

KAKENHI Online Seminar in English
(For Beginners to Intermediate-Level Audience)

How to write a Good, Strong and Successful KAKENHI Proposal

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My previous **successful** and **unsuccessful** KAKENHI proposals

2021-2023 Grant-in-Aid for Scientific Research (S) ¥198,000,000 requested

2021-2023 Grant-in-Aid for Scientific Research (A) ¥42,250,000

2018-2020 Grant-in-Aid for Scientific Research (A) ¥44,700,000

2018-2022 Grant-in-Aid for Scientific Research on Innovative Areas ¥119,100,000

2016-2018 Fund for the Promotion of Joint International Research ¥11,170,000

2015-2017 Grant-in-Aid for Challenging Exploratory Research ¥2,800,000

2015-2017 Grant-in-Aid for Scientific Research (B) ¥13,100,000

2013-2014 Grant-in-Aid for Scientific Research on Innovative Areas ¥8,000,000

2014-2016 Grant-in-Aid for Scientific Research (B) ¥20,000,000 requested

2011-2013 Grant-in-Aid for Young Scientists (A) ¥21,500,000 (7 years after Ph. D / 32 publications)

What have I learned from my rejected KAKENHI proposal?

Scoring Classification	Assessment Criteria
A Excellent	Among the research projects of the second stage of the review, should be adopted as top priority
B Good	Among the research projects of the second stage of the review, should be positively adopted
C Fair	Among the research subjects of the second stage of the review, it may be adopted
D	Those not entering A to C
—	Cannot evaluate because it has interests

Research category

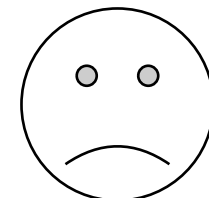
→ **KAKENHI (B)**

Research Field

→ **Nano-bio-science**

Reviewers' feedback

→ **lack of scientific
and industrial impact**



I explored the database to find what kind of proposal was accepted in the research filed of “Nano-bio-science”?



KAKEN Grants database is accessible to all

Database of Grants-in-Aid for Scientific Research(KAKEN) is a public database which includes information on adopted projects, assessment, and research achievements from the Grants-in-Aid for Scientific Research(KAKENHI) Program. This system is hosted by the National Institute of Informatics (NII) in cooperation with MEXT and JSPS.

 Full-Text Search

Research Project Title

Project/Area Number

Project Type

Research Project Innovative Areas Organizer Wrapup Planned Publicly International

Research Category

Allocation Type

Single-year Grant Multi-year Fund Partial Multi-year Fund

Review Section/Research Field

Research Institution

Project Period (FY)

~ FY of Project

Search result for the key word of “ Self assembly, DNA computer”.

28.  **Molecular combination dial and nano-cage**

Research Project

Research Category

Grant-in-Aid for Scientific Research (B)

Research Field

Bioinformatics/Life informatics

Bioinformatics/Life informatics

Research Institution

The University of Tokyo

Principal Investigator

HAGIYA Masami The University of Tokyo

Project Period (FY)

2008 – 2010 **Completed**

Keywords

DNA計算 / DNAナノテク / 三次元ナノ構造 / 分子システム / AFM測定 / DNAナノテクノロジー / 三次元ナノ構造体 / アゾベンゼン / DNAコンピューティング / 3次元ナノ構造 / 自動設計

Research Abstract

We developed a "molecular combination dial," which can be controlled by the order of multiple inputs, and a "nano-cage," which can be combined with the dial.

Submitted my unsuccessful proposal to this field
without **any modification** next year.

Result was.....

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2015-2017	Grant-in-Aid for Challenging Exploratory Research	¥2,800,000
2015-2017	Grant-in-Aid for Scientific Research (B)	¥13,100,000
2014-2016	Grant-in-Aid for Scientific Research (B)	¥20,000,000 requested
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Research categories and research fields matter.

Be open to change and be confident in your idea!

