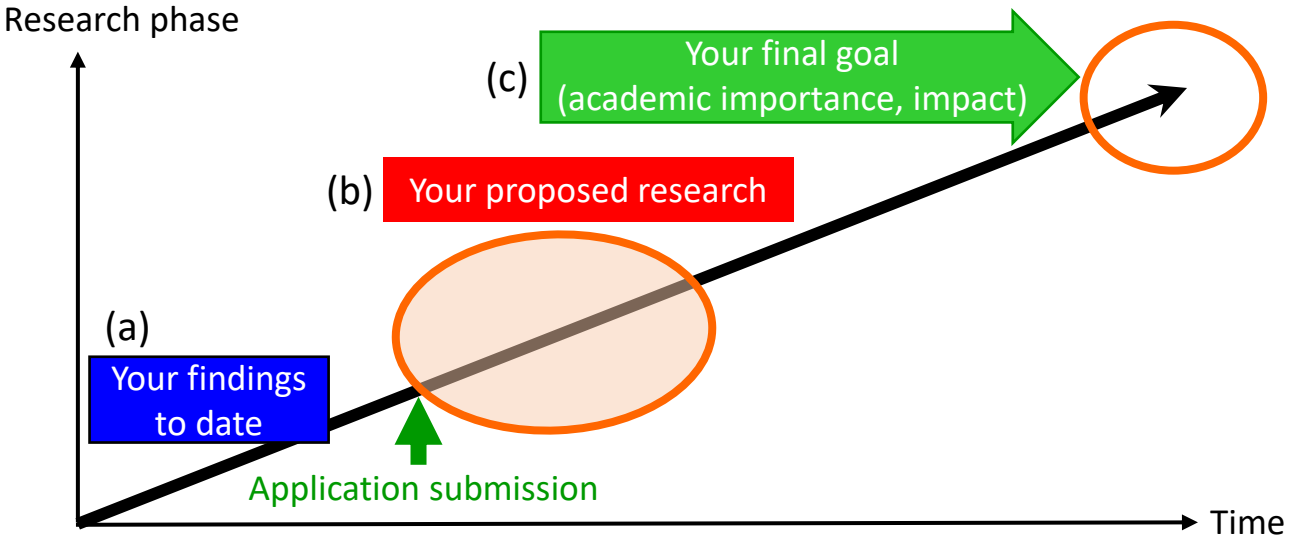
Tip: Grant-in-Aid for Transformative Research Areas is worth considering if a specific area matches your field of research.

[The on-going research category of "Grant-in-Aid for Scientific Research on Innovative Areas", formerly "Transformative Research Areas", started in FY2020.]

Structure and Design in Grant Writing
申請書作成の構成とデザイン

Start by viewing your research as a whole まずは研究全体のイメージ

A great idea alone does not guarantee a successful grant proposal. The challenge for you as an applicant is to express your idea effectively so that reviewers will see its potential. Viewing your research as a whole will help you to create a clearer picture.



Your research as a whole begins with (a) your findings to date, then continues through (b) your proposed research, and leads toward (c) your final goal. Consider this view when preparing your proposal by following these steps:

1. Examine and organize your findings to date to determine where you currently stand in your research.
2. Consider your final goal, its impact on your field, its impact on society, and how it will influence other areas (ripple effect).
3. Based on 1 and 2, express the importance and originality of your idea, as well as the landmarks to realize it. To accomplish this, be sure to clearly state:
   - ✓ Your hypothesis and specific aims
   - ✓ Your solution to the problem (including your plan and timeline)
   - ✓ Your backup plan in case things do not go as planned
   - ✓ Necessary facilities and expenses

Doing the above will allow reviewers to see all the phases of your research. Apply this design when preparing the summary section of your proposal as well.

Tip: Ensure that there are no contradictions between your proposal and goal. Even small discrepancies will draw the reviewers' attention and reduce your credibility.

