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

### FY2011

Specially Promoted Research,
Scientific Research,
Challenging Exploratory Research
and
Grant-in-Aid for Young Scientists (A/B)

September 1, 2010

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

#### Introduction

The current round of call for proposals lists the necessary procedures and other matters for the Details of the Call for Proposals or Application of the Grants-in-Aid for Scientific Research for FY2011 "Specially Promoted Research, Scientific Research, Challenging Exploratory Research, Grant-in-Aid for Young Scientists (A/B)"

#### It consists of:

- I Outline of the Grants-in-Aid for Scientific Research
- **II** Details of the Call for Proposals
- **III** Instructions & Procedures for those Intending to Apply
- IV Instructions & Procedures for those Who Have Already Been Accepted
- **V** Instructions & Procedures for Staff of the Research Institution

Among these, are listed in the "I Details of the Call for Proposals": Eligible Candidates for the Research Categories for which a Call for Proposals is Organized; Total budget provided and Research period and other matters; and Schedule from Application to Receipt of Funding and other issues.

In addition, in "III Instructions & Procedures for those Intending to Apply", "IV Instructions & Procedures for those Who Have Already Been Accepted" and "V Instructions & Procedures for Staff of the Research Institution" are listed: "Conditions for Applying", "Necessary Procedures", and other matters, for those who are eligible to apply. Individuals to whom it may concern are requested to make sure that they verify the relevant parts of the text.

Moreover, the major changes for FY2011 are as follows.

#### <The major changes for FY2011>

#### ① The eligibility to apply has changed. (See page 20,42,91)

"Students" who are in a position of receiving an education and being guided in their research cannot apply for Grants-in-Aid for Scientific Research. Therefore, from the call for proposals of FY2011 on, students cannot apply, even if they hold a position in which they conduct research activities in the research institution to which they belong or in another research institution.

However, persons who have a position consisting of conducting research activities in the research institution to which they belong, as their main work (e.g., university teaching staff, researchers from companies, etc.), and who also have student status are not included in the term "student" for the purposes of this process.

Moreover, they can implement research projects also from FY2011 on, but only if they are already implementing the research in question as the Principal Investigator. Furthermore, if they are already participating as Co-Investigator (*kenkyū-buntansha*) or Co-Investigator (*renkei-kenkyūsha*), they need to withdraw as project members when they apply for receipt of funding for the research project in question.

## ② The handling of research grant employees (persons who are employed through Grants-in-Aid for Scientific Research) has been clarified. (See page 21,42,87,91)

Research grant employees, as a rule, need to concentrate on work related to a Grant-in-Aid for Scientific Research at their place of employment (hereinafter called "employment related work") according to their employment contracts. Therefore, considering the working hours they need to allot to the employment related work, they cannot apply for Grants-in-Aid for Scientific Research themselves. In the call for proposals of FY2011, the handling of this point has been made clear.

However, if they provide a clear explanation on the time they can spend besides their employment related work, and if during this time they themselves attempt to conduct research using a Grant-in-Aid for Scientific Research, on their own initiative, it is possible for them to apply for Grants-in-Aid for Scientific Research, on condition that the following points have been verified in the research institution. In this case, they can apply as Principal Investigator, and they can also become Co-Investigators (*kenkyū-buntansha*), Co-Investigators (*renkei-kenkyūsha*), or other project members.

Moreover, also in case of continued research projects, they themselves can likewise

implement research using a Grant-in-Aid for Scientific Research, on condition that the following points have been verified in the research institution.

- It has been determined in the employment contract that research grant employees themselves can conduct research on their own initiative, besides the employment related work
- The employment related work and the work devoted to research that they conduct themselves on their own initiative has clearly been divided in the working hours and the effort.
- Time that can be allotted to research which they attempt to conduct themselves on their own initiative has been secured, besides the time spent for employment related work.

## ③ The handling of a case in which the report on the research achievements has not been submitted is clarified. (See page 6,22,88,95)

No Grants-in-Aid for Scientific Research will be funded to researchers who do not submit the report on the research achievements at the end of the research, without any reason. Moreover, it may happen that the decision to grant the funding to the researcher in question is cancelled, or that an order to return the grant is issued. It may also happen that information, such as the name of the research institution to which the researcher in question belongs and other data, is made public.

Furthermore, if researchers have failed, without good reason, to submit the scheduled report on the research achievements, then implementation of other Grants-in-Aid for Scientific Research due to be implemented in the same fiscal year will be suspended. Therefore, it is the responsibility of the representative of the research institution to ensure that the report on the research achievements is submitted without fail.

## **4** The handling of the replacement of the Principal Investigator has changed (See page 44,88)

The Principal Investigator is the researcher who assumes full responsibility for the implementation of the research plan, and thus plays a central role. Persons who, at the time they apply, are expected to lose their eligibility to apply during the research period, due to retirement or other reasons, and thus become unable to carry out their responsibility, are requested to avoid becoming a Principal Investigator.

For this reason, from FY2011 on, replacements of Principal Investigators of research

projects that already have been adopted will no longer be accepted.

⑤ The promotion of the "Dialogue on Science and Technology with Citizens" is mentioned. (See page 10)

Because recently "On the Promotion of the 'Dialogue on Science and Technology with Citizens' (A Basic Course of Action)" (June 19, 2010, the Minister of State for Science and Technology Policy and the Experts of the Council for Science and Technology Policy) has been compiled and made public, its content is mentioned.

## **(6)** The "List of Categories, Areas, Disciplines and Research Fields" has been partially changed (See page 49-84)

After deliberations in the Research Grant Screening Section of the Section Meeting for Science of the Academic Deliberation Council for Science and Technology, the list has changed as indicated below.

- 1) Area "Comprehensive fields"
  - The discipline "museology" and the research field "museology" have been added.
- 2) Area "New multidisciplinary fields"
  - To the discipline "Biomolecular Science" the research field "Chemical Biology" has been added.
- 3) Area "Medicine, Dentistry, and Pharmacy"
  - To the discipline "Boundary Medicine" the research field "Pain science" has been added.
- **?** New calls for proposals for "Grant-in-Aid for Young Scientists (S)" have been suspended.

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### Outline of the Electronic Application Procedures

#### References

The Supplementary Volume has the following contents. Please use it for reference.

Supplementary Volume

Application Procedures for Grants-in-Aid for Scientific Research for FY2011 (Specially Promoted Research, Scientific Research, Challenging Exploratory Research, Grant-in-Aid for Young Scientists (A/B)) (Application Forms and Data Entry)

#### 1. Proposal for grant-in-aid

#### (1) Specially Promoted Research

Procedures for preparing and data entry of proposal for grant-in-aid (new/continued)

#### First Half, application information (Items to be filled in on the form on the website)

Application information (Items to be filled in on the form on the website) (screenshot)

#### **Second Half, Files with Project Description**

Form S-1-1 (1): Proposal for grant-in-aid "Specially Promoted Research" (new / English version)

Form S-1-1 (2): Proposal for grant-in-aid "Specially Promoted Research" (new / Japanese version)

Form S-1-2: Proposal for grant-in-aid "Specially Promoted Research" (continued)

#### (2) Research categories other than Specially Promoted Research

#### First Half, application information (Items to be filled in on the form on the website)

Application information (Items to be filled in on the form on the website) (Scientific Research, Challenging Exploratory Research and Grant-in-Aid for Young Scientists (A/B))

Preparation and data entry of application information

Application information (Items to be filled in on the form on the website) (screenshot)

### Second Half, Files with Project Description (procedures for preparation and data entry of proposal for grant-in-aid, and form for proposal for grant-in-aid)

Form S-1-6: Proposal for grant-in-aid "Scientific Research (S)" (new)

Form S-1-7: Proposal for grant-in-aid "Scientific Research (A/B) (General)" (new)

Form S-1-8: Proposal for grant-in-aid "Scientific Research (C) (General)" (new)

- Form S-1-9: Proposal for grant-in-aid "Scientific Research (A/B) (Overseas Academic Research)" (new)
- Form S-1-10: Proposal for grant-in-aid "Challenging Exploratory Research" (new)
- Form S-1-12: Proposal for grant-in-aid "Grant-in-Aid for Young Scientists (A/B)" (new)
- Form S-1-13: Proposal for grant-in-aid (continued)

#### 2. Written consent of the Co-Investigator (kenkyū-buntansha)

- Form C-11: Written consent of the Co-Investigator (kenkyū-buntansha) (for other institution)
- Form C-12: Written consent of the Co-Investigator (kenkyū-buntansha) (for same institution)

#### 3. Notice of Completion of Grant-Aided Project

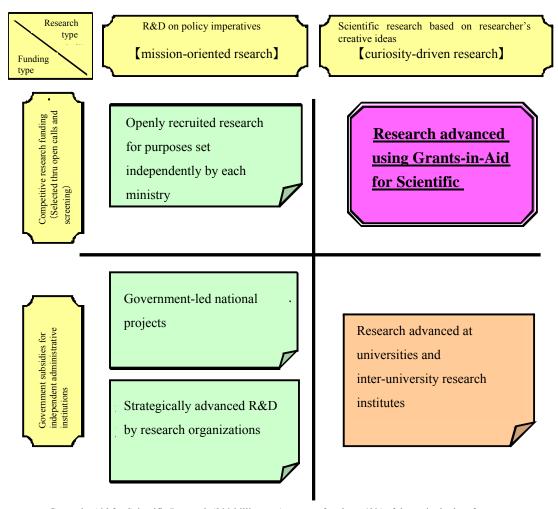
Form U-1: Notice of Completion of Project Funded with Grant-in-Aid for Scientific Research FY2010

#### I. Outline of the Grants-in-Aid for Scientific Research

#### 1. Purpose and Character of Grants-in-Aid for Scientific Research

Grants-in-Aid for Scientific Research are competitive funds that are intended to significantly develop all scientific research (research based on the free ideas of the researcher), from basic to applied research in all fields, ranging from the humanities and the social sciences to the natural sciences. The grants provide financial support for creative and pioneering research projects that will become the foundation of social development. The research projects are selected using a peer-review screening process (screening by multiple researchers whose field of specialization is close to that of the applicant).

The position of "Grants-in-Aid for Scientific Research" in the policy on the promotion of science, technology and scientific research in Japan



Grants-in-Aid for Scientific Research (200 billion yen) account for about 43% of the entire budget for competitive funding (approximately 463.1 billion yen).

### 2. Research Categories

For the following research categories, research institutions manage and carry out the different procedures on behalf of researchers.

Research categories, etc.	Purposes and description of the research category		
Grants-in-Aid for Scientific Research			
Grant-in-Aid for Specially Promoted Research	Specially Promoted (There is no limit to the period or budget although, as a guide, a period of three to five years and a budget of around 500		
Scientific Research	(The period is five years. The budget ranges from 50 million yen to a	ring research done by one researcher or a relatively small group of researchers five years. The budget ranges from 50 million yen to around 200 million yen per project.) pioneering research done by one researcher or jointly by multiple researchers	
	(Classified in A, B or C, depending on the total budget provided)	(B) From 5 million yen to 20 million yen (C) 5 million yen or less	
Challenging Exploratory Research	Early-stage research that is based on a unique concept, that is challenging, three years. The budget is up to 5 million yen per project.)	and that sets a high goal (The period is one to	
Grant-in-Aid for Young Scientists  (S) Research done by one researcher aged 42 or less (The period is five years. The budget ranges roughly from yen to 100 million yen per project.)  (A)(B) Research done by one researcher aged 39 or less  (The period is two to four years. Classified in A or B, depending on the total budget provided.)  (A) from 5 million yen to 30 million yen  (B) 5 million yen or less			
Grant-in-Aid for Research Activity Start-up	Research done by one researcher who has just been employed by the research institution, by one researcher who returns from childcare leave or other kinds of leave, or other researchers.  (The period is up to two years. The budget is up to 1.5 million per fiscal year.)		

	Encouragement of	Research done by one person who is an employee of an educational/research institution, a company employee, or others
	Scientists	
Grant-in-Aid for Special		Funding of urgent and important research projects.
Pu	rposes	
Gr	ant-in-Aid for	
Pu	blication of Scientific	
Re	search Results	
	Scientific Literature	Funding of Scientific Literature issued by an individual or a group of researchers to disclose scientific research
		achievements
	Databases	Funding of databases created by an individual or a group of researchers for public availability
Gr	ant-in-Aid for JSPS	Funding of research done by JSPS Fellows, including Foreign JSPS Fellows (for a period of up to three years)
Fe	llows	
Gr	ant-in-Aid for Creative	Among research supported by Grants-in-Aid for Scientific Research and others, focus is placed on the most outstanding
Scientific Research		research field. Research projects that are especially important in promoting the research field in question are selected to
		promote highly creative scientific research (recommendation required; for a period of five years)

In addition to this, there are the application divisions "Publication of Scientific Research Results (B/C)" and "Scientific Periodicals" in "Grants-in-aid for the publication of Scientific Research Results".

#### 3. The Relationship between MEXT and JSPS

The Ministry of Education (currently, the Ministry of Education, Culture, Sports, Science and Technology) publicly recruited, screened applications and delivered grants in all of the research categories up to FY1998. In FY1999 these tasks began to be transferred to the Japan Society for the Promotion of Science (JSPS). The call for proposals, screening and funding are currently being conducted as indicated below. From here on, the transfer of these tasks will proceed gradually.

Research category  Grants-in-Aid for Scientific Research, Ty	Call for proposals and screening (Main body in the preparation of the procedures for lodging applications and the location where the applications should be submitted)	Funding (Main body handling the criteria for selection, notice of the decision, and the location where the application forms for grants and the various other necessary documents should be submitted)
Scientific Research on Priority Areas, Scientific Research on Innovative Areas, Grant-in-Aid for Special Purposes, Grant-in-Aid for Publication of Scientific Research Results (Publication of Scientific Research Results (B/C))	MEXT	MEXT
Grants-in-Aid for Scientific Research, Ty	rpe 2	
Specially Promoted Research		MEXT

Grant-in-Aid for Young Scientists (A/B)	JSPS	
Grants-in-Aid for Scientific Research, Ty	rpe 3	
Scientific Research, Challenging Exploratory Research, Grant-in-Aid for Young Scientists (S), Grant-in-Aid for Research Activity Start-up, Encouragement of Scientists, Grant-in-Aid for Publication of Scientific Research Results (Scientific Periodicals, Scientific Literature and Databases), Grant-in-Aid for JSPS Fellows, Grant-in-Aid for Creative Scientific Research	JSPS	JSPS

❖ As of September 2010

#### 4. Rules Relating to Grants-in-Aid for Scientific Research

Grants-in-Aid for Scientific Research are governed by the Law on Optimizing Implementation of Budgets Relating to Subsidies (Law No. 179, 1955), Procedures on the Handling of Grants-in-Aid for Scientific Research (Announcement of the MEXT), Grants-in-Aid for Scientific Research (Scientific Research, etc.) Management Procedures of the Japan Society for the Promotion of Science (Regulations No. 17, 2003), and Others.

- (1) Three types of rules for Grants-in-Aid for Scientific Research

  There are three types of rules for Grants-in-Aid for Scientific Research, as follows:
  - 1) Application rules: rules concerning the applications
  - 2) Assessment rules: rules concerning the preliminary assessment (screening), the interim assessment, the ex-post assessment, and the research project progress assessment
  - 3) Spending rules: rules concerning the use of the Grants-in-Aid for Scientific Research Moreover, these three sets of rules on Grants-in-Aid for Scientific Research apply as follows, according to the type of scientific research (being Grants-in-Aid for Scientific Research Type 1, Grants-in-Aid for Scientific Research Type 2, and Grants-in-Aid for Scientific Research Type 3):

	Application rules	Assessment rules	Spending rules
	MEXT	MEXT	MEXT
Grants-in-Aid for Scientific Research, Type 1	Procedures on the call for proposals	Rules concerning the assessment for Grants-in-Aid for Scientific	For researchers: Supplementary conditions
Type I		Research	For research institutions: Administrative work and other tasks
		Screening Outline for Grants-in-Aid for Scientific	concerning the use of Grants-in-Aid for Scientific Research, to be performed by

		Research, category "Scientific Research on Innovative Areas"	each research institution
Grants-in-Aid for Scientific Research, Type 2	JSPS Procedures on the call	JSPS Rules concerning the	MEXT
Grants-in-Aid for Scientific Research, Type 3	for proposals	screening and assessment for Grants-in-Aid for Scientific Research (Scientific Research, etc.)	JSPS For researchers: Supplementary conditions For research institutions: Administrative work and other tasks concerning the use of Grants-in-Aid for Scientific Research, to be performed by each research institution

#### (2) Appropriate use of grants-in-aid

Grants-in-Aid for Scientific Research are funded by the tax of citizens and other sources. Researchers receiving Grants-in-Aid for Scientific Research have a duty to comply with the related laws, regulations and spending rules by researchers (subsidiary conditions), and also to use such grants appropriately. To ensure recipients comply with this requirement, we check whether no inappropriate use of the grants-in-aid will be made, when an application is made. (See note below.)

To facilitate the appropriate use of Grants-in-Aid for Scientific Research, research institutions to which the researchers belong are responsible for the management of the grant-in-aid. The Administrative work that each research institution is required to carry out (rules for use for institutions) is determined.

Among other things, the research institution has the duty to secure the appropriate use of the grants-in-aid, for example, by setting up a system for the management and audit of the budget, and, for the expenditure of expenses for goods, by properly implementing inspections of delivered goods.

Researchers and persons in charge in the research institution should fully understand prior to the application that these rules will apply after the application is approved.

#### (3) Important points on the use of grants-in-aid

Upon application a package plan throughout the research period should be prepared and submitted. However, after the research project is adopted, it will be handled as a project which is

funded for each fiscal year during the research period in question. For example, a grant-in-aid for scientific research cannot be used to pay costs in a fiscal year which falls outside the fiscal year(s) in which the funded project should be carried out.

Moreover, when it can be expected that the funded project will remain unfinished within the fiscal year, due to reasons beyond the control of the applicant(s), which could not be foreseen at the time it was decided to grant the funding, the costs in question can be carried over to the next fiscal year, provided that a request for approval for the carry-over is submitted to the Finance Minister through the Minister of Education, Culture, Sports, Science and Technology (MEXT), and the approval from the Finance Minister is obtained.

- (4) The handling of a case in which the report on the research achievements has not been submitted
  - 1 The report on the research achievements plays the important role of making the achievements of the research funded with a Grant-in-Aid for Scientific Research widely known to the citizens. It is an important tool in order to widely return the achievements of the research funded with a Grant-in-Aid for Scientific Research, which in turn has the tax of citizens and other sources as its resources, to society.

Therefore, researchers should submit the report on the research achievements at the end of the research. The content of the research will be widely disclosed to the public via the Grant-in-Aid for Scientific Research Database (KAKEN) of the National Institute of Informatics and other tools. Moreover, the research institution to which the researchers belong has to collect and submit the reports on the research achievements.

2 No Grants-in-Aid for Scientific Research will be funded to researchers who do not submit the report on the research achievements at the end of the research, without any reason. Moreover, it may happen that the decision to grant the funding to the researcher in question is cancelled, or that an order to return the grant is issued. It may also happen that information, such as the name of the research institution to which the researcher in question belongs and other data, is made public.

Furthermore, if researchers have failed, without good reason, to submit the scheduled report on the research achievements, then implementation of other Grants-in-Aid for Scientific Research due to be implemented in the same fiscal year will be suspended. Therefore, it is the responsibility of the representative of the research institution to ensure that the report on the research achievements is submitted without fail.

(5) Treatment in case of infringement of related laws

When a research project has been implemented, by violating related laws, guidelines, etc., for example when the content which is entered in the application documents is false, it is possible that the provision of the grant-in-aid is not carried out or cancelled.

(Note) Examples of recent fraudulent use, fraudulent receiving of grants or fraudulent acts committed during the research.

#### O Fraudulent use

- Someone instructed a trader to complete a fictitious transaction, pretended to have purchased consumables, had the grant expended by the university, and then had it managed as money deposited to the trader.
- Someone instructed a trader to complete a fictitious transaction, had a false invoice issued on which the name of a good that is different from the good that had actually been purchased and delivered was stated, and then had the grant expended by the university.
- Someone charged fictitious insubstantial personnel costs, and then managed the money himself, as a pooled fund.
- Someone stayed in a destination different from the scheduled travel plan, in order to have a meeting on collective research unrelated to the purpose of the research project, and then put the costs under travel expenses associated with overseas travel.
- (Note) The expenditure of grants-in-aid for fictitious and other transactions, like the ones mentioned in the examples, are all considered fraudulent use, even if the expenditure of the grant-in-aid was intended for the research project related to the Grant-in-Aid for Scientific Research in question.

#### O Fraudulent receiving of grants

• A researcher who is not eligible to apply filed an application for a Grant-in-Aid for Scientific Research, applied for receipt of funding, and then fraudulently received the grant-in-aid.

#### O Fraudulent acts committed during the research

- Someone manipulated or forged a chart in a research paper published as the achievements of research funded with a Grant-in-Aid for Scientific Research, using data from a previous experiment.
- Someone translated an original English-language research paper without obtaining consent, without permission from the author(s), incorporated this translation into a book or report on the research achievements published as the achievements of research funded with a Grant-in-Aid for Scientific Research, and made it public as the research achievements of the research project in question, without clearly mentioning that it was being quoted.

#### 5. Guidelines on the Proper Implementation of Competitive Funding

The "Guidelines on the Proper Implementation of Competitive Funding" (agreement of the liaison meeting of related offices and ministries on competitive funding, dated September 9, 2005) agree on the rules in the field of competitive funding on the elimination of unreasonable reduplication and excessive concentration, fraudulent receiving, of grants, fraudulent use and research-related fraudulent acts in research papers, and other matters in the related offices and ministries.

During the implementation of the competitive funding, including Grants-in-Aid for Scientific Research, these matters will be dealt with appropriately, based on these Guidelines. Therefore, the applicant should consider carefully the following points.

#### (1) Eliminate Unreasonable Reduplication and Excessive Concentration

1) In order to avoid "Unreasonable Reduplication or Excessive Concentration" (\*) of competitive funds, we may, to the extent necessary, share information on a part of the project description of the application between other divisions in charge of competitive funds, including other offices and ministries, independent administrative legal entities, etc, making use of the Cross-ministerial Research and Development management system (e-Rad).

Therefore, in the case of an application for more than one competitive funding (including in the case of an application for more than one Research Categories for Grants-in-Aid for Scientific Research), and other matters, the applicant should be careful when preparing the Proposal for Grant-in-Aid so that, for example, he or she fills in the Title of the Proposed Project in a way that makes it clear that it does not entail unreasonable reduplication.

If unreasonable reduplication or excessive concentration is found, the grant-in-aid may not be delivered.

For Grants-in-Aid for Scientific Research, JSPS has thus far sought to verify "whether applications fall under Unreasonable Reduplication or Excessive Concentration" during the screening process. However, the Ministry of Finance of Japan requested a change in the procedure in its "Budget Implementation Investigation FY2009": "Thoroughgoing Effort to Limit the Receiving of Grants-in-Aid for Scientific Research for Similar Research Projects". In the light of this, JSPS would like to draw attention to this point.

2) Concerning the completed information on the condition of applications and receiving of other Competitive Funding and other matters, including from other offices and ministries, when preparing the Proposal for Grant-in-Aid (name of Research Funds, Title of Proposed Project, Research period, Effort, etc.), if the stated information turns out to be different from the facts, the Research Project will not be adopted, the adoption will cancelled, or the allotted research budget will be reduced. Moreover, concerning the "Effort", and other matters, necessary for the activity to build a center in the program called "World Premier International Research Center Initiative", it is necessary to fill in the Proposal for Grant-in-Aid. Therefore, when completing this document, the applicant should verify the "FY2011 Procedures for Preparing and Entering a Proposal for Grant-in-Aid".

- (2) Dealing with Fraudulent Use, Fraudulently Received Grants or Fraudulent Acts Committed During the Research
- 1) No grant-in-aid will be offered, for a fixed period of time, when the researcher has made fraudulent use of a Grant-in-Aid for Scientific Research, has fraudulently received a Grant-in-Aid for Scientific Research, or has committed fraudulent acts. (For details see "(Reference 2) Procedures on the Handling of Grants-in-Aid for Scientific Research".)

Also researchers who fraudulently use or receive competitive funds other than Grants-in-Aid for Scientific Research (including funds under the control of other ministries), or who commit fraudulent acts by means of these competitive funds, and therefore are excluded from receiving these funds in question, for a fixed period of time, will not receive grants-in-aid for scientific research for a fixed period of time.

Moreover, the researcher who falls in those categories may experience difficulties when applying for other competitive funds, since an outline of the inappropriate use of grants, the inappropriate receiving of grants and/or the inappropriate acts in question (containing an outline of the research achievements in the research institution, the names of the people involved, the institution they belong to, the research project, the budget, the fiscal year of the research, the inappropriate content, details of the measures taken, etc.) will be provided to other bodies in charge of competitive funds, starting with the other ministries, including independent administrative legal entities and other institutions allocating grants.

2) If it has been established that fraudulent acts have taken place in a research paper, a report, or other research output funded by Grants-in-Aid for Scientific Research, the applicant may be requested to completely or partially return the provided Grant-in-Aid for Scientific Research. Concerning the Grant-in-Aid for Scientific Research in question. The severity of the fraudulent acts, the influence they have on the whole research project, and other matters, will be taken into consideration in making such an evaluation.

In addition, a person who is determined to have a certain responsibility, because, for example, he or she neglected his/her duty of care as a person in charge of the paper, report, etc. in question, will be treated in the same way as stated in the above-mentioned ①, even if it has not been established that he or she was directly involved in the fraudulent acts.

#### (\*) Eliminate Unreasonable Reduplication and Excessive Concentration

"Guidelines on the Proper Implementation of Competitive Funding" -Extract-

(Agreement of the Liaison Meeting of Related Offices and Ministries on Competitive Funding, Dated September 9, 2005 (Revision: March 27, 2009))

- 2. Eliminate Unreasonable Reduplication and Excessive Concentration
- (1) Basic Policy of the Unreasonable Reduplication and Excessive Concentration
  - ① In these guidelines, "Unreasonable Reduplication" is a situation in which more than one competitive funding is needlessly and repeatedly allotted to one and the same research project (i.e. the title and the content of the research to which competitive funding is being allotted; the same applies below) carried out by one and the same researcher. Either of the following cases fall under "Unreasonable Reduplication".
    - O Cases where applications have been made at the same time for more than one competitive funding for substantively the same research project (including research projects that overlap to a considerable degree; the same applies below), and where these research projects are redundantly adopted.
    - OCases where an application has been made again for substantively the same research project as another project that has already been adopted, and for which the allotment of competitive funding has already been completed.
    - OCases where there is a reduplication of the use research funds among more than one research project.
    - OOther cases corresponding to the cases mentioned above.
  - ② In these guidelines, "Excessive Concentration" is a situation in which the entire research funds that are allotted to one and the same researcher or research group (hereinafter called "researcher, etc.") in the fiscal year in question exceeds the limit within which they can be used effectively and efficiently, and in which the research funds cannot be used within the research period. Either of the following cases fall under "Excessive Concentration".
    - OCases where, in the light of the abilities of the researcher, etc. and the research methods, etc., excessive research funds are allotted.
    - OCases where, in comparison with the effort (the time allocation rate (%) of time necessary for the implementation of the research activities with the entire working time of researcher) that is being allotted to the research project in question, excessive research funds are allotted.
    - OCases where the purchase of unnecessarily expensive equipment is carried out.
    - Other cases corresponding to the cases mentioned above.

## 6. On the Promotion of the 'Dialogue on Science and Technology with Citizens' (A Basic Course of Action)

For the Grants-in-Aid for Scientific Research, it has, until now, clearly been mentioned in the spending rules by researchers (subsidiary conditions), the Handbook for Grants-in-Aid for Scientific Research, and other materials, that the expenses for the creation of a homepage for the publication of the research achievements, the expenses for the creation of a pamphlet publicizing research achievements, the expenses associated with outreach activities, such as, for example, activities publicizing the research achievements among the general public, can be paid as direct costs. Moreover, researchers have to try to positively disseminate the achievements produced through Grants-in-Aid for Scientific Research to society and citizens. For example, it is requested that researchers mention information concerning outreach activities in the self-assessment report they are

requested to prepare for research projects of which the research period is 4 years or more.

Furthermore, JSPS has implemented the program "HIRAMEKI A TOKIMEKI SCIENCE" in order to introduce the newest research achievements to elementary school, junior high-school and senior high-school pupils, in an easy-to-understand form, through experiences, experiments and lectures. Researchers are invited to positively make use of this program.

Moreover, recently "On the Promotion of the 'Dialogue on Science and Technology with Citizens' (A Basic Course of Action)" (June 19, 2010, the Minister of State for Science and Technology Policy and the Experts of the Council for Science and Technology Policy) has been compiled and made public.

In the Basic Course of Action, the activity in which researchers explain the content and achievements of their research activities to society and citizens in an easy-to-understand form is placed in the above-mentioned 'Dialogue on Science and Technology with Citizens'. Researchers and other persons who have received an allotment of public research funds amounting more than 30,000,000 yen per year per case are requested to positively work on the 'Dialogue on Science and Technology with Citizens'. Universities and other research institutions are also requested to make positive efforts in order to enable the proper implementation of the Dialogue on Science and Technology between Citizens, on the one hand, and researchers and other persons who have received public research funds, on the other hand, for example, by setting up support systems.

For the Grants-in-Aid for Scientific Research, there is the question "Are you positively trying to publicize and disseminate the research content and research achievements?", especially in the research progress assessment of, for example, Specially Promoted Research, for which researchers receive a relatively high amount of research funds, and the interim assessment of, for example, Scientific Research on Innovative Areas (Research in a proposed research area). Therefore, based on the above-mentioned Basic Course of Action, researchers should disseminate the achievements of research funded with Grants-in-Aid for Scientific Research to society and citizens in an even more positive way.

#### II. Details of the Call for Proposals

#### 1. Research Categories for which a Call for Proposals is Organized

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

- (1) Grants-in-Aid for Scientific Research, Type 2 (Specially Promoted Research, Grant-in-Aid for Young Scientists (A/B))
- (2) Grants-in-Aid for Scientific Research, Type 3 (Scientific Research, Challenging Exploratory Research)

#### 2. Schedule from Application to Receipt of Funding

In order to enable researchers to start their research as early as possible, the current call for proposals will start before the passage of the budget for FY2011, so that the preparations for the screening can be started early.

Therefore, applicants should be forewarned that the content and other matters are subject to change, depending of the circumstances of the passage of the budget.

### (1) Procedures that need to be completed prior to the deadline for the submission of the application documents

Principal Investigator should sufficiently cooperate with the research institution, and should adequately respond to its requests.

The Date and Time	Procedures to be Performed by the Principal Investigator (The Principal Investigator should carefully read the sections "II Instructions & Procedures for those Intending to Apply" and "IV Instructions & Procedures for those Who Have Already Been Accepted" for details, and should ensure he or she performs each procedure without omitting anything.)	Procedures to be Performed by the Research Institution (The Research Institution should carefully read the sections "V Instructions & Procedures for Staff of the Research Institution" for details, and should ensure he or she performs each procedure without omitting anything.)
From September 1, 2010(Wed.) Start of the Call for Proposals	① Investigators should access the Electronic Application System using the ID and the e-Rad Password which has been provided by the research institution to which they belong and preparing the application  ② The Principal Investigator should submit (send) the application documents to the research institution he/she belongs to, by the deadline decided the research institution.	1) The Research Institution obtains "An Electronic Certificate for Research Institutions, an ID, or Password" for e-Rad from the person in charge of the operation of e-Rad (This does not apply if the research institution already obtained them.)  ** The issue of the ID and the Password takes about 2 weeks.  2) Registration of the Researcher Information in e-Rad and other matters  3) Research institutions issue an "ID and password" to the Principal Investigators. (This does not apply if the researcher already obtained an ID and a password.)  4) Submission of the "Report on the Status of the Implementation of the System, Based on the
November 10 (Wed.) 4:30 pm  Deadline for the Submission		Guidelines"  (Deadline for submission: October
Deadine for the Submission		8 (Fri.))  5) <u>Submission (Sending) of the Application Documents</u>

#### Notes:

- 1. After the Principal Investigator submit (Sending) to the application to the research institution (mentioned in "Procedures to be Performed by the Principal Investigator" ②), the research institution should submit (Sending) to the JSPS the application the application by the deadline for the submission (mentioned in "Procedures to be Performed by the Research Institution" 5)).
  - Next, he or she should verify the section "Preparing the Application and Submitting the Application" (pages 38-47), etc., as well as verify the procedures designated by the research institution, etc. (deadline for the submission of the application, etc., in the research institution), with the office worker in charge in the research institution.
- 2. The research institution should perform the procedures 1) to 3) mentioned in the section "Procedures to be Performed by the Research Institution" where necessary.
  - Moreover, when the researcher is applying for Grants-in-Aid for Scientific Research, he or she should register the researcher information beforehand in e-Rad from the research institution to which he or she belongs. The research institution should perform the registration in e-Rad. Therefore, the researcher who is planning to apply should verify the state of the registration with the office worker in charge in the research institution.

Moreover, the research institution should submit a "Report on the Status of the Implementation of the System, based on the Guidelines on the Management and Audit of Public Research Funds at Research Institutions" (section 4) in "Procedures to Be Completed by the Research Institution"). If it has not been submitted, the applications of researchers belonging to the research institution in question will not be accepted in the Electronic Application System.

#### (2) Schedule after the Submission of the Application Documents (plan)

Specially Promoted Research	Scientific Research (S),	Scientific Research (A/B/C), Challenging Exploratory Research, Grant-in-Aid for Young Scientists (A/B)
December 2010 to April 2011:	December 2010 to May 2011:     Screening Late May 2011:     Informal decision to grant the funding Middle of June:     Application for funding Late June:     Decision concerning the granting of the funding  Early July:     Funding provided	December 2010 to March 2011:

#### 3. Details of Each Research Category

#### 1) Specially Promoted Research

A) Intended for:

Research project carried out by one researcher or by a relatively small group of researchers that is likely to yield highly acclaimed research achievements through intensive funding. The goal of the funding is the increased promotion of research which is highly regarded in the international arena.

- B) Total budget provided (total budget throughout the research period): There is no limit to the total budget although, as a guide, a total budget of around 500 million yen per research project may be awarded.
  - ※ On the amount for the total budget
    In principle, the total budget is set at approximately 500 million yen and the annual budget is set at approximately 100 million yen.
    However, if it is deemed necessary, the budget applied for can exceed the above-mentioned figures.
  - **\*\*** Handling of research projects with a total budget exceeding 500 million yen

The reason why such a budget is needed should be stated in detail in the appropriate section of the proposal for grant-in-aid. Especially rigorous screening on the appropriateness of the budget will be conducted.

- C) Research period: Three to five years
- D) Number of research projects scheduled to be selected: **Around 10** (subject to strict selection)
- E) Important points:

For research projects that have been adopted, a research progress assessment will be conducted in the fiscal year before the final fiscal year of the research period (or, for research projects of which the research period is 3 years, in the final fiscal year). Moreover, based on the results of this research progress assessment, an increase or a reduction of the research budget, cancellation of the research, or other measures may subsequently be implemented, if the need arises.