Categories to start from for first-time applicants

Grant-in-Aid for Scientific Research	(S): Creative/pioneering research conducted by one or a relatively small number of researchers. 5 years (in principle) 50 million to 200 million yen	(S)	SG
	(A), (B), (C): Creative/pioneering research conducted by one researcher or jointly by multiple researchers.	(A)	
	(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 <u>5 million yen or less</u>	(B)	
		(C)	MF
Grant-in-Aid for Challenging Research (Pioneering)/(Exploratory)	Research conducted by a single or multiple researchers that aims at radically transforming the existing research framework and/or changing the research direction and has a potential of rapid development. The scope of the (Exploratory) category encompasses research proposals that are highly exploratory and/or are in their budding stages. (Pioneering) 3 to 6 years 5 million to 20 million yen (Exploratory) 2 to 3 years 5 million yen or less	MF	
Grant-in-Aid for Early-Career Scientists	Research conducted by an individual researcher (*2) who is less than 8 years after Ph.D. acquisition. 2 to 5 years <u>5 million yen per project.</u>	MF	
Grant-in-Aid for Research Activity Start-up	Research conducted by a single researcher who has been freshly appointed to a research position, or who has returned from his/her maternity, childcare or other kinds of leave. Up to 2 years Up to 1.5 million per fiscal year	MF	

MF: Multi-year Fund

What are the chances that your proposal will be accepted?

Acceptance rate for KAKENHI 2020

https://www.jsps.go.jp/j-grantsinaid/27_kdata/data/2020sokuhou.pdf

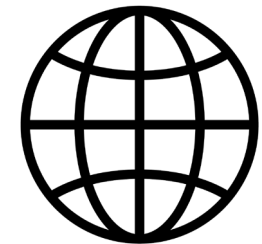
(translated by Kakugo)

>Research category Grant-in-Aid for Early-Career Scientists

Number of application 18,708

Number of acceptance 7,496

Acceptance rate 40.1%



Global comparison

JP	~25%
USA	<25%
Eur	~14 %
Aus	<20%

>Grant-in-Aid for Scientific Research (C)

Number of application 44,948

Number of acceptance 12,775

Acceptance rate 28.4%

Who are the reviewers?

Selected from approx. 7,000 researchers in **all academic field**.

https://www.jsps.go.jp/j-grantsinaid/01_seido/03_shinsa/index.html

Not all of them are senior researchers

I was one of the reviewers for
Challenging Exploratory Research and **KAKENHI (S)**.

How many reviewers evaluate each application?

Grant-in-Aid for Early-Career Scientists

Grant-in-Aid for Scientific Research (C)

4 reviewers per application

What are the criteria for scoring?

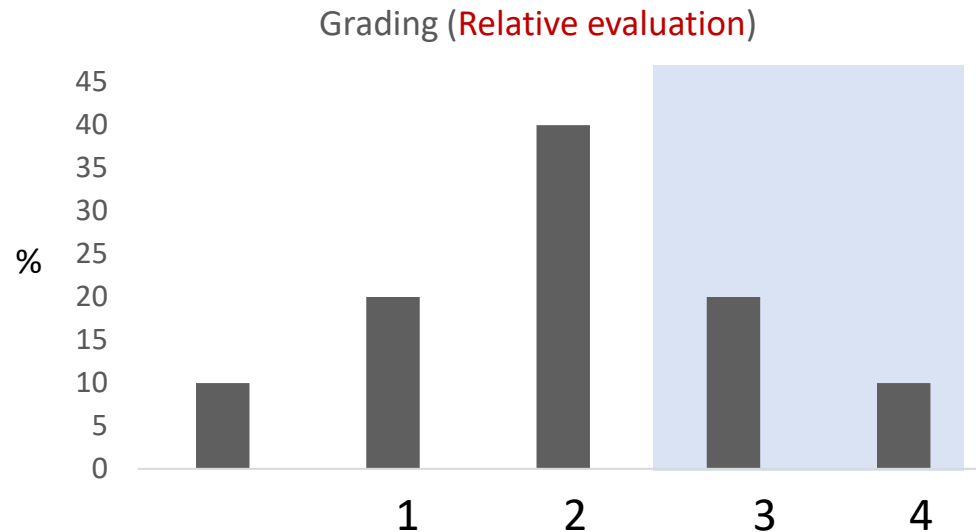
First stage review

Rating Elements

- (1) Academic Importance of Research Project
- (2) Validity of Research Method
- (3) Appropriateness of Ability to Conduct Research and Research Environment

Scoring Classification	Assessment Criteria
4	Excellent
3	Good
2	Somewhat insufficient
1	Insufficient

Overall score in the first stage review



Scoring Classification	Indication on Scoring Distribution
4	10%
3	20%
2	40%
1	30%
Cannot evaluate because it has interests	—

How to score more than 3 (top 30%)?