Importance, originality, and feasibility
重要性・独創性・実現可能性

As alluded to earlier, importance and originality are criteria that reviewers will use to evaluate your proposal (see Rating Elements, page 9). But what is importance? What is originality? Useful questions to ask yourself are:

- Will this research lead to a major advance or simply an incremental advance?
- Do similar studies exist? If so, how does my proposal differ?
- Does it have broader impact in academia, technology, or society?
- Will reviewers think, “Wow, I wish I thought of that!”?

Importance and originality are then tempered by feasibility. You will need to convince the reviewers of the feasibility of your plan by showing appropriate methods, ample experience, and sufficient (or obtainable) resources.

Many applicants make the mistake of either being too ambitious or not ambitious enough. A strong proposal maximizes impact within the constraints of feasibility.

Tip: Support your claims of importance and originality as concretely as possible by providing data and references. Strive to demonstrate that your idea has potential.

Tip: Strive for balance between background and methods content. They are both important. Background shows importance, while the methods convey feasibility.

Process of building a proposal
作成過程（構想・準備・書き・確認）

Creating an effective KAKENHI proposal is more than just sitting down and writing. Writing should be part of a more thoughtful process that also includes ample preparation and polishing. Follow the process below when building your proposal:

1. Envision the outcomes of your research, and collect and organize information on the field.
2. Based on your collected information, envision a plan to realize the research outcomes.
3. Once you have a full, workable plan, begin writing the application.
4. Address each required item clearly and concisely, and use figures and data to help convey your message.
5. Ask your supervisor and other colleagues to review your proposal.

How to Write a KAKENHI Proposal
申請書の書き方

The goal of a proposal is to secure financial support for your research by explaining its merits to reviewers who may or may not be familiar with your research specialty.

1. What your proposal needs　なにが申請書に必要か

① **A concise summary of the proposed research at the beginning**
- A good summary will enhance reviewer understanding of your proposal.

② **A description of what will be learned during the research period**
- A research plan must include appropriate methods, a schedule, a budget, etc.

③ **An explanation of potential obstacles to completing the research and how these will be circumvented**
- If the research project involves co-investigators, add a research group organizational chart.

Only a small number of writing tips are given below due to space limitations. They will help you write a successful proposal for any type of grant, including KAKENHI.

2. Writing tips　ヒント

① **Use plain language so that reviewers who are not familiar with your field can understand your proposal.**
- It is best to avoid unnecessary technical jargon.

② **Use headings for each subsection.**
- All evaluation points must be included in your proposal.

③ **Proofreading is a must!**
- Ask your supervisor, co-workers, family members, URAs, and KAKENHI advisers at your university to comment on your proposal. Since KAKENHI is a universal, fundamental research grant in Japan, almost all scientists in Japan could be useful advisers.

Website: “researchmap” リサーチマップ

Prior to submitting a KAKENHI application, researchers need to prepare their publication information on the “researchmap” website because reviewers will utilize the CV information from “researchmap” during the review process.
https://researchmap.jp/?lang=english

Reviewers will evaluate KAKENHI proposals by using the following Rating Elements. Thus, applicants needs to satisfy these criteria.
(For details, please refer to the “Assessment Criteria” on the JSPS website: https://www.jsps.go.jp/english/e-grants/grants03.html)

Rating Elements　評定要素

① **Academic Importance of Research Projects**
- academic significance and originality
- clearly stated key research question
- academic, scientific, technological, and/or social impact

② **Validity of Research Methods**
- concrete and appropriate research method for the research objective with adequate budget, plan, and preparation

③ **Appropriate Ability to Conduct Research and Appropriate Research Environment**
- readiness to perform the proposed research with regards to the applicant’s experience and achievements
- research environment: accessibility to necessary facilities, equipment, and other participants

Instructions on the Form and Rating Elements
評定要素と申請書の記載指示との関係

The numbered elements in the proposal form instructions (below) correspond to the rating elements. Therefore, it is important to include all instructed items in your proposal.