#### 2) Scientific Research (S)

A) Intended for:

Research project performed by one researcher or by a relatively small group of researchers, with the purpose of achieving a major development in creative and pioneering research, based on past

#### research achievements

- B) Total budget provided: From 50 million yen to around 200 million yen
- C) Research period: Five years as a general rule
- D) Important points:
  - As an exception, the research period may be set at three or four years, in case any of the researchers are expected to leave the research institution, due to reaching retirement age, or for any other reason.
  - 2) For research projects that have been adopted, a research progress assessment will be conducted in the fiscal year before the final fiscal year of the research period (or, for research projects of which the research period is 3 years, in the final fiscal year). Moreover, based on the results of this research progress assessment, an increase or a reduction of the research budget, cancellation of the research, or other measures may subsequently be implemented, if the need arises.

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

A) Intended for: Research project done by one or by multiple researchers, with the purpose of achieving a major development in creative and pioneering research

B) Total budget provided: Applications are to be divided into the following three divisions, according to the total budget provided.

Division	Total budget provided	Screening division
Scientific Research (A)	between 20 million and 50 million yen	General / Overseas Academic
		Research
Scientific Research (B)	·	General / Overseas Academic Research
Scientific Research (C)	5 million yen or less	General

C) Research period: Three to five years

D) Screening division: When applying, select one of the following screening divisions, because the criteria of the screening are different depending on the nature of the research project for which the applicant applies.

#### Screening division: "General"

The screening division accepts applications relating to **Scientific Research** (**A/B/C**). It is intended for projects which will develop innovative research.

All applications should be made for this screening division, except for research projects which are classified as "Overseas Academic Research".

#### Screening division: "Overseas Academic Research"

This screening division only accepts applications for Scientific Research (A/B). It is intended for research projects having as their <u>major purpose</u> in terms of research subject and research methods <u>conducting a field survey</u>, <u>observation</u>, <u>or collecting data at a specific location overseas</u>.

If a field survey, or a similar survey, is not the main purpose of the project, please apply for the "General" screening division. As far as equipment is concerned, the use of grants in the "Overseas Academic Research" screening division is limited to equipment that is directly used for surveys, observation or collection of data overseas, excluding inexpensive personal computers.

#### 4) Challenging Exploratory Research

A) Intended for: Research at an exploratory stage, done by one or multiple

researchers, that is based on a unique concept, that is challenging,

and that sets an ambitious goal.

B) Total budget provided: 5 million yen or lessC) Research period: One to three years

#### 5) Grant-in-Aid for Young Scientists (A/B)

A) Intended for: A research project conducted by one researcher aged 39 or less as

of April 1, 2011 (a person born on April 2, 1971, or thereafter) with an original idea that is expected to bring forth a major

development in the future

B) Total budget provided: Applications are to be divided into the following two divisions,

depending on the total budget provided

Division	Total budget provided
Grant-in-Aid for Young Scientists (A)	From 5 million yen to 30 million yen
Grant-in-Aid for Young Scientists (B)	5 million yen or less

C) Research period: **Two to four years** 

D) Important points: On the "Restriction on the Number of Times of Receiving a Grant(\*)" and transitional measures.

From the call for proposals of FY2010 on, JSPS decided to introduce a limitation on the number of times applicants can receive grants through Grant-in-Aid for Young Scientists (S/A/B). JSPS decided that applicants can receive Grants-in-Aid for Scientific Research up to a limit of two times through Grant-in-Aid for Young Scientists (S/A/B).

Concretely speaking, researchers can apply for research in one of the three research categories Grant-in-Aid for Young Scientists (S), Grant-in-Aid for Young Scientists (B), within the age limitations, and receive funding two times.

In addition, between now and the call for proposals of FY2013, JSPS decided to establish the following transitional measures.

- Even if the number of times an applicant received a Grant-in-Aid for Young Scientists (S/A/B) is already more than two times, he or she can receive a grant for one of the three research categories Grant-in-Aid for Young Scientists (A) or
   (B) one more time, if this happens within the age limitations.
- (\*) "Receiving a grant" means being selected as a Grant-in-Aid for Young Scientists (S/A/B) "Receiving a decision concerning the granting of the funding" here.

In addition, even if a research project of which the research period goes over more than one fiscal year received a decision concerning the granting of the funding, under one and the same project number, the "Number of Times of Receiving a Grant" will be considered as "one time".

Therefore, if, for example, researcher A conducted research from FY2003 to FY2004 with a "Grant-in-Aid for Young Scientists (B) (project number: 15\*\*\*\*\*\*)", and is conducting research from FY2006 to FY2009 with a "Grant-in-Aid for Young Scientists (A) (project number: 18\*\*\*\*\*\*)", the "Number of Times of Receiving a Grant" will be considered as "two times".

Moreover, in both the following cases, the "Number of Times of Receiving a Grant" will be considered as "one time".

· Cases where the researcher declined the application for funding in the middle of the

- research period, or where he or she discontinued the research, after he or she received a decision concerning the granting of the funding.
- Cases where the researcher applied during Grants-in-Aid for Scientific Research FY2006 for a "Grant-in-Aid for Special Purposes (Trial of Multiple Applications per Year)" with a research plan suitable for a "Grant-in-Aid for Young Scientists", where that application was adopted, and where the researcher received the decision concerning the granting of the funding.

(Reference) Please note that the following cases do not contain a "Number of Times of Receiving a Grant".

- In cases where, after the researcher received an informal decision to grant the funding for new research projects, he or she refused the application for funding, and did not receive the decision concerning the granting of the funding, there is no "Number of Times of Receiving a Grant". (This also includes cases where the researcher declines the grant, after he or she suspended the application for funding.)
- For Continued Research Projects of the category "Grant-in-Aid for Young Scientists (B)" in FY2002 (projects that have been newly approved in FY2001 as "Encouragement of Scientists (A)" with project number "13\*\*\*\*\*\*") there is no "Number of Times of Receiving a Grant", even if the researcher would have received the decision concerning the granting of the funding.

#### III. Instructions & Procedures for those Intending to Apply

#### 1. Procedures to be Completed Prior to the Application

Three matters need to be completed before the application: (1) Verification of the Eligibility to Apply, (2) Verification of the Registration of the Researcher Information, (3) Obtaining an ID and Password to Use the Electronic Application System.

#### (1) Verification of the Eligibility to Apply

A qualified person should apply for a Grant-in-Aid for Scientific Research as a Principal Investigator.

Applicants should meet the requirements 1) and 2) below.

Moreover, if a qualified applicant belongs to more than one research institution, he or she can apply simultaneously from each of these research institutions. However, in that case, it is necessary to consider the rules on duplicate applications (see page 24).

In addition, JSPS Fellows and Foreign JSPS Fellows cannot apply for "Grant-in-Aid for Scientific Research".

Students, such as, for example, graduate students, cannot apply for Grants-in-Aid for Scientific Research. (See note.) Therefore, applicants should bear in mind that, from the call for proposals of FY2011 on, students cannot apply, even if they hold a position in which they conduct research activities in the research institution to which they belong or in another research institution.

(Note) Persons who have a position consisting of conducting research activities in the research institution to which they belong, as their main work (e.g., university teaching staff, researchers from companies, etc.), and who also have a student status are not included in the term "student".

- ① At the time of the application, a person needs to be recognized by the research institution (Note) to which he or she belongs to be a researcher who meets the requirements 1), 2) and 3) below, and needs to be a researcher whose Researcher Information has been registered
  - 3) below, and needs to be a researcher whose Researcher Information has been registered in e-Rad as "Eligible to Apply for Grants-in-Aid for Research".

#### Requirements

- 1) The researcher should belong to the research institution as a person who has *inter alia* the duty to perform research activities within the research institution in question (irrespective of whether the work is paid or unpaid, full-time of part-time. Moreover, it is not necessary for the researcher to perform these research activities as such as his or her main duty.)
- 2) The researcher should actually be engaged in research activities at the research

**institution in question** (research assistant excluding) (This does not apply to cases where he or she is only engaged as a research assistant.)

3) The researcher is not a graduate student or any other category of student. (However, this does not apply to persons who have a position consisting of conducting research activities in the research institution to which they belong, as their main work (e.g., university teaching staff, researchers from companies, etc.), and who also have a student status.)

Note: Research institutions as prescribed in Article 2 of the Rules for the Handling of Grants-in-Aid for Scientific Research (announced by the Ministry of Education)

(Reference) Requirements that need to be met by the research institution(see page 90)

#### Requirements

- If a grant-in-aid is given, the research activity should be conducted as an activity of the research institution in question.
- · If a grant-in-aid is given, the research institution should carry out the management of the grant-in-aid.
- ② A person should not fall under "Not eligible for receipt of funding" in FY2010, because he or she committed fraudulent use, fraudulent receiving of grants or fraudulent acts of/with Grants-in-Aid for Scientific Research or other competitive funding.

Persons who are employed through Grants-in-Aid for Scientific Research (hereinafter called "research grant employees"), as a rule, need to concentrate on work related to a Grant-in-Aid for Scientific Research at their place of employment (hereinafter called "employment related work") according to their employment contracts. Therefore, considering the working hours they need to allot to the employment related work, they cannot apply for Grants-in-Aid for Scientific Research themselves. In the call for proposals of FY2011, the handling of this point has been made clear.

However, if they provide a clear explanation on the time they can spend besides their employment related work, and if during this time they themselves attempt to conduct research using a Grant-in-Aid for Scientific Research, on their own initiative, it is possible for them to apply for Grants-in-Aid for Scientific Research, on condition that the following points have been verified in the research institution.

- It has been determined in the employment contract that research grant employees themselves can conduct research on their own initiative, besides the employment related work.
- The employment related work and the work devoted to research that they conduct themselves on their own initiative has clearly been divided in the working hours and the effort.
- Time that can be allotted to research which they attempt to conduct themselves on their own initiative has sufficiently been secured, besides the time spent for employment related work.

(Note) As a rule, research grant employees are in a position where they receive instructions from the Principal Investigator or other researchers, and where they are engaged solely in work funded with a Grant-in-Aid for Scientific Research at their place of employment. Therefore, from FY2010 on, it is clearly written in the subsidiary conditions that "When employing a Research Collaborator, it is not the Principal Investigator but the research institution who, as a party, has to conclude an employment contract in which the work content, the working hours and other matters are clearly mentioned."

In addition, it may happen to researchers that they are treated as indicated below, even if their researcher information has been registered in e-Rad as "Eligible to Apply for Grants-in-Aid for Research".

- No Grants-in-Aid for Scientific Research will be funded, if there is a new application for Grants-in-Aid for Scientific Research from researchers who do not submit the report on the research achievements at the end of the research, without any reason, even if their research has been adopted after screening. Moreover, if researchers have failed, without good reason, to submit the scheduled report on the research achievements, then implementation of other Grants-in-Aid for Scientific Research due to be implemented in the same fiscal year will be suspended.
- If it is judged in the research institution to which researchers belong that it is not appropriate to let them conduct their research activities as activities of the research institution in question, it may happen that the research institution does not recognize the application. It may also happen that the application for funding by these researchers in question is not recognized and that the application for funding of the Grant-in-Aid for Scientific Research is rejected.

#### (2) Verification of the Registration of the Researcher Information in e-Rad

A Principal Investigator who tries to apply for research categories for which a call for proposals is organized this time should be a person who is eligible to apply at the time of the deadline for the submission of the application documents, and should be a person whose researcher information is registered in e-Rad as "Eligible to Apply for Grants-in-Aid for Research".

## Therefore, when applying, it is necessary to first perform a verification of the content of the registration in e-Rad.

However, for the registration in e-Rad, the applicant does not need to perform the procedures directly with the MEXT or JSPS, but the Principal Investigator should verify the registration procedures that the research institution to which he or she belongs needs to perform (the registration deadline within the research institution, methods of verification of the current state of the registration, etc.) with the research institution to which he or she belongs, because the

research institution to which he or she belongs needs to perform the procedures using e-Rad. (if there is any item (such as "the institution", "the position", or others) that needs to be corrected, even though he or she has already been included in e-Rad of the research institution, the applicant needs to register the correct information on e-Rad.)

#### (3) Obtaining an ID and a Password to Use the Electronic Application System

When applying, it is necessary to login into e-Rad, to access the Electronic Application System, and to prepare the application documents.

Therefore, the applicant should first be **provided with an ID and a password for e-Rad** by the research institution.

Moreover, once the ID and the password have been provided they can be used, unless the research institution changes. In addition, Researchers who already obtained an ID and a password issued by e-Rad do not need to obtain it again.

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

The "Grant-in-Aid for Research Activity Start-up" is aimed at supporting persons who cannot apply for the call for proposals this time, such as researchers who have just been employed by their research institutions, researchers who return from childcare leave or other kinds of leave, or other researchers.

The FY2011 call for proposals for this research category is scheduled for March 2011, and the eligibility to apply is scheduled to be as follows.

- ① Persons who could not apply for a research category, because they became eligible to apply for Grants-in-Aid for Scientific Research on the day after the application deadline (November 10, 2010) for the research categories
- (\*1) for which the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Japan Society for the Promotion of Science (JSPS) organized a call for proposals in September 2010.
- ② Persons who could not apply for the research categories (\*1) for which the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Japan Society for the Promotion of Science (JSPS) organized a call for proposals in September 2010, because they took up maternity leave or childcare leave in FY2010.

(Applicants should verify the details in the Application Procedures of March 2011.)

The research institution is responsible for conducting the registration of the researcher information and other matters in e-Rad. Therefore, researchers who may come to fall under the above-mentioned point ①, should respond appropriately and, for example, contact the office worker in charge in the research institution.

(\*1) Among the Grants-in-Aid for Scientific Research for FY2011 there are "Scientific Research on Innovative Areas", "Scientific Research on Priority Areas", "Specially Promoted Research", "Scientific Research", "Challenging Exploratory Research" and "Grant-in-Aid for Young Scientists".

#### 2. Verification of the Restrictions on Duplication

Before preparing the application forms, researchers who would like to apply for Grants-in-Aid for Scientific Research need to sufficiently verify the rules for "restrictions on duplication" in order to find out whether it is possible to apply for the research category they would like to apply for.

#### (1) Restrictions on Duplication in the Basic Policy

In the Grants-in-Aid for Scientific Research different "Research Categories" and "Screening Divisions" have been made, based on the scale of the research, the content, and other factors, This makes it possible to apply for research projects that meet the demands of various research forms.

On the other hand, taking into consideration the necessity to support many excellent researchers with limited resources, the danger of negatively affecting the operation of proper reviewing by an increase in the number of applications, and other elements, "Rules for Restrictions on Duplication" have been set up, based on the following fundamental principles.

- ① Making sure that as many excellent researchers as possible are supported with limited resources.
- ② Making sure that the number of applications does not increase dramatically, based on the reviewing system of each research category.
- ③ When setting up restrictions, primarily making the Principal Investigator who bears all responsibility eligible for the implementation of research projects, but also making the Co-Investigator (*kenkyū-buntansha*) eligible in some cases, for example, if the amount of funds in a research category is large.
- ④ Based on the fundamental principles outlined above, taking into consideration the purpose, character, and other elements of the "Research Categories" of the Grants-in-Aid for Scientific Research, and setting up restrictions on duplication separately, by making a distinction between the restrictions on application or restrictions on receiving of funds.

Moreover, restrictions on duplication have also been established in the research categories for which a call for proposals is organized this time. Therefore, when applying, the applicant should sufficiently verify the description below and the "Table of Restrictions on Duplication" showed on pp. 32-37.

#### (2) Restrictions on Duplicate Applications

① Cases where a researcher tries to apply as the "Principal Investigator" for two research projects.

[Type "Principal Investigator→Principal Investigator"] (see page 32)

Consequently, he or she cannot make more than one application for one and the same research category (screening division) at the same time (In case he or she has a continued research project, he or she cannot apply for a new research project in one and the same research category (screening division)).

(cases that fall under "-" in the table)

In case one researcher tries to make a duplicate application for two research projects, as the Principal Investigator for both, the following restrictions on duplicate applications of the type from A to E below apply.

However, this does not apply in case of an "Application for a grant for the fiscal year before the final fiscal year of a research project" (See "Special cases in the restrictions on duplicate applications", page 30).

A Cases where a researcher can only apply for one research project.

#### (cases that fall under "×" in the table)

B Cases where a researcher cannot apply for a new research project, because he or she is implementing a continued research project.

(cases that fall under "▲" in the table)

C Cases where a researcher can apply for both research projects, but, if both are adopted, he or she can only implement the research of one research project, as laid down in the rules.

For "■" in the table, the research categories in the section A are given priority
For "□", the research categories in the section B are given priority

D Cases where a researcher can apply for both research projects, but, if both are adopted, the researcher who applied has to decide which one he or she will implement.

(cases that fall under "%")

- E Cases where, as a general rule, duplicate applicants are not recognized, but where a researcher can apply for both research projects, only if the conditions added below are met.
  - If a researcher applies as a Principal Investigator for "Scientific Research", screening division "Overseas Academic Research", as a general rule, he or she cannot apply as a Principal Investigator for "Scientific Research", screening division "General" However, except in cases where it is necessary to conduct individually two research projects which clearly differ in objective, plan or methodology within the same fiscal year.

(cases that fall under "★" in the table)

② Cases where a researcher who applies as the Principal Investigator tries to participate as the Co-Investigator (*kenkyū-buntansha*) of another research project.

[Type "Principal Investigator→Co-Investigator (kenkyū-buntansha)"] (see page 34)

In case one researcher applies as the Principal Investigator for a certain research project and at the same time also tries to participate as the Co-Investigator (*kenkyū-buntansha*) of another research project, or, in case a researcher who has already become the Principal Investigator of a research project the continuation of which is scheduled in FY2011 (continued research project) also tries to participate as the Co-Investigator (*kenkyū-buntansha*) of another research project, he or she can normally apply for both projects.

However, for a part of the research categories, mainly Specially Promoted Research, Scientific Research on Innovative Areas (Research in a Proposed Research Project), Challenging Exploratory Research, etc., there are restrictions on duplicate applications of the type from A to C below.

A Cases where a researcher can only apply for one research project.

(cases that fall under "x" in the table)

B Cases where a researcher cannot apply for a new research project, because he or she is implementing a continued research project.

(cases that fall under "▲" in the table)

C Cases where a researcher can apply for both research projects, but, if both are adopted, he or she can only implement the research of one research project, as laid down in the rules.

For "■" in the table, the research categories in the section A are given priority

For "□", the research categories in the section B are given priority

Moreover, restrictions when opting for a "Participation of the Principal Investigator of Challenging Exploratory Research as the Co-Investigator (*kenkyū-buntansha*) of Scientific Research on Innovative Areas (Research in a Proposed Research Project)" or an "Application by the Co-Investigator (*kenkyū-buntansha*) of Scientific Research on Innovative Areas (Research in a Proposed Research Project) as the Principal Investigator of Challenging Exploratory Research" have been established from the Procedures on the Call for Proposals FY2010 on. However, in case a researcher has already started research entailing this combination in FY2009, or before that (i.e. before the notification of the current Procedures on the Call for Proposals), he or she can continue both research projects without change.

③ Cases where a researcher who participates in research as the Co-Investigator (*kenkyū-buntansha*) tries to apply as the Principal Investigator of another research project.

[Type "Co-Investigator (*kenkyū-buntansha*)→Principal Investigator"] (see page 36)

In case one researcher tries to participate as the Co-Investigator (*kenkyū-buntansha*) in a certain research project and at the same time also applies as the Principal Investigator of another research project, or, in case a researcher who has already become the Co-Investigator (*kenkyū-buntansha*) of a research project the continuation of which is scheduled in FY2011 (continued research project) also applies as the Principal Investigator of another research project, he or she can normally apply for both projects.

However, for a part of the research categories, mainly Specially Promoted Research, or other projects, there are the same restrictions on duplicate applications as in point ②).

(4) Cases where a researcher who participates as the Co-Investigator (kenkyū-buntansha) of a research project also tries to participate as the Co-Investigator (kenkyū-buntansha) of another research project.

[Type "Co-Investigator ( $kenky\bar{u}$ -buntansha) $\rightarrow$ Co-Investigator ( $kenky\bar{u}$ -buntansha)"] (see table below)

In case one researcher tries to participate as the Co-Investigator (*kenkyū-buntansha*) in a certain research project and at the same time also tries to participate as the Co-Investigator (*kenkyū-buntansha*) of another research project, or, in case a researcher who has already become the Co-Investigator (*kenkyū-buntansha*) of a research project the continuation of which is scheduled in FY2011 (continued research project) also tries to participate as the Co-Investigator (*kenkyū-buntansha*) of another research project, he or she can normally apply for both projects.

However, for a part of the research categories, mainly Specially Promoted Research, or other projects, there are the following restrictions on duplicate applications.

A For Specially Promoted Research, a researcher cannot participate in two research projects as the Co-Investigator (*kenkyū-buntansha*). In addition, in case a researcher has already become the Co-Investigator (*kenkyū-buntansha*) of Specially Promoted Research, he or she cannot participate as the Co-Investigator (*kenkyū-buntansha*) of other Specially Promoted Research either.

- B In case a researcher has already become the Co-Investigator (*kenkyū-buntansha*) of Scientific Research on Innovative Areas (Research in a Proposed Research Project), participating as the Co-Investigator (*kenkyū-buntansha*) of Specially Promoted Research is not permitted. (Moreover, conversely, in case a researcher has already become the Co-Investigator (*kenkyū-buntansha*) of Specially Promoted Research, participating as the Co-Investigator (*kenkyū-buntansha*) of Scientific Research on Innovative Areas (Research in a Proposed Research Project) is not recognized either.)
- C A researcher who has become the Co-Investigator (*kenkyū-buntansha*) of Grant-in-Aid for Creative Scientific Research can apply for research projects in which he or she participates as the Co-Investigator (*kenkyū-buntansha*) of Specially Promoted Research. However, if both are adopted, only the implementation of the Co-Investigator (*kenkyū-buntansha*) of Specially Promoted Research is recognized.

(Reference) Type "Co-Investigator (kenkyū-buntansha) (section A)

→Co-Investigator (kenkyū-buntansha) (section B)"

This table shows the restrictions on duplication in case "a person who tries to participate in a research project mentioned in section A as the Co-Investigator (*kenkyū-buntansha*), or a person who has already become the Co-Investigator (*kenkyū-buntansha*)" participates to a research project mentioned in section B as the Co-Investigator (*kenkyū-buntansha*).

	S	Section B	Specially Promoted Research
Section A			New • buntansha
Specially Promoted Research	New	buntansha	×
Research	Continued	buntansha	•
Grant-in-Aid for Creative Scientific Research	Continued	buntansha	
Scientific Research on Innovative Areas (Research a proposed research project)	Continued	buntansha	•

- ×: The researcher can only apply for one research project (in case he or she applied for a research project mentioned in section A, he or she cannot apply for a research project mentioned in section B).
- ▲:The researcher cannot apply for a research project mentioned in section B (He or she only implements the research of a continued research project mentioned in section A).
- □: The researcher can apply for both research projects. However, in case both are adopted, he or she only implements the research of the research project in B.

#### (3) Restriction Rules on the Receiving of Grants

Among the Restrictions on Duplication, the handling of cases that fall under the category "A researcher can apply for both research projects. However, in case both are adopted, he or she can only implement the research of one research project" (restrictions on receiving of grants) is as follows.

①On the handling in case both applications that fall under "■" or "□" are adopted

A In cases of "Principal Investigator" and "Principal Investigator" (cases of Principal Investigator of Specially Promoted Research and Principal Investigator of other research categories, etc.), as a result of the restrictions on duplication, a researcher should abandon (or should decline to accept) the research project he or she does not implement, if he or she can only implement the research category mentioned in section A or section B, as laid down in the rules.

However, for research projects of the research category "Scientific Research on Priority Areas" (Summarizing Group Research Projects, Support Group Research Projects and Adjustment Group Research Projects), it may happen that the implementation of the research through a replacement of the Principal Investigator is recognized, in "cases where it is recognized that the research of the area or the research project in question can be continued by a person from among the Co-Investigator(s) (kenkyū-buntansha) who can replace the Principal Investigator".

B As a result of the Restrictions on Duplication of Principal Investigators of Specially Promoted Research and Co-Investigators (*kenkyū-buntansha*) of other research categories, a researcher should cease being a "Co-Investigator (*kenkyū-buntansha*)" for research projects other than Specially Promoted Research, if he or she can only implement a research project of Specially Promoted Research (as the Principal Investigator).

Moreover, if he or she ceases being the "Co-Investigator (*kenkyū-buntansha*)", he or she should abandon (or should decline to accept) research projects of which he or she cannot continue the research.

C As a result of the Restrictions on Duplication in case of Co-Investigators (*kenkyū-buntansha*) of Specially Promoted Research and Principal Investigators of other research categories, a researcher should abandon (or should decline to accept) research projects he or she does not implement, if he or she can only implement a research project of Specially Promoted Research (as Co-Investigator (*kenkyū-buntansha*).

However, for research projects of the research category "Scientific Research on Priority Areas" (Summarizing Group Research Projects, Support Group Research Projects and Adjustment Group Research Projects), it may happen that the implementation of the research through a replacement of the Principal Investigator is recognized, in "cases where it is recognized that the research of the area or the research project in question can be continued by a person from among the Co-Investigator(s) (kenkyū-buntansha) who can replace the Principal Investigator".

D As a result of the Restrictions on Duplication of Co-Investigators (*kenkyū-buntansha*) of Specially Promoted Research and Co-Investigators (*kenkyū-buntansha*) of Grant-in-Aid for Creative Scientific Research, a researcher should cease being a "Co-Investigator

(kenkyū-buntansha)" for research projects of Grant-in-Aid for Creative Scientific Research, if he or she can only implement a research project of Specially Promoted Research (as the Co-Investigators (kenkyū-buntansha)).

Moreover, if he or she ceases being the "Co-Investigator (*kenkyū-buntansha*)", he or she should abandon (or should decline to accept) research projects of which he or she cannot continue the research.

- ② On the handling in case both applications that fall under "※" are adopted, but the researcher selects one of the research projects
  - A In case a researcher selects and implements a research project of "Scientific Research (S)", he or she should abandon (or should decline to accept) research projects of "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" (Planned Research).
  - B In case a researcher implements a research project of "Scientific Research on Innovative Areas (Research in a Proposed Research Area)" (Planned Research), he or she should abandon (or should decline to accept) research projects of "Scientific Research (S)".

#### (4) Other Important Points

- ①Even if duplicate application, etc. is possible according to the rules on restriction of duplication, the researcher should consider the restrictions in case of "Situations where the applicant cannot carry out his/her responsibility as a Principal Investigator or a Co-Investigator (*kenkyū-buntansha*), due to participation in multiple research projects". Altogether, he or she should consider the content of "Elimination of Unreasonable Reduplication and Excessive Concentration" mentioned on page 8.
- ②Even if the application has been accepted in the Electronic Application System, it may happen in some cases that afterwards it is not accepted for reviewing, due to the Restrictions on Duplicate Applications. This may happen, for example, in case a change has taken place in the project members of continued research projects. The researcher should sufficiently verify this before the submission of the application documents.
- ③Even when a researcher who is eligible to make applications in multiple research institutions applies at the same time from multiple research institutions separately, the restrictions on duplicated applications apply to that researcher in question (Principal Investigator or Co-Investigator (*kenkyū-bentansha*)).
- (4) When verifying the "Table of Restrictions on Duplication", the participation form to "Summarizing Group Research Projects" in case of research categories creating research areas, etc. is special (see "Application Procedures for Grants-in-Aid for Scientific Research FY2011 (MEXT)"). Therefore, applicants should take note of the following points.
  - A The "Principal Investigator of Summarizing Group Research Projects in Scientific Research on Innovative Areas (Research in a Proposed Research Area)" should verify the relation with "Principal Investigators or Co-Investigators (*kenkyū-buntansha*) of research projects who try to make a duplicate application" in the relevant section of the "Table of Restrictions on Duplication".
  - B The "Co-Investigator (kenkyū-buntansha) of Summarizing Group Research Projects in

Scientific Research on Innovative Areas (Research in a Proposed Research Area)" should verify the relation with "Participation Form to General Planned Research (Planned Research Other than Summarizing Group Research Projects) (Principal Investigators and Co-Investigators (*kenkyū-buntansha*))" and with "Principal Investigators or Co-Investigators (*kenkyū-buntansha*) of research projects who try to make a duplicate application" in the "Table of Restrictions on Duplication".

- C Persons who participate as Principle Investigators or Co-Investigators (*kenkyū-buntansha*) to "Summarizing Group Research Projects", "Support Group Research Projects" or "Adjustment Group Research Projects" in "Scientific Research on Priority Areas" should verify the relation with "Participation Form to General Planned Research (Summarizing Group Research Projects, Support Group Research Projects and Adjustment Group Research Projects) (Principal Investigators and Co-Investigators (*kenkyū-buntansha*))" and with "Principal Investigators or Co-Investigators (*kenkyū-buntansha*) of research projects who try to make a duplicate application" in the "Table of Restrictions on Duplication".
- ⑤ In case the continued research project which needs to be abandoned according to the restriction on the receiving of grants ① has FY2011 as the final fiscal year, and ② has been selected before FY2009, the Principal Investigator should submit a report on the research achievements (a working paper) and other matters related to the research project in question between June 20 and June 30, 2012 (except for "Challenging Exploratory Research").

## (5) Special cases in the restrictions on duplicate applications (Application for a grant for the fiscal year before the final fiscal year of a research project)

- ① When a Principal Investigator of a research project whishes to restructure the research project in the light of developments in the research in question, and the research project (continued research project) belongs to the type "Specially Promoted Research", "Scientific Research" or Grant-in-Aid for Young Scientists, the research period is 4 years or more, and FY2011 is the last fiscal year of the research period, then he or she may apply for an "Application for a grant for the fiscal year before the final fiscal year of a research project".
  - Moreover, based on one continued research project, the number of projects a researcher can make a new application for is limited to <u>one</u>.
- ② The research categories for which new applications may be made, as "Application for a grant for the fiscal year before the final fiscal year of a research project", are "Specially Promoted Research", and "Scientific Research". However, the only research category for which a new application can be made, based on research projects of the category "Grant-in-Aid for Young Scientists (S/A/B)", is "Scientific Research".
- ③ The restrictions on duplicate applications do not apply to cases where there is, on the one hand, a new application for a research project of the type "Application for a grant for the fiscal year before the final fiscal year of a research project" and, on the other hand, a continued research project on which the new application is based.
  - However, the restrictions on duplicate applications do apply to cases where there are, on the one hand, these projects and, on the other hand, other research projects under the supervision of the same Principal Investigator for which an application has been made (including continued research projects).
- 4 When the research project for which a new application has been made is selected, the grant

of FY2010 for the continued research project on which the new application is based will, as a general rule, not be paid. Even in case when the grand has been paid, the full amount of the grant should be refunded. For this reason, the proposal for grant-in-aid for a research project for which a new application is made should include a part of the budget necessary for the implementation of the continued research project for FY2010.

Moreover, in this case, the Principal Investigator should submit a report on the research achievements (a working paper) and other matters related to the continued research project in question between June 20 and June 30, 2012. Therefore, he or she should include the budget for the report, etc. in question, when completing the preparations.

## Attached Table 1 Table of Restrictions on Duplication

1−1) Type "Principal Investigator (New/Continued) (Section A) → Principal Investigator (Section B)"

This table shows the restrictions on duplication in case of "a person who tries to apply as Principal Investigator for a research project mentioned in section A (research categories for which JSPS organizes a call for proposals), or a person who has already become Principal Investigator of a research project that is scheduled to be continued in FY2011 (continued research project) mentioned in section A" applies as Principal Investigator for mentioned in section B.

in section B.	Section B					ific	h (A)	ific	h (B)	ific h (C)	onng	onng	Scientific on Priori	Research ity Areas		fic Rese		sarch
	56	ectioi	nВ	Specially Promoted Research	Scientific Research (S)	Scientific	Research (A)	Scientific	Research (B)	Scientific Research (C)	Grant-in-Aid for Young Scientists(A)	Grant-in-Aid for Young Scientists(B)	esearch	nvited	Resear	ch in a pr search ar	oposed	Challenging Exploratory Research
				Specia	Scientifi	General	General Overseas Academic Research	General	General Overseas Academic Research	General	Grant-in Sci	Grant-in Sci	Planned research	Publicly invited research	Summarizing group	Planned research	Publicly invited research	Ch Explora
				New	New	New	New	New	New	New	New	New	New	New	New	New	New	New
Section A		`		PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PΙ	PI	PI
Specially Promo	ted	New	PI	_											×			
Research		Continued	PI	_	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Scientific Researc	h (C)	New	PI		_			×	×	×	×	×				*		
Scientific Researc	II (3)	Continued	PI		_	•	•	•	•	•	•	•			•	•		
	General	New	PI			=	*	×	*	×	×	×						
Scientific Research		Continued	PI		•	_	*	•	*	•	•	•						
(A)	General Overseas	New	PI			*	-	*	×	*	×	×						
	Academic Research	Continued	PI		•	*	-	*	•	*	•	•						
	General	New	PI		×	×	*	_	*	×	×	×						
Scientific Research		Continued	PI		•	•	*	_	*	<b>A</b>	•	<b>A</b>						
(B)	General Overseas Academic	New	PI		×	*	×	*	-	*	×	×						
	Research	Continued	PI		<b>A</b>	*	<b>A</b>	*	_	*	•	•						
Scientific Research	General	New	PI		×	×	*	×	*	-	×	×						×
(C)		Continued	PI		•	•	*	•	*	ı	•	•						•
Grant-in-Aid for Y Scientists(S)	oung	Continued	PI	•	•	•	<b>A</b>	•	•	•	•	•			•	<b>A</b>		•
Grant-in-Aid for Y	oung	New	PI		×	×	×	×	×	×	_	×						
Scientists(A)		Continued	PI		<b>A</b>	•	•	<b>A</b>	•	<b>A</b>	_	<b>A</b>						
Grant-in-Aid for Y	oung	New	PI		×	×	×	×	×	×	×	-						×
Scientists(B)		Continued	PI		<b>A</b>	<b>A</b>	•	<b>A</b>	<b>A</b>	•	•	-						<b>A</b>
Challenging		New	PI							×		×						_
Exploratory Rese		Continued	PI							•		•						_
Grant-in-Aid fo Creative Scientific Re	search	Continued	PI		•	•	•	•	<b>A</b>	•	•	•			•	<b>A</b>		
Grant-in-Aid fo Research Activity ( up		Continued	PI															

<sup>-:</sup> A researcher can only apply for one research project in one and the same research category (screening division) (In case he or she has a continued research project mentioned in section A, he or she cannot apply for a research project mentioned in section B)

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

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

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

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

<sup>※:</sup>A researcher can apply for both research projects. However, in case both are adopted, the researcher selects only one research project and implements it.
★:As a rule duplicate applications are not accepted. (This does not apply to cases where it is necessary to conduct two clearly different research projects within the same fiscal year.)

### 1−2) Type "Principal Investigator (New/Continued) (Section A) → Principal Investigator (Section B)"

This table shows the restrictions on duplication in case of "a person who tries to apply as Principal Investigator for a research project mentioned in section A (research categories for which MEXT organizes a call for proposals), or a person who has already become Principal Investigator of a research project that is scheduled to be continued in FY2011 (continued research project) mentioned in section A" applies as Principal Investigator for mentioned in section B.

