1. Research Objectives, Research Method, etc.

This research proposal will be reviewed in the Broad Section of the applicant's choice. In filling this application form, refer to the Application Procedures for Grants-in-Aid for Scientific Research -KAKENHI-.

Research objectives, research method, etc. should be described within 6 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, (3) The circumstances 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.

In addition, be sure to provide relevant information in case the following is applicable.

- If the proposed research project involves Co-Investigator(s) (Co-I(s)), a concrete description of the role-sharing between the Principal Investigator (PI) and the Co-I(s) should be given.
- If the applicant submits another research proposal to the research category Scientific Research (A), the difference between the two proposals must be clearly described.
- If your research proposal was adopted under Scientific Research (S) in the past, describe the differences (novelty, expansivity, etc.) between the project previously adopted under Scientific Research (S).

[SUMMARY]

Notes to observe when preparing the Research Proposal Document

*Delete this entire text box when completing this form.

Note 1 :

1. Read and understand the following important notes carefully before preparing your Research Proposal Document.

KAKENHI funding aims to promote scientific research in all fields based on original ideas of researchers. The grants provide financial support for creative and pioneering research projects that will become the foundation of social development.

In KAKENHI, research theme setting is at the applicant's discretion. As such, KAKENHI research proposals are evaluated based not only on their scientific significance, but also on their originality and creativity. Accordingly, in the Research Proposal Document forms for the "Scientific Research", "Early-Career Scientists" and "Research Activity Start-up" categories, applicants are required to state:

- ✓ What kind of <u>key scientific question(s)</u> is set against the relevant <u>scientific background</u> (such as research trends and new developments)?
- ✓ What are the <u>scientific originality</u> and <u>creativity of the proposal?</u>
- ✓ What was the circumstances leading to the conception of the research idea?
- ✓ What are the research trends (domestic and overseas) and the positioning of this research in the relevant field?

In the review process, research proposals will be screened either by Comprehensive Review or Two-Stage Document Review. Reviewers strive to grasp the essence of the proposed research through exchange of opinions among them, evaluate such merits as scientific significance, originality and creativity, and comprehensively place their judgments taking account of the feasibility of the research plan and the applicant's ability to conduct research.

In applying for KAKENHI, applicants are advised to take note of the above, and to read the Application Procedures for Grants-in-Aid for Scientific Research and the explanations of review criteria and the annotations in the application form in preparing their Research Proposal Documents, so that the scientific merits and other points in the research proposal will be appropriately conveyed to the reviewers.

Note 2:

1. Proposals submitted to the research category Scientific Research (S) will be reviewed in the pertaining Broad Section of the Review Section Table. The proposal document should be prepared with consideration that it will be conducted by Comprehensive Review from diverse viewpoints by a review committee consisting of reviewers with different backgrounds.

Note 3:

- 1. Read the "Procedures for Preparing and Entering a Research Proposal Document" before preparing this form.
- 2. Complete the form using font size 10-point or larger.
- 3. The title and instructions on the upper part of each page should be left intact.
- 4. Do not exceed the maximum number of pages specified in the instructions. Therefore, if there are any blank page(s), leave them as they are (do not delete any page).

[N

2. Issues Relevant to the Protection of Human Right and Compliance with Laws and Regulations

(cf. Application Procedures for Grants-in-Aid for Scientific Research)

If the proposed research involves such issues that require obtaining the consent and/or cooperation of third parties, consideration in handling of personal information, or actions related bioethics and/or biosafety, including the laws, regulations and the guidelines in the country/region(s) where the joint international research is to be conducted, describe the measures and actions planned to be taken in responding to these issues within 1 page.

This provision applies to research activities that would require approval by an internal or external ethical jury, such as research involving handling of personal information from questionnaire surveys, interviews and/or behavior surveys, including personal histories and images, handling of donated specimens, human genome analysis, recombinant DNA, and experimentation with animals.

If the activities of the proposed research do not fall under such categories, enter "N/A (not applicable)"

3. Items to be Entered When New Application is Made in the Fiscal Year Previous to the Final Year of the Research Period of an On-Going KAKENHI Project

(For an application that comes under this category, this column is a mandatory entry. (cf. Application Procedures for Grants-in-Aid for Scientific Research))

The applicant should give within 1 page: (1) the relevant information on the on-going project (for which FY2023 is the final year of the research period) including the original plan at the time of application/adoption and the research accomplishment such as new knowledge acquired, and (2) the reason why he/she is submitting this new proposal for FY2023 on top of the on-going project (in terms of the development of the on-going research, necessity of new research budget, etc.). If not applicable, leave this page blank. (Do not eliminate the page.)

Research Category	Project Number	Title of the Research Project	Research Period
			FY_to FY2023

The original plan at the time of application/adoption and the research accomplishment of the ongoing project.

The reason for submission of this new proposal.

To be filled in and attached to the Research Proposal Document for each Principal Investigator (PI) and Co-Investigator(s) (Co-I(s))

Scientific Research (S) 9-(1)

4. Proposal of the Researcher Conducting Scientific Research (S) for FY2023 (PI)

Researcher	Name	Date of Bir (age)	th (_years old)
(PI)	Institution, Academic Unit, Position	Academi Degree	С

Ability to Conduct the Research and the Research Environment

Descriptions of (1) PI's hitherto research activities, (2) PI's research environments including research facilities and equipment, research materials, etc. relevant to the conduct of the proposed research, and (3) research environments mentioned in the (2) above surrounding whole project members should be given within 2 pages to show the feasibility of the research plan by the applicant.

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

(1) PI's hitherto research activities

*Delete this entire text box when completing this form.

Note:

- 1. The description in this column is to explain the feasibility of the research plan. On citing research achievements (research papers, books, patents, invited talks, etc.) they should be given not as an exhaustive list but as supporting evidence to prove the applicant's ability to conduct the proposed research.
- 2. Sufficient information should be given so that the reviewers can identify the research achievements. In the case of a research paper, for example, the relevant bibliographic information, including the title of the paper, the author(s), the title and the volume of the journal, the publication year, and the pages of the article should be given.
- 3. The research papers that can be cited are only those already published or accepted for publication.

(3) Research environments surrounding whole project members

*Delete this entire text box when completing this form.

Note:

* In case the whole project members consists of a sole PI, no need to write in the (3) Research environments surrounding whole project members.

(2)

Scientific Research (S) 9-(2)

4. Proposal of the Researcher (PI) (continued from the previous page)

To be filled in and attached to the Research Proposal Document for each Principal Investigator (PI) and Co-Investigator(s) (Co-I(s))

Scientific Research (S) 9-(3)

4. Proposal of the Researcher Conducting Scientific Research (S) for FY2023 (Co-I)

Researcher (Co-I) Name Institution, Academic Unit, Position	Date of Bi (age)	rth (_years old)
		Academ Degree

Ability to Conduct the Research and the Research Environment

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

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

(1) Co-I's hitherto research activities

*Delete this entire text box when completing this form.

Note:

- 1. The description in this column is to explain the feasibility of the research plan. On citing research achievements (research papers, books, patents, invited talks, etc.) they should be given not as an exhaustive list but as supporting evidence to prove the applicant's ability to conduct the proposed research.
- 2. Sufficient information should be given so that the reviewers can identify the research achievements. In the case of a research paper, for example, the relevant bibliographic information, including the title of the paper, the author(s), the title and the volume of the journal, the publication year, and the pages of the article should be given.
- 3. The research papers that can be cited are only those already published or accepted for publication.

(2) Co-I's research environments