Form S-14: Research Proposal Document (forms to be uploaded)

Scientific Research (C) (General) 1

1. Research Objectives, Research Method, etc.

This research proposal will be reviewed in the Basic Section of the applicant’s choic… to the Application Procedures for Grants-in-Aid for Scientific Research -KAKENHI-.
Research objectives, research method, etc. should be described within 4 pages.
A succinct summary of the research proposal should be given at the beginning.
The main text should give descriptions, in concrete and clear terms, of (1) scientific background for the proposed research, and the “key scientific question” comprising the core of the research plan, (2) the purpose, scientific originality, and creativity of the research project, and (3) applicant’s research development leading to conception of the present research proposal, domestic and overseas trends related to the proposed research and the positioning of this research in the relevant field, (4) what will be elucidated, and to what extent and how will it be pursued during the research period, and (5) preparation status towards achievement of the purpose of the research project.
If the pr…ed research project involves Co-Investigator(s) (Co-I(s)), a concrete description of the role-sharing between the Principal Invest…I) and the Co-I(s) should be given.

Rating Element ①

Rating Element ②

Tip #1

A proposal should be

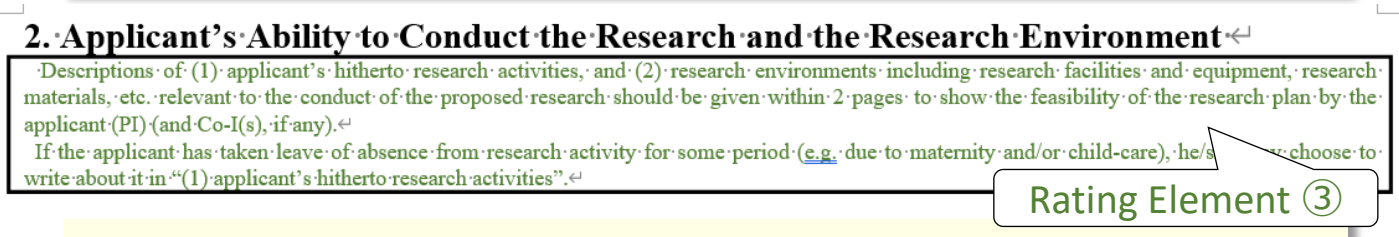
- ☐ Easy to read
  - ✓ Short sentences/paragraphs with clean margins and spacing
  - ✓ Headings to structure and indicate the key information
- ☐ Easy to understand
  - ✓ Write in plain language
  - ✓ Make sure the logical flow is sound
- ☐ Compelling and convincing
  - ✓ Clearly identify the issue(s)
  - ✓ Provide supportive facts for your statements
  - ✓ Compare & contrast your research with others in the field
  - ✓ Explain how you developed the idea for the project
  - ✓ Show what impacts (academic/social) your results may have

Tip #2

The **key scientific question** should be

- ☐ The big picture – your final goal, may/may not be directly testable
  AND
- ☐ A research question at the fundamental core of the project

Some applicants define only the former. However, it is equally important that your research yield tangible results. A testable question should also be stated.


2. Applicant's Ability to Conduct the Research and the Research Environment

Descriptions of (1) applicant's hitherto research activities, and (2) research environments including research facilities and equipment, research materials, etc. relevant to the conduct of the proposed research should be given within 2 pages to show the feasibility of the research plan by the applicant (PI) (and Co-I(s), if any).

If the applicant has taken leave of absence from research activity for some period (e.g. due to maternity and/or child-care), he/s … choose to write about it in "(1) applicant's hitherto research activities".

Rating Element ③

Tip #3 (regarding the instructions from section 2 of the form)

- ☐ Discuss your previous work and the results obtained; help reviewers follow the arrow of your research.
- ☐ Add your publication record, third-party evaluation results, patents, invited talks, and other achievements.
- ☐ How are you/your institution equipped with what you need for this project?

Tip #3 (continued) Section 2 writing examples

(1) Applicant's research activities

2019 – present Assistant Professor, Dept of ****, University of ****

I have been working on ***** for the purpose of *****. So far, I found that **** [1][2]

This research was funded by ****

2015 -2019 Post Doctoral Fellow, Research Institute of ****

…….

[Publications, awards, invited talks, patents, etc.]

1. Authors (if there are many, indicate your position), title, journal name, volume, issue, and pages, and publication year
2. ….