		So	ection B	Specially Promoted Research	Scientific Research (S)	Scientific Research	(A)	Scientific Research	(B)	Scientific Research (C)	Grant-in-Aid for Young Scientists(A)	Grant-in-Aid for Young Scientists(B)	Challenging Exploratory Research
				Spe	Scien	General	General Overseas Academic Research	General	General Overseas Academic Research	General	Grant	Grant	Expl
				New	New	New	New	New	New	New	New	New	New
Secti	on A			PI	PI	PI	PI	PI	PI	PI	PI	PI	PI
	Summarizing group	New	PI	×									
on s	Summ	Continued	PI	<b>A</b>	<b>A</b>								
Scientific Research on Innovative Areas (Research in a proposed research area)	Planned	New	PI		*								
Scientific Innovar	Pla	Continued	PI		•								
<b>4</b>	Publicly invited research	New	PI										
	Pu' in res	Continued	PI										
uo ı	Planned research	New	PI										
Research ity Areas	Pl <sub>2</sub>	Continued	PI										
Scientific Research on Priority Areas	Publicly invited research	New	PI										
<b>3</b> ,	Pu in' res	Continued	PI										
Scientific on Innova (Research : research	tive Areas a proposed	Continued	PI	•	•	•	•	•	•		•		•

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

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

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

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

<sup>\*:</sup> A researcher can apply for both research projects. However, in case both are adopted, the researcher selects only one research project and implements it

#### 2-1) Type "Principal Investigator (New/Continued) (Section A) Co-Investigator (kenkyū-buntansha) (Section B)

This table shows the restrictions on duplication in case of "a person who tries to apply as Principal Investigator for a research project mentioned in section A (research categories for which JSPS organizes a call for proposals), or a person who has already become Principal Investigator of a research project that is scheduled to be continued in FY2011 (continued research project) mentioned in section A" participates in a research project mentioned in section B as Co-Investigator (kenkyū-buntansha).

in section B as co-i		ectio	-	Specially Promoted Research	Scientific Research (S)	Coinstiff December (A)	IIIIc Nescalcii (A)	(u) 1	une research (b)	Scientific Research (C)	Scientific on Prior	ity Areas	Scientific Research on Priority Areas	Challenging Exploratory Research
				Speciall Re	Scientific	General	General Overseas Academic Research	General	General Overseas Academic Research	General Scien	Planned research	Publicly invited research	Planned Research in a proposed research research area	Cha Explorate
				New	New	New	New	New	New	New	New	New	New	New
Section A				Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)
Specially Promo	ted	New	PI	×								•		
Research		Continued	PI	•	•	•	•	•	•	•	•	•	•	•
Scientific Research	h ( <b>S</b> )	New	PI											
Scientific Research	<b>II</b> (3)	Continued	PI											
	General	New	PI											
Scientific Research	General	Continued	PI											
(A)	General Overseas	New	PI											
	Academic Research		PI											
	General	New	PI											
Scientific Research		Continued	PI											
<b>(B)</b>	General Overseas	New	PI											
	Academic Research	Continued	PI											
Scientific Research	General	New	PI											
(C)		Continued	PI											
Grant-in-Aid for Y Scientists(S)	oung	Continued	PI											
Grant-in-Aid for Y	oung	New	PI											
Scientists(A)		Continued	PI											
Grant-in-Aid for Y	oung	New	PI											
Scientists(B)		Continued	PI											
Challenging			PI											
Exploratory Research	Exploratory Research Continued		PI											
Grant-in-Aid fo Creative Scientific Re		Continued	PI		•									
Grant-in-Aid for Re Activity Start-u		Continued	PI											

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

<sup>▲</sup> The researcher cannot apply for a research project mentioned in section B (He or she only implements the research of a continued research project mentioned in section A).

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

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

This table shows the restrictions on duplication in case of "a person who tries to apply as Principal Investigator for a research project mentioned in section A (research categories for which MEXT organizes a call for proposals), or a person who has already become Principal Investigator of a research project that is scheduled to be continued in FY2011 (continued research project) mentioned in section A" participates in a research project mentioned in section B as Co-Investigator (kenkyū-buntansha).

		S	ection B	Specially Promoted Research	Scientific Research (S)	Scientific Research	(A)	Scientific Research	(B)	Scientific Research (C)	Challenging Exploratory Research
				S	Sci	General	General Overseas Academic Research	General	General Overseas Academic Research	General	Ex
				New	New	New	New	New	New	New	New
Secti	on A			Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)	Co-I (kenkyu- buntansha)
	Summarizing group	New	PI	×							
on sed	Summ	Continued	PI	•							
Scientific Research on Innovative Areas (Research in a proposed research area)	Planned research	New	PI								
cientific F Innovati esearch ir	Plaı	Continued	PI								
S (R	Publicly invited research	New	PI								
	Pub inv rese	Continued	PI								
no	Planned	New	PI								
entific Research Priority Areas	Plaı	Continued	PI								
Scientific Research on Priority Areas	Publicly invited research	New	PI								
S	Pub inv rese	Continued	PI								
Scientific on Priori (Research research	ity Areas a proposed	Continued	PI	•							

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

×: The researcher can only apply for one research project (in case he or she applied for a research project mentioned in section A, he or she cannot apply for a research project

<sup>▲:</sup>The researcher cannot apply for a research project mentioned in section B (He or she only implements the research of a continued research project mentioned in section A). □:The researcher can apply for both research projects. However, in case both are adopted, he or she only implements the research of the research project in B.

#### 3−1) Type "Co-Investigator (kenkyū-buntansha) (New/Continued) (Section A) → Principal Investigator (Section B)

This table shows the restrictions on duplication in case of "a person who tries to participate as Co-Investigator (kenkyū-buntansha) in a research project mentioned in section A (research categories for which JSPS organizes a call for proposals), or a person who has already become Co-Investigator (kenkyū-buntansha) of a research project that is scheduled to be continued in FY2011 (continued research project) mentioned in section A" applies as Principal Investigator for mentioned in section B.

	Se	ectio	n B	noted	rch (S)	ntific	Research (A)	Scientific Research (B)		Scientific Research (C)	Young (A)	· Young B)		Research ity Areas		fic Rese ority Ar		ng search
				Specially Promoted Research	Scientific Research (S)	Scie	Resear	Scie	Resea		Grant-in-Aid for Young Scientists(A)	Grant-in-Aid for Young Scientists(B)	Planned research	Publicly invited research		ch in a pr search ar	hallenging ratory Researc	
				Spec	Scienti	General	General Overseas Academic Research	General	General Overseas Academic Research	General	Grant-i S	Grant-i S	Planned	Publicly rese	総括 班	Planned research	Publicly invited research	Explo
				New	New	New	New	New	New	New	New	New	New	New	New	New	New	New
Section A				PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PI	PI
Specially Promo	ted	New	Co-I (kenkyu- buntansha)	×											×			
Research		Continued	Co-I (kenkyu- buntansha)	•									•	•	•	•	•	
Saiontifia Dagaana	h (C)	New	Co-I (kenkyu- buntansha)															
Scientific Researc	Scientific Research (S)		Co-I (kenkyu- buntansha)															
	Comonal	New	Co-I (kenkyu- buntansha)															
General Scientific Research		Continued	Co-I (kenkyu- buntansha)															
(A) General Overseas	New	Co-I (kenkyu- buntansha)																
	Academic Research	Continued	Co-I (kenkyu- buntansha)															
	General	New	Co-I (kenkyu- buntansha)															
Scientific Research	General	Continued	Co-I (kenkyu- buntansha)															
( <b>B</b> )	General Overseas	New	Co-I (kenkyu- buntansha)															
	Academic Research	Continued	Co-I (kenkyu- buntansha)															
Scientific Research	cientific Research		Co-I (kenkyu- buntansha)															
(C) General Conti		Continued	Co-I (kenkyu- buntansha)															
Challenging		New	Co-I (kenkyu- buntansha)															
Exploratory Rese	arch	Continued	Co-I (kenkyu- buntansha)															
Grant-in-Aid fo Creative Scientific Re		Continued	Co-I (kenkyu- buntansha)															

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

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

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

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

This table shows the restrictions on duplication in case of "a person who tries to participate as Co-Investigator (kenkyū-buntansha) in a research project mentioned in section A (research categories for which MEXT organizes a call for proposals), or a person who has already become Co-Investigator (kenkyū-buntansha) of a research project that is scheduled to be continued in FY2011 (continued research project) mentioned in section A" applies as Principal Investigator for mentioned in section B.

			11 1		-								
		Se	ection B	Specially Promoted Research	Scientific Research (S)	Scientific Research	(A)	Scientific Research	(B)	Scientific Research (C)	Grant-in-Aid for Young Scientists(A)	Grant-in-Aid for Young Scientists(B)	Challenging Exploratory Research
				Spec	Scient	General	General Overseas Academic Research	General	General Overseas Academic Research	General	Grant- S	Grant- S	Explc
				New	New	New	New	New	New	New	New	New	New
Sectio	on A			PI	PI	PI	PI	PI	PI	PI	PI	PI	PI
Scientific Research on Innovative Areas (Research in a proposed research area)	Planned	New	Co-I (kenkyu-buntansha)										
Scientific F Innovati (Research in research	Plan	Continued	Co-I (kenkyu-buntansha)										
	Planned research	New	Co-I (kenkyu-buntansha)										
Scientific Research on Priority Areas	Plar rese	Continued	Co-I (kenkyu-buntansha)										
Scientific R Priorit	Publicly invited research	New	Co-I (kenkyu-buntansha)										
	Pub invi resea	Continued	Co-I (kenkyu-buntansha)										
Scientific R on Priority (Research a research pr	Areas a proposed	Continued	Co-I (kenkyu-buntansha)	•	<b>A</b>	<b>A</b>	•	<b>A</b>	•		<b>A</b>		•

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

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

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

## 3. Preparing the Application (Proposal for Grant-in-Aid) and Submitting the Application (Proposal for Grant-in-Aid)

The document necessary for the application is the Proposal for Grant-in-Aid.

The Principal Investigator should prepare the Proposal for Grant-in-Aid (PDF file) by entering the application information (Items to be filled in on the form on the website), and by attaching the separately prepared Files with Project Description (Items to be entered in the attached file) to the Electronic Application System. Then he or she should submit (send) the Proposal for Grant-in-Aid to the research institution he or she belongs to, by the deadline set by the research institution.

Details on the preparation of the Proposal for Grant-in-Aid and the way how to apply are as follows. The applicant should verify this information.

#### (1) Application via the Electronic Application System

When applying, the applicant should login into the "e-Rad" using the e-Rad ID and Password that is provided by the research institution to which he or she belongs. Then he or she should access the "Electronic Application System" and prepare the application documents.

① Researchers who apply as Principal Investigators, based on the "FY2011 Grants-in-Aid for Scientific Research, Procedures for Preparing and Entering a Proposal for Grant-in-Aid for Specially Promoted Research (New/Continued)", in the case of "Specially Promoted Research", and based on the "Procedures for Preparing and Entering Application Information (Items to be filled in on the form on the website) (Scientific Research, Challenging Exploratory Research, Grant-in-Aid for Young Scientists (A/B))", in the case of the other research categories. Finally they should attach the project description file (Items to be entered in the attached file), that has been separately

**Note** The project description file (items to be entered in the attached file) can also be downloaded from the JSPS website on grants-in-aid for scientific research (http://www.jsps.go.jp/j-grantsinaid/index.html) before obtaining an ID and a password.

② The research institution to which the Principal Investigator belongs should compile and submit the necessary proposal for grant-in-aid.

Therefore, the Principal Investigator should <u>submit</u> (<u>send</u>) the <u>application documents to the</u> <u>research institution he/she belongs to, by the deadline decided the research institution.</u>
(He or she cannot submit (<u>send</u>) them directly to JSPS.)

Moreover, when submitting (sending) it, he or she should sufficiently check the details of the Proposal for Grant-in-Aid (PDF file) he or she prepared, and perform the "check completed

and submission" process.

(He or she should submit the proposal for grant-in-aid (PDF file) to the research institution to which he or she belongs.)

#### (2) Preparing the proposal for grant-in-aid

The Principal Investigator should prepare a proposal for grant-in-aid, for "Specially Promoted Research", in accordance with the "FY2011 Grants-in-Aid for Scientific Research, Procedures for Preparing and Entering a Proposal for Grants-in-Aid for Specially Promoted Research (New and Continued)" and, for the research categories other than "Specially Promoted Research", in accordance with the "Procedures for Preparing and Entering Application Information (to be entered in the website) (Scientific Research, Challenging Exploratory Research, Grant-in-Aid for Young Scientists (A/B))" and "FY2011 Grants-in-Aid for Scientific Research, Procedures for Preparing and Entering a Proposal for Grant-in-Aid" for each research category (screening panel).

#### On the Proposal for grant-in-aid

①A proposal for grant-in-aid consists of the following two parts:

First part: Enter the application information (to be entered in the website) (\*1) in the electronic application system.

- (\*1) Information to be entered by the Principal Investigator in the website via the electronic application system includes the title of proposed project, basic data on the proposed project, like the budget for which the application is made, basic data on the project members, etc.
- Second part: Download the project description file (\*2) from the section "Grants-in-Aid for Scientific Research" of the JSPS website (http://www.jsps.go.jp/j-grantsinaid/index.html), and prepare the proposal for grant-in-aid (PDF file) by attaching it to the "electronic application system". (Paper-based applications will not be accepted.)
- (\*2) Details on the research project including the purpose of the research, the research plan and research methods should be entered.

	Proposal for g	rant-in-aid
Research category	First part	Second part
Research Category	Application information (to be entered in the website)	Project description file
Specially Promoted Research (New) (English Version)		S-1-1 (1)
Specially Promoted Research (New) (Japanese Version)		S-1-1 (2)
Specially Promoted Research (Continued)		S-1-2
Scientific Research (S)		S-1-6
Scientific Research (A)		S-1-7
Research related to the screening panel for Overseas Academic Research		S-1-9
Scientific Research (B)	To be entered in the	S-1-7
Research related to the screening panel for Overseas Academic Research	To be entered in the electronic application system	S-1-9
Scientific Research (C)		S-1-8
Challenging Exploratory Research		S-1-10
Grant-in-Aid for Young Scientists (A)		S-1-12
Grant-in-Aid for Young Scientists (B)		S-1-12
Continued Research Project (in the case of a major change in the research project)		S-1-13

- ② A copy of the proposal for grant-in-aid in black-and-white print is sent to the screening committee. Therefore, when preparing the proposal for grant-in-aid, the applicant should pay attention not to make a version of which the content becomes unclear when copied.
- (3) The personal information included in the proposal for grant-in-aid will be used to eliminate unreasonable reduplication and excessive concentration of competitive funds and to carry out

service on Grants-in-Aid for Scientific Research. (This also includes offering personal information to external private enterprises in charge of electronic processing and management of the data.) The personal information included in the application forms will also be provided to the e-Rad. (It may happen that information will be supplied to the Government Research and Development Database of the Cabinet Office through e-Rad.)

Moreover, in the case of selected research projects, the title of the proposed project, the name of the Principal Investigator, the amount of the budget to be granted, etc. will be disclosed through press release materials, the database of the National Institute of Informatics, etc.

Information like professional affiliation, name, etc. of the Principal Investigator of the selected research project will be entered in the database of JSPS screening committee candidates, as the need arises. A request for updating the database will be made annually through the research institution to which the Principal Investigators belong (planned for April).

#### Issues that Need to Be Considered When Preparing the Proposal for Grant-in-Aid

When preparing the Proposal for Grant-in-Aid, the applicant should check the following points and verify whether there no flaws in the content.

#### Whether or not it is an Ineligible Research Project

The following research projects are not eligible:

- A) Research projects which merely aim at purchasing ready-made research equipment.
- B) Research projects which aim at producing large-size research equipment and similar things which should be funded by other budgets.
- C) Research projects which directly aim at developing and selling goods and services (including market trend surveys on the development and sale of goods and services).
- D) Funded research which is carried out as commercial business.
- E) Research projects with a budget of <u>less than 100,000 yen</u> in any of the fiscal years of the research period.

#### 2 Whether the following requirements are met for the Project Members

When necessary, the Principal Investigator (See page 44 1)) can set up a team of project members together with a Co-Investigator (*kenkyū-buntansha*) (See page 45 2)), a Co-Investigator (*renkei-kenkyūsha*) (See page 45 3)), and/or a Research Collaborator (See 4) below), according to the nature of the research project.

Moreover, <u>regarding the Co-Investigator</u> ( $kenky\bar{u}$ -buntansha) and the Co-Investigator (renkei- $kenky\bar{u}$ sha), like in the case of the Principal Investigator, the research institution (renkei- $kenky\bar{u}$ sha), like in the case of the Principal Investigator, the research institution (renkei- $kenky\bar{u}$ sha), like in the case of the Principal Investigator, the research institution (renkei- $kenky\bar{u}$ sha) needs to verify whether, at the time of the application, the following requirements

#### are met.

However, Research Collaborators do not necessarily need to be registered in e-Rad.

Moreover, JSPS Fellows, Foreign JSPS Fellows and students, such as, for example, graduate students cannot become Principal Investigators. They can neither become Co-Investigators (*kenkyū-buntansha*) and Co-Investigators (*renkei-kenkyūsha*).

#### Requirements

- 1) The researcher should belong to the research institution as a person who has inter alia the duty to perform research activities within the research institution in question (irrespective of whether the work is paid or unpaid, full-time of part-time. Moreover, it is not necessary for the researcher to perform these research activities as such as his or her main duty.)
- 2) The researcher should actually be engaged in research activities at the research institution in question (This does not apply to cases where he or she is only engaged as a research assistant.)
- 3) The researcher is not a graduate student or any other category of student. (However, this does not apply to persons who have a position consisting of conducting research activities in the research institution to which they belong, as their main work (e.g., university teaching staff, researchers from companies, etc.), and who also have a student status.)

Note:Research institutions as prescribed in Article 2 of the Rules for the Handling of Grants-in-Aid for Scientific Research (announced by the Ministry of Education)

## (References) Requirements that need to be met by the research institution(see page 90) Requirements

- If a grant-in-aid is given, the research activity should be conducted as an activity of the research institution in question.
- If a grant-in-aid is given, the research institution should carry out the management of the grant-in-aid.

Research grant employees, as a rule, need to concentrate on their employment related work according to their employment contracts. Therefore, considering the working hours they need to allot to the employment related work, they cannot apply for Grants-in-Aid for Scientific Research themselves.

However, if they provide a clear explanation on the time they can spend besides their employment related work, and if during this time they themselves attempt to conduct research using a Grant-in-Aid for Scientific Research, on their own initiative, it is possible for them to apply for Grants-in-Aid for Scientific Research, on condition that the following points have been verified in the research institution. In this case, they can apply as Principal Investigator,

and they can also become Co-Investigator (*kenkyū-buntansha*), Co-Investigator (*renkei-kenkyūsha*), or other project members.

- It has been determined in the employment contract that research grant employees themselves can conduct research on their own initiative, besides the employment related work.
- The employment related work and work devoted to research that they conduct themselves
  on their own initiative has clearly been divided in the working hours and the effort.
- Time that can be allotted to research which they attempt to conduct themselves on their own initiative has sufficiently been secured, besides the time spent for employment related work.

(Note) As a rule, research grant employees are in a position where they receive instructions from the Principal Investigator or other researchers and where they are engaged solely in work funded with a Grant-in-Aid for Scientific Research at their place of employment. Therefore, from FY2010 on, it is clearly written in the subsidiary conditions that "When employing a Research Collaborator, it is not the Principal Investigator but the research institution who, as a party, has to conclude an employment contract in which the work content, the working hours and other matters are clearly mentioned."

Principal Investigators and Co-Investigators (*kenkyū-buntansha*) are members of funded projects, as stipulated in the Law on the Improvement of the Administration of the Budget for Grants-in-Aid (1955, Law no. 179), and it has been decided that, in case they commit inappropriate use of the grants-in-aid or the like, no grant-in-aid will be offered, for a fixed period of time.

In addition, it may happen that researchers are treated as indicated below, even if their researcher information has been registered in e-Rad as "Eligible to Apply for Grants-in-Aid for Research".

- No Grants-in-Aid for Scientific Research will be funded, if there is a new application for Grants-in-Aid for Scientific Research from researchers who do not submit the report on the research achievements at the end of the research, without any reason, even if their research has been adopted after screening. Moreover, if researchers have failed, without good reason, to submit the scheduled report on the research achievements, then implementation of other Grants-in-Aid for Scientific Research due to be implemented in the same fiscal year will be suspended.
- If it is judged in the research institution to which researchers belong that it is not
  appropriate to let them conduct their research activities as activities of the research
  institution in question, it may happen that the research institution does not recognize the
  application, and it may happen that the application for funding by these researchers in

question is not recognized and that the application for funding of the Grant-in-Aid for Scientific Research is rejected.

#### 1) Principal Investigator (The applicant)

- (A) The Principal Investigator is a member of a funded project and is the researcher who assumes full responsibility for the implementation of the research project (including the summarizing of the research achievements).
  - Moreover, persons who are expected to become unable to carry out their responsibility as a Principal Investigator, for example due to the loss of their applicant eligibility during the period of research, should avoid becoming a Principal Investigator. (See note.)
- (B) When setting up a team of project members, the Principal Investigator should without fail collect a "Written Consent of the Co-Investigator (kenkyū-buntansha) (for other institution)", in case the Co-Investigator (kenkyū-buntansha) in question belongs to a different research institution, or a "Written Consent of the Co-Investigator (kenkyū-buntansha) (for same institution)", in case the Co-Investigator (kenkyū-buntansha) belongs to the same institution, and retain it.

(Note) The Principal Investigator is the researcher who assumes full responsibility for the implementation of the research plan, and thus plays a central role. Persons who, at the time they apply, are expected to lose their eligibility to apply during the research period, due to retirement or other reasons, and thus become unable to carry out their responsibility, are requested to avoid becoming a Principal Investigator.

For this reason, from FY2011 on, replacements of Principal Investigators will not be accepted anymore. However, for "Summarizing Group Research Projects" of "Scientific Research on Innovative Areas (Research in a proposed research area)", it may happen that, after completion of the necessary procedures, replacements of Principal Investigators (or Principal Investigator of Innovative Areas) are accepted.

(For the handling of continued research projects, applicants should verify "IV. Instructions & Procedures for those Who Have Already Been Accepted" (p.85).)

(C) It is essential that Principal Investigators are not designated as ineligible for receipt of funding in FY2011, because they committed fraudulent use, fraudulent receipt of grants or fraudulent acts using Grants-in-Aid for Scientific Research or other competitive funding.

### 2) Co-Investigator (kenkyū-buntansha)

(A) The Co-Investigator (*kenkyū-buntansha*) is a member of the funded project, and engages in research activity, collaborating with the Principal Investigator in the implementation of the research project and sharing the responsibility for the implementation of the research as a funded project. He or she has to receive a share of the grant-in-aid. (Even when the Co-Investigator (*kenkyū-buntansha*) belongs to the same research institution as the Principal Investigator, he or she should be allotted a share of the expenses.)

Moreover, a person who is expected to become unable to carry out one's responsibility as a Co-Investigator (*kenkyū-buntansha*), for example due to the loss of one's applicant eligibility during the period of research, should avoid becoming a Co-Investigator (*kenkyū-buntansha*).

(**B**)For the Co-Investigator (*kenkyū-buntansha*) it is necessary to establish, like in the case of the Principal Investigator, that he or she is not ineligible for FY2010, because he or she committed fraudulent use, fraudulent receiving of grants or fraudulent acts using Grants-in-Aid for Scientific Research or other competitive funding.

#### 3) Co-Investigator (renkei-kenkyūsha)

The Co-Investigator (*renkei-kenkyūsha*) is a researcher who participates in the research project as a project member, under the responsibility of the Principal Investigator and the Co-Investigator(s) (*kenkyū-buntansha*).

Since the Co-Investigator (*renkei-kenkyūsha*) is not a member of the funded project, he or she cannot receive a share of the funding, and cannot use subsidies on his/her own initiative.

#### 4) Research Collaborator

A Research Collaborator is somebody who cooperates in the implementation of a research project other than the Principal Investigator, the Co-Investigator (*kenkyū-buntansha*) and the Co-Investigator (*renkei-kenkyūsha*). He/she does not necessarily have to be eligible for application.

(For example, a Fellow of the Japan Society for the Promotion of Science (JSPS Fellow), a researcher who belongs to an overseas research institution, a researcher who works for a corporation that is not recognized according to Article 2 of the Rules for the Handling of Grants-in-Aid for Scientific Research, etc.)

#### 3 Whether the following requirements are met for the Budget

#### 1) Eligible costs (direct costs)

The eligible costs are the costs necessary for the implementation of the research project and the costs necessary for the summarizing of the research achievements.

\* In case of research projects where in any of the fiscal years any of the costs like "equipment", "travel expenses" or "personnel (technical assistant, labor cost, etc.)" exceeds 90%, the applicant should write down in the proposal for grant-in-aid the reasons why these costs in question are necessary for the implantation of the research.

#### 2) Ineligible costs

#### The following costs are not included in the funding:

- ①Costs for buildings and other facilities (excluding the costs for minor installations which became necessary because of the introduction of goods that have been purchased by means of direct costs)
- ②Costs for handling accidents or disasters that occurred during the implementation of funded project
- 30ther costs which fall under indirect costs\*
  - \* Indirect costs are costs necessary for the management of the research institution and other things that arise during the implementation of the research project (corresponding with 30% of the amount of the direct costs). The costs are used by the research institution.

This time, among the research categories for which a call for proposals is organized, indirect costs are paid for "Specially Promoted Research", "Scientific Research" and "Grant-in-Aid for Young Scientists (A/B)". However, the Principal Investigator does not need to state those indirect costs in the application documents.

#### When applying, the applicant should select a desired area for screening as follows.

#### 1) In the case of an application for "Specially Promoted Research"

When applying, please make sure to select, according to the content of the research project, one desired area for screening from "Humanities and Social Sciences", "Science and Engineering" or "Biological Sciences". Moreover, if you select "Science and Engineering", please select one screening division from the subcategories "Mathematics/Physics", "Chemistry", or "Engineering", which you think is the most closely related to your research project.

2) In case of an application for "Scientific Research" (screening division "General"), "Challenging Exploratory Research" and "Grant-in-Aid for Young Scientists (A/B)" When applying, please make sure to select, according to the content of the research project, one appropriate research field from Attached Table 2 "List of Categories, Areas,

Disciplines and Research Fields for FY2011 Grants-in-Aid for Scientific Research" (hereinafter called "List of Research Fields"; see pages 49-55), which is a classification table showing the desired areas for screening. In addition, please make sure to select one keyword which the applicant thinks is the most closely related to the content of his/her research project within the selected research field from Attached Table 3 "Appendix Table of Keywords" (see pages 56-84).

## About the "List of Disciplines and Research Fields with a Time Limit" (special cases in "Scientific Research (C)")

In order to be able to react flexibly to trends in scientific research, a "List of Disciplines and Research Fields with a Time Limit" (see pages 52-55), has been set up, as a table separate from the "List of Research Fields". This list is operated in a flexible way, within the limits of a set period. Only for research projects that fall into the category of "Scientific Research (C)", one area can be selected as a desired area for screening from this "List of Disciplines and Research Fields with a Time Limit". Moreover, the research period is 3 to 5 years, regardless of the set period of the research area.

## 3) In case of an application for "Scientific Research" (screening division "Overseas Academic Research")

When applying, please <u>make sure to select one area</u> you wish to have screened from the following 17 areas, and <u>one research field</u> which you think is the most closely related to your research project.

	Desired area for screening
Humanities and Social Sciences	1) Humanities A (philosophy, literature, linguistics, the arts) 2) Humanities B (history, archaeology) 3) Humanities C (human geography, cultural anthropology) 4) Humanities D (Geography, Area studies, and others which do not fall under Humanities A, B, or C)
	5) Social Sciences A (law, Politics) 6) Social Sciences B (economics, business administration) 7) Social Sciences C (sociology) 8) Social Sciences D (psychology, education)
Science and Engineering	9) Mathematical and physical sciences A (earth and planetary science) 10) Mathematical and physical sciences B (mathematics, physics, and others which do not fall under Mathematical and physical sciences A)
	11) Chemistry
	12) Engineering
	13) Biology

## Biological Sciences

- 14) Agricultural sciences A (agriculture, agricultural chemistry, forestry, boundary agriculture)
- 15) Agricultural sciences B (agro-economics, agro-engineering, zootechnical science/veterinary medical science, fisheries science)
- 16) Medicine, dentistry, and pharmacy A (pharmacy, basic medicine, boundary medicine, and society medicine)
- 17) Medicine, dentistry, and pharmacy B (clinical medicine, dentistry, nursing, and others which do not fall under Medicine, dentistry, and pharmacy A)

### Attached Table 2 List of Categories, Areas, Disciplines and Research Fields

(1) List of Categories, Areas, Disciplines and Research Fields for FY2011 Grants-in-Aid for Scientific Research

Category: Integrated Science and Innovative Science

Area	Discipline	Research Field	Item Number	Remark	Area
·	<u> </u>	Fundamental theory of	1001		
		informatics			
		Software	1002		
		Computer system/Network	1003	A B	
		Media informatics/Database	1004	A B	
		Intelligent informatics	1005	ь	
		Perception information		A	
		processing/Intelligent robotics	1006	В	
	Informatics	Sensitivity informatics/	1007	A	
		Soft computing	1007	В	
		Library and information		Α	
		science/Humanistic social	1008		
		informatics		В	
		Cognitive science	1009		New multidisciplin
		Statistical science	1010		fields
		Bioinformatics/		A	
		Life informatics	1011	В	
		Neuroscience in general	1101		
		Nerve anatomy/	1102	Α	
		Neuropathology	1102	В	
		Neurochemistry/	1103		
	Cerebral	Neuropharmacology			
	Neuroscience	Neurophysiology and muscle	1104	A	
		physiology Fusional basic brain science	1105	В	
		Fusional brain recording science	1105		
		Fusional social brain science	1107		
	Laboratory				
	animal science	Laboratory animal science	1201		
Comprehensive		Biomedical engineering/	1301	Α	
fields	Biomedical	Biological material science		В	
	engineering	Medical systems	1302		Category
		Rehabilitation science/ Welfare engineering	1303	A B	
		wenare engineering		А	
		Physical education	1401	В	
	Health/Sports	- ·		Α	
	science	Sports science	1402	В	
		Applied health science	1403	Α	
		Applied licatur science	1403	В	
		General human life sciences	1501	Α	
	Human life science			В	
	science	Eating habits, studies on eating habits	1502	A B	
	Science				
	education/	Science education	1601	*	
	Educational	Educational tachnalass	1602		Humanities
	technology	Educational technology	1602	**	Humanities
	Sociology/				
	History of science	Sociology/History of science and	1701		
	and technology	technology			
	Cultural property	Cultural property science	1801		
	science	Cultural property science	1001		
	Museology	Museology	1851		
	Geography	Geography	1901		
		Carcinogenesis	1951		
		Tumor biology	1952		
	Oncology	Tumor immunology	1953		
	2	Tumor diagnosis	1954		1
			1055		
		Clinical oncology Cancer epidemiology and prevention	1955		

Area	Discipline	Research Field	Item Number	Remark			
		Environmental dynamic analysis	2001				
		Environmental impact assessment/	2002	A			
	Environmental science	Environmental policy		В			
		Risk sciences of radiation/ Chemicals	2003	A B			
		Environmental technology/ Environmental materials	2004	A B			
		Nanostructural science	2101	A B			
	Nano/Micro science	Nanomaterials/ Nanobioscience	2102	A B			
New		Microdevices/Nanodevices	2103	A B			
multidisciplinary fields	Social/Safety	Social systems engineering/ Safety system	2201	A B			
	system science	Natural disaster science					
		Genome biology	2301				
		Medical genome science	2302				
	Genome science	System Genome Science	2303				
		Applied Genomics	2304	A B			
	Biomolecular science	Biomolecular science	2401				
	Science	Chemical biology	2402				
	Resource conservation science	Resource conservation science	2501				
	Area studies	Area studies	2601				
	Gender	Gender	2701				

### Category: Humanities and Social Sciences

			_	_
		Philosophy/Ethics	2801	
		Chinese philosophy	2802	
		Indian philosophy/	2803	
	Philosophy	Buddhist studies	2003	
		Religious studies	2804	
		History of thought	2805	
		Aesthetics/Art history	2806	
	The arts	Study of the arts/History of the	2851	
	THE arts	arts/Arts in general	2031	
		Japanese literature	2901	
		Literature in English	2902	
	Literature	European literature	2903	
	Literature	(English literature excluded)	2903	
Humanities		Literatures/Literary theories in	2904	
Tumamues		other countries and areas	2904	
		Linguistics	3001	Ж
		Japanese linguistics	3002	
	Linguistics	English linguistics	3003	
		Japanese language education	3004	
		Foreign language education	3005	*
		Historical studies in general	3101	
		Japanese history	3102	
	History	Asian history	3103	
		History of Europe and America	3104	
		Archaeology	3105	
	Human geography	Human geography	3201	
	Cultural anthropology	Cultural anthropology/Folklore	3301	

The first stage of the screening of the research fields that have the indication "A" or "B" in the remarks column is carried out in separate groups. The basis for this division in separate groups is the keywords that need to be selected within each research category. Make sure to select A or B based on the Attached Table "List of Categories, Areas, Disciplines and Research Fields", when applying for these research fields

In the case of "Scientific Research (C)", 13 research fields carried in the "List of Disciplines and Research Fields with a Time Limit" have been set up as areas for screening, besides the main table.