Please do not make the reviewer happy.

Do not take it
literally 😏

→ What proposal makes the reviewer happy.....

1. Proposal that doesn't follow the guideline....
2. Proposal that has a lot of blank spaces.....
3. Proposal that includes unnecessarily large figures

This kind of proposal can be easily scored C or D without any hesitation.

→ It saves my time.

A reviewer should evaluate 30~40 applications and provide grading as well as 400 words of the pros and cons for each proposal within few weeks. **Tough work!!**

(Demeriting method is followed in this system : grading your proposal by deducting points.)

Avoid making reviewers happy in this way.....

How to get reviewers' interest, instead?

Write a proposal that tells a story

→ Clear, Concise, Consistent (3Cs)

How to prepare a proposal with 3Cs?

(Set aside a plenty of your time to prepare the proposal.)

Step1. Survey literature

→ Make it clear what is already known and what is not unveiled

Step2. Find the purpose and scientific significance

→ Evaluate the impact of your scientific question in the community .

Step3. Find the way to resolve your purpose.

→ Look for a feasible way to achieve the goal within the research period.

How to present your idea?

There are specific instructions in the application form.

Early career scientist's application form

1. Research Objectives, Research Method, etc.

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

In this column, research objectives, research method, etc. should be described within 3 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 significance, and originality of the research project, and (3) what will be elucidated, and to what extent and how will it be pursued during the research period.

[SUMMARY] *Describe in about 10 lines

Just follow the instruction!

Creativity is required in your idea but not in the formatting!!

2. Research Development Leading to Conception of the Present Research Proposal, etc.

In this column, descriptions should be given within 1 page, of (1) 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) preparation status and feasibility of the research plan.

- (1) Describe how or why you came across your research question by overviewing your background.
- (2) Describe the current status of your relevant proposed research.
- (3) Describe your research achievements related to the proposal including publications, original methods, receiving funds and awards then based on your achievements show the feasibility of your research plan.

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

In this column, 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 (Principal Investigator).

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) applicant's hitherto research activities".

- (1) Describe your all research history by providing your published papers, books, reviews, invited talks and patents etc..

- (2) Provide the available research facilities, experimental set up, software, accessibility to Journals and communication tools etc..

4. Issues Relevant to Human Right Protection and Legal Compliance

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

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

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

If the proposed research does not fall under such categories, enter "N/A (not applicable)".

My sample

In this study, only E. coli strains and donated nucleic acids whose safety has already been established will be used, and no pathogenic or infectious experimental materials are planned to be used. Therefore, this section is not considered applicable. With regard to waste disposal and human rights, we will comply with the relevant laws and regulations, guidelines, and standards established by the research facility. Permission to use recombinant DNA has already been approved by the Hokkaido University Genetic Recombination Safety Committee.

Translated with www.DeepL.com/Translator (free version)

Small but important tips

- ✓ Try to write in plain English
 - Mostly reviewers are not always very familiar with your field
- ✓ Nice figure, clear schematic illustration (one or more figures per page)
 - Origin, GraphPad, Shade 3D, CAD, blender etc.
- ✓ No grammatical error and no typos.
- ✓ Use font size 10 or more.
- ✓ Use bold text and underline to draw attention.
- ✓ Be sure to cite proper references.



Share your idea with your experienced colleagues who are familiar and not familiar to your field and then improve your proposal based on their feedback.

Last words

Dr. Carol W. Greider won Nobel prize in medicine in 2009. On the day she won the prize she learnt that her recently submitted grant proposal had been rejected.....

<https://www.nature.com/articles/d41586-019-03914-5>

**Do not be afraid to submit your proposal
which includes your ambition!!**