(2) Research Environments

University of **** is equipped with all measuring instruments …

Tips for Figures and Tables 図表のヒント

Visual aids such as diagrams, flowcharts, tables, and images can help reviewers better understand your proposal. Make sure to….

- ☐ **Make it simple**
  - ✓ Use minimally. It should *
    - Explain/illustrate background info/concept
    - Explain/illustrate your object/model/system/scheme
    - Display preliminary data
    - Support your argument
  - ✓ A busy figure is not informative - display only necessary info
  - ✓ State conclusions in the figure titles
  - ✓ Add brief legends telling what message the figure should convey
- ☐ **Avoid using unmodified figures from past publications**
- ☐ **Make it big (recognizable) and in high resolution (300 dpi+)**
- ☐ **Align position, size, style for a better look**
- ☐ **Refer to it (by figure #) in the text**
- ☐ **Print your document in black and white and check legibility**
  Applications are printed for reviewers in black and white.

*modified from https://www.bu.edu/gwise/files/2014/07/Grant-Writing-Seminar-Cyndi-Bradham.pdf page 14

4. Issues Relevant to Human Right Protection and Legal Compliance

Write "**N/A (not applicable)**" if the proposal does not involve these issues.

If it does, write simply. For example: "**Appropriate measures have been taken to protect human rights and to assure legal compliance**."

Effort (%)　エフォートの考え方

Distinction	Name (Age)	Academic Unit (School, Faculty, etc.) Position	1.Academic Degree 2.Role in This Project	Expenditure for FY2019 (Thousand Yen)	Effort(%)
	(Researcher Number) 99999999	△△△大学			

Never write 100% in your effort! It includes your working hours: paperwork, management meeting, teaching, research for other grants, etc. The amount of effort that you input varies depending on all of your obligations, but even if you don't teach, the maximum effort for KAKENHI is **70%**. Please consult a KAKENHI adviser at your institution if you have any questions.

Research Expenditures and Necessity (Budget)
研究経費とその必要性（予算）

応募情報 Application Information	処理状況 Processing Status	応募情報入力 Application Information Input
研究課題情報 Research project information	作成済 分担承諾完了 Consent from the Co-Investigator has obtained.	修正 Modify
研究経費とその必要性 Research Expenditure and Their Necessity	未作成	応募情報入力 Application Information Input こちらをクリック
研究費の応募・受入等の状況 The Status of Application and Acquisition of Research Grants	未作成	応募情報入力 Application Information Input

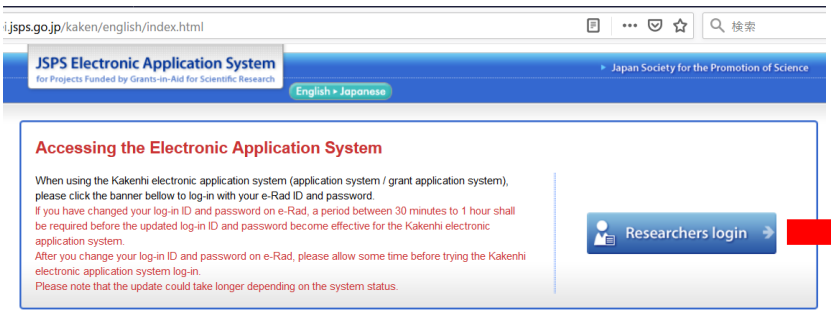
The budget plan should be honest, persuasive, thoughtful and specific.

- Don't include equipment cited in research achievements. (That means you already have it, or have access to it.)
- Generally, the approved funding amount is 70% of your proposal budget.
- Include consumables in case the budget is reduced when approved.