Table "List of Categories, Areas, Disciplines and Research Fields", when applying for these research fields
The first stage of the screening of the research fields that have the symbol "%" is carried out in separate groups. The basis for this division in separate
groups is the keywords that need to be selected within "Scientific Research (C)". Make sure to select a division number from 1 to 5 based on the Attached
Table "List of Categories, Areas, Disciplines and Research Fields", when applying for these research fields

(Category: Humanities and Social Sciences)

Area	Discipline	Research Field	Item Number	Remark
		Fundamental law	3401	
		Public law	3402	
		International law	3403	
	Law	Social law	3404	
		Criminal law	3405	
		Civil law	3406	
		New fields of law	3407	
	Politics	Politics	3501	
	Politics	International relations	3502	
		Economic theory	3601	
		Economic doctrine/	3602	
		Economic thought	3002	
		Economic statistics	3603	
	Economics	Applied economics	3604	
		Economic policy	3605	
0 1		Public finance/	2606	
Social sciences		Monetary economics	3606	
sciences		Economic history	3607	
		Business administration	3701	*
	Business administration	Commerce	3702	
	adillillistration	Accounting	3703	
		Sociology	3801	*
	Sociology	Social welfare and social work studies	3802	
		Social psychology	3901	
	Davahalaav	Educational psychology	3902	
	Psychology	Clinical psychology	3903	
		Experimental psychology	3904	
		Education	4001	*
		Sociology of education	4002	
	Education	Education on school subjects and activities	4003	*
		Special needs education	4004	<del>                                     </del>

### Category: Science and Engineering

		Algebra	4101	*
		Geometry	4102	
		General mathematics		
	Mathematics	(including Probability theory/	4103	
		Statistical mathematics)		
		Basic analysis	4104	
		Global analysis	4105	
	Astronomy	Astronomy	4201	
		Particle/Nuclear/Cosmic ray/	4301	*
		Astro physics	4301	**
		Condensed matter physics I	4302	
		Condensed matter physics II	4303	*
	Di .	Mathematical physics/		
Mathematical	Physics	Fundamental condensed matter	4304	
and		physics		
physical		Atomic/Molecular/	T	
sciences		Quantum electronics	4305	
		Biophysics/Chemical physics	4306	
		Solid earth and planetary	İ	
		physics	4401	
		Meteorology/Physical	1	
		oceanography/Hydrology	4402	
	Earth and	Space and upper atmospheric	_	
	planetary	physics	4403	
	science	Geology	4404	
		Stratigraphy/Paleontology	4405	
		Petrology/Mineralogy/	_	
		Science of ore deposit	4406	
		Geochemistry/Astrochemistry	4407	
	Plasma science	Plasma science	4501	
		Physical chemistry	4601	
	Basic chemistry	Organic chemistry	4602	
		Inorganic chemistry	4603	
		Analytical chemistry	4701	
		Synthetic chemistry	4702	
	Applied	Polymer chemistry	4703	
Chemistry	Chemistry	Functional materials chemistry	4704	
		Environmental chemistry	4705	
		Bio-related chemistry	4706	
		Functional materials/Devices	4801	
	Materials	Organic industrial materials	4802	
	chemistry	Inorganic industrial materials	4803	-
1				<u> </u>

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Area	Discipline	Research Field	Item Number	Remark			
		Applied materials science/ Crystal engineering	4901				
		Thin film/Surface and interfacial physical properties	4902				
	Applied physics	Applied optics/Quantum optical					
		engineering	4903				
		Applied physics, general	4904				
		Engineering fundamentals  Materials/Mechanics of	4905				
		materials	5001				
		Production engineering/ Processing studies	5002				
		Design engineering/					
	Mechanical engineering	Machine functional elements/ Tribology	5003				
	clighteering	Fluid engineering	5004				
		Thermal engineering	5005				
		Dynamics/Control	5006	-			
		Intelligent mechanics/	5007				
		Mechanical systems					
		Power engineering/	5101				
		Power conversion/ Electric machinery	5101				
		Electronic materials/					
		Electric materials	5102				
	Electrical and	Electron device/					
	electronic	Electronic equipment	5103				
	engineering	Communication/Network	5104				
		engineering	3104				
		System engineering	5105				
		Measurement engineering	5106				
		Control engineering	5107				
		Civil engineering materials/ Construction/	5201				
	Civil	Construction management	3201				
		5202					
Engineering		Maintenance management					
	engineering	engineering					
	engmeering	Geotechnical engineering	5203				
		Hydraulic engineering	5204				
		Civil engineering project/ Traffic engineering	5205				
		Civil and environmental		_			
		engineering	5206				
	Architecture and	Building structures/materials	5301				
		Architectural	5302				
	building	environment/equipment					
	engineering	Town planning/Architectural	5303				
		planning Architectural history/design	5304				
		Physical properties of metals	5401				
		Inorganic materials/					
		Physical properties	5402				
	Material	Composite materials/	5403				
	engineering	Physical properties					
		Structural/Functional materials	5404				
		Material processing/treatments	5405				
		Metal making engineering	5406				
		Properties in chemical engineering process/Transfer	5501				
		operation/Unit operation	5501				
	Process	Reaction engineering/					
	engineering	Process system	5502				
		Catalyst/Resource chemical	5503				
		process	3303				
		Biofunction/Bioprocess	5504				
		Aerospace engineering	5601				
		Naval and maritime engineering Earth system and resources	5602				
	Integrated	enginnering	5603				
	engineering	Recycling engineering	5604				
	5 6	Nuclear fusion studies	5605				
		Nuclear engineering	5606				
		Energy engineering	5607				
		-	-				

### Category: Biological Sciences

	Biological Scie		]	
Area	Discipline	Research Field	Number	Remark
		Genetics/Genome dynamics Ecology/Environment	5701 5702	-
		Plant molecular biology/		
	D 1 1	Plant physiology	5703	
	Basic biology	Morphology/Structure	5704	
		Animal physiology/	5705	
		Animal behavior		
Dielogy		Biodiversity/Systematics	5706 5801	
Biology		Structural biochemistry Functional biochemistry	5802	
		Biophysics	5803	
	Biological science	Molecular biology	5804	
	science	Cell biology	5805	
		Developmental biology	5806	
		Evolutionary biology	5807	
	Anthropology	Physical anthropology	5901 5902	
		Applied anthropology Breeding science	6001	
		Crop science/Weed science	6002	_
		Horticulture/Landscape	6002	
	Agriculture	architecture	6003	
		Plant pathology	6004	
		Applied entomology	6005	
		Plant nutrition/Soil science	6101	-
	Agricultural	Applied microbiology  Applied biochemistry	6102	
	chemistry	Bioproduction chemistry/		
	, , , , , , , , , , , , , , , , , , , ,	Bioorganic chemistry	6104	
		Food science	6105	
	Forestry	Forest science	6201	
	Torestry	Wood science	6202	
	Fisheries science	General fisheries	6301	
Agricultural	A ana acamamica	Fisheries chemistry	6302 6401	
sciences	Agro-economics	Agronomy Irrigation, drainage and rural	0401	
		engineering/Rural planning	6501	
	Agro-	Agricultural environmental		
	engineering	engineering	6502	
		Agricultural information	6503	
		engineering	0505	
		Zootechnical science/ Grassland science	6601	
	Zootechnical	Applied animal science	6602	
	science/ Veterinary medical science	Basic veterinary science/		
		Basic zootechnical science	6603	
		Applied veterinary science	6604	
		Clinical veterinary science	6605	
	Boundary	Boundary agriculture	6701	
	agriculture	Applied molecular and	6702	
	-	Chamical pharmacy	6001	
		Chemical pharmacy Physical pharmacy	6801 6802	-
		Biological pharmacy	6803	*
	Pharmacy	Drug development chemistry	6804	
		Environmental pharmacy	6805	
		Medical pharmacy	6806	
		General anatomy (including	6901	*
		histology/embryology)		
		General physiology Environmental physiology	6902	-
		(including physical medicine	6903	
Medicine,		and nutritional physiology)		
dentistry, and pharmacy		General pharmacology	6904	
ана рнаннасу		General medical chemistry	6905	
	Basic medicine	Pathological medical chemistry	6906	
		Human genetics	6907	<u> </u>
		Human pathology	6908	-
		Experimental pathology	6909	*
		Parasitology (including sanitary zoology)	6910	
		Bacteriology	+	$\vdash$
l		0.5	6911	
		(including mycology)		
		Virology	6912	

Boundary medicine	Area	Discipline	Research Field	Item Number	Remark
Boundary medicine		•	Medical sociology		
Medicine		Boundary	C.	7002	
Pain science				7003	
Hygiene				7004	
Nursing   Public health/Health science   102				7101	
Legal medicine					
General internal medicine (including psychosomatic medicine)   Gastroenterology   7202   %   Circulatory organs internal medicine   Respiratory organ internal medicine   Ridney internal medicine   7204   %   Metabolomics   7207   %   Metabolomics   7207   %   Metabolomics   7207   %   Metabolomics   7209   %   Metabology   7208   Metabology   7209   %   Metabology   Met		medicine			
Clinical internal medicine				7103	
Clinical internal medicine				7201	
Clinical internal medicine				7201	
Clinical internal medicine			· · · · · · · · · · · · · · · · · · ·	7202	×.
Clinical internal medicine				1202	*
Clinical internal medicine				7203	*
Clinical internal medicine					
Clinical internal medicine			1 , 0	7204	*
Clinical internal medicine					
Clinical internal medicine					*
medicine   Metabolomics   7207   x		Clinical internal			
Hematology					*
Collagenous pathology/ Allergology					
Allergology  Infectious disease medicine Pediatrics Embryonic/Neonatal medicine Pediatrics Embryonic/Neonatal medicine Pediatric science Pediatric surgery P				7209	*
Allergology				7210	*
Pediatrics			Allergology	7210	^
Embryonic/Neonatal medicine   7213   7214   7214   7214   7215   7216			Infectious disease medicine	7211	
Dermatology			Pediatrics	7212	*
Medicine, dentistry, and pharmacy  Clinical surgery  Clinical surgery  Digestive surgery  Thoracic surgery  Orthopaedic surgery  Othopaedic surgery  Othopaedic surgery  Othopaedic surgery  Othopaedic surgery  Anesthesiology/Resuscitation studies  Urology  Obstetrics and gynecology  Ophthalmology  Pediatric surgery  Thoracic surgery  Anesthesiology/Resuscitation studies  Urology  Obstetrics and gynecology  Ophthalmology  Tail  Plastic surgery  Tail  Functional basic dentistry  Thoracic surgery  Tail  Plastic surgery  Tail  Plastic surgery  Tail  Functional basic dentistry  Thoracic surgery  Tail  Prosthetic dentistry  Thoracic surgery  Tail  Plastic surgery  Tail  Prosthological dentistry  Thoracic surgery  Tail  Plastic surgery  Tail  Prostrictional basic dentistry  Thoracic surgery  Tail  Thoracic surgery  Tail  Plastic surgery  Tail  Plastic surgery  Tail  Plastic surgery  Tail  Prostrictional basic dentistry  Tail  Functional basic dentistry  Tail  Functional basic dentistry  Thoracic surgery  Tail			Embryonic/Neonatal medicine	7213	
Medicine, dentistry, and pharmacy  Radiation science  General surgery  Digestive surgery  Thoracic surgery  Thoracic surgery  Thoracic surgery  Cerebral neurosurgery  7304 **  Orthopaedic surgery  Anesthesiology/Resuscitation studies  Urology  Obstetrics and gynecology  Ophthalmology  Tail  Plastic surgery  Toto surgery  Ophthalmology  Tail  Plastic surgery  Tail  Functional basic dentistry  Thoracic surgery  Tail  Plastic surgery  Tail  Plastic surgery  Tail  Proctional basic dentistry  Thoracic surgery  Tail  Plastic surgery  Tail  Proctional basic dentistry  Thoracic surgery  Tail  Plastic surgery  Total  Thoracic surgery  Total  To			Dermatology	7214	ж
Medicine, dentistry, and pharmacy			Psychiatric science	7215	*
Digestive surgery			Radiation science	7216	*
Thoracic surgery	Medicine,		General surgery	7301	*
Thoracic surgery	dentistry,		Digestive surgery	7302	*
Cerebral neurosurgery 7304 ** Orthopaedic surgery 7305 ** Anesthesiology/Resuscitation studies Urology 7307 ** Obstetrics and gynecology 7308 ** Otorhinolaryngology 7309 ** Ophthalmology 7310 ** Pediatric surgery 7311 Plastic surgery 7312 Emergency medicine 7313 Morphological basic dentistry 7401 Functional basic dentistry 7402 Pathobiological dentistry 7402 Pathobiological dentistry 7403 Dental radiology 7405 Dental engineering/ 7406 Regenerative dentistry 7406 Regenerative dentistry 7406 Regenerative dentistry 7407 Surgical dentistry 7408 Periodontal dentistry 7408 Periodontal dentistry 7409 Social dentistry 7409 Social dentistry 7409 Social dentistry 7501 Clinical nursing 7501 Clinical nursing 7503 Community health/ 7504 **	and pharmacy			7303	*
Orthopaedic surgery				7304	*
Anesthesiology/Resuscitation studies				7305	*
Studies					
Obstetrics and gynecology				7306	*
Obstetrics and gynecology		Clinical surgery	Urology	7307	*
Otorhinolaryngology					
Ophthalmology					
Pediatric surgery					_
Plastic surgery   7312			1		
Emergency medicine   7313     Morphological basic dentistry   7401     Functional basic dentistry   7402     Pathobiological dentistry   7403     Dental radiology   7403     Conservative dentistry   7404     Prosthetic dentistry   7405     Dental engineering   7406     Regenerative dentistry   7407   ×   Orthodontic/Pediatric dentistry   7408     Periodontal dentistry   7409     Social dentistry   7410     Fundamental nursing   7501     Clinical nursing   7502     Nursing   Lifelong developmental nursing   7503     Community health   7504   ×					
Morphological basic dentistry   7401					
Functional basic dentistry					
Pathobiological dentistry/   Dental radiology   T403					
Dental radiology					
Dentistry				7403	
Prosthetic dentistry				7404	
Dentistry					
Regenerative dentistry  Surgical dentistry  Orthodontic/Pediatric dentistry  Periodontal dentistry  Social dentistry  Fundamental nursing  Clinical nursing  Totol  Clinical nursing  Totol  Community health/  Totol		Dentistry		7403	
Surgical dentistry 7407 × 7408  Orthodontic/Pediatric dentistry 7408  Periodontal dentistry 7409  Social dentistry 7410  Fundamental nursing 7501  Clinical nursing 7502  Nursing Lifelong developmental nursing 7503  Community health/ 7504 × 7504				7406	
Orthodontic/Pediatric dentistry 7408 Periodontal dentistry 7409 Social dentistry 7410 Fundamental nursing 7501 Clinical nursing 7502 Nursing Lifelong developmental nursing 7503 Community health/ 7504				7407	Nº/
Periodontal dentistry					*
Social dentistry 7410 Fundamental nursing 7501 Clinical nursing 7502 Nursing Lifelong developmental nursing 7503 Community health/ 7504 **					
Fundamental nursing 7501 Clinical nursing 7502 Nursing Lifelong developmental nursing 7503 Community health/ 7504 **					
Nursing Clinical nursing 7502  Lifelong developmental nursing 7503  Community health/ 7504 **			ž		
Nursing Lifelong developmental nursing 7503 Community health/					
Community health/					
7504		Nursing		7503	<u> </u>
Gerontological nurisng			•	7504	*
			Gerontological nurisng		

# (2) Table separate from the "List of Categories, Areas, Disciplines and Research Fields for FY2011 Grants-in-Aid for Scientific Research"

## O List of Disciplines and Research Fields with a Time Limit

Area	Detail	Item Number	Set Period
Quantum beam science	Quantum beams are beams that show both wave-like and particle-like properties. They come in wide range of energies, wavelengths, and types, such as electromagnetic beams (laser beams, X-rays, gamma-rays), lepton beams (electrons, positrons, muons, neutrinos etc.), and hadron beams (protons, neutrons, mesons, ions). Recently the usage of these many different types of quantum beams is advancing rapidly, not just in basic science, but also in medical and industrial fields. The R&D of quantum beam sources and the application of these beams is important for the advancement of accelerator physics and surrounding fields. Such efforts will also lead to the realization of the technological foundation required in fields ranging from fundamental science to its applications. This grant aims to support research projects that will lead to developing the technological foundation, such as new technology to generate beams, new accelerating mechanisms for making accelerators smaller, and new analysis methods to diagnose the structure and properties of materials, which will be necessary to a wide range of fields.	9034	FY2008 — FY2011
Children studies (Studies of environment on children)	The quality of the physical, human, and socio-cultural environment surrounding children (from infancy through youth) has deteriorated as a result of urbanization, the impact of information technology, the declining birthrate, and changes in the local community, and it has various influences on the body and the psychology of children. The conservation and restoration of a good environment for young people from the viewpoint of nurturing them should be a socially, as well as academically, important task.  The environment surrounding children has been studied in wide-ranging research fields such as pedagogies, childcare studies, psychology, pediatrics, public health, child psychiatry, neurosciences, physical education, architecture, urban engineering, environmental science, robotics, and cognitive science. However, now the need for a fusion-type research incorporating divergent disciplines is apparent. This program promotes research on the environmental problems surround children which would, from an interdisciplinary perspective, study the influence of environment on young peoples bodies and psychology, by organizing various studies such as those of architecture and engineering on the physical environment (so-called hardware"), and those on education and human, and socio-cultural environments ("software").	9036	
Medical Physics/ Radiological Technology	"Medical Physics / Radiological Technology" is a research area in which physical and technological issues within radiology are explored. In recent years, various medical technologies based on radiation physics including radiation therapies using particle beams and a number of diagnostic technologies such as molecular imaging, are developed and have become widely used in a short period of time. Together with the rapidly growing needs for radiation therapies and diagnostic imaging, basic research which supports these fundamental technologies are very important in the expanding field of radiology. At the same time, such basic research supports development of technologies and human resources which will be necessary in a wide range of fields from basic to clinical application, including medical imaging engineering, radiation therapy, heavy particle therapy, nuclear medicine, and radiation protection. Although this field primarily aims clinical application toward radiology, the academic foundation and techniques are positioned to be in the fields of science and engineering. Therefore, researches where fundamental technologies which will cover a wide range of fields from science and engineering to medicine, and researches where new research area will be established will be expected.	9037	FY2009 — FY2011
Biomass energy	Due to environmental issues and a sudden rise in fossil fuels, research on biomass energy is now expected worldwide to be developed as one of the alternative energies. The major research in such fields involves biomass conversion to biofuels, technologies for thermal recycling, development of sustainable biomass production technologies, and establishment of cycling system of regional agriculture and biomass energy. In addition, fundamental research relevant to synthesis/structure/function of biomass resources is included. Furthermore, also included is research on life cycle impact assessment by increasing biomass energy production and socio-scientific research such as effects on dietary and poverty issues. Projects by young researchers on free and bottom-up thinking basis are also very much welcomed.	9038	

Area		Item Number	Set Period
Social symbiosis and exclusion	Since the 1980s, the spread of social exclusion, social inequality, etc. and social justice as a socio-political response to these problems have become a major challenge in developed countries. In Japan, since the mid-1990s, problems of income disparity and social inequality, and then in the 2000s, the poverty issue became major public concerns. Not only fatherless families, disabled persons and the aged, who have been the object of attention since long before, but also the spread of poverty and social exclusion across a broader spectrum of the population such as, for example, younger people and children, and, in addition to general socio-economic inequality, even the disparity in medical treatment and health have been increasingly highlighted. This area includes theoretical research on the social accumulation and spread of poverty and social exclusion, inequality and other matters, the grasping of the actual circumstances, and the measurement and the estimate of their influences. Moreover, concerning the question how society tackles these issues, this area also includes research on policies responding to actual social exclusions and to the mechanisms that generate social exclusion, and analysis of legal systems in relation to these issues. In addition, any synchronic and diachronic comparative research projects, such as empirical researches on the actual circumstances of social disparity, inquiries on the policy trends and on the revision of legal systems in developed countries, studies on the poverty issues in developing countries, and various historical studies are all important. JSPS is expecting researches that will contribute significantly to the development of this field.		
Design science	For the sake of the welfare of humanity and the enrichment of human life, the science of design opens an appropriate pathway for exciting and potentially transformational technology. The science of design has as its research object machines and tools, furniture, space, construction, cities, regions, culture, welfare and care, media, information-processing equipment, information content, drama, etc., in short, all the phenomena that support and enrich human living space. For the science of design, a fusion of knowledge that transcends a wide range of disciplines, starting from design research, which concerns design as such, to design engineering, modeling engineering, architecture, landscape engineering, sciences of living, anthropology, cognitive science and psychology, ergonomics, medical science and hygienics, sensory science, sensory engineering, information science, acoustics, computer science, social science, art science, etc., is necessary. Consequently, the science of design requires a broad based inter-disciplinary approach encompassing disciplines ranging from arts and social sciences to science and technology, as well as aethetics and ethics. This area has as its object the individual elements of the phenomena that make up our living spaces, the collectivity and organization of these elements, and the combination of these elements and societies that consist of various cultures. For this area, JSPS is expecting ambitious and creative research originating from an alliance of disciplines that transcends traditional disciplines, and consists of a merger of humanities-fields, science-fields and arts-fields. The aim of this research is the creation of a bright future for mankind.	9041	FY2010 — FY2012
Mechanobiology	The cells that make up a living body are being exposed to a variety of mechanical stimuli that are caused not only by gravitation, but also by the movement of skeletal muscles and smooth muscles of internal organs in the body. At the same time the cells sense these stimuli and respond to them. That this mechanism is essential for the functional maintenance of the living body is, of course, clear from auditory sense and the sense of touch, and also when one considers amyotrophy of astronauts and osteoporosis. Moreover, excessive mechanical stimuli (elevated blood pressure) cause severe diseases, such as arterial sclerosis, cardiac failure, etc. On the other hand, with the growth, division, alteration of shape and movement of the cell, the occurring forces are fed back, and the functions of the cells regulate themselves. It is considered that insufficiencies of cells lead to developmental anomalies and cancer. In this way, the cell's capacity of reception of and response to mechanical stimuli is a core function that supports life, and is a fundamental and highly important subject of research not only for the development of basic biology, but also for the development of astromedicine, regenerative medicine, medical engineering, dentistry and engineering, and agriculture. JSPS is expecting research that aims at the creation of new academic fields, by integrating related research, and by making the mechanism of sensing of, and responding to mechanical stimuli that living bodies and cells possess, the pivotal axis of the research.	9042	

Area	Detail	Item Number	Set Period
Bioethics	"Bioethics" is the field which mainly treats ethical aspects of life. However, it is an interdisciplinary field which not only treats various humanity fields, such as philosophy, ethics, sociology, law, economics, politics, cultural anthropology and history of technology but also overcrossing with a number of scientific fields such as biology, bio-science, anthropology, genetics, public health, pharmacology, basic medicine, clinical medicine, forensic medicine and nursing.  Bioethics was founded in the USA in the 1970s, and its importance has been acknowledged widely throughout the world, especially in an era where genetic engineering, biotechnology and state-of-the-art medical technology are rapidly developing.  In this field, many problems such as informed consent, medical decision making, abortion, genetic diagnosis, surrogate birth, brain death and transplantation, euthanasia and death with dignity, terminal care, ethics in nursing, human clone research, animal experimentation, genetic modification and so on are left unsolved. We sincerely hope that many ambitious researchers will endeavor in these areas of study.	9043	
Tourism Studies	The academic development of tourism studies complements the policy of promoting Japan as a tourism-oriented country from a scientific viewpoint. Until now, interdisciplinary scientific research on tourism has been carried out from diverse perspectives, such as, for example, "ecotourism", "green" tourism, health tourism, "new" tourism (such as, for example, industrial and cultural tourism), the economic effects of tourism, the influence of tourism on regional communities and culture, town development and regional promotion through tourism, international tourism policy, the behavior and psychology of tourists, etc. These research topics have been extensively studied, in an interdisciplinary way, in every area of science, such as business administration, commercial science, economics, geography, sociology, psychology, civil engineering, urban engineering, architecture, environmental studies, etc. In each area, research activities on tourism have intensified.  Nevertheless, in order to further the development of tourism studies academically, it is necessary to harmonize these dispersed research areas through interdisciplinary study.  In this area, JSPS expects to promote the research activities ranging from basic theory concerning the original development of tourism studies to various kinds of applied research, in addition to the promotion of expansive research that entails a practical and academic approach, and that contributes to the development of those economic and social sectors engaged in tourism.	9044	FY2011  FY2013
Reliable environmental measurement methods	In order to understand totally the relation between life and earth environment and to continue the reliable environment of the earth, it is required to develop a new measurement methods based on a new metrology. In this field, new measurement methods are developed to understand a safe life, a food safety, a medical safety, and a reliable environment. Especially, a super selective and wide dynamic range analytic method, a mobile and energy-saving measurement instrument, an imaging technique, super-selective analytical reagents, a new detection method of bio-related micro particle such as virus and pollen are highly required.  In order to achieve the reliable environmental measurement methods, a wide approach is expected from medical, agricultural, pharmaceutical, environmental fields, in addition to scientific and engineering fields.	9045	
epigenetics	The regulation of gene expression is not achieved exclusively by the nucleotide sequence. The expression of genetic information is regulated by stable and yet plastic control mechanisms collectively referred to as epigenetics, that is, chemical and structural modifications of chromatin composed of genomic DNA and interacting proteins such as histones. Currently, epigenetics is a major research focus in the life sciences because of its demonstrated involvement in a wide variety of biological phenomena including embryogenesis, tissue-specific gene expression, genome imprinting, aging, tumorigenesis, neurodegenerative diseases and somatic cell cloning.  JSPS is expecting ambitious research projects along these lines, which go beyond the frameworks of biological science disciplines such as genomics, molecular biology, cell biology, biochemistry, developmental biology, genetics and neuroscience, with the goal of elucidating the basic principles of epigenetics (operating principles, regulatory mechanisms and breakdown) commonly observed in the above-mentioned biological phenomena.	9046	

Area	Detail	Item	Set
71100		Number	Period
Integrated Nutrition Science	Nutrition science has contributed greatly to health promotion and improvement of physical strength/shape through the understandings of physiology, nutrients, and metabolism necessary for growth and maintenance of life. However, new issues such as overeating, food satiation, lifestyle-related diseases, stress, and aging, have been emerged. Recent advances in life science and analytical informatics technology enabled new approaches in this field: molecules, cells, laboratory animals to human population can now be included for research design. In order for such expansion in nutrition science to accelerate, establishment of a cross-sectoral research community beyond the existing frame, including eating habits studies, applied health science, food science, and clinical medicine is required.  The goal of this new research field is to contribute toward maintaining/promoting health, preventing diseases, and potentiating therapeutic effects in the complex and diverse modern society. A broad range of studies with aim to build the platform of nutritional science and put the accomplishment into practice is encouraged. Nutrition science has contributed greatly to health promotion and improvement of physical strength/shape through the understandings of physiology, nutrients, and metabolism necessary for growth and maintenance of life. However, new issues such as overeating, food satiation, lifestyle-related diseases, stress, and aging, have been emerged. Recent advances in this field: molecules, cells, laboratory animals to human population can now be included for research design. In order for such expansion in nutrition science to accelerate, establishment of a cross-sectoral research community beyond the existing frame, including eating habits studies, applied health science, food science, and clinical medicine is required.  The goal of this new research field is to contribute toward maintaining/promoting health, preventing diseases, and potentiating therapeutic effects in the complex and diverse modern society. A broad ra	9047	FY2011 - FY2013
Regenerative medicine	Human beings are composed of many organs and various types of cells within. These cells must self-renew themselves even after birth as well as during development, to maintain the homeostasis of the organ and to maintain their life against various environmental stresses. Regenerative medicine intends to repair and regenerate the damaged tissue/organ by manually controlling the self-renewing system, which resides endogenously in the organisms. Three-step approach, which includes in vitro, in vivo, and translational researches, is required for clinical application of the regenerative medicine. Identification of the cell-type specific differentiation factor and the establishment of the cell-type specific protocol for effective differentiation and purification system using somatic stem cells, embryonic stem (ES) cells, and induced pluripotent stem (iPS) cells are the important goals of in vitro researches. Thereafter, in vivo approaches using laboratory animals is important to establish the method to deliver the cells and to keep them alive and functional at the damaged lesion, in order to re-organize the damaged organ within the living organisms. To reach the final goal toward the clinical application, in vitro and in vivo findings should be gathered and translated into clinical medicine. Immunologic problem, such as rejection, or the differences in the organ size between experimental animals and humans are the challenges that should be solved in translational researches. Development of tissue engineering technology is one of the helpful candidates for solving those problems. Regenerative medicine is expected to become a new hope for the patients of refractory disorders such as heart diseases and neurodegenerative diseases. Moreover, regenerative medicine could reduce the inflated healthcare cost, which is becoming a big economic issue in the advanced country, by improving the quality of life of the elderly in the graying society. We are eager for the challenging proposals that would greatly advance this field.	9048	

<sup>(</sup>Note 1)

This table, in combination with the main table, applies only to "Scientific Research (C)", screening division "General". (Note 2)

The set period is the fiscal year when the call for proposals is organized. Notwithstanding the set period, research projects of 3 to 5 years are being sought.

## **Attached Table 3 Appendix Table of Keywords**

- 1) The first stage of the screening of the research fields followed by A or B in the section "Integrated Science and Innovative Science" is carried out in two separate groups. The basis for this division in two groups is the keywords shown in all the research categories (except for "Overseas Academic Research"). Make sure to select A or B based on the keyword, when applying for the research fields in the list.
- 2) The first stage of the screening of the research fields followed by the numbers 1 to 5 in each category of the division column is carried out in separate groups. The basis for this division in separate groups is the keywords shown in "Scientific Research (C)". Make sure to select a number from 1 to 5 based on the keyword, when applying for the research fields in the list for "Scientific Research (C)".

Cat	tegory: Integ	grated Science and Innovative Science	(Disc	ipline: Inforn	natics)
Δ r	Area: Comprehensive fields			Research Field	Screening Sub-panel Number / Keyword
AIV	a. Comprei	iensive netus			A Database, media, and information system
Item	ipline: Inform	atics Screening Sub-panel Number / Keyword			A Database (DataBase Manegement System, DBMS)
Numbe	rescurent reid	A Computational theory			B Digital content
1001	Fundamental theory of informatics	B Automata theory/Formal language theory C Theory of programs D Computational complexity theory E Algorithm theory F Cryptosystem G Information mathematics H Mathematical logic J Discrete structure K Computational learning theory L Quantum computation theory M Combinatorial optimization	1004 i	Media nformatics/ Database	C Multimedia D Information systems E Web services F Mobile systems G Information retrieval H Graphics J Visualization K Corpus L Structured document B User interface M Human interface
1002	Software	A Algorithm engineering  B Parallel processing/Distributed processing  C Programming paradigm/Programming language theory  D Implementation of programming systems  E Operating system  F Software engineering  G Software agent  H Specification/Verification of specification  J Development environment  K Development management  L Embedded software		ntelligent	N User model P Groupware Q Virtual reality R Wearable appliance S Universal design T Accessibility U Usability A Search, logic, and inference algorithms B Learning and knowledge acquisition C Knowledge bases and knowledge systems D Intelligent system architecture
1003	Computer system/ Network	A Computer system A Computer architecture B Circuit and system C VLSI design technology D High performance computing E Reconfigurable system F Dependable computing G Embedded system B Information network H Network architecture J Network protocol K Network security technology L Mobile network technology M Transport technology M Transport technology N Overlay network P Traffic engineering Q Network management technology R Measurement of networks S Ubiquitous computing T Large scale network simulation U Interoperability V Network node operating system W Network information representation X Basic technology of providing services	1003 i	Perception nformation processing/intelligent probotics	E Intelligent information processing F Natural language processing G Knowledge discovery and data mining H Intelligent agent J Ontology K Web intelligence  A Perceptual information processing A Pattern recognition B Image processing C Speech processing D Computer vision E Information sensing F Sensor fusion G Sensing devices systems  B Intelligent robotics H Intelligent robot J Behavior and environment recognition K Motion planning L Sensory behavior system M Autonomous system M Digital human model P Animation Q Real world information processing R Physical agents

(Discipline: Informatics)

(Discipline: Informatics)

	cipline: Inform	atic	8)		scipline: Inform	т -		
Item Number	Research Field	Scre	ening Sub-panel Number / Keyword	Item Numbe	Research Field	Sc		eening Sub-panel Number / Keyword
		A	Sensitivity informatics					Research survey and experimental design
			Sensitivity design					Multivariate analysis
		В	Sensitivity expression				C	Time series analysis
		C	Sensitivity recognition	41			D	Classification and pattern recognition
1			Sensitivity congnition	41				Statistical inference
		E	Sensitivity robotics				F	Computational staistics and computer aided
		F	Sensitivity measurement evaluation	11			Ì	statistics
		C	Ambiguity and sensitivity	11			G	Statistical prediction and statistical control
		Н	Sensitivity information processing	11				Model selection
		J	Sensitivity database	11,,,,	Statistical			Optimization theory
		K	Sensitivity interface	1010	science			Pharmaceutical statistical analysis genome
1		I	Sensitivity physiology	11			L	
	Sensitivity	N	Sensitivity material products	11				1 Mathematical finance
1007	informatics/	N	Sensitivity industry	11				Data mining
1007	Soft	P	Sensitivity environmental science	11			P	Spatial statistics and environmental statistics
1	computing	Ç	Sensitivity sociology	11				Statistics education
	1	R	Sensitivity philosophy	11			R	Statistical quality control
		S		11			S	Statistical learning theory
		Т	Sensitivity brain science	]				Social research and analysis plan
		U	Sensitivity management	][				Data science
		В	Soft computing			Α	_	Bioinformatics
		V	Neural network	]				Bioinformatics
		W	Genetic algorithm	]			В	Genome information processing
1	1	X	Fuzzy theory	_			C	Proteome information processing
	1	Y	Chaos	]]			D	Computer simulation
	ĺ	Z	Fractal	_	Bioinformatics/	L	Е	Biosystem information sciences
	ĺ		Complex systems	1011	Life informatics	В		Vitae system informatics
<u></u>			Probabilistic information processing	41	informatics			Biological information
1	<u> </u>	A	Library and information science	41			G	Neuroinformatics
	ĺ	A	Library science	41				Neural information processing
1	1		Information services	41				Artificial life system
1	1		Library information systems	41				Molecular computing
1	1		Digital archives	<b> </b>			L	DNA computing
1	1		Information organization	-				_
	1	F	Information retrieval		cipline: Cerebra	al	N	Neuroscience
		G	Information media	Item Numbe	Research Field	Sc	cre	eening Sub-panel Number / Keyword
1	L	L	Bibliometrics and scientometrics	Numbe		Ħ		Molecular and cellular neuroscience
1	Library and	I	Construction and management of information	11				B Developmental and regenerative neuroscience
1	information		resources					Neuroendocrinology
1008	science/	В	Humanistic social informatics	-			F	Neuroendocrinology   Clinical neuroscience
1008	Humanistic	_	Literature information	<del> </del>				Neuroinformatics
	social	I I	History information	<b>†</b>   .	Neuroscience			Cognitive neuroscience
	informatics	I I	Information sociology	1101	in general			Behavioral neuroscience
1	1		Law information	1)				Noninvasive neuroimaging
1	1	_	Information economics	11				Computational neuroscience
1	1	_	Management information	]			K	Neuropsychology
1	1	_	Educational information	]]			L	Neuroscience of language
1	1	S	Art information	]				1 Brain Pathology
1	ĺ	Т	Medical information	][		Α	•	Neuroanatomy
1	1	U	Science and technology information	]]			Α	Anatomy of neural tracts
1	1		Intellectual property information	_			В	Neural network
	<u> </u>		Geographic information	<b>_</b>				Neurohistology
	<u> </u>	Α	Cognitive psychology	4			D	Molecular neurobiology
	1	В	Evolution/Development	41			Е	Neural fine structure
	1	C	Learning/Thinking/Memorization	41				Neurohistochemistry and neurocytochemistry
	ĺ		Reasoning/Problem solving	41				Neural development and its abnormality
	1		Sensation/Perception/Attention	4)				Neural regeneration, remodeling and plasticity
	I	F	8	41			J	Experimental morphology of the nervous system
	1	C	231119111111111111111111111111111111111		N		K	Anatomical study of neuroimaging
40.	Cognitive	1	Cognitive philosophy	1102	Nerve anatomy/	F	L	Neurocytology
1009	Cognitive science	H	In a control of the c		Neuropathology	В		Neuropathology
1009	_	J	Brain cognitive science				,	
1009	_	J K	Cognitive linguistics					Cellular neuropathology
1009	_	H J K L	Cognitive linguistics Comparative decision making theory				N	Cellular neuropathology Molecular neuropathology
1009	_	H J K L	Cognitive linguistics Comparative decision making theory Cognitive engineering				N P	Cellular neuropathology Molecular neuropathology Neurodegenerative diseases
1009	_	H J K L M	Cognitive linguistics Comparative decision making theory Cognitive engineering Cognitive archaeology				N P Q	Cellular neuropathology Molecular neuropathology Neurodegenerative diseases Developmental disorders
1009	_		Cognitive linguistics Comparative decision making theory Cognitive engineering Cognitive archaeology Cognitive model				N P Q R	Cellular neuropathology Molecular neuropathology Neurodegenerative diseases Developmental disorders Senile dementia
1009	_		Cognitive linguistics Comparative decision making theory Cognitive engineering Cognitive archaeology				N P Q R	Cellular neuropathology Molecular neuropathology Neurodegenerative diseases Developmental disorders Senile dementia Cerebrovascular disorders
1009	_		Cognitive linguistics Comparative decision making theory Cognitive engineering Cognitive archaeology Cognitive model				N P Q R S	Cellular neuropathology Molecular neuropathology Neurodegenerative diseases Developmental disorders Senile dementia Cerebrovascular disorders Metabolic diseases
1009	_		Cognitive linguistics Comparative decision making theory Cognitive engineering Cognitive archaeology Cognitive model				P Q R S T U	Cellular neuropathology Molecular neuropathology Neurodegenerative diseases Developmental disorders Senile dementia Cerebrovascular disorders Metabolic diseases Toxic diseases
1009	_		Cognitive linguistics Comparative decision making theory Cognitive engineering Cognitive archaeology Cognitive model				N P Q R S T U	Cellular neuropathology Molecular neuropathology Neurodegenerative diseases Developmental disorders Senile dementia Cerebrovascular disorders Metabolic diseases Toxic diseases Brain tumors
1009	_		Cognitive linguistics Comparative decision making theory Cognitive engineering Cognitive archaeology Cognitive model				N P Q R S T U V	Cellular neuropathology Molecular neuropathology Neurodegenerative diseases Developmental disorders Senile dementia Cerebrovascular disorders Metabolic diseases Toxic diseases

### (Discipline: Cerebral Neuroscience)

### Discipline: Laboratory animal science

Section Final   Section Fina	(Discipline: Cerebi	_				Item	<del>,                                    </del>	_	÷	y animal science
In Development, differentiation, and aging   Coverage compress   Development differentiation and repair			Scr	ee	ning Sub-panel Number / Keyword		Research Field	K	ey	word
Commission   Com		Ī	P					ſ	-	
Description			F							
December			(							
Descriptions   Final principles   Final proposalogy and decapy of neuropsychiatrial diseases   Final principles   Final princ			_				Laboratory		_	, , , , , , , , , , , , , , , , , , ,
1116   Seropeamento	Neurochemistry/		-	_		1201	animal			
Fusional brain science   Fusional brain scie	,	о	1				science			
In   Neurophysiology   A   Neurophysiology	gy		(							
To Neurophysiology   Committee neuroscience   Discipline: Biomedical engineering										
Public   Common control   Common contr			J							
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Neurophysiology  Neurop			I	_	Genomic neuroscience	Disc	cipline: Biome	dic	al	l engineering
Neurophysiology   Neurophysi		1	A	1	Neuronhysiology		Research Field	S	cre	ening Sub-panel Number / Keyword
Fusional brain   Fusional brain science   Comment of the manufacture medicine and smooth muscle physiology   Partin science   Comment of the manufacture medicine and smooth muscle physiology   Partin science   Comment of the manufacture medicine and smooth muscle physiology   Partin science   Comment of the manufacture medicine and smooth muscle physiology and molecular motor   Comment of the manufacture medicine and smooth muscle physiology   Comment of the manufacture medicine   Partin science   Comment of the manufacture medicine   Partin science   Partin					1 . 0.	Numbe	r	+		
Neurophysiolog   Neurophysiolog   Pautonomic nervous regulation   Discontinuo de l'Autonomic nervous regulation   Discontinuo nervous regulation   D								1.	_	
Public   Posture and motor control			(	-	:					
Neurophysiology   Patient neurophysiology									_	· · · · · · · · · · · · · · · · · · ·
Posture and motor control   Foundation aervous regulation   Gosystem neuroscience and neuroinformatics   Foundation neuroinspire   Foundation neuroins			Γ	5	Somatic and visceral sensation, and pain				_	
Reurophysiolog   Holizonia neuroimage memory, and emotion   Functional neuroimage memory, and emotion   Functional neuroimage   Reurophysiolog   Neurogenesis, development, regeneration, and repair   Neurophysiology   Neurophys			E						Е	Artificial organs, regenerative medicine
He Cognition, language, memory, and emotion   Functional neuroimaging   Functional neuroimagin			F							
Neurophysiology   James   Formation   Fo			C							
Neurophysiology   Monte   Neurogenesis development, regeneration, and repair   Neurogenesis, development, regeneration, and repair   Neurological pathophysiology   Neurological pathophysiology and molecular motor   Neurological neurophysiology   Neurological neurolo			ŀ						Н	
Neurophysiology   And muscle physiology   Liveurological pathophysiology   Muscle contraction mechanism and energetics   Neurophysiology   Muscle contraction mechanism and energetics   Neurophysiology   Muscle contraction mechanism and energetics   Neurophysiology and molecular motor   Neurophysiology and molecular motor   Neurophysiology and molecular motor   Neurophysiology   Neuroph			_	_			Biomedical			0 0
Pusional brain forecording science   Pusional	Neurophysiolog	g	k							
Physiology		-				1301			K	
B   Muscle physiology	physiology	L	I						L	
Note		[]	B _					В	_	
P Molecular neurophysiology and molecular motor			N						_	
Pusional basic brain science   Fusional brain function probe   Farain inaging   Fusional brain function behavioral analysis   Fusional brain science   Fusional s			ľ						_	
R Neural control of muscle and skeletal, cardiac, and smooth muscles			(							
and smooth muscles   S Cardiac excitation and conduction abnormalities   T Myocardial dysfunction and regeneration   U Cardiac and smooth muscle remodeling   V Smooth muscle physiology   W Skeletal muscle physiology and pathophysilogy   W Skeletal muscle physiology and pathophysilogy   W Skeletal muscle physiology and pathophysilogy   W Skeletal muscle physiology   W Skeletal with muscle			F							
Secretation and conduction abnormalities									_	-
T Myocardial dysfunction and regeneration   U Cardiac and smooth muscle remodeling   V Smooth muscle physiology   V Skeletal muscle physiology and pathophysilogy   A Genome brain science   B Epigenetics   C Brain molecule profiling   D Nano brain science   B Epigenetics   C Brain molecule profiling   D Nano brain science   B Epigenetics   D Nano brain science   E Chemical biology   F Medicinal brain science   G Brain function probe   H Brain insigning   J Luminary brain science   G Brain function probe   H Brain insigning   J Luminary brain science   G Brain function model animals   M Brain function behavioral analysis   N Brain and rhythm   P Sleep   A Brain function measurement   C Real time brain blood flow measurement   D Brain function measurement   D Brain function measurement   C Real time brain blood flow measurement   D Brain information reading (Decoding)   F Sensory information   H Cognitive informatio			5	_						
U Cardiac and smooth muscle remodeling   V Smooth muscle physiology   W Skeletal muscle physiology and pathophysilogy   W Skeletal muscle physiology and pathophysilogy   A Genome brain science   E Epigenetics   E Epigenetics   C Brain molecule profiling   D Nano brain science   E Chemical biology   F Medicinal brain science   E Chemical biology   F Medicinal brain science   G Brain function probe   F Medicinal brain science   G Brain function probe   J Luminary brain science   K Neuron glial cross-interaction   L Brain and rhythm   P Sleep   A Brain machine processing   D Brain function measurement   D Brain activity recording (Recording)   E Brain information reading (Decoding)   F Sensory information   D Brain activity recording (Recording)   E Brain information processing   L Brain information processing   L Brain machine interface   A Communication   B Human interaction   D Development and education   E Soscial behavior   D Development and education   E S			-	-						
V Smooth muscle physiology   V Skeletal muscle physiology and pathophysilogy									U	
W Skeletal muscle physiology and pathophysilogy   A Genome brain science   B Epigenetics   C Brain molecule profiling   D Mano brain science   E Chemical biology   F Medicinal brain science   H Brain function probe   H Brain imaging   J Luminary brain science   K Neuron glial cross-interaction   L Brain function model animals   M Brain function behavioral analysis   N Brain and rhythm   P Sleep   Brain intention measurement   D Brain function measurement   C Real time brain blood flow measurement   D Brain activity recording (Recording)   E Brain information reading (Decoding)   F Sensory information   H Cognitive information   D Development and education   E Sensibility, affectivity and emotion   F Values, reward and punishment   G Motivation   H Neuroeconomics and neuromarketing   H Cognitive information   D Development and education   D Development and education   D Development and education   E Sensibility, affectivity and emotion   H Neuroeconomics and neuromarketing   H Cognitive information   H Cognitive information   D Development and education   D Developm			7							
B   Epigenetics   C   Brain molecule profiling   D   Mondo brain science   E   Chemical biology   F   Medical brain science   E   Chemical biology   F   Medical brain science   E   Chemical biology   F   Medical brain science   H   Brain inaging   D   Luminary brain science   H   Brain inaging   D   Mondo brain   H   Computational surgery   D   Medical information system   H   Computational surgery   D   Medical robotics   D   Med			ν	V,	Skeletal muscle physiology and pathophysilogy				Α	Medical ultrasonics
C Brain molecule profiling   D Nano brain science   E Chemical biology   F Medicinal brain science   E Chemical biology   F Medicinal brain science   G Brain function probe   H Computational surgery   J Medical probits   H Computational surgery   J Medical probits   Medical probability   Medical probits   Medical probability   Medical probits   Medical probability   Medical probits   Medical probability   Medical				_						
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Fusional basic brain science   F. Medicinal brain science   H. Brain imaging   J. Luminary brain science   K. Neuron glial cross-interaction   L. Brain function model animals   M. Brain function behavioral analysis   N. Brain and rhythm   P. Sleep   D. Seep			-			1202	Medical			
Fusional basic brain science  Fusional basic brain science  Fusional basic brain science  Fusional brain recording science  Fusional brain science  Fusional science  Fusional brain science  Fusional science			_	_		1302	systems			
Fusional basic brain science b			F	7	Medicinal brain science					
Harmin making   Harmin makin	Fusional basic	с								
K   Neuron glial cross-interaction   L Brain function model animals   Brain function behavioral analysis   N Brain and rhythm   P Sleep   D Occupational therapy science   C Physical therapy   D Occupational therapy science   E Speech language and hearing therapy   D Occupational therapy science   E Speech language and hearing therapy   F Social welfare and health science   G Artificial sensory organs   H Gerontology   D Clinical psychotherapy   D Occupational therapy science   E Speech language and hearing therapy   F Social welfare and health science   G Artificial sensory organs   H Gerontology   D Clinical psychotherapy   D Occupational therapy science   E Speech language and hearing therapy   F Social welfare and health science   G Artificial sensory organs   H Gerontology   D Clinical psychotherapy   D Occupational therapy science   E Speech language and hearing therapy   F Social welfare and health science   G Artificial sensory organs   H Gerontology   D Clinical psychotherapy   D Occupational therapy science   E Speech language and hearing therapy   F Social welfare and health science   G Artificial sensory organs   H Gerontology   D Clinical psychotherapy   Welfare engineering   T Clinical psychotherapy   Welfare engineering   M F Social welfare and neutring engineering   T Technology for activities of daily living   M Preventive care/Assistive technology   N Normalization   P Barrier-free system   Q Universal design   R Robotics for welfare and nursing care   S Technology for substituting biological function   T Technical aid   U Human interface   T Te	11051									
Lagrain function model animals   Marain function behavioral analysis   Nation and rhythm			J					A		Rehabilitation science
Marain function behavioral analysis   Narian and rhythm   Pales   Sleep			k						_	
Normalization   Parine-free system   Parine-free			I	_						
P   Sleep			N							
Fusional brain recording science  Fusional brain science  Fusional brain recording science  Fusional brain science and punishment brain function measurement science and punishment brain function measurement science welfare and health science and brain science/  Welfare engineering  Fusional Brain information processing  Rehabilitation science/ Welfare engineering  Fusional Brain information processing  Rehabilitation science/ Welfare engineering  Fusional Brain information processing  Rehabilitation science/ Welfare engineering  Fusional Brain function operation  Parrier-free system Q Universal design  Rehabilitation Science/ Welfare engineering  Fusional Brain function operation  Parrier-free system Q Universal design  Rehabilitation Science/ Welfare engineering  Fusional Brain activity science/ Welfare engineering  Fusional Brain activity recording Melfare and health science  Fusional Brain activity recording			I							
Fusional brain recording science   Fusional brain recording   Fusional science   Fusional recording   Fusional science   Fusional science   Fusional recording   Fusional science   Fusional		+	+							
Fusional brain recording science  Fusional brain science  Fusional scien			-							
Fusional brain recording science  Fusional brain recording (Recording)  Fusional recording (Recording)  Fusional brain recording (Recording)  Fusional recording (Recording)  Fusi			-				Rehabilitation		Н	Gerontology
Fusional brain recording science  Figure 1106  Figure 1106  Figure 1107  Figure 1106  Figure 1107  Figure 1106  Figure 1107  Figure 110			Ι				science/	L		Clinical psychotherapy
Fecording science  Figure 1106  Figure 2	Fusional brain	n	_			1303	{	В		
Science Science   G Kinetic (motor) information   H Cognitive information   H Cognitive information   M Preventive care/Assistive technology   M Preventive care/Assistive care/Assis			_	_	· · · · · · · · · · · · · · · · · · ·					
H Cognitive information  J Higher brain function measurement  K Brain information processing  L Brain function operation  M Brain machine interface  A Communication  B Human interaction  C Social behavior  Fusional  1107 social brain science  F Values, reward and punishment  G Motivation  H Neuroeconomics and neuromarketing	_			_	· /		<i>58</i>			
K   Brain information processing   L   Brain function operation   M   Brain machine interface   M   R   Robotics for welfare and nursing care   S   Technology for substituting biological function   T   Technical aid   U   Human interface   Human inte			1							
L Brain function operation M Brain machine interface  A Communication B Human interaction C Social behavior D Development and education  Fusional  1107 social brain science F Values, reward and punishment G Motivation H Neuroeconomics and neuromarketing			k						_	
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A Communication B Human interaction C Social behavior D Development and education social brain science F Values, reward and punishment G Motivation H Neuroeconomics and neuromarketing			N							
Fusional 1107 social brain science  F Values, reward and punishment G Motivation H Neuroeconomics and neuromarketing  U Human interface U Human interface		T	P	١ (	Communication				S	Technology for substituting biological function
Fusional 1107 social brain science  F Values, reward and punishment G Motivation H Neuroeconomics and neuromarketing									_	
1107 social brain science   E Sensibility, affectivity and emotion   F Values, reward and punishment   G Motivation   H Neuroeconomics and neuromarketing	Fr! 1		-	_		<u> </u>			U	Human interface
science F Values, reward and punishment G Motivation H Neuroeconomics and neuromarketing			-							
G Motivation H Neuroeconomics and neuromarketing										
H Neuroeconomics and neuromarketing	science		_							
			_	_						
v   1 Official Office			J		Political brain science					

### Discipline: Health/Sports science

### Discipline: Human life science

•	Sports science		ipime: numar		110		
Number Research Field	Screening Sub-panel Number / Keyword	Item Number	Research Field	Sc	cree	ening Sub-panel Number / Keyword	
	A Developmental mechanisms and the body works			Α		Home economy	
	A Educational physiology				A	Family finance and home management	
	B Physical systems science				В	Family relations	
	C Biological information analysis					Lifestyle	
	D Higher brain function science				D	Consumer purchasing activities/Life information	
	E Physical growth developmental science					Human life and culture	
	F Sensory and motor development studies					Life of the aged persons	
	B Mental and physical education and culture		General		G	Care for aged and disabled persons	
	G Aesthetic education	1501	human life	1 1		Livelihood culture	
	H Physical environment theory	-	sciences	Ш	J	Home economics education	
	J Kinetic theory of leadership			В		Clothing and dwelling life	
Physical	K Pedagogy of physical education					Clothing life	
education	L Fitness					Clothing enviornment	
	M Cultural theories of physical movement					Living and lifestyle	
	N Philosophy of the body					Living environment	
	P Life and death education					Life material	
	Q Psychology of physical education			_		Living design/Living goods	
	R Affective science			Α		Food and cooking	
	S Outdoor education					Cooking and processing	
	T Dance education					Food storage	
	U Girls gymnastics					Sensory evaluation	
	V Adult life stage elderly gymnastics					Food materials  Coaling and functional constituent	
	W Martial arts theory X Motion adaptation life science					Cooking and functional constituent Food service	
	A Sports science			I L		Food culture	
	A Sports philosophy			I L		Texture	
	B Sports history					Food item and mastication	
	C Sports psychology		Eating habits,	_		Diet and health	
	D Sports science management	1502	studies on		-	Health and dietary life	
	E Sports pedagogy	11	eating habits			Diet and nutrition	
	F Training science		eating nabits			Dietary education	
	G Sports biomechanics					Dietary habits	
	H Coaching					Dietary behavior	
	J Sports talent					Dietary information	
	K Sports for the disabled					Special nutritious food	
1402 Sports science						Food and environment	
sports science	M Sports environment			1 1		Diet plan	
	N Cultural anthropology of sport					Family and dietary life	
	B Medical and sport sciences					Diet evaluation	
	P Sports physiology					Food management	
	Q Sports biochemistry						
	R Sports nutrition	Disc	Discipline: Science education/Educational technology				
	S Energy metabolism	Item	Research Field	Screening Sub-panel Number / Keyword			
		Number	Research Field	ь.			
	T Exercise and training					Natural science education (mathematics, science,	
	U Sports disorders			1		earth science physical chemical biological	
	V   Doping					information)	
	A Health education/Health promotion activities	41				Engineering education	
	A Health education					Understanding nature	
	B Health promotion					Social awareness of science	
	C Safety propulsion/Safety education		Science			Science literacy	
	D Pedagogy of health education	1601	education			Experiment/Observation	
	E Stress management		Caucation			Science education curriculum	
	F Smoking/Drug abuse prevention education					Environmental education	
	G School health					Industrial technology education	
Applied	H AIDS and sex education					Science higher education	
	J Health management					History of science and technology education Science and sociocultural	
health science	K Health information L Nutritional guidance			1 1		Science and technology policy	
	M Physical and mental health					Teacher education/Science communicator	
	N Leisure/Recreation			H		Curriculum/Pedagogy development	
	B Applied medical health			1 F	-	Teaching-learning support systems	
	P Lifestyle diseases			1	C	Distributed collaborative learning system	
	Q Exercise prescription and exercise therapy					Human interface	
	R Aging		Educational technology			Instructional materials information system	
	S Sports medicine					Utilization of media	
	T Sports immunology	111602				Distance education	
l l	<u> </u>					E-learning	
						Computer literacy	
						Media education	
						Learning environment	
					M	Teacher's education	
						Classroom instruction	

Discipline:	Sociology/History of science and technology	(Discipline: Oncol	ogy)
Item Number Research	Field Keyword	Number Research Field	Keyword
Sociol Histor 1701 scienc and techno	A Sociology of science B Bioethics C History of science D History of technology E Medical history F Industrial archaeology G Philosophy of science/Theory of science H Science, technology and society  Cultural property science	Number Research Field  1952 Tumor biology	A Oncogene B Tumor suppressor gene C Signalling and gene expression D DNA replication E Cell cycle F Cancer and heredity G Apoptosis H Cell polarity J Cell adhesion and movement K Invasion L Metastasis M Characteristics of cancer cells
Cultur 1801 proper scienc	B Material analysis C Production technique D Conservation science E Archaeological prospection		N Cancer microenvironment P Angiogenesis Q Lymphangiogenesis R Stem cells S Cellular senescence T Cellular immortalization A Humoral immunity B Cell immunity
Discipline:  Item Research	Museology	Tumor	C Antibody therapy D Immunotherapy E Vaccine therapy
1851 Musec	A Museum Informatics B Museum Education, Museum Pedagogy C Museum Information Systems, Museum Information		F Cell therapy G Cytokine H Immunosuppression J Immune activation A Genome analysis B Proteomics analysis C Expression analysis
Discipline:  Item Number Research	Geography	Tumor	D Individuality diagnosis of cancer     Order-made medical treatment     Drug efficacy and calculation
1901 Geogr	H Climatology J Hydrology K Cartography	diagnosis	G Biomarkers H Tumor markers J Molecule imaging K Epigenome L miRNA M Functional RNA A Antitumor substance research and chemical biology B Chemotherapy C Molecular target therapy D Endocrine therapy
Discipline:	L Geographic information system M Remote sensing  Oncology	1955 Clinical oncology	E Drug delivery F Physical therapy G Gene therapy H Nucleid acid therapy
Research Number Research	A Genome instability B Epigenetics C Cancer genome analysis D Chemical carcinogenesis E Radiation carcinogenesis	Cancer epidemiology and prevention	J Cell therapy  A Biobank B Ethnoepidemiology C Cohort study D Gene-environment interaction E Preventive intervention study F Chemoprevention G Interface between cancer study and society

## Area: New multidisciplinary fields

## Discipline: Nano/Micro science

Discipline: 1	Environmental	science
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	ipline: Enviror	mental science
Item Number	Research Field	Screening Sub-panel Number / Keyword
2001	Environmental dynamic analysis	A Environmetnal change B Biolgeochemocal cycle C Environmental measurements D Environmental model E Environmental information F Global warming G Global change of water cycle H Environmental monitering of the polar regions J Chemical oceanography K Biological oceanography
2002	Environmental impact assessment/ Environmental policy	A Environmental impact assessment  A Terrestrial, aquatic, and atmospheric impact assessment  B Impact assessment on ecosystem  C Impact assessment methods  D Impact assessment on human health  E Environmental impact assessment for the future generation  F Human activities in polar regions  B Environmental policy  G Environmental philosophy  H Environmental philosophy  H Environmental management  K Environmental activities  L Environmental activities  L Environmental activities  L Environmental activities  L Environmental safety and security
2003	Risk sciences of radiation/ Chemicals	A Risk science of radiation  A Environmental radiation  B Protection  C Basic process  D Dosimetry assessment  E Damage  F Response  G Repair  H Sensitivity  J Impact on life  K Risk assessment  B Risk science of chemicals  L Toxicology  M Toxic substance to human  N Estimation of trace chemicals pollution  P Endocrine disrupting substances
2004	Environmental technology/ Environmental materials	A Environmental technology  A Environmental conservation technology  B Environmental restoration technology  C Resource conservation technology  D Energy conservation technology  E Recycling technology  F Reduction technology of environmental impact  B Environmenal materials  G Circular material design  H Circulation and processing  J Production system of circular materials  K Human living environment  L Green chemistry  M Ecology and environment

Item Number	Research Field	Screening Sub-panel Number / Keyword		
		A		Chemical system
			A	Nanostructural chemistry
			В	Cluster/Fine particle
				Nano/Microreaction field
				Single molecule manipulation
	Nanostructural science			Hierarchical structure/Superstructure
2101				Surface/Interface nanostructure
		В	G	Self-assembly
			п	Physical system Non-activative momenties
			п	Nanostructure properties Mesoscopic physics
				Nanoprobes Nanoprobes
				Quantum information
				Nanotribology
		Α		Nanomaterials
			Α	Creation of nanomaterials
				Analysis and characterization of nanomaterials
				Nanosurface/Nanointerface
			D	Functional nanomaterials
			Е	Nanometrology
				Formation/Control of nanostructures
			G	Molecular devices
				Nanoparticle/Nanotubes
2102	Nanomaterials/		J	Single-molecule science
	Nanobioscience	В		Nanobioscience
				DNA devices
				Nano synthesis
				Molecular manipulation Biochip
				Single-molecule biochemistry and physiology
				Single-molecule bioinformation science
				Single-molecule science
				Single-molecule imaging/Nanometrology
				Genomic engineering
		A		Microdevices/Micromachines
			A	Microelectromechanical systems/
				Nanoelectromechanical systems
		В		(MEMS/NEMS)
				Microfabrication
				Micro-optical devices
				Microchemical systems
				Micro biosystems
				Micromechanics
			G	Microsensors
	Microdevices/		п	Nanodevices Nanostructure fabrication
2103	Nanodevices			Self-assembly
	Namodevices			Nanoparticle
				Quantum dot
			_	Carbon nanotube
				Control of nano-properties
				Quantum effect
				Nanoelectronic devices
				Nano-optical devices
				Spin devices
				Molecular devices
				Single-quantum devices
			٧	Nanomachines

Disci	pline: Social/S	afety system science	(Dis	scipline: Genor	me science)
Item Number	Research Field	Screening Sub-panel Number / Keyword	Item Number	Research Field	Keyword
		Social systems engineering			A Disease-associated gene
		A Social engineering			B Personalized medicine
		B Social system			C Gene diagnosis
		C Policy science			D Human genome diversity
		D Development planning		Medical	E Genome medicine
		E Management engineering			F Regenerative medicine
		F Management system	2302	genome	G Genome-wide association study
		G Operations research		science	H Human genome resquencing
		H Quality control			J Genome of model animals
		J Industrial engineering			K Disease epigenomics
	Social	K Modeling	<b> </b>		L Human population genetics
I I		L Logistics			M Statistical genetics
177011	systems	M Marketing			N Medical informatics
	engineering/	N Finance			A Gene networks
	Safety system	P Project management			B Protein networks
		Q Environmental management			C Metabolic networks
		B Safety system			D Development and differentiation
		R Safety system	2303	System	E Synthetic biology
		S Safety engineering		genome	F Database biology
		T Crisis management U Urban and social disaster prevention		science	G Modeling and simulation H Bioinformatics
		V Fire/Accident			J Database integration
		W Safety information/Environmental preparation			
		X Community resistance to disaster (evacuation,			K Genome analysis technology L Functional RNA
		panic, communication, hazard map)			M Epigenome control
		Y Reliability engineering			A Industrial genome sciences
		A Earthquake and volcano disaster mitigation			A Industrial animal genome
		A Seismic motion			B Industrial plant genome
		B Liquefaction	- - -		C Bacterial flora in humans and animals
		C Active fault			D Industrial microorganism genome
		D Tsunami			E Marker breeding
		E Volcanic eruption			F Genome bioengineering
		F Volcanic ejecta/Debris flow	230/	Applied	B Environmental genome sciences
		G Seismic hazard	2301	genomics	G Environmental genome
		H Volcanic hazard			H Metagenome
		J Damage prediction/Analysis/Mitigation			J Genome and symbiosis
		measures			K Biodiversity
	Natural	K Disaster mitigation and buildings			L Conservation of species
2202	disaster	B Natural disasters			M Genetic resource
	science	L Meteorological disasters			N Biological database
		M Hydrological disasters		1	- Diological database
		N Geo-hazard	Dice	inlina. I ivina	g organism molecular science
		P Landslide	Number	Research Field	Keyword
		Q Drought			A Natural product organic chemistry
		R Snow and ice disasters			B Secondary metabolite
		S Natural disaster prediction/Analysis/Measures	2401		C Searching bioactive molecules
		T Lifeline disaster prevention		Living	D Chemical modification of biomolecules
		U Local disaster preparedness plan and policy		organism	E Biological function related substance
		V Rehabilitation and reconstruction engineering		molecular	F Molecular mechanism of activity expression
		W Disaster risk assessment	1	science	G Biosynthesis  H Design and synthesis of bioactive molecule

### Discipline: Genome science

Item Number	Research Field	Keyword			
Number	Genome biology	A Genome structural diversity B Animal genome C Plant genome D Microbial genome			
		E Bacterial flora genome F Organelle genome			
		G Genome evolution H Genome architecture			
2301		J Genome maintenance and restoration			
		K Genome function expression L Gene expression regulation			
		M Transcriptome			
		N Proteome P Metabolome			
		Q Epigenome			
		R Genome database S Comparative genome			

	Living organism	A	Natural product organic chemistry
		В	Secondary metabolite
		C	Searching bioactive molecules
		D	Chemical modification of biomolecules
		E	Biological function related substance
2401		F	Molecular mechanism of activity expression
2401	molecular	G	Biosynthesis
	science	Н	Design and synthesis of bioactive molecule
		J	Combinatorial chemistry
		K	Chemical ecology
		L	Proteomics
	Chemical biology	A	in vivo functional expression
		В	searching medicines
		C	searching diagnosis chemicals
		D	searching agricultural chemicals
		E	chemical library
2402		F	structure-activity relationship
		G	diversity-oriented organic synthesis
		Н	bioprobe
		J	molecular imaging
		K	biomolecule measurements
		L	intracellular chemical reactions
		L	intracellular chemical reactions

#### Discipline: Resource conservation science

Item Number	Research Field	Keyword
2501	Resource conservation science	A Conservation biology B Biodiversity conservation C Conservation of biological strains D Conservation of genetic resources E Ecosystem conservation F Native species conservation G Seed conservation H Cell/Tissue preservation J Microbial culture collections

#### Discipline: Area studies

Item Number	Research Field	Keyword
Number	Research Field  Area studies	A Europe B Russia/Slavic area C North America D Central and South America E East Asia F Southeast Asia G South Asia H West Asia/Central Asia J Africa/African history K Oceania/Oceanian history L Global studies
		M Cross-regional comparative studies  N Aid/Regional cooperation

#### Discipline: Gender

Item Number	Research Field	Keyword
		Keyword  A Gender differences/Gender roles B Sexuality C Social thought/Social movements/History D Law/Politics E Economy/Work F Social policy/Social welfare G Body/Expression/Media H Science and technology/Medicine/Life J Education/Human development K Development L Violence/Sex workers M Cross-cultural comparison
		N Women's studies/Men's studies/Queer studies

Cat	egory: Huma	ani	ties and Social Sciences	(Dis	cipline: Literatu	ıre)	
A ro	a. Humaniti	OC.		Item Number	Research Field	Keywo	ord
Are	a: numamu	es				ΑF	rench literature
Disc	ipline: Philosop	hy			European	ВС	German literature
Item Number	Research Field	Key	word		literature	CR	Russian and East European literature
		Α	Principles of philosophy/Specific theories of	2903	(English	DC	Other European literatures
			philosophy		literature		Vestern classics
			Principles of ethics/Specific theories of ethics		excluded)		Bibliography/Philology
2001	Philosophy/		Western philosophy		,	GL	iterary criticism/Literary theory
2001	Ethics		Western ethics Japanese philosophy		T /		Comparative literature Chinese literature
		F		-	Literatures/		African literature
Area: Hum:  Discipline: Phi  Research Fie		Comparative philosophy		Literary theories in	CS	outheast Asian literature	
		Н	Philosophy of religion	2904	other		Other literatures
	CI.:	A	Chinese philosophy/Thought		countries and	EE	Bibliography/Philology
2802		B		-	areas		iterary criticism/Literary theory Comparative literature
	piniosopny		Confucianism		urcus	GC	comparative interature
	T. P 121 1 /		Indian philosophy/Thought	Disc	ripline: Linguis	tics	
2803	Buddhist studies	_		Item	Research Field		ing Sub-panel Number / Keyword
		A	Buddhist studies/History of Buddhism Religious studies in general	Number	Research Field	<u> </u>	Ing Sub-panel Number / Keyword Phonetics
			History of religions	$\parallel$			rionetics Phonology
2804	-	C				CN	Morphology
	studies	D	Philosophy of religion			DS	yntax
		E				1 E S	emantics
			History of Western thought			FP	ragmatics
		C	History of Eastern and Japanese thought Comparative history of thought				Discourse analysis cripts and orthography
			History of religious thought				exicography
2805		E	History of social thought	3001	Linguistics	K S	ociolinguistics
		F	History of political thought			L P	sycholinguistics
			History of scientific thought				Biolinguistics
	A th - ti /		History of art theory Aesthetics			N F	Historical linguistics Prench linguistics
2806			Art history				German linguistics
			,	-			Chinese linguistics
Disc	ipline: The arts	5				s C	Other languages
Item Number	Research Field	Key	word			ТЕ	Endangered and minority languages
	G. 1 C.1		Musicology				honetics/Phonology
			Theory of arts				Grammar
2851		C	Various studies on arts Culture and representation	-			Morphology, Semantics Vriting systems
		E	Popular arts	-	Japanese	ES	tylistics
	iii generai	F		3002	linguistics	FI	Dialect
			<u> </u>	-		GL	anguage in daily life
Disc	ipline: Literatu	re				ΗF	History of the Japanese language
Item Number	Research Field 1	Key	word			J F	History of Japanese linguistics
		A	Japanese literature in general			A P	Phonetics/Phonology
		В	Ancient literature (Nara and Heian periods)				Grammar
		C	Medieval literature (Kamakura and Muromachi		English	CN	Morphology, Semantics
		-	periods)	3003	linguistics	DS	tylistics
2901	•		Premodern literature (Edo period)  Modern and contemporary literature (after Meiji	-		EF	listory of the English language listory of English linguistics
	literature	E	Restoration)			G F	Diversity of the English language
		E	Kanbungaku (Chinese literature in Japan)				systems of Japanese language education/
			Bibliography/Philology				anguage policy
			Literary criticism/Literary theory	1			heories on qualified teachers/
		_	English literature	1			Classroom research
		В	American literature	1	Japanese language education		Peaching methods/Curriculum planning
2002	Literature in	C	Other literatures in English			DI	heory of second language acquisition
/90/		D	Bibliography/Philology			EE	Educational technology/Teaching
∠9U2	211511		Literary criticism/Literary theory			n	naterials/Educational media in general
<b>2902</b>	2.1.5.1.0.1				1		
2 <del>9</del> 02	Zinginoni	F		]		FN	Mother tongue retention/Bilingual education
<u> </u>				1		G C	Cross-cultural understanding and communication
<b>2902</b>	2			]		G C H J	Mother tongue retention/Bilingual education Cross-cultural understanding and communication apanese affairs History of Japanese language education

(Discipline: Linguistics)

Discipline:	Human	geography
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Item Number	Research Field	So	cree	ening Sub-panel Number / Keyword		
Number	Foreign language education	1	A B C D E	Systems of foreign language education Theory of foreign language education/History of foreign language education Teaching methods/Curriculum planning Theory of second language acquisition Educational technology/Teaching materials/Educational media in general e-Learning/Computer-assisted language learning Cross-cultural communication		
			Н	Educational testing and evaluation Training of foreign language teachers		
		2		English language education in general		
		_	L	Early English education		

A History of geography/Methodology  B Economic geography/Transportation geography  C Political geography/Social geography  D Cultural geography  E Urban geography  F Rural geography  G Historical geography  H Regional environment/Natural hazards  J Geography education  K Regional planning/Regional policy  L Regional geography  M Geographic information system	Item Number	Research Field	Keyword						
N History of cartography	Number	Human	A History of geography/Methodology B Economic geography/Transportation geography C Political geography/Social geography D Cultural geography E Urban geography F Rural geography G Historical geography H Regional environment/Natural hazards J Geography education K Regional planning/Regional policy L Regional geography M Geographic information system						