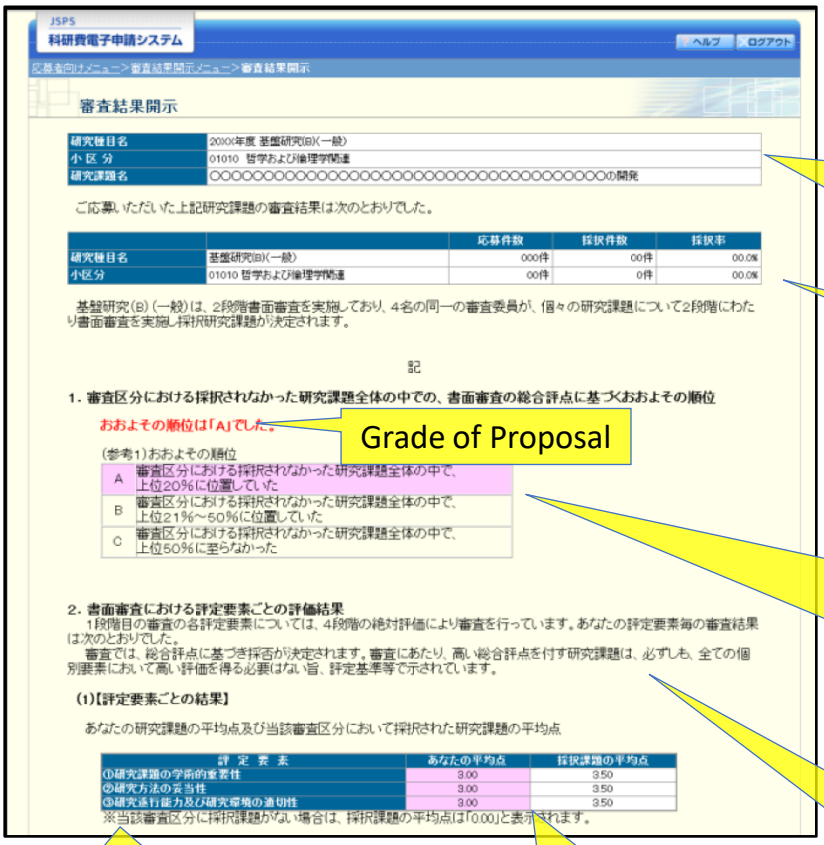
You can also refer to advice from foreign researchers who secured KAKENHI funding. E.g., EURAXESS Japan maintains 2016 KAKENHI presentation data here: https://euraxess.ec.europa.eu/worldwide/japan/boost-your-career-grants-practice#custom-collapse-0-kakenhi-sessions-grantees-amp-alumni-presentations

Disclosure of Review Results
審査結果開示の見方

Review results are disclosed directly to applicants to make the review process more transparent. Researchers whose proposals were not adopted can make use of review results in revising future proposals. Below is a sample of a Two-Stage Document Review that you would see for Scientific Research (B), (C) and Early-Career Scientists. (Note: This information is currently only offered in Japanese.)



View review results



Basic Information (Research category, review section and title of research project)

Number of applications/ Number of award/ Success rate

Grade of Proposal

Letter grades indicate that the proposal was
A: Top 20% of unaccepted applications
B: Upper 21-50%
C: Lower 50%

① Academic importance of research project
② Validity of research methods
③ Appropriateness of ability to conduct research and research environment

Your average score/ Average score of awarded projects

In the first stage of review, each reviewer grades 1-4 for each rating elements using an “absolute” scale.

①Academic Importance of the Research Project

- Is it an important research project from an academic point of view?
- Does the “key scientific question” comprise the core of the research plan? Is it clear, and scientifically significant, with evident originality?
- Is it clear how the history leading to the conceived research plan and domestic and overseas trends are related to the proposed research? Does the proposal indicate the positioning of this research in the relevant field?
- How will the proposed research affect the wider academic, scientific, or technological community or society?

②Validity of Research Method

- Is the research method concrete and appropriate in order to achieve its research objective? Also, does the research expenditure ensure consistency with the research plan?
  - Is the preparation status appropriate in order to achieve its research objective?

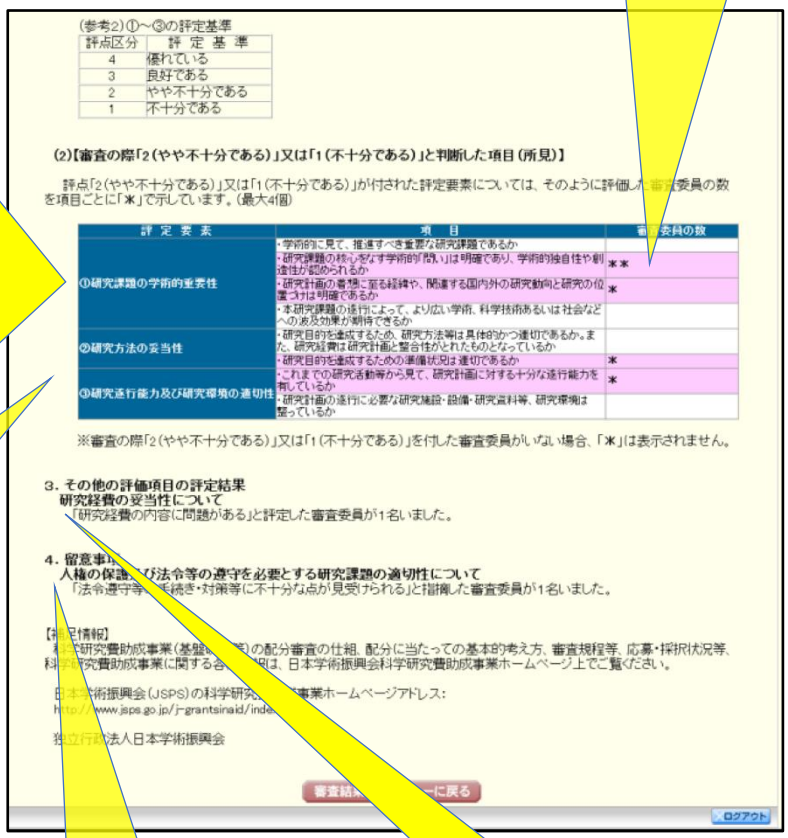
③Appropriateness of Ability to Conduct Research and Research Environment

- Does the author possess sufficient ability to conduct the research plan based on past research activity?
- Is the research environment suitable (facilities, equipment, research materials, etc.) to conduct the research?

Scoring classification and equivalent assessment criteria. (4: Excellent, 3: Good, 2: Somewhat insufficient or 1: Insufficient)

Specific items rated 2 (somewhat unsatisfactory) or 1 (unsatisfactory) are indicated with asterisk.

The number of asterisks (*) represent the number of reviewers who gave a rating of 2 or 1.



(参考2)①～③の評定基準

評点区分	評 定 基 準
4	優れている
3	良好である
2	やや不十分である
1	不十分である

(2)【審査の際「2(やや不十分である)」又は「1(不十分である)」と判断した項目(所見)】

評点「2(やや不十分である)」又は「1(不十分である)」が付された評定要素については、そのように評価した審査委員の数を項目ごとに「*」で示しています。(最大4個)

評 定 要 素	項 目	審査委員の数
①研究課題の学術的重要性	・学術的に見て、推進すべき重要な研究課題であるか	
	・研究課題の核心をなす学術的「問い」は明確であり、学術的独自性や創造性が認められるか	**
	・研究計画の着想に至る経緯や、関連する国内外の研究動向と研究の位置づけは明確であるか	*
	・本研究課題の遂行によって、より広い学術、科学技術あるいは社会などへの波及効果が期待できるか	
②研究方法の妥当性	・研究目的を達成するため、研究方法等は具体的かつ適切であるか。また、研究経費は研究計画と整合性がとれたものとなっているか	
	・研究目的を達成するための準備状況は適切であるか	*
③研究遂行能力及び研究環境の適切性	・これまでの研究活動等から見て、研究計画に対する十分な遂行能力を有しているか	*
	・研究計画の遂行に必要な研究施設・設備・研究資料等、研究環境は整っているか	

※審査の際「2(やや不十分である)」又は「1(不十分である)」を付した審査委員がいない場合、「*」は表示されません。

3. その他の評価項目の評定結果
研究経費の妥当性について
「研究経費の内容に問題がある」と評定した審査委員が1名いました。

4. 留意事項
人権の保護及び法令等の遵守を必要とする研究課題の適切性について
「法令遵守等の手続き・対策等に不十分な点が見受けられる」と指摘した審査委員が1名いました。