**Discipline: History** 

Disc	ipline: Cultı	ıral anthropology
Item	Research Field	Keyword

Item	Danasah Eigld	71
Number	Research Field	Keyword
		A World history
	Historical	B History of cultural exchange
3101	studies in	C Comparative history
	general	D Comparative study of civilizations
	general	E Study of historical materials
		F Globalization
		A Ancient history (Nara and Heian periods)
		B Medieval history (Kamakura and Muromachi
		periods)
		C Early modern history (Edo period)
	Japanese	D Modern and contemporary history (after Meiji
3102	history	Restoration)
	ilistory	E Local history
		F Cultural history
		G History of cultural and diplomatic exchange
		H Japanese history in general
		J Research in historical materials
		A Chinese history: Ancient, medieval, and early
		modern period
	Asian history	B Modern and contemporary Chinese history
		C East Asian history
		D Southeast Asian history
3103		E South Asian history
		F West Asian/Islamic history
		G Central Eurasian history
		H Comparative history/History of cultural and
		diplomatic exchange
		A Ancient European history
	B Medieval European history	
		C Modern and contemporary West European history
		D Modern and contemporary East European history
	History of	E Modern and contemporary South European history
3104	Europe and	F Modern and contemporary North European history
	America	G North and South American history
		H Research in historical materials
		J Comparative history/History of cultural and
		diplomatic exchange
		A Archaeology in general
		B Prehistoric studies
		C Historical archaeology
	Archaeology	D Japanese archaeology
		E Asian archaeology
3105		F Study of ancient civilizations
		G Study of material culture
		H Experimental archaeology
		J Research in buried cultural assets
		K Archaeological informatics
<u> </u>		Archaeological informatics

Disc	onne: Cultural anthropology							
Item Number	Research Field	Keyword						
Number	Cultural anthropology/ Folklore	Keyword  A Cultural anthropology B Folklore C Ethnography D Social anthropology E Comparative folklore F Material culture G Prehistoric period/Historic period H Arts/Performing arts J Religion/Rituals K Development/Aid L Gender M Health care N Population/Emigration P Minority Q Ecology/Natural environment						
		R Media						

#### **Area: Social sciences**

	line: Law			ipline: Politics	S	
Item Number R	esearch Field	Keyword	Item Number	Research Field	Key	vword
· · · · · · · · · · · · · · · · · · · ·		A Legal philosophy/Legal theory	raniber		T A	A Political theory
		Research Field   Rese	History of political thought			
					(	Political history
2401 F	undamental					
3401 la	aw		3501	Politics	F	Political process
		F Foreign law			I	Electoral studies
		G Law and policy			C	Public administration
		H Law and economics			F	H Comparative politics
					J	Public policy
		A   Legal philosophy/Legal theory   B   Research Field   Respect   B   A   Political theory   B   Roman law   C   Legal philosophy/Legal theory   B   Research Field   C   Political theory   B   Research Field   C   Political theory   D   Japanese politics   D   Japanese politics   E   Political process   F   Electoral studies   G   Public administration   H   Comparative daw   G   D   Political policy   H   Comparative daw   T   Public policy   D   Japanese politics   T   Public policy   T   Public	Theory of international relations			
					F	Diplomatic history/International history
			2502	International		international pointear economy
3402 P	ublic law	G Comparative constitutional law	3302	relations	I	International cooperation (including theories of
		H Constitutional history				international regime and international
		J Administrative organization law				integration)
					C	Transnational issues
		N Judicial law	Disc	ipline: Econor	mics	
				_		
			Number	Research Field		
т.				Economic		Game theory
3403			3601	theory		
la				uncory	I	Economic theory
			Seconomic   Seco			
				Economic		
3404 Social lav			3602			
3404 S	Social law					
3404 Sc				thought		
2405	N 1 1					
3405 C	riminai iaw			Economic		
			3603		1	
				statistics	1	
3406 C	Civil law			Applied		
3402 Public I  3403 Internat law  3404 Social I  3405 Crimina  3406 Civil la			3604			
				cconomics		
Fundamental law  Fundamental law  Foreign law  C Legal history  D Sociology of law  E Comparative law  Foreign law  G Law and policy  H Law and economics  A Constitutional law  B Administrative law  C Tax law  D Constitutional litigation  G Comparative constitutional law  H Constitutional litigation  G Comparative constitutional law  H Constitutional history  J Administrative procedure  L Administrative procedure  H International law  B Private international law  B Private international law  E International puman rights law  D Law of international puman rights law  D Law of international conomic law  F Nationality law  G International croomic law  E Nationality law  G International croomic law  A Committed law  Labor law  A Criminal law  C Social security law  D Education law  A Criminal law  B Criminal procedure  C Criminology  D Criminal procedure  C Criminology  D Criminal procedure  C Criminology  D Criminal procedure  D Legal person  E Business corporate law  F Financial law  C Civil law  R Commercial law  C Civil procedure  D Legal person  E Business corporate law  F Financial law  C Civil rocedure  D Legal person  Lead person  D Legal person  E Business corporate law  F Financial law  A Civil law  A Civil law  A Civil law  A Civil law  B Commercial law  C Civil rocedure  D Legal person  D Legal person  D Legal person  D Legal education/Legal theory						
		M Civil execution law				
			3605			
3407 N	New fields of			policy		
la	law					Economic development
				D1.11.		
		c  Legai education/Legai tileory				
			3606	finance/		C Monetary economics
			3000	Monetary		
				economics		E International monetary theory
			-			
			3607	Economic		Business history
			3007	history		Business history  Industrial history
				_		- muusutai mstory

**Discipline: Business administration** 

Discin	line:	Psvc	hology	

Discipline: Business administration			Discipline: Psychology						
Item Number	Research Field	Screening Sub-panel Number / Keyword	Item Number	Research Field	Keyword				
vuinoci		A Corporate management	ramoci		A Self-process				
		B Administrative organization			B Social cognition/Emotion				
		C Managerial finance	11		C Attitude/Belief				
		D Management information	1		D Social interaction/Interpersonal relations				
		E Business administration	11		E Interpersonal communication				
3'/()] ]	Business	F Corporate strategy	1		F Group/Leadership				
3,01	administration	G International management	11		G Collective phenomena				
		2 H Human resource management	3901	Social	H Industry/Organization				
		J Management of technology	11000	psychology	J Culture				
		K Corporate social responsibility	11		K Social issues				
		L Business ventures	1		L Environmental issues				
		A Marketing	1		M Media/Electronic network				
		B Consumer behavior	11		N Personnel				
3702	Commerce	C Distribution	11		P Work				
3702	Commerce	D Commerce	1		O Consumer affairs				
		E Insurance	1		A Lifelong development				
		A Financial accounting	1		B Parent-child relationship				
		B Managerial accounting	1		C Developmental disabilities				
		C Auditing	-		D Personality				
		D Bookkeeping			E Learning process				
3703	Accounting	E International accounting	-	Educational	F Teaching method				
			3902	psychology					
		F Tax accounting	+	Payendiogy	G Classroom group/Management H Educational evaluation				
		G Governmental accounting	1		I Educational evaluation				
		H Environmental accounting	]		J Educational counseling				
					K Counseling				
Disci	pline: Sociolog	y			L Student counseling				
Item	Research Field	Screening Sub-panel Number / Keyword			A Psychological disorder				
Number		A Social philosophy/Social thought			B Crime/Delinquency				
		B History of sociology	1		C Psychological assessment				
		C General theory	1		D Psychotherapy				
		D Sociological methodology	1		E Psychological intervention				
		E Social research	-						
			- 1		F Psychological tests G Self-control				
		F Mathematical sociology	3903	Clinical	G Self-control				
		G Social interaction/Social relations	13703	psychology	H Psychological interviewing process				
		H Social group/Social organization	- 1		J Case study				
		J Institutions/Structure/Social change			K Self-help group L Therapist's theory				
		K Knowledge/Science/Technology							
		L Politics/Power/State			M Community support				
2001	G : 1	M Body/Ego/Identity			N Health development				
3801	Sociology	N Family/Kinship/Population			P Rehabilitation psychology				
		P Community/Village/City			Q Health psychology				
		Q Industry/Labor/Leisure	41		A Physiology				
		R Class/Stratification/Social mobility	-		B Sensation/Perception				
		S Culture/Religion/Social consciousness			C Attention				
		T Communication/Information/Media	4		D Learning/Behavior analysis				
		2 U Gender/Generation	41		E Memory				
		V Education/School		Experimental	F Thinking				
		W Medical care/Welfare	3904	psychology	G Language				
		X Social problems/Social movements	-	Forthology	H Motivation				
		Y Discrimination/Social exclusion	11		J Emotion				
		Z Environment/Pollution	11		K Behavior				
		a International community/Ethnicity	11		L Data analysis method				
		A Principles of social welfare/Social welfare theory			M Consciousness				
		B Social welfare ideology/Social welfare history	ــــا		N Principle/History				
		C Social security/Social welfare policy							
		D Social work							
		D Social work E Poverty/Social exclusion/Discrimination							
		D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare							
	Social welfare	D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare  G Social welfare for disabled persons	-						
	Social welfare and social	D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare  G Social welfare for disabled persons  H Social welfare for aged persons							
3802		D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare  G Social welfare for disabled persons  H Social welfare for aged persons  J Community welfare/Community social work							
3802	and social	D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare  G Social welfare for disabled persons  H Social welfare for aged persons	-						
3802	and social	D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare  G Social welfare for disabled persons  H Social welfare for aged persons  J Community welfare/Community social work							
3802	and social	D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare  G Social welfare for disabled persons  H Social welfare for aged persons  J Community welfare/Community social work  K Social work in health care/Care work							
3802	and social	D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare  G Social welfare for disabled persons  H Social welfare for aged persons  J Community welfare/Community social work  K Social work in health care/Care work  L School social work/Forensic social work  M Welfare management/Advocacy/Evaluation							
3802	and social	D Social work  E Poverty/Social exclusion/Discrimination  F Child welfare/Family welfare/Women's welfare  G Social welfare for disabled persons  H Social welfare for aged persons  J Community welfare/Community social work  K Social work in health care/Care work  L School social work/Forensic social work							

#### **Discipline: Educaion**

4001 Ec	search Field		A B C	ening Sub-panel Number / Keyword  Philosophy of education  Educational thought  History of education
4001 Ec			B C	Educational thought
4001 Ed			C	
4001 Ed			-	
4001 Ec			D	Curriculum theory
4001 E		1		Instructional theory
4001 Ec				Academic achievement theory
4001 Ed			G	Educational methods
.001	ducaion			Educational evaluation
				Administration and finance of education
				School management School education
				Early childhood education/Child-care
		2		Lifelong learning
				Adult and community education
				Education at home
			R	Education policy
			Α	Sociology of education
				Economics of education
				Anthropology of education
				Education policy
				Comparative education
				Human resource development/Development
4002 So	ociology of			education School system/School culture
ed	lucation			Teacher/Student culture
				Youth problems
				Academic achievement problem
				Multicultural education
			M	Gender and education
				Education survey method
				Educational information system
				Education of individual subjects (Japanese,
				mathematics, science, social studies,
				geography/History, civics, life environmental
		1		studies, music, art, home economics, technology,
		1		English, information)
	ducation on		R	Education of vocational/Professional subject
4003	hool			(industry, bussiness, agriculture, fishery, nursing,
su	bjects and			welfare)
ac	tivities		C	Curriculum composition/development
			D	Materials development
		2		Education excluding subject (global learning,
		_		moral, special activities)
				Guidance
				Career education  Education for children with disabilities
				Education for children with disabilities Special needs education
				Nursing for infants with disabilities
				Special needs nursing
				Inclusion
				Schools for special needs education
				Classes for special needs education
			Н	Resource room education
_	. ,			Special educational needs
	pecial needs			Learning difficulty
ed	lucation			Intellectual disabilities
				Developmental disabilities  Physical disarders
				Physical disorders  Mental disorder
				Disease/Illness
				Behavioral disabilities
				Delia, ioiai disabilities
			S	Severe multiple disabilities
				Severe multiple disabilities Parenting difficulties/Abuse
			T	Severe multiple disabilities Parenting difficulties/Abuse School maladjustment

Cat	egorv: Scien	Ce	Я	nd Engineering	(F.	animlim - Di	٠,		
Category: Science and Engineering				Item	Research Field		erc	eening Sub-panel Number / Keyword	
Are	a: Mathema	tic	a	l and physical sciences	Numbe	r Research Field	30	_	A Magnetism
Disc	ipline: Mathem	at	ics	3			1		Magnetic resonance
Item Number	Research Field	Sci	ee	ning Sub-panel Number / Keyword				C	Strongly-correlated system
				Number theory	4303	Condensed matter physics		Γ	High temperature superconductivity
				Group theory Arithmetic geometry	4303	II	2		E Metal F Ultralow temperature/Condensed quantum
				Representation theory of groups			-	r	system
4101	Algebra		E :	Lie algebra theory				C	G Superconductivity/Density wave system
+101	Aigcora		F.	Algebraic combinatorics					H Molecular solid/Organic conductor
				Algebraic analysis Algebraic geometry				P	A Statistical physics B Fundamental condensed matter theory
		2	J	Ring theory		Mathematical		C	Mathematical physics
				General algebra		physics/		Г	D Integrable system E Non-equilibrium/Nonlinear physics
				Differential geometry Complex manifold	4304	Fundamental			F Applied mathematics
102	Geometry		C	Гороlogy		condensed		C	G Dynamics
				Complex analytic geometry Differential topology		matter physics			Fluid physics  J Disordered system
				Foundation of mathematics				K	Computational physics
	General		В	Probability theory	ability theory Atomic/	Atomic/		Α	A Atom/Molecule
	mathematics			Mathematical statistics Applied mathematics	4305	Molecular/			B Quantum electronics C Quantum information
1102	(including			Combinatorics		Quantum		Γ	Radiation
1103	Probability theory/			Mathematics in information science		electronics			E Beam physics
	Statistical			Discrete mathematics Computational mathematics		Biophysics/			A Polymer/Liquid crystal  B Chemical physics
	mathematics)	ΙĪ	J	Mathematical model	4306	Chemical		C	Biophysics
				Self-assembly		physics		Γ	Soft matter physics
				Complex analysis Real analysis	Dia.	inline. Feath e			wlawatawa asiawaa
		l H	+	<del>.</del>	Item	Dansanah Eiald	_	_	planetary science
1104	Basic analysis			Functional equation Functional analysis	Numbe	Research Field	K	-	A Earthquake phenomena
	Global analysis		E	Stochastic analysis				E	B Volcanic phenomena
		_	F.	Algebraic analysis				C	Crustal movement/Sea floor crustal movement
			A B	Global theory of functional equation Calculus of variations				E	D Geomagnetism E Gravity
			C	Nonlinear phenomena		man promise som		F	F Observation methods
4105		I	D .	alysis on manifold namical system erator algebra	4401				G Tectonics
						physics			H Internal structure  J Internal variability/physical properties
			G.	Integrable system				K	Solid planets/Satellite/Asteroid
								-	Planet formation and evolution
JISC Item	ipline: Astrono		_					-	Exploration of solid planets
lumber	Research Field	_		ord Optical/Infrared astronomy					N Earthquake disasters and prediction  A Meteorology
			B	Radio astronomy				E	B Physical oceanography
1201	Astronomy		C	Solar physics		Mata and large		C	Land-area water cycle/Material circulation
	, , ,		E.	Astrometry Theoretical astronomy		Meteorology/ Physical			D Water balance E Global environmental system
			F :	X-ray/γ-ray astronomy	4402	oceanography/		F	F Geophysical fluid dynamics
						Hydrology		-	G Climatology
Disc Item	ipline: Physics							-	H Planetary atmospheres
umber	Research Field			ning Sub-panel Number / Keyword				J	J Air-sea interaction
			B	Particle physics (theory) Nuclear physics (theory)				E	A Solar-terrestrial system/Space weather  B Solar wind/Interplanetary space
		1	C	Cosmic ray (theory)		Space and		C	Terrestrial and planetary magnetospheres
	Particle/			Astrophysics (theory) Relativity/Gravitation (theory)	4403	upper			Terrestrial and planetary ionospheres  E Terrestrial and planetary upper atmospheres
1201	Nuclear/			Particle physics (experiment)		atmospheric physics		F	
1301	Cosmic ray/		G :	Nuclear physics (experiment)		F, 5105			Geomagnetic variation
	Astro physics			Cosmic ray (experiment) Astrophysics (experiment)				-	H Plasma waves A Stratum
			K.	Relativity/Gravitation (experiment)				E	B The earth's crust
			L.	Accelerator technology	rator technology			C	Environmental geology
				Particle detectors Semiconductors				E	D Tectonics E Geologic era
			В	Mesoscopic system/Localization	4404	Geology		F	F Earth history
	Condonacd		C	Optical properties				C	Applied geology
	Condensed			Surface/Interface Crystal growth					H Planetary geology  J Quaternary research
1302	matter physics			Cijomi giowni		1	ı	Ľ	Zamomary research
1302	I			Dielectrics				K	K Geologic hazard
1302	I		F :	Dielectrics Lattice defects X-ray/Particle beam				K	K Geologic hazard

Item Number					ea: Chemis	цу
		A	Stratigraphic succession	Disc	cipline: Basic	chemistry
		В	Paleoenvironment	Item Numbe	Research Field	Keyword
		C	Fossil	- Tumo		A Molecular structure
405	Stratigraphy/	D	Phylogeny/Evolution/Diversity			B Crystal structure
	Paleontology		Paleoecology			C Electronic state
		F	Paleobiogeography			D Molecular dynamics
		G	Function/Morphology			E Chemical reaction
			Paleo-ocean			F Reaction dynamics
			Terrestrial and planetary material			G Cluster
			Terrestrial and planetary evolution		Physical	H Solution/Colloid
			Crust/Mantle/Core	4601	chemistry	J Molecular spectroscopy
	Petrology/		Magma/Igneous rock		enemistry	K Molecular excitation process elementary
	Mineralogy/		Metamorphic rock			L Quantum beam
1406	Science of ore	F	Natural and artificial crystals			M Electron/Energy transfer N Surface/Interface
	deposit		Element fractionation			N Surface/Interface P Theoretical chemistry
	deposit	H	Mineral resources			Q Electrochemistry
		J V	Ore deposit formation			R Spin chemistry
		L	Mineral physics Biologic and environmental minerals			S Biophysical chemistry
		_	Element distribution			A Structural organic chemistry
			Isotope/Radiometric age			B Organic reaction chemistry
	Geochemistry/ Astrochemistry	C	Material recycling			C Synthetic organic chemistry
1407			Chemistry of the crust and mantle	4602	Organic	D Organoelement chemistry
			Chemistry of the extraterrestrial material		chemistry	E Organic photochemistry
		F	Atmospheric and hydrospheric chemistry			F Physical organic chemistry
		G	Biosphere geochemistry			G Theoretical organic chemistry
						A Metal complex chemistry
Disc	ipline: Plasma	scie	nce			B Organometallic chemistry
Item Number			word			C Inorganic solid-state chemistry
		Α	Basic studies of plasma			D Solution chemistry
			Plasma applications	4603	Inorganic	E Bioinorganic chemistry
		C	Plasma diagnostic techniques and		chemistry	F Nuclear/Radiochemistry
			instrumentation			G Cluster
		D	D Plasma physics		H Supramolecular complex	
4501	Plasma		Electric discharges			J Polynuclear complex
1501	science		Reactive plasmas			K Coordination polymer
			Space and astrophysical plasmas			<u> </u>
		Н	Burning plasma	Disc	cipline: Appli	ed Chemistry
		-	Plasma chemistry	Item Numbe	Decearch Field	Keyword
		K	Plasma control/Laser	Ivanioe		A Sample preparation
	II.					B Chemical analysis
						C Biological analysis
						D Chemical analysis by nuclear methods
						E Separation analysis
						F Chemical sensors
				4701	Analytical	G Chip analysis
				4/01	chemistry	H Chromatography
						J Instrumental analysis
						K Surface and interface analysis
						L Chemical analysis
						M Environmental analysis
						N Bio-material analysis
						P Biosensors
						A Selective synthesis/reaction
						A Selective synthesis/reaction B Complex/Organometallic catalysis C Fine chemicals

4702 Synthetic chemistry

C Fine chemicals
D Asymmetric synthesis/reaction
E Catalyst design/reaction
F Environmentally friendly reaction

G Reaction field
H Automatic synthesis
J Biotic synthesis technique
K Combinatorial method

Item Number	Research Field	Keyword
tunioci		A Polymer synthesis
		B Polymer reaction/degradation
		C Asymmetric polymerization
		D Polymerization catalyst
		E Non-covalent polymer
	Doleman	F Self-assembled polymer
4703	Polymer	G Polymer structure
	chemistry	H Polymer properties
		J Functional polymer
		K Bio-related polymer
		L Polymer thin film/surface
		M Polymer complex
		N Environment-related polymer
		A Optical properties
		B Electric/Magnetic function
		C Molecular devices
		D Sensors
	Functional	E Molecular recognition
4704		F Supramolecule
4/04	materials	G Liquid crystal/Crystal
	chemistry	H Film/Assembly
		J Surface/Interface
		K Colloid/Ultrafine particle
		L Electrochemistry
		M Functional catalysts
		A Green chemistry
		B Recycle chemistry
		C Low environmental load substances
		D Biodegradable substances
1705	Environmental	E High-functional catalysts
+/03	chemistry	F Trace environmental substance evaluation
		G Reaction media
		H Safety chemistry
		J Micro-chemical methods
		K Highly efficient reaction design
		A Biofunctional chemistry
		B Biomacromolecule chemistry
		C Bioinorganic chemistry
		D Natural products chemistry
	Bio-related	E Bioorganic chemistry
4706		F Biotechnology
	Chemistry	G Nucleic acid/Protein/Sugar chemistry

(Discipline: Materials chemistry)

Item Number	Research Field	Keyword
4803	Inorganic industrial materials	A Crystalline/Polycrystalline materials B Glass C Ceramics D Fine particles/Powder E Layered/Intercalation compound F Ion exchanger/conductor G Inorganic synthesis H Photocatalyst J Electrochemistry K Nanoparticle L Porous materials M Hybrid materials
4804	Polymer/ Textile materials	A Polymeric material properties B Polymeric material synthesis C Textile materials D Rubber materials E Gel F Polymeric functional materials G Natural/Bioplymeric materials H Polymer alloy J Polymer composites K Polymer/Textile processing L Computational polymer science

#### **Discipline: Materials chemistry**

Item Number	Research Field	Keyword
	Functional materials/ Devices	A Liquid crystal materials/devices B Organic EL devices C Organic semiconductor devices D Optical materials/devices E Organic electronic materials/devices F Devices for electric conduction G Molecular devices H Electric/Magnetic devices J Battery K Condenser (Capacitor) L Biofunctional applied devices
4802	Organic industrial materials	A Functional organic materials B Hybrid materials C Surfactant D Dye/Pigment E Dye/Color materilas F Printing/Ink G Resist H Glue J Selective reaction K New functional group

L Biofunctional materials

G Nucleic acid/Protein/Sugar chemistry

H Enzyme chemistry
J Biological recognition/Biofunctional chemistry
K Post-genomic drug discovery

#### **Area: Engineering**

Item Number Research Field

(Discipline: Mechanical engineering) Keyword

	Area. Engineering			Item Numbe	Research Field	Keyword			
Disci	Piscipline: Applied physics				A Modeling for production				
Item	Research Field	_	word	$\exists I$		B Production Systems			
Number	resourch rich		Metal			C Production management			
		E		-	Production	D Process design			
		I -	C Magnetic material		anginagring/	E Machine tools			
			Superconductor	5002	Processing	F Forming process			
		F	<u> </u>		studies	G Cutting/Grinding process			
		F	Dielectric		studies	H Special processing			
			Ceramics			J Ultraprecision machining			
	Applied		Crystal growth			K Nano/Micro machining			
	materials	J	- P			L Precise positioning/Measurements			
4901	science/	K				A Design engineering			
	Crystal	L	Treterost detaile			B Shape modeling			
	engineering	N	Optical properties		Design	C Computer aided design (CAD)/Computer aided engineering (CAE)			
		P	1 di tio di dic		engineering/	D Synectics			
		Ç			Machine	E Dynamics of mechanisms			
			New functional materials	5003	functional	F Machine elements			
		S			elements/	G Functional components			
		T			Tribology	H Failure diagnostics			
		Ū			THOOLOGY	J Safety design			
			Thin film			K Life cycle analysis and design			
	Thin film/		Surface			L Tribology			
	Surface and	C				A Computational fluid dynamics			
4902	interfacial		Plasma process			B Flow measurements			
	physical	E				C Compressible/Incompressible flow			
	properties	F				D Turbulent flow			
	properties	H				E Multi-phase flow F Reacting flow			
			Optics		Fluid	G Non-Newtonian flow			
		E		5004	engineering	H Micro flow			
		C			engineering	J Molecular fluid dynamics			
		Г				K Bio-fluid mechanics			
	Applied optics/ Quantum optical engineering	E	Quantum electronics			L Environmental fluid mechanics			
		F				M Acoustics			
			Nonlinear optics			N Fluid machinery			
4903		Н	Commence of the commence of th			P Fluid power systems			
		J				A Thermophysical property			
		K	Opt-electronics Micro-and nano-optics			B Convection C Heat conduction			
		N	Optical sensing			D Thermal radiation			
		N				E Mass transfer			
		P			Thermal	F Combustion			
		Ç		5005	engineering	G Micro/Nanoscale heat transfer			
		Α				H Thermal engine			
		Е	Heats			J Refrigeration/Air conditioning			
		C	Sounds			K Heat transfer equipment			
			Waves			L Energy use			
	Applied		Electromagnetism Physical measurements and control			M Bio-thermal engineering A Dynamics			
4004	physics,	G				B Dynamic design			
7704	general	H				C Vibration mechanics			
	general	J				D Vibration analysis/tests			
		K		11		E Control instrument			
		I	<del> </del>	5006	Dynamics/	F Motion control			
		_	Radiation		Control	G Vibration control			
		N		<b>  </b>		H Mechanical measurements			
		Α	Mathematical engineering (mathematical			J Aseismic/Seismic isolation design			
4005	Engineering	-	analysis/plan/design/optimization)			K Vehicle and transport system control			
4905	fundamentals		Physical mathematics Computational mechanics			L Acoustic information/Acoustical control M Acoustic energy			
			Simulation engineering	$\dashv$		A Robotics			
	<u> </u>	l l	Johnandron engineering	ㅡ		B Mechatronics			
Dicci	ipline: Mechan	nicol	Lengineering			C Micro/Nano mechatronics			
Item	r e	_	0 0	<b></b>	Intelligent				
Number	Research Field	- 1	word	<b>—</b>	mechanics/	D Biomechanics			
		Α	Material design/Process/Mechanical	5007		E Softmechanics			
			properties/Evaluation	_	Mechanical	F Information equipment/Intelligent (smart)			
		Е			systems	machine systems			
	Materials/	C	27 1 27 2 27 27 27 27 27 27 27 27 27 27 27 2	[]		G Precision mechanics and systems			
5001	Mechanics of	Е		_		H Human-machine systems			
2001	materials	E				J Information systems			
	materials	F							
			Environments Reliability						
			CINCHADIIIIV	1					
		J	Biomechanics Micromechanics of materials						

Discipline:	Electrical	and elec	rtronic	engine	ering

(Discipline: Civil engineering)

	_		nd electronic engineering	(D1S	cipline: Civil er	Ť		
Item Number	Research Field		word	Number	Research Field	٠.	_	word
		Α	Electrical energy engineering			1 H		Applied mechanics
	Power		(generation/conversion/storage, and energy		Structural		В	Structural engineering
	engineering/		conservation)		engineering/	1 1	C	Steel Structure
5101	Power		Power system engineering	41	Earthquake	1 1	D	Control of Structure
5101	conversion/	C	Electric machinery	5202	engineering/	1 1		
	Electric	D	Power electronics		Maintenance	1 1		
	machinery	E	Effective utilization of electric energy Electric/Electromagnetic compatibility		management		G	Earthquake engineering Earthquake resistant structure
	,	- F	Illumination/Lighting	-11	engineering		<u>п</u>	Earthquake disaster prevention
		A		1				
		'	(semiconductor, dielectric, magnetic, fero-			-	A	5 5
	Electronic		dielectric, organic, insulator, superconductor,			1 1		
5102	materials/		etc.)			1 1		
	Electric	B	Thin film/Quantum structure		Geotechnical	1 1		
	materials	C	Thick film	5203	engineering	1 1	E	
			Fabrication/Characterization method				F	Ground and structure
		Α	Electron device/Integrated circuits				G	Geotechnical disaster prevention
		В	Circuit design/Conputer aided circuit design				Η	Geo-environmental engineering
			(CAD)					11) 41441165
			Optical devices and circuits					Environmental hydraulics
	Electron	D	Quantum devices/Spintronic devices	41	** 1 1:	1 L		)
5103	device/		Microwave/Millimeter wave	5204	Hydraulic			River engineering
3103	Electronic		Wave technology and applications Bio devices		engineering		F	
	equipment		Information storage/record	-			C	Coastal engineering Port engineering
			Display	1			Н	
		K		1			A	Infrastructure planning
		L		1			В	
			Interconnect, packaging and system integration				C	
		A	Electronic circuits and systems		Civil		D	
			Nonlinear theory/circuits		engineering			planning
		C	Information theory	5205	project/		Е	Transportation planning
	Communication/ Network engineering		Signal processing		Traffic		F	Traffic engineering
		E	Communication systems (wireless, wired,		engineering		G	rum my engineering
			satellite, optical and mobile)				Η	Surveying remote sensing
5104		F	Modulation/Demodulation	_			J	Landscape architecture/Design
			Coding/Decoding	-				
		J	Protocol					
			Antennas Routing/Switching					Environmental systems Environmental conservation
				5206	Civil and	1 1		
		l —	Multimedia	5206	environmental	1 1	E	
		N			engineering		F	Soil and water environments
		Α					G	
		В	Social engineering				Η	Ecological engineering
5105	System		Industrial engineering and management	_				
5105	engineering	D	Environmental engineering			ecti	ur	re and building engineering
		E	Production system engineering	Item Numbe	Research Field	Ke	eyv	word
_		F	Biological engineering			П		Load theory
		Α	Measurement technology	]		1 F		Structural analysis
		В	Sensing devices	41			C	Structural design
5106	Measurement	C	Measuring/Analyzing instruments	41		1 1		
	engineering		Measurement systems	41	Building	1 1	Е	Steel structure
		F		5201	structures/	1 1	F	
			Sensing information processing Control theory	3301		1 1	G H	
			System theory	11	materials		I	Maintenance technology
	Control	C	Knowledge-based control			-	K	Earthquake disaster prevention
5107	engineering	D	Control technology	1			L	Structure control
	5 6	E	Control systems	]			M	Earthquake resistant design
		F	Complex systems	[		Ш	N	Wind resistant design
_	_						A	Sound/Vibration environment
Disci	pline: Civil en	gine	eering	_			В	Light environment
	Research Field	Key	word	11			С	Heat environment
Item Number	Research Field		Concrete	1	Architectural	1 1	D	
Item Number	Research Fleid	I A		5302		1 1		
			Steel		environment/	I L		
	Civil	B	Steel Bituminous material	1 3302	equipment		F	Environmental psychology/physiology
	Civil engineering	B C D	Bituminous material Composite material/New materials				G	Building equipment
Number	Civil engineering materials/	B C D	Bituminous material Composite material/New materials Timber	-			G H	Building equipment Fire engineering
Number	Civil engineering materials/	B C D E F	Bituminous material Composite material/New materials Timber Construction	-			G H J	Building equipment Fire engineering Global/Urban environment
	Civil engineering materials/ Construction/ Construction	B C D E F	Bituminous material Composite material/New materials Timber Construction Maintenance/Management	- 3302			G H J	Building equipment Fire engineering Global/Urban environment
Number	Civil engineering materials/	B C D E F	Bituminous material Composite material/New materials Timber Construction				G H J	Building equipment Fire engineering Global/Urban environment

(Discipline: Architecture and building engineering)

(Discipline: Material engineering)

	cipline: Archite	cture and building engineering)	(Discipline: Materi	al engineering)
Item Number	Research Field	Keyword	Item Number Research Field	Keyword
5303 5304	Town planning/ Architectural planning  Architectural history/design	A Planning theory B Design theory C Housing theory D Building types/District facilities E Urban/Regional planning F Administration/System G Building/Urban economy H Production management J Disaster prevention planning K Landscape/Environmental planning A Architectural history B Urban history C Architectural theory D Design E Style F Landscape/Environment G Preservation/Renovation	Structural/ 5404 Functional materials	A Strength/Toughness/Fracture/Fatigue/ Creep/Stress corrosion cracking/ Superplasticity/Wear  B Nanostructure C Magnetic materials D Electronic/Information materials E Hydrogen storage materials F Fuel cell materials G Materials for heat and energy H Sensor materials/Optical functional materials J Cryogenic material K Earthquake resistant/ Environmental resistant materials L Biomaterials M High-temperature materials N Amorphous materials P Intelligent/Safety/Relieved material Q New functional materials R Environment-conscious materials
Item	Research Field	Keyword	1	S Functional polymeric material
5401	Physical properties of metals	A Electronic/Magnetic properties B Properties of semiconductors C Thermal properties D Optical properties E Mechanical properties F Superconductor G Properties of thin films H Properties of nano materials J Computational material properties K Surface/Interface/Grain boundary properties L Fine particulate/Cluster M Quasicrystals N Radiation damage P Atomic/Electronic structure Q Lattice defects R Diffusion/Phase transformation/Phase diagram	Material 5405 processing/ treatments	A Surface/Interface control B Corrosion anticorrosion C Plastic forming D Powder metallurgy E Heat treatment F Joining/Welding G Crystal/Microstructure control H Nano process J Microfabrication K Plasma treatment/Laser processing L Thermal spraying/Coating/Particle deposition process M Plating process N Non destructive inspection P Thin film process Q Nonequilibrium process
5402	Inorganic materials/ Physical properties	A Crystal structure/Microstructure control  B Mechanical/Electronic/Electromagnetic/ Optical/Thermal properties  C Surface/Interface properties  D High-temperature properties  E Grain boundary characteristics  F Functional ceramics  G Functional glass  H Structural ceramics  J Carbon material  K Dielectric materials  L Inorganic polymer		R Mechanical alloying S Precision molding process T Electrocatalysis U Repair/Life-prolonging treatment V Electrical connection/Wiring A Reaction/Separation B Materials refining C Melting/Solidification D Foundry E Crystal growth F Microstructure control G Purification
5403	Composite materials/ Physical properties	A Organic/Inorganic fibers  B Matrix materials C Composite effect D Dispersion strengthening E Continuous fiber reinforcement F Fiber reinforced metals (FRM) G Fiber reinforced plastics (FRP) H Fiber reinforced celamics (FRC) J Functionally gradient K Composite particle L Composite fracture M Composite deformation stress N Interface failure P Reaction sintering Q Complex polymer	5406 Metal making engineering	H Various manufacturing process  J Energy saving process  K Extreme condition/Environmental conscious process  L Ecological materials  M Resource separation/Resource conservation  N Waste management  P Material recycling process  Q Recycling  R Materials engineering for safety

G Marine engine/Fuel
H Marine environment

J Marine resources/Energy

K Ocean exploration/Equipment
L Undersea and subsea engineering
M Polar engineering

	ipline: Process	engineering	(Discipline: Integra	ated engineering)
Item Number	Research Field	Keyword	Item Number Research Field	Keyword
		A Equilibrium/Transport properties B Fluid/Heat transfer/Mass transfer op	peration	A Applied geology B Geo-engineering
		C Distillation		C Remote sensing
	Duom aution in	D Extraction		D Monitoring in Geo-engineering
	Properties in chemical	E Absorption		E Earth systems
		F Adsorption	Fouth greaters	F Resource exploration
5501	engineering	G Ion exchange	Earth system	G Natural resource development
3301	process/ Transfer	H Membrane separation  J Hetero-phase separation	5603 and resources	H Resource evaluation J Mineral processing
		K Ultra high separation	enginnering	K Underground disposal and storage
	operation/	L Stirring/Blending operation		L Contaminated soil remediation
	Unit operation	M Granular and powedered materials of	pperation	M Development and utilization of deep underground
		N Crystallization procedure		N Material resources
		P Thin film/Microparticle forming open	eration	P Renewable source/Energy
		Q Polymer processing		Q Economic resources
		A Gas/Liquid/Solid/Supercritical fluid B Novel reaction field	operation	A Waste reduction B Reuse
		C Reaction rate		C Cascade recycling/Utilization
		D Reaction mechanism	<del></del>	D Recycling
	Reaction	E Reaction apparatus		E Waste valuable recovery
		F Materials synthesis process	Recycling	F Solid-solid separation
5502	engineering/	G Polymerization process	5604 Recycling engineering	G Purification of materials
	Process	H Measurement		H Proper treatment and disposal of waste
	system	J Sensors		J Recycling and LCA
		K Process control		K Environmentally conscious design
		L Processing system design		L Green productions
		M Process information processing N Process operation/Facilities manage	ment	M Zero emission A Core plasma
		A Catalysis reaction	ment	B Peripheral plasma
		B Catalyst preparation chemistry		C Plasma measurement
	Catalyst/ Resource chemical process	C Catalyst performance analysis		D Plasma-wall interaction
		D Energy conversion process	Niveleer	E Theoretical simulation
5503		E Fossil fuel effective utilization techn		F Low activation material
		F Resources/Energy effective utilization	on Tusion studies	G Fuel/Blanket
		technology		H Electromagnet
		G Resources/Energy saving technolog	У	J Inertial confinement fusion
		H Combustion technology		K Fusion systems engineering
		A Biocatalyst engineering B Biofunction engineering		L Safety/Biological influence A Radiation engineering/Beam science
		C Food engineering		B Reactor physics/Nuclear data
		D Medicochemical engineering		C Nuclear measurements/Radiation physics
	Biofunction/	E Applied bioelectrochemistry		D Thermo-hydrodynamics/Structure
5504	Bioprocess	F Bioproduction process		E System design/Safety engineering
	Dioprocess	G Bioreactor	5606 Nuclear	F Nuclear material/Nuclear fuel
		H Biosensor	engineering	G Isotope/Radiation chemistry
		J Bioseparation K Bioinformatics		H Fuel cycle J Backend
		L Genomic engineering	<del></del>	K Advanced reactors
		2 Genomic engineering	<del></del>	L Health physics/Environmental safety
Disc	ipline: Integrat	ed engineering		M Social environment of nuclear energy
Item	Research Field	Keyword		
Number	Research Field		I	A Energy generation/conversion
		A Aerodynamics B Structure/Material	Energy	B Energy transport/storage C Energy saving/Efficient use of energy
		C Vibration/Strength	5607 engineering	D Energy system
		D Guidance/Navigation/Control		E Environmental harmony
	Agragnasa	E Propulsion/Engine		F Natural energy use
5601	Aerospace	F Flight dynamics		
	engineering	G Aerospace system		
		H Design/Instrumentation		
		J Special aircraft		
		K Space utilization/Exploration L Aerospace environment		
		A Propulsion/Vessel dynamics		
		B Material/Structural mechanics		
		C Marine hydrodynamics		
		D Planning/Design/Production system		
	Naval and	E Shipbuilding/Equipment		
5602	maritime	F Maritime transportation system		
	engineering	G Marine engine/Fuel H Marine environment		
		LHUMATINE ENVIRONMENT	•	

#### **Category: Biological Sciences** Discipline: Biological science Research Field Area: Biology A Carbohydrate B Lipid Discipline: Basic biology Research Field Nucleic acid Keyword A Molecular genetics D Protein B Cytogenetics E Enzyme C Population genetics F Gene and chromosome D Evolutionary genetics G Biological membrane and receptor E Human genetics H Intercellular matrix Structural 5801 J Organelles F Genetic diversity biochemistry Genetics/ G Genome architecture, reorganization, and K Posttranslational modification Genome 5701 maintenance L Molecular recognition and interaction dynamics H Genomic function and expression M Denaturation and folding N Structural analysis and prediction J Developmental genetics K Behavioral genetics P NMR L Mutagen Q Mass spectrometry M Chromosome R X-ray crystallography N Model organism S High resolution electron microscopy A Population A Catalytic mechanism of enzyme B Society B Regulation of enzyme C Species interaction C Allosteric effect D Assemblage D Enzyme abnormality E Ecosystem E Gene expression and replication Ecology/ 5702 F Biological energy transduction F Evolutionary ecology Environment G Behavioral ecology G Metalloprotein H Natural environment H Biological trace element Functional 5802 J Physiological ecology J Hormone and bioactive substances biochemistry K Molecular ecology Cell signal transduction L Conservation ecology L Membrane transport and transporters A Plastid function/Photosynthesis M Proteolysis B Phytohormones/Growth and N Cytoskeleton Plant development/Totipotency P Immunobiochemistry molecular Organelles/Cell wall Q Glycobiology 5703 biology/ D Response to environmental factors R Bioelectrochemistry Plant E Plant-microbe interaction/Symbiosis A Structure, dynamics and functions of proteins physiology and nucleic acids B Motility/Transport F Metabolism G Plant molecular function C Biomembranes/Receptors/Channels A Animal morphology B Plant morphology D Photobiology C Microbial morphology E Cellular signaling and dynamics D Comparative endocrinology F Neural information processing Morphology/ 5803 Biophysics 5704 E Molecular morphology G Theoretical biology/Bioinformatics Structure H Structural biology F Morphogenesis G Tissue construction J Folding H Microstructure K Prediction of structure and function J Microscopical technique L Single-molecule measurements and manipulation M Bioimaging A Metabolism Animal N Non-equilibrium/Complex systems B Neurobiology physiology/ 5705 C Neuroethology A DNA replication Animal D Behavioral physiology B DNA damage and repair behavior E Animal physiology and biochemistry C Recombination A Metabolism physiology D Transcription Molecular B Classification system E RNA C Evolution F Translation biology G Protein modification D Genetic diversity E Population/Species diversity H Intermolecular interaction Biodiversity/ J Chromosomal organization, function and 5706 F Community/Ecosystem diversity Systematics G Taxonomic character segregation H Phylogenetics A Cell structure and function B Biomembrane J Speciation K Natural history Cytoskeleton/Cell motility

5805 Cell biology

D Intracellular signaling
E Intercellular communication

K Protein degradation
L Chromatin

J Cell-cell interaction/Extracellular matrix

F Cell cycle
G Cytokinesis
H Nuclear structure

L Museum

(Discipline: Biological science)

#### **Area: Agricultural sciences**

Item Number	Research Field	Ke	yword		ea: Agricult			
Number		-	A Cell differentiation	Dia	ainlina. A guian	.14	• •••	
		ŀ		Item	cipline: Agricu			
		L	B Stem cells	Numbe	Research Field	K	Ť	word
			Germ layer				A	Plant breeding/Plant genetics
	Developmental		formation/Gastrulation/Somitogenesis					Breeding theory
5806	biology		D Organogenesis					7 8 7
	biology		E Fertilization					Plant molecular breeding
			F Reproduction/Germ cells					Resistance/Tolerance
			Regulation of gene expression		Breeding		F	Generation of genetic diversity/Analysis of
			H Developmental genetics	600	science			genetic diversity
			J Evolution and development					Gene/Protein
			A Origin of life					Chromosome engineering
			B Origin of eukaryotic organisms					B
			C Origin of organelles					, , , , , , , , , , , , , , , , , , ,
			Origin of multicellularity				L	Developmental physiology/
	Evolutionary	- 1	Molecular evolution					Developmental genetics
5807	biology	L	F Morphological evolution					
		-	G Evolution of function				В	Industrial crop
			H Evolution of genes					8 1
		-	J Evolutionary biology in general	6002	Crop science/			
		-	K Comparative genomics		Weed science		E F	Crop quality/Crop processing
			L Experimental evolutionary biology					Weed science Weed control
	ipline: Anthrop	ol	ogy				Н	Wild plant resources
Item Number	Research Field	Ke	yword				A	Fruit tree
			A Morphology					
			B Prehistory/Chronology				C	Flower
			C Biomechanism		Horticulture/		D	Use of horticultural plants
			Molecular anthropology/Genetics	600	Landscape		Е	Storage of horticultural plants/
			E Ecology		architecture			Processing of horticultural plants
	Physical	ı	F Primates		arcintecture		F	Protected horticulture
5901	anthropology	Ī	G Evolution				G	Landscaping
	anunopology		H Growth/Aging					Landscape formation/Landscape conservation
			J Society				J	Open space planning
			K Behavior/Cognition					Pathologic
		L	L Reproduction/Development					Pathological physiology
			M Bone archaeology					Plant-pathogen interactions
			N Geographic diversity	6004	Plant			Tutilogementy fuetor, virulence fuetor
			A Physiological anthropology		pathology			
		-	B Ergonomics					
			C Physiological polymorphism					Phylogenetic systematics
			D Environmental adaptive capacity			-	-	Infection/Proliferation
			E Systemic relationship				A	
2002	Applied		F Functional potential G Techno-adaptability				С	Animal pest management Insect properties development and utilization
3902	anthropology	-	H Somatometry					Insect properties development and utilization  Insect pathology
		11 5	J Clothing		1		F	Sericulture/Silk
		1	K Somatology/Adaptation	600	Applied		F	Insect ecology
			L Constitution/Health		entomology			Insect physiology
			M Forensic anthropology		1.2.20			Insect classification
			N Medical anthropology					Insect pest management/Biological control
			Treatest antinopology					Insect molecular biology
				1		- 1	L	indeed more under the contract of the contract

Item		tural chemistry	Item	ipline: Fo
Number	Research Field	Keyword	Number	Research Fie
		A Plant physiology, growth and development		
		B Plant nutrition and metabolism C Plant metabolic regulation		
	Plant	D Fertilizer		
6101	nutrition/	E Soil classification		
0101	Soil science	F Soil physics	6201	Forest sci
	3011 SCICILCE	G Soil chemistry		1 orest ser
		H Soil organisms		
		J Soil environment		
		A Microbiology		
		B Fermentative production		
		C Microbial classification		
		D Microbial genetics/breeding		
		E Microbial enzyme		
		F Microbial metabolism		
6102	Applied	G Microbial function		
	microbiology	H Microbial application		*** 1 .
		J Environmental microorganism	$ ^{6202}$	Wood sci
		K Antibiotic production		
		L Microbial ecology M Control of microbe		
		N Genetic resources		
		P Gene expression		
		A Animal biochemistry		
		B Plant biochemistry		
		C Enzyme application	Disc	ipline: Fis
			Item	Research Fie
		D Genetic engineering	Number	Kesearch Fie
		E Protein engineering		
	A12	F Bioengineering		
6103	Applied	G Metabolic engineering		
	biochemistry	H Cell/Tissue culture		
		J Enzyme chemistry K Metabolism and physiology		
		L Gene expression		
		M Production of useful material	—     6301	General
		N Cellular response	- 0301	fisheries
		P Signal transduction		
		Q Trace element		
		A Bioactive substance		
		B Regulator of cell function		
		C Pesticide science		
		D Plant growth substance		
	Bioproduction	E Signal molecule		
	chemistry/	F Biosynthesis		
6104	Bioorganic	G Natural products chemistry		
	chemistry	H Bioinorganic chemistry		
	chemistry	J Physical chemistry		Eigh aniga
		K Analytical chemistry	6302	Fisheries
		L Organic chemistry M Bioregulatory chemistry		chemistry
		N Molecular recognition		
		A Food chemistry		
		B Provisions chemistry		
		C Food biochemistry		
		D Food physics		
		E Food engineering		
		F Food function		
6105	Food science	G Food preservation		
		H Food manufacturing/processing		
		J Nutritional chemistry		
		K Nutritional biochemistry		
		L Food safety		
		M Food analysis		

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Item Number	Research Field	Keyword
		A Forest productivity/Tree breeding
		B Forest ecology/Forest protection/Forest
		conservation
		C Forest biology
		D Forest management/Forest policy
6201	Forest science	E Forest landscape
		F Forest utilization
		G Revegetation/Environmental conservation forest
		H Erosion control/Erosion and torrent improvement
		J Landcollapse/Landslide/Mudflow
		K Water conservation/Water quality
		A Wood anatomy/Wood formation
		B Materials/Physical properties
		C Cellulose
		D Lignin
		E Extractives/Minor extractives
		F Chemical processing
6202	Wood science	G Preservation/Wood culture
		H Drying/Machining
		J Adhesion/Wood based material
		K Strength/Wooden construction
		L Habitability/Sensibility
		M Woody biomass
		N Pulp/Paper

isheries science

Item Number	Research Field	Keyword
Number 6301	General fisheries	A Taxonomy B Development C Morphology D Physiology E Ecology/Behavior F Fishery G Resources/Resource management H Aquaculture J Genetics/Heredity/Breeding K Fish disease
-		L Aquatic environment/Conservation M Algae/Seaweeds N Plankton P Microorganisms Q Harmful algae
6302	Fisheries chemistry	A Biochemistry B Metabolism/Enzyme C Fish nutrition D Molecular biology E Bioengineering F Biopolymer G Natural products chemistry H Analytical chemistry J Food chemistry K Food processing/Preservation L Hygiene/Food sanitation M Food microorganism

Discipline: Agro-economics

Discipline:	Zootechnical	science/V	/eterinary	medical	science

Item Number	Research Field	Keyword	
	Research Field	A Farm management B Agricultural policy C Agricultural economy D Agricultural finance E Agricultural history F International agriculture	
6401	Agronomy	G Regional planning H Rural society J Agriculture and environment K Food system L Marketing M Food safety N Agricultural ethics	

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Discipline: Agro-engineeri	ng

Item Number	Research Field	Keyword
		A Hydraulics
		B Hydrology
		C Soil physics
	T	D Soil mechanics/Applied mechanics
	Irrigation,	E Land improvement facilities
	drainage and	F Material/Construction
6501	rural	G Irrigation and drainage
0501	engineering/	H Land improvement/Agricultural land use planning
	Rural	J Regional planning/Community development
	planning	K Regional environment/Countryside landscape
	1 0	L Rural ecosystem
		M Water pollution/Water environment
		N Material circulation
		P Soil conservation/Disaster prevention
		A Agricultural production environment
		B Bioproduction machinery
		C Postharvest engineering
		D Bioproduction system
		E Farming technology management
	A . 1, 1	F Agricultural labour science
c500	Agricultural	G Supply chain management
6502	environmental	H Environment control in biology
	engineering	J Greenhouse horticulture/Plant factory
		K Bioprocessing
		L Natural energy use M Agricultural meteorology/Micrometeorology
		N Meteorological disasters
		P Global warming impacts
		Q Greening environment
		A Image processing/Image recognition
		B Nondestructive measurement
		C Bioinstrumentation
		D Biosensing
		E Bioinformatics
		F Remote sensing
	Agricultural	G Geographic information system
6503	information	H Modeling/Simulation
	engineering	J Computer network
		K ICT/Knowledge processing
		L Agricultural robotics
		M Precision agriculture
		N Bioenvironmental information
		P Agricultural information
		Q Farming information

٦	Item	Research Field	nical science/Veterinary medical science  Keyword
-	Number		A Grassland ecology
-			B Grassland ecology
-			C Grassland utilization
-		Zootechnical	D Feed/Feedstuffs
		science/	
-	6601		E Nutrition/Feeding
		Grassland	F Livestock production system
-		science	G Livestock management/Welfare
-			H Wild animal management/utilization
-			J Animal product utilization  K Livestock biomass
			A Breeding
-			B Reproduction
-			C Metabolism/Endocrine control
_		Applied	D Functional substance
	6602	animal	
_	0002	science	E Developmental biotechnology
		Selence	F Cloned livestock
			G Livestock genome
			H Wildlife protection/Proliferation
			A Hereditary/Genetics
_			B Embryology/Fetal development
		Basic	C Physiology
_			D Morphology
		veterinary	E Pharmacology
5	6603	science/	F Pathology
	0005	Basic	G Pathological condition
		zootechnical	H Pathogenic microorganism
_		science	J Parasitology
_			K Immunology
_			L Biological information
			M Behavior
_			A Animal hygiene
_			B Veterinary public health
		Applied	C Toxicology
_	6604	veterinary	D Disease prevention and control
4		science	E Wildlife
_		SCICILCO	F Animal welfare
4			G Zoonoses
_	<u> </u>		H Epidemiology
_			A Internal medicine
4			B Surgery
_			C Clinical breeding/Obstetrics
_			D Diagnostics
4		Clinical	E Laboratory examination
_	6605	veterinary	F Therapy
		science	G Prognosis
_		SCICIEC	H Clinical pathology/Pathological condition
_			J Regenerative medicine
4			K Anesthesia/Analgetics
4			L Radiology
4			M Animal nursing

#### Discipline: Boundary agriculture

11	Item	Research Field	Keyword
H	Number		
11			A Environmental analysis
H			B Environmental pollution
IJ			C Environmental reclamation
Ш			D Environmental purification
Ш		Boundary	E Aquatic pollution
Ш	6701	•	F Resource recycling systems
Ш		agriculture	G Biomass
-			H Genetic resources
			J Biological environment
			K Resource environment balance
			L Regional agriculture
			A Gene/Chromosome engineering
			B Protein/Glycosylation engineering
			C Metabolic engineering
			D Organelle engineering
		A1: a d	E Cellular engineering
		Applied	F Gene expression
	6702	molecular and	G Development/Differentiation control
		cellular	H Cell-cell interaction
		biology	J Intermolecular interaction
			K Biosensor
			L Cellular function
			M Molecular imformation
			N Functional-molecule design
ı			Tunchonal-molecule design

## Area: Medicine, dentistry, and pharmacy

Discipline:	Pharmacy
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Item Number	Research Field	S	reening Sub-panel Number / Keyword
			A Organic chemistry
			B Synthetic organic chemistry
	Cl 1		C Biomolecules
6801	Chemical		D Herbal medicine/Natural products chemistry
	pharmacy		E Mechanistic organic chemistry
			F Heterocyclic chemistry
			G Asymmetric synthesis
			A Physical chemistry
			B Analytical chemistry
			C Galenical pharmacy
			D Biophysical chemistry
	Physical		E Isotope pharmacentical chemistry
6802	pharmacy		F Biocomplex chemistry
	pharmacy		G Molecular structure science
			H Structural biology
			J Imaging
			K Drug delivery
			L Information science
		H	A Biochemistry
			B Molecular biology
		1	C Immunology
	Biological pharmacy	1	D Cell biology
6803			
		H	E Developmental biology
		2	F Pharmacology G Analytical pharmacology
		2	H Neurobiology
			A Medicinal chemistry
			B Medicinal molecular design
	Drug		C Bioactive substance
6804	development		D Functional science of medicinal molecules
	chemistry		E Genomic drug development
			F Regulatory science
		H	A Environmental hygiene
			B Environmental chemistry
			C Environmental dynamics
	Environmental		D Food hygienics
6805	pharmacy		E Chemical nutrition
	F		F Microbiology and infectious diseases
			G Medicinal resources
			H Toxicology
		İ	A Clinical pharmaceutical sciences
			B Pharmacokinetics and drug metabolism
			C Medical pharmaceutics
	3.6 11 1		D Drug information and clinical toxicology
6806	Medical		E Clinical chemistry
	pharmacy		F Drug economics
			G Personalized medicine
			H Social pharmacy
			J Pharmacy management insurance

#### Discipline: Basic medicine

Item Number	Research Field	S	cre	ening Sub-panel Number / Keyword
			Α	Gross anatomy
			В	Functional anatomy
			C	Clinical anatomy
			D	Comparative anatomy
		1	Е	Radiological anatomy
				Physical anthropology
	General		G	Morphogenesis and embryogenesis
	anatomy			Teratology
6901	(including			Experimental morphology
	histology/		K	Anatomical education
	embryology)			Cytology
	cinory orogy)			Histology
			N	Cell differentiation and tissue formation
		2	P	Cell function and morphology
		1	Q	Ultrastructural morphology
			R	Molecular morphology
				Histocytochemistry
			T	Microscopic technology

#### (Discipline: Basic medicine)

Number	Research Field	Sc	Screening Sub-panel Number / Keyword				
			A Molecular and cellular physiology				
			B Biological membrane, channel, transporter				
			and active transport				
			C Receptor and intracellular signal transduction D Stimulation-secretion coupling				
			E Epithelial function				
			F Heredity, fertilization, development and				
			differentiation				
			G Cellular proliferation and cell death  H Cellular motility, morphogenesis and intercellula				
			interaction				
6902	General		J Microcirculation, peripheral circulation,				
0702	physiology		circulation dynamics and regulation				
			K Ventilation mechanics, blood gas function and				
			respiratory control L Gastrointestinal motility, absorption and				
			digestion				
			M Renal function, body fluids, and acid-base				
			balance				
			N Blood coagulation and rheology P Pathophysiology				
			Q System physiology and physiome				
			R Comparative, developmental and genome				
			physiology				
			A Environmental physiology B Physical medicine				
			C Nutritional physiology				
	Environmental		D Adaptive and associative physiology				
	physiology		E Biorhythm F Growth, development, and aging				
	(including		G Stress				
6903	physical		H Space medicine				
	medicine and nutritional		J Behavioral physiology K Biological clock				
	physiology)		L Hyperthermia physiology				
			M Feeding regulation N Social environment				
			P Sleep and arousal				
			Q Reproductive physiology A Kidnev				
			B Smooth muscle and skeletal muscle				
			C Gastrointestinal				
			D Inflammation and immunity E Bioactive substance				
			F Central nervous system and peripheral nerve				
	General		G Spinal cord and pain				
6904	pharmacology		H Receptor, channel, transport system, and signal				
			transduction system  J Cardiovascular system and hematology				
			K Drug discovery and pharmacogenomics				
			L Drug therapy and toxicology				
			M Herbal medicine and pharmacology of natural products				
			A Biomolecular medicine				
			B Cellular biochemistry (cellular medical				
			chemistry)				
	General		C Genomic biochemistry (genomic medical				
6905	medical		chemistry)				
	chemistry		D Developmental medicine				
			E Regenerative medicine F Aging medicine				
			G Higher order life sciences				
	I .	1	H Intracellular signaling				

(Discipline: Basic medicine)

Discipline: Boundary medicine

(Disc	cipline: Basic r	medicine)		cipline: Bound	ary medicine
Item Number	Research Field	Screening Sub-panel Number / Keyword	Item Numbe	Desearch Field	Keyword
2 vannoer		A Abnormal metabolism	ivuinoe		A Hospital administration
	Pathological	B Molecular pathogenesis			B Medical administration
	medical	C Molecular and gene diagnosis			C Medical informatics
	chemistry	D Molecular oncology			D Bioethics
		E Molecular pathogenesis of nutrition			E Medical history
		A Medical genome science			F Medical and pharmaceutical education
		B Molecular genetics		Medical	G Health economics
		C Cytogenetics	7001	sociology	H Risk management
		D Pharmacogenetics		sociology	J Quality of medical care
	Human	E Genetic biochemistry			K Community medicine
6907	genetics	F Genetic epidemiology			L Health policy science
	genetics	G Genetic diagnostics			M Social security science
		H Gene therapy			N Care and welfare
		J Genetic counseling			P Health policy evaluation
		K Bioethics L Epigenetics			Q Infection control science
		A Brain and nervous system			A Clinical pharmacology B Clinical trials and ethics
		B Digestive system and salivary gland			C Pharmaceutical therapeutics
		C Respiratory and mediastinal organs			D Adverse drug reaction and drug interaction
		1 D Cardiovascular system			E Drug transport mechanism
		E Urogenital and endocrine organs			F Pharmacogenomics
		F Bone, joint, muscle, skin and sense organs	$\dashv$		G Clinical isotope pharmacy
6908	Human	G Blood	7002	Applied	H Madical daviage and phormagy
5700	pathology	H Molecular pathology	-1,002	pharmacology	J Drug metabolic enzyme and tranporter
		J Geographic pathology	$-\parallel$		K Imaging
		K Diagnostic pathology	$-\parallel$		L Research using human tissue
		L Telepathology			M Drug dependence and drug sensitivity
		M Environmental pathology			N Genetic diagnosis and gene therapy
		N Transplantation pathology			P Drug delivery
		A Animal			Q Pharmacoepidemiology
		B Cells			A Clinical laboratory medicine
		C Molecules		Laboratory medicine	B Clinical pathology
		D Ultrastructure			C Clinical chemistry
6909	Experimental pathology	Tumors			D Immunology and serology
0909		F Inflammation	7003		E Clinical laboratory system
		G Toxicological pathology	7003		F Genetic testing
		H Developmental pathology			G Clinical microbiology
		J Animal models			H Laboratory oncology
		K Regenerative medicine			J Clinical hematology
		A Helminth			K Physiological laboratory testing
		B Protozoa			A evaluation methods of pain
	Parasitology	C Arthropod vector			B epidemiology of pain
		D Pathogenic animals			C analgesic
6910	(including	E Molecule			D non-drug therapy
	sanitary	F Epidemiology			E pain producing substance (PPS), algesic substance
	zoology)	G Incidence H Genetics			F generating or exacerbating mechanism of pain G neural mechanism of pain
		J Immunity			H hyperalgesia
		K Tropical diseases and international health			J genetic factors of pain
		A Pathogenicity			K development or aging factors of pain
		B Infection immunity			L Gender difference in pain
	Bacteriology	C Epidemiology			M Pain withdrawal reflex
	(including	D Genetics			N numbness, hypesthesia
	mycology)	E Classification	7004	Pain science	P nociceptor
	-, - 51-51/	F Diagnosis			Q histopathic pain, histotoxic pain
		G Structure and physiology			R neuropathic pain, neuralgia
		A Molecules			s psychological pain
		B Cells			T itching, pruritus
		C Whole body			U epidemiology of itching, or pruritus
6912	Virology	D Epidemiology			V antiprurities
0714	v II OlOgy	E Pathogenicity			W itch-producing substances
		F Diagnosis and treatment			X generating or exacerbating mechanism of pruritus
		G Protection/Vaccine			Y neural mechanism of pruritus
		H Prions			Z curettage behavior
		A Cyotkines			a hyperknesis
		B Antibodies			b psychological itching
		C Antigen recognition	_		c development or aging factors of itching
		D Lymphocytes			
		E Innate immunity			
c0.12	T 1	F Acquired immunity			
6913	Immunology	G Mucosal immunity			
-		H Immunological memory			
		J Immune tolerance/Autoimmunity			
		K Immune surveilance/Tumor immunology			
		L Immunodeficiency			

Item	ipline: Society	_			Item	cipline: Clinical			<u> </u>
Number	Research Field	K	-	vord	Number	Research Field	Sc		ening Sub-panel Number / Keyword
				Environmental health					Molecular pathophysiology
				Preventive medicine			1		Neuroimmunology
				Industrial health					Clinical molecular neurogenetics
				Environmental epidemiology	7206	Neurology			Clinical neurophysiology
				Molecular epidemiology			2	E	Clinical neuromorphology
				Medical statistics				F	Clinical neuropsychology
				Bioethics					Functional neuroimaging
7101	Hygiene			Environmental toxicology				A	Disturbances of energy and carbohydrate
				Industrial toxicology			1		metabolism
				Environmental physiology	7207	Metabolomics		В	Metabolic syndrome
				Global environment	/20/	Metabolomics			Abnormal lipid metabolism
				Disaster accident	-		2	D	Disorder of purine metabolism
				rgonomics				E	Abnormal bone and calcium metabolism
				Traffic medicine			H	r	Metabolic electrolyte abnormality Endocrinology
				Food sanitation Community health nursing	7208	Endocrinology			Reproductive endocrinology
				Maternal and child health					Hematology
				School health			1	D	Hematology/Oncology
				Adult health issues				С	Thrombosis/Hematostasis
				Health/Nutrition	7209	Hematology		D	Transfusion medicine
				Health management	, 209	Tiomatology	2	F	Hematopoietic stem cell transplantation
				Health education			آ	F	Hematology/Immunology
	D I II I I I I I			Behavioral healthcare			Ì	G	Immune regulation
7102	Public health/			Population problem			H		Connective tissue diseases
	Health science			International health		Collagenous	1	В	Rheumatology
				Health administration	7210	pathology/	F		Allergology
				Hospital management		Allergology	2		Clinical immunology
				Medical informatics		rinergology			Inflammation
			P	Care insurance				Α	Infection diagnosis
			Q	Epidemiology		Infectious			Infection therapy
			R	Medical examination	dical examination 7211				Infection prevention
			S	Mass-screening					International infection science
		Α	A	Forensics		medicine		Е	Infection epidemiology
	Legal medicine			Medical ethics				F	Opportunistic infection
			C	Criminal psychiatry				Α	Developmental pediatrics
			D	Correctional medicine					Growth and developmental medicine
			E	Compensation science					Pediatric neurology
7103				Medical record management			1	D	Pediatric endocrinology
				msic examination			1	Е	Pediatric metabolism/Nutrition
				Alcohol research					Hereditary/Teratology
				Forensic odontology					Pediatric health
				DNA polymorphism					Pediatric social medicine
			L	Forensic pathology	7212	Pediatrics			Pediatric hematology
							_		Pediatric oncology
Disc	ipline: Clinical	ir	te	rnal medicine			2	L	Pediatric immunology/Allergy/Connective tissue
Item Number	Research Field	Sc	ree	ning Sub-panel Number / Keyword					diseases
Number		h		Psychosomatic internal medicine			H	м	Pediatric cardiology
				Stress science					Pediatric respirology
	General internal	l		Oriental medicine					Pediatric infectious disease
	medicine			Alternative medicine					Pediatric nephrology/Urology
7201	(including			Palliative medicine					Pediatric gastroenterology
	psychosomatic			General medicine					Prenatal diagnosis
	medicine)			Primary care		Embryonic/	Ì		Fetal medicine
				Geriatrics	7213	Neonatal	Ì		Teratology
		Ħ		Upper gastroenterology (esophagus, stomach,	-15	medicine	Ì	D	Neonatal medicine
		1		duodenum)		medicine		F	Premature baby medicine
	I .	2	В	B Lower gastroenterology (small intestine, colon)				Skin diagnostics	
<b>-</b>	a	2		Hepatology			1		Dermatopathology
7202	Gastroenterology		C	Biliary-Pancreatology			Ī		Dermatologic oncology
7202		3		,				D	Laser therapeutics
7202		3	D	Digestive endoscopy		Dermatology			
7202		3 4 5	D E	Digestive endoscopy Clinical cardiology	7214	Dermatology		E	Skin physiology
	Circulatory	3 4 5 1	D E A	Clinical cardiology	7214	Dermatology	_	F	Skin physiology Pigment cell biology
	Circulatory organs internal	3 4 5 1	D E A B	Clinical cardiology Molecular cardiology	7214	Dermatology	2	F	Pigment cell biology
	Circulatory organs internal medicine	3 4 5 1 2 3	D E A B C	Clinical cardiology	7214	Dermatology	2	F G	
7203	Circulatory organs internal medicine Respiratory	3 4 5 1 2 3	D E A B C A	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease	7214	Dermatology	2	F G H	Pigment cell biology Sexually transmitted diseases
7203	Circulatory organs internal medicine Respiratory organ internal	3 4 5 1 2 3	D E A B C A B	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary	7214	Dermatology	2	F G H J	Pigment cell biology Sexually transmitted diseases Infectious diseases
7203	Circulatory organs internal medicine Respiratory	3 4 5 1 2 3	D E A B C A B	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease	7214	Dermatology	2	F G H J	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration
7203	Circulatory organs internal medicine Respiratory organ internal medicine	3 4 5 1 2 3 1	D E A B C A B	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary	7214	Dermatology	2	F G H J A	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration Psychopharmacology
7203 7204	Circulatory organs internal medicine Respiratory organ internal medicine Kidney	3 4 5 1 2 3 1 2	D E A B C A B B A B	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary fibrosis, respiratory infection and other diseases Nephrology Hypertension	7214	Dermatology	2	F G H J A B	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration Psychopharmacology Clinical molecular genetics
7203 7204	Circulatory organs internal medicine Respiratory organ internal medicine Kidney internal	3 4 5 1 2 3 1 2	D E A B C A B B A B	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary fibrosis, respiratory infection and other diseases Nephrology	7214		1	F G H J A B C D	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration Psychopharmacology Clinical molecular genetics Psychophysiology
7203 7204	Circulatory organs internal medicine Respiratory organ internal medicine Kidney	3 4 5 1 2 3 1 2 2	D E A B C A B C A B C C C C C C C C C C C C	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary fibrosis, respiratory infection and other diseases Nephrology Hypertension	7214	Psychiatric	1	F G H J A B C D E F	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration Psychopharmacology Clinical molecular genetics Psychophysiology Psychopathology Social psychiatry Child and adolescence psychiatry
7203 7204	Circulatory organs internal medicine Respiratory organ internal medicine Kidney internal	3 4 5 1 2 3 1 2 2	D E A B C A B C A B C C C C C C C C C C C C	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary fibrosis, respiratory infection and other diseases Nephrology Hypertension Water and electrolyte metabolism			2	F G H J A B C D E F G	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration Psychopharmacology Clinical molecular genetics Psychophysiology Psychopathology Social psychiatry Child and adolescence psychiatry Geriatric psychiatry
7203 7204	Circulatory organs internal medicine Respiratory organ internal medicine Kidney internal	3 4 5 1 2 3 1 2 2	D E A B C A B C A B C C C C C C C C C C C C	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary fibrosis, respiratory infection and other diseases Nephrology Hypertension Water and electrolyte metabolism		Psychiatric	1 2	F G H J A B C D E F G	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration Psychopharmacology Clinical molecular genetics Psychophysiology Psychopathology Social psychiatry Child and adolescence psychiatry Geriatric psychiatry
7203 7204	Circulatory organs internal medicine Respiratory organ internal medicine Kidney internal	3 4 5 1 2 3 1 2 2	D E A B C A B C A B C C C C C C C C C C C C	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary fibrosis, respiratory infection and other diseases Nephrology Hypertension Water and electrolyte metabolism		Psychiatric	2	F G H J A B C D E F G	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration Psychopharmacology Clinical molecular genetics Psychophysiology Psychopathology Social psychiatry Child and adolescence psychiatry Geriatric psychiatry Forensic psychiatry
7203 7204	Circulatory organs internal medicine Respiratory organ internal medicine Kidney internal	3 4 5 1 2 3 1 2 2	D E A B C A B C A B C C C C C C C C C C C C	Clinical cardiology Molecular cardiology Molecular vascular biology Obstructive lung disease Non-obstructive lung disease, pulmonary fibrosis, respiratory infection and other diseases Nephrology Hypertension Water and electrolyte metabolism		Psychiatric	2 1 2	F G H J A B C D E F G H J	Pigment cell biology Sexually transmitted diseases Infectious diseases Inflammation and regeneration Psychopharmacology Clinical molecular genetics Psychophysiology Psychopathology Social psychiatry Child and adolescence psychiatry Geriatric psychiatry

#### (Discipline: Clinical internal medicine)

(Discipline: Clinical surgery)