【特記情報】
科学研究費助成事業(基盤研究(C))の配分審査の仕組、配分に当たっての基本的考え方、審査規程等、応募・採択状況等、科学研究費助成事業に関する各種データは、日本学術振興会科学研究費助成事業ホームページ上でご覧ください。

日本学術振興会(JSPS)の科学研究費助成事業ホームページアドレス:
http://www.jsps.go.jp/j-grantsinaid/index.html

独立行政法人日本学術振興会

審査結果一覧に戻る

ログアウト

Points to be noted (e.g., issues relevant to human rights protection and legal compliance)

Other evaluation items (e.g., validity of research expenditure)

For more detailed information about assessment criteria, please check the following link: Scientific Research (B/C) (Application Section “General”) and Early-Career Scientists Assessment Criteria for Document Review
https://www.jsps.go.jp/english/e-grants/data/2021/r3hyoutei03_en_general.pdf

About Grants in Japan　科研費以外の外部資金

The Japanese government provides competitive funds via related ministries and agencies, which are based on Japan's science and technology policies.
A list of all national competitive funds:
https://www8.cao.go.jp/cstp/english/index.html

- **AMED (Japan Agency for Medical Research and Development)**
  https://www.amed.go.jp/en/index.html
  Grants: AMED-CREST (Research Team), PRIME (Individual Researcher)
  https://www.amed.go.jp/en/program/list/16/02/001.html
- **JST (Japan Science and Technology Agency)**
  http://www.jst.go.jp/EN/
  Grants: PRESTO (Sakigake) (A grant for individual researchers.)
  https://www.jst.go.jp/kisoken/presto/en/index.html
  FOREST (Sohatsu)
  https://www.jst.go.jp/souhatsu/en/call/index.html

Information about Private Foundations:
The Japan Foundation Center
http://www.jfc.or.jp/eng/english-top/
Recent grant list (in Japanese)
http://www.jfc.or.jp/grant-search/news/

- Most of the calls of private foundations are for limited fields. But some accept proposals of all the fields.
- Sometimes the success rate is much better than KAKENHI.
- There are also application calls in English.
- Even the application guidelines are in Japanese some accept English applications.
- Please try to see if there are suitable calls for your research.
- Information from your colleagues is precious about these calls.

Consult with a URA or staff member in charge of external funds at your institution for more information.

Remember that the reviewers are doing the reviews as a task over and above their daily mandated activities (...). They may be overwhelmed with applications and manuscripts requiring reviews. They often carry out the reviews under less-than-ideal conditions (evenings, weekends, holidays, at meetings, or even on the way to review committee meetings). They may wait until the last minute to begin their review.

Reviewers often do their reading in bits-and-pieces. Have your application so organized so that it can be read in this way. You do not want them to have to go back to the beginning after each break.

Assume that you are writing for a reviewer in a somewhat related field, rather than for an expert directly in your area. (3.1 General)

THE ABSTRACT SHOULD SERVE AS A SUCCINCT AND ACCURATE DESCRIPTION OF THE PROPOSAL EVEN WHEN IT IS SEPARATED FROM THE APPLICATION. IT MUST STAND ON ITS OWN.

It must be understood by both experts in your field and by "generalists".

The primary reviewer(s) read the entire application for which they are responsible, but others on the review committee may only read the abstract. (see also Appendix - the process in the review committee).The abstract may be the only part of the application that is read by all the members of the grants committee who are not primary reviewers, even though ALL members may have to give their independent scores (given equal weight to the scores of the primary reviewer(s)).

(3.4 Abstract / Summary of Proposal)

From *The Art of Grantsmanship* By Jacob Kraicer

With KAKENHI grants comes independence to pursue research of your own choosing. For this reason, these grants are competitive, and your proposal may not be accepted the first time. But do not let this discourage you! Both failures and successes will help you to grow as a researcher. Keep trying, and best wishes with your KAKENHI application!

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