Item	cipinic. Cilinca	шш	tei	mal medicine)	(Dis	cipline: Clinical	l s	ur	rg	gery)
Number	Research Field	Sci	ree	ning Sub-panel Number / Keyword	Item Number	Research Field	S	cre	ee	ning Sub-panel Number / Keyword
rumoer		ĦТ.	Α	Medical imaging (including diagnostic	- Trainioci		١.	Α	A	Obstetrics
				X-Ray/CT	11	Obototnico on d	1	В	3	Reproductive medicine
				Magnetic resonance imaging	7308	Obstetrics and		C	C	Gynecology
		1		Nuclear medicine (including PET)		gynecology	2	D	)	Gynecologic oncology
				Radiopharmaceuticals/Contrast medium						Menopause medicine
				Radiation safety management	_]					Otology
				Medical imaging technology	_		2			Rhinology
7216	Radiation			Interventional radiology	7309	Otorhinolaryngology	,			Head and neck surgery
7210	science			Angioplasty/Osteoplasty/Vascular embolization	-11,207	Otorimiotal yngology	3			Tracheal esophageal study
				Radiofrequency ablation (RFA)/Stent				E	Ξ	Laryngology
				treatment/Reserver treatment						Pharyngology
				Therapeutic radiology	41					Clinical research
				Radiation oncology	41					Epidemiology study
				Radiotherapy physics				-		Social medicine
				Radiotherapy biology			1			Ocular biochemistry and molecular biology
			Ų	Particle beam therapy	J		1			Ocular cell biology
		_								Ophthalmic genetics
_	ipline: Clinica	ıl su	rę	gery	_			G	ŕ	Ocular histology
Item Number	Research Field	Sci	ree	ning Sub-panel Number / Keyword	7310	Ophthalmology	,	Н	I	Ocular pathology
		ĦΤ.	A	General surgery	11,510	philiniology	F			Ocular pharmacology
				Transplant surgery	11					Ocular physiology
		1	C	Artificial organs science				L	L	Ocular developmental and regenerative biology
7301	General			Vascular surgery	11		2	N	Л	Ocular immunology
7501	surgery			Experimental surgery			_			Ocular microbiology/Infectious diseases
				Endocrine surgery	41					Orthoptic science
				Breast surgery	41					Ophthalmological optics
				Surgical metabolism and nutrition	4			R		Ophtalmic medical engineering
				Esophageal surgery	41			A		Gastroenterology of congenital diseases
				Gastroduodenal surgery	-	Dadiataia				Surgery of congenital caldiovascular diseases
7302	Digestive	2	C	Colorectal surgery	7311	Pediatric				Fetal surgery
7302	surgery	3	D E	Hepatic surgery Surgery for spleen and portal vein	-	surgery				Pediatric urology Pediatric chest surgery
		H	E	Biliary surgery	_					Pediatric enest surgery Pediatric oncology
				Pancreatic surgery						Reconstructive surgery
		1	A	Cardiovascular surgery	-					Wound healing science
	Thoracic surgery			Chest surgery	7312	Plastic				Microsurgery
7303				Mediastinal surgery	11	surgery				Tissue culture/Transplantation
	Suigery			Pleural surgery	11					Regenerative medicine
		11.	A	Head injury				Α	A	Intensive care medicine
			В	Cerebrovascular disorder		Emergency		В		Trauma surger
				Cerebral blood vessel surgery	7313	medicine		C	C	Emergency resuscitation science
		]		Experimental brain surgery		medicine				Acute toxicology
			E	Diagnostic neuroimaging				Е	Ξ	Disaster medicine
7304	Cerebral		F	Brain tumor	-					
7304	Cerebral neurosurgery		F	Functional cranial nerve surgery	Disc	ipline: Dentist	ry	,		
7304			F G	Functional cranial nerve surgery	Item	Pasaarch Field	Ť		/W	vord
7304			F G H	Functional cranial nerve surgery Pediatric neurological surgery		Research Field	Ť	ey	_	
7304		2	F G H J	Functional cranial nerve surgery	Item	Research Field  Morphological	Ť	ey B	A 3	Oral anatomy (including histology/embryology) Oral pathology
7304		2	F G H J	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease	Item Number	Research Field	Ť	ey B	A 3	Oral anatomy (including histology/embryology) Oral pathology
7304		2 <sup>1</sup>	F G H J K L	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders	Item Number 7401	Research Field  Morphological basic dentistry	Ť	A B C	A 3 4	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology
7304		2 1	F G H J K L A	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders	Item Number	Research Field  Morphological basic dentistry  Functional	Ť	A B C	A 3 A 3	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry
7304		2 1	F G H J K L A B	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy	Item Number 7401	Research Field  Morphological basic dentistry  Functional basic dentistry	Ť	A B C	A 3 A 3	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology
7304		2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F G H J K L A B C	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation	Item Number 7401	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological	Ť	A B C A	3 3 4 3 4	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology
7304	neurosurgery	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F G H J J K A A B C D E	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors	Item Number 7401	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/	Ť	A B C A B	A B B C A B	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation
7304	neurosurgery  Orthopaedic	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F G H J J K A B C D E F	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors Limb reconstruction surgery	7401 7402	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental	Ť	A B C A B C	A 3 3 A 3 C	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology
	Orthonaedic	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F G H J K A B C D E F	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics	7401 7402	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology	Ť	A B C A B C D	A 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology
	neurosurgery  Orthopaedic		F G H J K L A B C D E F G	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology	7401 7402	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative	Ť	A B C A B C A A B C A A	A 3 3 3 4 A 3 5 A 4 A 5 A 5 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry
	neurosurgery  Orthopaedic		F G H J K A B C D E G H J J	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology  Joint disorders	7401 7402 7403	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology	Ť	A B C A B C A B C A B	A B C A B C A B B C A B B C B A B B C B B B B	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist
	neurosurgery  Orthopaedic		F G H A B C D E F G H K	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors Limb reconstruction surgery Pediatric orthopaedics Musculoskeletal traumatology Joint disorders Rheumatic diseases	7401 7402 7403	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry	Ť	A B C A B C A B A B A A	A B C A B C A A B A A	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics
	neurosurgery  Orthopaedic	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F G H J K A B C D E G H J K L L L L L L L L L L L L L L L L L L	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors Limb reconstruction surgery Pediatric orthopaedics Musculoskeletal traumatology Joint disorders Rheumatic diseases Bone cartilage metabolism	7401 7402 7403	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic	Ť	A B C A B C A B A B B A B B A B B B B B	A 3 3 3 4 3 4 3 3 4 3 3 4 3 3 4 3 3 3 3	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics
	Orthopaedic surgery		F G H J K A B B C D E G H J J K K	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology  Joint disorders  Rheumatic diseases  Bone cartilage metabolism  Sports medicine	7401 7402 7403	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic	Ť	A B C A B C B A B C C B B C C C B B C C C C	A B C A B B A B C C	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics
7305	Orthopaedic surgery  Anesthesiology/		F G H J K A B C D E G H J K L A A A A A A A A A A	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology  Joint disorders  Rheumatic diseases  Bone cartilage metabolism  Sports medicine  Anesthesiology	7401 7402 7403	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic	Ť	A B C A B C C D A B C C D C D C D C D C D C D C D C D C D	A B C A B C C A B C C C A B C C C C C C	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics
7305	Orthopaedic surgery  Anesthesiology/Resuscitation		F G H J K A B C D E G H J K H H H H H H H H H H H H H H H H H	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology  Joint disorders  Rheumatic diseases  Bone cartilage metabolism  Sports medicine  Anesthesiology  Resuscitation studies	7401 7402 7403	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic	Ť	A B C A B A B C D D B B C D D D D D D D D D D D D D	A B C A B C A B C C A B C C A B C C A B C C A B C C C A B C C C C	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function
7305	Orthopaedic surgery  Anesthesiology/		F G H J K A B C D E G H J K K L A C C C C C C C C C C C C C C C C C C	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology  Joint disorders  Rheumatic diseases  Bone cartilage metabolism  Sports medicine  Anesthesiology  Resuscitation studies  Perioperative management	7401 7402 7403	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic	Ť	A B C C C C C C C C C C C C C C C C C C	A B C A B C A B C A B C A A B C A B	Oral anatomy (including histology/embryology) Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering
7305	Orthopaedic surgery  Anesthesiology/Resuscitation		F G H J K A B C D E H J K H A C D C D C D C D C D C D C D C D C D C	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology  Joint disorders  Rheumatic diseases  Bone cartilage metabolism  Sports medicine  Anesthesiology  Resuscitation studies  Perioperative management  Pain management	7401 7402 7403 7404 7405	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic dentistry  Dental engineering/	Ť	A B C A B C C D A B A B C C D B A B C C D B A B C C D B A B C C D B A B C C D B A B C C D B B C D B	A B C A B C	Oral anatomy (including histology/embryology) Oral pathology Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering Dental materials science
7305	Orthopaedic surgery  Anesthesiology/Resuscitation	2 1 1 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1	F G H J K L A B C D K H J K C D A A A A A A A A A A A A A A A A A A	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors Limb reconstruction surgery Pediatric orthopaedics Musculoskeletal traumatology Joint disorders Rheumatic diseases Bone cartilage metabolism Sports medicine Anesthesiology Resuscitation studies Perioperative management Pain management Oncology	7401 7402 7403	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic dentistry  Dental engineering/	Ť	A B C A B C C B A B C C C B A B C C C C	A 3 C A 3 C	Oral anatomy (including histology/embryology) Oral pathology Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering Dental materials science Biomaterials science
7305	Orthopaedic surgery  Anesthesiology/Resuscitation		F G H J L A B G G H A B G C A B B B B B B B B B B B B B B B B B B	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology  Joint disorders  Rheumatic diseases  Bone cartilage metabolism  Sports medicine  Anesthesiology  Resuscitation studies  Perioperative management  Pain management	7401 7402 7403 7404 7405	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic dentistry  Dental engineering/ Regenerative	Ť	A B C C C C C C C C C C C C C C C C C C	A B C A B C A B C C C C C C C C C C C C	Oral anatomy (including histology/embryology) Oral pathology Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering Dental materials science Biomaterials science Adhesion dentistry
7305	Orthopaedic surgery  Anesthesiology/Resuscitation		F G H J L A B C D A B C C B C C	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors Limb reconstruction surgery Pediatric orthopaedics Musculoskeletal traumatology Joint disorders Rheumatic diseases Bone cartilage metabolism Sports medicine Anesthesiology Resuscitation studies Perioperative management Pain management Oncology Voiding function and dysfunction	7401 7402 7403 7404 7405	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic dentistry  Dental engineering/	Ť	A B C C C C C C C C C C C C C C C C C C	A	Oral anatomy (including histology/embryology) Oral pathology Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering Dental materials science Biomaterials science
7305	Orthopaedic surgery  Anesthesiology/Resuscitation		F G H J L A B B C D A B B C D D A B B C D D D D D D D D D D D D D D D D D	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors Limb reconstruction surgery Pediatric orthopaedics Musculoskeletal traumatology Joint disorders Rheumatic diseases Bone cartilage metabolism Sports medicine Anesthesiology Resuscitation studies Perioperative management Pain management Oncology Voiding function and dysfunction Urolithiasis studies	7401 7402 7403 7404 7405	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic dentistry  Dental engineering/ Regenerative	Ť	A B C C B A B C C C C C C C C C C C C C	A	Oral anatomy (including histology/embryology) Oral pathology Oral pathology Oral bacteriology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering Dental materials science Biomaterials science Adhesion dentistry Regenerative dentistry
7305	Orthopaedic surgery  Anesthesiology/ Resuscitation studies		F G G G G G G G G G G G G G G G G G G G	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors Limb reconstruction surgery Pediatric orthopaedics Musculoskeletal traumatology Joint disorders Rheumatic diseases Bone cartilage metabolism Sports medicine Anesthesiology Resuscitation studies Perioperative management Pain management Oncology Voiding function and dysfunction Urolithiasis studies Infectious diseases Regenerative medicine Feratology Feratology Feratology Feratology Feratology Feratology Feratology Feratology Feratology Feratology Feratology	7401 7402 7403 7404 7405	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic dentistry  Dental engineering/ Regenerative dentistry	K	A B C C C C C C C C C C C C C C C C C C	A	Oral anatomy (including histology/embryology) Oral pathology Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering Dental materials science Biomaterials science Adhesion dentistry Regenerative dentistry Oral implantology Oral and maxillofacial surgery Clinical oncology
7305	Orthopaedic surgery  Anesthesiology/ Resuscitation studies		F G G G G G G G G G G G G G G G G G G G	Functional cranial nerve surgery  Pediatric neurological surgery  Spinal cord/Spine disease  Brain surgical instruments  Radiation neurological surgery  Spinal disorders  Muscle/Nerve disorders  Physical therapy  Musculoskeletal rehabilitation  Bone and soft tissue tumors  Limb reconstruction surgery  Pediatric orthopaedics  Musculoskeletal traumatology  Joint disorders  Rheumatic diseases  Bone cartilage metabolism  Sports medicine  Anesthesiology  Resuscitation studies  Perioperative management  Pain management  Oncology  Voiding function and dysfunction  Urolithiasis studies  Infectious diseases  Regenerative medicine  Teratology  Adrenal surgery	7401 7402 7403 7404 7405	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic dentistry  Dental engineering/ Regenerative dentistry	K	A B C C C C C C C C C C C C C C C C C C	A	Oral anatomy (including histology/embryology) Oral pathology Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering Dental materials science Biomaterials science Adhesion dentistry Regenerative dentistry Oral implantology Oral and maxillofacial surgery Clinical oncology Dental anesthesiology
7305	Orthopaedic surgery  Anesthesiology/ Resuscitation studies		F G G H H H H H H H H H H H H H H H H H	Functional cranial nerve surgery Pediatric neurological surgery Spinal cord/Spine disease Brain surgical instruments Radiation neurological surgery Spinal disorders Muscle/Nerve disorders Physical therapy Musculoskeletal rehabilitation Bone and soft tissue tumors Limb reconstruction surgery Pediatric orthopaedics Musculoskeletal traumatology Joint disorders Rheumatic diseases Bone cartilage metabolism Sports medicine Anesthesiology Resuscitation studies Perioperative management Pain management Oncology Voiding function and dysfunction Urolithiasis studies Infectious diseases Regenerative medicine Feratology Feratology Feratology Feratology Feratology Feratology Feratology Feratology Feratology Feratology Feratology	7401 7402 7403 7404 7405	Research Field  Morphological basic dentistry  Functional basic dentistry  Pathobiological dentistry/ Dental radiology  Conservative dentistry  Prosthetic dentistry  Dental engineering/ Regenerative dentistry	K	A A A A B C C C C C C C C C C C C C C C	A	Oral anatomy (including histology/embryology) Oral pathology Oral pathology Oral bacteriology Oral physiology Oral physiology Oral biochemistry Dental pharmacology Experimental oncology Immunity/Infection/Inflammation General dental radiology Oral and maxillofacial radiology Operative dentistry Endodontist General prosthodontics Removable denture prosthodontics Fixed partial denture prosthodontics Oral and maxillofacial prosthetics Stomatognathic function Dental science and engineering Dental materials science Biomaterials science Adhesion dentistry Regenerative dentistry Oral implantology Oral and maxillofacial surgery Clinical oncology

(Discipline: Dentistry)

Item Number	Research Field	Screening Sub-panel Number / Keyword				
7408	Orthodontic/ Pediatric dentistry	A Orthodontics  B Pediatric dentistry C Pediatric oral health science D Stomatognathic function and mechanics				
7409	Periodontal dentistry	A Periodontal immunology B Surgical periodontology C Preventive periodontology				
7410	Social dentistry	A Dental hygiene (including public hygiene/nutrition)  B Preventive dentistry C Oral health administration and management D Forensic odontology E Gerodontics F Psychosomatic medicine dentistry				

Discipline: Nursing

	pinie. Nursing			
Item Number	Research Field	S	cree	ening Sub-panel Number / Keyword
			Α	Nursing philosophy
			В	Nursing ethics
				Nursing art
7501	Fundamental		D	Nursing education
7301	nursing		E	Nursing management
	_		F	Nursing policy/Administration
			G	Disaster nursing
			Н	History of nursing
			Α	Critical care/Emergency nursing
	Clinical nursing		В	Perioperative nursing
7502			C	Adult nursing (chronic)
1302			D	Rehabilitation nursing
			Е	Tarminal care
				Onclology nursing
	Lifelong			Family health nursing
7503	developmental nursing			Maternal/Women's nursing
1303			C	Midwifery
	nursing			Child health nursing
				Community health nursing
				Public health nursing
		1	C	School nursing
	Community		D	Occupational and environmental health nursing
7504	health/		E	Gerontological nursing
1304	Gerontological		F	Psychiatric/Mantal health nursing
	nurisng	2		Home nursing
	_	2	Н	Visiting nursing
			J	Family health nursing
			K	Rehabilitation nursing

# IV. Instructions & Procedures for those Who Have Already Been Accepted

1.On the handling of research projects that are scheduled to be continued in FY2011 (hereinafter called "continued research projects").

#### (1) Specially Promoted Research

1) It is not necessary to submit application forms for research projects the continuation of which has been informally agreed in FY2010 (continued research projects). (However, in order to receive the grant-in-aid, it is necessary to prepare and to submit the necessary documents like the grant application form, after receiving a notification of the informal decision to offer the grant-in-aid)

## 2) However, if the applicant would like to make significant changes in the research project, he/she needs to submit the application forms.

Because the application procedure is the same as for "Preparing the Application (Proposal for Grant-in-Aid) and Submitting the Application (Proposal for Grant-in-Aid)" (see page 38), the applicant should verify it. In this case, when preparing the Proposal for Grant-in-Aid, he or she should select the same area as when he or she was accepted for the Desired Area for Screening.

Moreover, since, in this case, the application needs to be screened again, it may happen that the change will not be recognized and that the amount of the budget to be granted will not be granted from FY2011 on.

Moreover, a significant change to the research project can be, concretely speaking, (1) a change to the purpose of the research or a change to the title of the proposed project, (2) a change to the annual plan of the budget that is scheduled to be funded from FY2011, (3) an increase or a reduction of the budget, and a shortening of the research period, etc. Please consult in advance with the Scientific Research Aid Division No. 2 of the Department of Research Projects of the Japan Society for the Promotion of Science (JSPS), in order to know whether the change the applicant wants to make falls under these categories (see "Inquiries" on page 126).

#### (2) Research categories except Specially Promoted Research

1) It is not necessary to submit application forms for research projects the continuation of which has been informally agreed in FY2008 (continued research projects). (However, in order to receive the grant-in-aid, it is necessary to prepare and to submit the necessary documents like the grant application form, after receiving a notification of the informal decision to offer the grant-in-aid)

However, if the applicant would like to make significant changes in the research project, he/she needs to submit the application forms. Because the application procedure is the same as for "Preparing the Application (Proposal for Grant-in-Aid) and Submitting the Application (Proposal for Grant-in-Aid)" (see page 38), the applicant should verify it.

Moreover, since, in this case, the application needs to be screened again, it may happen that the change will not be recognized and that the amount of the budget to be granted will not be granted from FY2011 on. Therefore, the applicant should consult in advance with the Scientific Research Aid Division No. 1 of the Department of Research Projects of the Japan Society for the Promotion of Science (JSPS), in order to know whether the change the applicant wants to make falls under these categories (see "Inquiries" on page 126).

As a general rule, applications for an increase of the budget of the grants-in-aid for continued projects are not accepted.

3) As a general rule, withdrawing from a continued research project and applying for a new research project will not be accepted.

However, in case the applicant changes the research category and aims for a new research development ( $\divideontimes$ ), because the research proceeded beyond expectation, and because the original attainment targets of the continued research project have already been reached, he or she can apply for a new research project, after submitting a Notice of Completion of Research Project and a Statement of Reason by October 27 (Wednesday), 2010. (Documents that arrive later will not be accepted.)

Moreover, please note that, if the content of the Statement of Reason is deemed inappropriate by the screening panel for applications for new research projects, the research project for which a new application is made becomes ineligible for screening, and that, in this case, no funding of a grant-in-aid from FY2011 on can be requested for the continued research project that has already been completed.

\*\* "Cases where the applicant changes the research category and aims for a new research development" are cases where the applicant makes a change such as, for example, from "Scientific Research (C) (General)" to "Scientific Research (B) (General)". However, it also includes cases where the applicant only makes a change to the screening division, such as, for example, a change from "Scientific Research (A) (General)" to "Scientific Research (A) (Overseas Academic Research)".

#### 2. On the Handling of Continued Research Projects in Which Students Have Joined as Project Members

Students, such as, for example, graduate students, cannot apply for Grants-in-Aid for Scientific Research. Therefore, from the call for proposals of FY2011 on, students cannot apply, even if they hold a position in which they conduct research activities in the research institution to which they belong or in another research institution.

However, persons who have a position consisting of conducting research activities in the research institution to which they belong, as their main work (e.g., university teaching staff, researchers from companies, etc.), and who also have a student status are not included in the term "student" for the purposes of this process.

Moreover, they can implement research projects also from FY2011 on, but only if they are already implementing the research in question as Principal Investigator. Furthermore, if they are already participating as Co-Investigator (*kenkyū-buntansha*) or Co-Investigator (*renkei-kenkyūsha*), they need to withdraw as project members when they apply for receipt of funding for the research project in question.

### 3. On the Handling of Continued Research Projects in Which Research Grant Employees Have Joined as Project Members

Research grant employees, as a rule, need to concentrate on their employment related work according to their employment contracts. Therefore, in the same way as for new research projects, considering the working hours they need to allot to the employment related work, they cannot implement research funded with Grant-in-Aid for Scientific Research themselves.

However, if they provide a clear explanation on the time they can spend besides their employment related work, and if during this time they themselves attempt to conduct research using a Grant-in-Aid for Scientific Research, on their own initiative, they can implement research using a Grant-in-Aid for Scientific Research, on condition that the following points have been verified in the research institution. In this case, they can implement it as Principal Investigator, and they can also become Co-Investigator (*kenkyū-buntansha*), Co-Investigator (*renkei-kenkyūsha*), or other project members.

- It has been determined in the employment contract that research grant employees themselves can conduct research on their own initiative, besides the employment related work.
- The employment related work and the work devoted to research that they conduct themselves on their own initiative has clearly been divided in the working hours and the

effort.

 Time that can be allotted to research which they attempt to conduct themselves on their own initiative has sufficiently been secured, besides the time spent for employment related work.

(Note) As a rule, research grant employees are in a position where they receive instructions from the Principal Investigator or other researchers, and where they are engaged solely in work funded with a Grant-in-Aid for Scientific Research at their place of employment. Therefore, from FY2010 on, it is clearly written in the subsidiary conditions that "When employing a Research Collaborator, it is not the Principal Investigator but the research institution who, as a party, has to conclude an employment contract in which the work content, the working hours and other matters are clearly mentioned."

## 4. On the Handling of Continued Research Projects in Which the Principal Investigator Has Failed to Submit the Report on the Research Achievements

In the same way as for new research projects, no Grants-in-Aid for Scientific Research will be funded to researchers who do not submit the report on the research achievements at the end of the research, without any reason. Moreover, it may happen that the decision to grant the funding to the researcher in question is cancelled, or that an order to return the grant is issued.

Furthermore, if researchers have failed, without good reason, to submit the scheduled report on the research achievements, then implementation of other Grants-in-Aid for Scientific Research due to be implemented in the same fiscal year will be suspended.

#### 5. On the Replacement of Principal Investigators in Continued Research Projects

The Principal Investigator is the researcher who assumes full responsibility for the implementation of the research plan, and thus plays a central role. Persons who, at the time they apply, are expected to lose their eligibility to apply during the research period, due to retirement or other reasons, and thus become unable to carry out their responsibility, are requested to avoid becoming a Principal Investigator.

For this reason, from FY2011 on, also replacements of Principal Investigators of research projects that already have been adopted will no longer be accepted.

However, for the following research projects, it may happen that, after completion of the necessary procedures, replacements of Principal Investigators are accepted.

 "Summarizing Group Research Project", "Support Group Research Project" and "Adjustment Group Research Project" of Scientific Research on Priority Areas

(For Scientific Research on Priority Areas, it may happen that replacements of Principal Investigators (or Principal Investigators of Innovative Areas) of "Summarizing Group Research Project" and also replacements of Principal Investigators of "Support Group

Research Project" and "Adjustment Group Research Project" are accepted. However, Principal Investigators of "Other Planned Research" and Principal Investigators of "Publicly Invited Research" cannot be replaced.)

• "Summarizing Group Research Project" and "Support Activity in 3 Areas of Bioscience" of Scientific Research on Innovative Areas (Research in a proposed research area)

For Scientific Research on Innovative Areas (Research in a proposed research area), it may happen that replacements of Principal Investigators (or Principal Investigators of Innovative Areas) of "Summarizing Group Research Project" and Principal Investigators of "Support Activity in 3 Areas of Bioscience" are accepted. However, Principal Investigators of "Other Planned Research" cannot be replaced.

#### V. Instructions & Procedures for Staff of the Research Institution

#### 1. Issues to Be Completed Beforehand by the "Research Institution"

(1) Requirements as a "Research Institution" and Procedures for Designation and Change In order to apply for Grants-in-Aid for Scientific Research, a researcher needs to belong to a "Research Institution".

Concerning the "Research Institution" cited here, the following four types of "Research Institution" have been designated as eligible in Article 2 of the Rules for the Handling of Grants-in-Aid for Scientific Research (announced by the Ministry of Education, Culture, Sports, Science and Technology).

- 1) Universities and inter-university research institutions
- 2) MEXT facilities and other institutions engaged in scientific research
- 3) Technical colleges
- 4) Institutions designated by the Minister of MEXT (See note.)

(Note) In order to become research institution, institutions not falling under 1) to 3) first need to receive the designation by the Minister of Education, Culture, Sports, Science and Technology (MEXT). Therefore, applicants should consult with the Scientific Research Aid Division of the Research Promotion Bureau of the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Moreover, if changes in one of the following items have been scheduled, institutions that have received the designation by the Minister of Education, Culture, Sports, Science and Technology (MEXT) and already have been recognized as research institution should promptly report the content of these changes to the Scientific Research Aid Division of the Research Promotion Bureau of the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

- ① abolition or dissolution of the research institution,
- 2 name and address of the research institution, and name of the representative,
- 3 matters concerning laws, regulations, endowment acts and other rules that prescribe the purpose of establishment, the business content, and the internal organization of the research institution.

Moreover, **researchers should consider that**, in order to conduct research activities using Grants-in-Aid for Scientific Research, **the research institution should meet the requirements mentioned below**.

#### (Requirements)

- ① if a grant-in-aid is given, the research activity should be conducted as an activity of the research institution in question,
- ② if a grant-in-aid is given, the research institution should carry out the management of the grant-in-aid.

#### (2) Verification of the Eligibility to Apply of the Affiliated Researcher

Researchers who try to apply for Grants-in-Aid for Scientific Research, should meet the requirements 1) and 2) below. Therefore, they should sufficiently verify these requirements with the research institution.

Moreover, graduate students or other students cannot apply, even if they hold a position in which they conduct research activities in the research institution to which they belong or in another research institution.

## Researchers who try to apply for Grants-in-Aid for Scientific Research, should meet the Eligibility to Apply. (see page 20)

1) At the time of the application, a person needs to be recognized by the research institution to which he or she belongs to be a researcher who meets the requirements A), B) and C) below, and needs to be a researcher whose Researcher Information has been registered in e-Rad as "Eligible to Apply for Grants-in-Aids for Research".

#### (Requirements)

- A) The researcher should belong to the research institution as a person who has *inter alia* the duty to perform research activities within the research institution in question (irrespective of whether the work is paid or unpaid, full-time of part-time. Moreover, it is not necessary for the researcher to perform these research activities as his or her main duty.)
- B) The researcher should actually be engaged in research activities at the research institution in question (this does not apply to cases where he or she is only engaged as a research assistant.)
- C) The researcher is not a graduate student or any other category of student. (However, this does not apply to persons who hold a position consisting of conducting research activities in the research institution to which they belong, as their main work (e.g. university teaching staff, researchers from companies, etc.), and those who also have a student status.)
- 2) A person should not fall under "Not eligible for receipt of funding" in FY2011, because he or she committed fraudulent use, fraudulent receiving of grants or fraudulent acts of/with Grants-in-Aid for Scientific Research or other competitive funding.

Research grant employees, as a rule, need to concentrate on their employment related work according to their employment contract. Therefore, considering the working hours they need to allot to their employment related work, they cannot apply for Grants-in-Aid for Scientific Research themselves.

However, if they provide a clear explanation on the time they can spend besides their

employment related work, and if during this time they themselves attempt to conduct research using a Grant-in-Aid for Scientific Research on their own initiative, it is possible for them to apply for Grants-in-Aid for Scientific Research, on condition that the following points have been verified in the research institution. In this case, they can apply as a Principal Investigator, and they can also become Co-Investigators (*kenkyū-buntansha*), Co-Investigators (*renkei-kenkyūsha*), or other project members.

- It has been determined in the employment contract that research grant employees themselves can conduct research on their own initiative, besides their employment related work.
- The employment related work and the work devoted to research that they conduct
  themselves on their own initiative has clearly been divided in the working hours and the
  effort.
- Time that can be allotted to research which they attempt to conduct themselves on their own initiative has been secured, besides the time spent for employment related work.

(Note) As a rule, research grant employees are in a position where they receive instructions from the Principal Investigator or other researchers and where they are engaged solely in work funded with a Grant-in-Aid for Scientific Research at their place of employment. Therefore, from FY2010 on, it is clearly written in the spending rules for research institutions that "When employing a Research Collaborator, the research institution has to be a party, and has to conclude the employment contract after making clear the work content, the working hours and other matters in the employment contract. In addition, the research institution has to manage appropriately the work content, the working hours and other matters of the Research Collaborator and provide a salary, etc."

#### (3) Registration of the Researcher Information in e-Rad

Individuals other than the Principal Investigator who try to apply, being the Co-Investigator(s) (*kenkyū-buntansha*) and the Co-Investigator(s) (*renkei-kenkyūsha*) who make up the Project Members should be individuals of whom the researcher information has been registered in e-Rad as "Eligible to Apply for Grants-in-Aids for Research".

Regarding the registration (renewal) of the researcher information necessary when applying, the person in charge in the research institution to which the researcher belongs should perform the procedures using e-Rad. (if there is any item, such as the institution, the position, or others, that needs to be corrected, even though he or she has already been included in the researcher list of the research institution, the applicant needs to register the correct information on the researcher list.)

For specifics on the method of registration, the research institution should verify the "Manual for Research Institutions to which the Researchers Belong (Grants-in-Aid for Scientific Research for Research Institutions)".

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

Moreover, Since Proposals for Grant-in-Aid will not be accepted after the deadline for submission of application documents, applicants should complete the registration (the renewal) of the researcher information early, in order to have sufficient time to submit (send) them.

In order not to negatively affect the compilation of the applications within the research institution, when completing the applications, the research institution should perform the various procedures (including the procedures within the research institution), positioning this specific procedure as one of the important procedures to be performed by the research institution.

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

The "Grant-in-Aid for Research Activity Start-up" is aimed at supporting persons who cannot apply for the call for proposals this time, such as researchers who have just been employed by their research institutions, researchers who return from childcare leave or other kinds of leave, or other researchers.

The FY2011 call for proposals for this research category is scheduled for March 2011, and the eligibility to apply is scheduled as follows.

(Applicants should verify the details in the Application Procedures of March 2011.)

The research institution is responsible for conducting the registration of the researcher information and other matters in e-Rad. Therefore, applicants should bear this in mind when registering researcher information that may come to fall under the above-mentioned point ① or when carrying out other procedures.

(\*1) Among the Grants-in-Aid for Scientific Research for FY2011 there are "Scientific Research on Innovative Areas", "Scientific Research on Priority Areas", "Specially Promoted Research", "Scientific Research", "Challenging Exploratory Research" and "Grant-in-Aid for Young Scientists".

## (4)Verification of the ID and the Password of the Researcher Belonging to the Research Institution

In order to apply for Grants-in-Aid for Scientific Research, researchers should perform the procedures, by logging in into e-Rad, and by accessing the "Electronic Application System"), he or she should retain the ID and the Password for e-Rad. For this reason, the research institution should verify whether researchers who are scheduling to apply have an ID and a Password, or not. Especially in the case a researcher who applied has subsequently transferred to another research institution, he or she cannot longer use the ID and the Password that has been provided by the research institution he or she belonged to before the transfer. Therefore, the new research institution the researcher belongs to needs to provide a new ID and Password.

In case there is a researcher who has scheduled to apply and who has no ID or Password, the research institution should deal with this matter as follows.

① In order to provide the researcher with an ID and a Password, the research institution needs to have an Electronic Certificate for Research Institutions, an ID and a Password. If the research institution has not yet obtained them, it should first of all download a registration form from the e-Rad Portal Site, conduct a registration application in writing.

It takes approximately two weeks for the "ID and password for use of the research institution" to arrive after registration application the "Application for Use of the Electronic Application System".

- Note 1 Please refer to "Advance Preparation when Using the System" (http://www.e-rad.go.jp/shozoku/system/index.html) on the e-Rad website for information on downloading the e-Rad electronic certificate, ID and password.
- **Note 2** Research institutions that already obtained an electronic certificate issued, an ID and a password issued do not need to obtain it again.
- **Note 3** It is not necessary to obtain an electronic certificate, an ID and a password for each research category of the grants-in-aid for scientific research.
- ② After obtaining an ID and a password for use in the research institution, the people in the research institution should provide this ID and password to the researcher who is planning to apply as a Principal Investigator. Please refer to the "Manual for Research Institutions to which the Researchers Belong (Grants-in-Aid for Scientific Research for Research Institutions)" for information on the concrete way how to provide them.
  - **Note 1** Once the ID and the password have been provided they can be used, unless the research institution changes.
  - **Note 2** In case the ID and the Password for e-Rad have already been provided, it is not necessary to provide them a second time.
  - **Note 3** Please be sure to obtain and use the latest version of the Operation Manual.

# (5) A Report on the Status of the Implementation of the System, Based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions" (Implementation Standards).

The Research Institution that is applying for Grants-in-Aid for Scientific Research should set up a system for the management and audit of public research funds, based on the "Guidelines on the Management and Audit of Public Research Funds at Research Institutions", and should report on its state of implementation.

Therefore, The Research Institution (including research institutions which are already engaged in a continued research project funded with a grant-in-aid for scientific research) that is applying for Grants-in-Aid for Scientific Research should submit a "Report on the Status of the Implementation of the System, Based on the Guidelines on the Management and Audit of Public Research Funds at Research Institutions" to the Office of Research Funding Administration, Research and Coordination Division, Science and Technology Policy Bureau of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) by October 8 (Friday), 2010, using e-Rad. Please be advised that, in case the report is not submitted, applications of researchers who belong to the research institution in question in the electronic system will not be considered.

Moreover, if the report has already been submitted in April 2010 or later through e-Rad when applying for competitive funding or other kinds of funding that is allotted by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) or by independent administrative legal entities under the control of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). It is not necessary to submit it again.

When using e-Rad, one needs an Electronic Certificate for Research Institutions, an ID and a Password.

A notification on how to submit reports, forms, and other matters when using e-Rad will be sent later to each research institution from the Office of Research Funding Administration, Research and Coordination Division, Science and Technology Policy Bureau of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) (This notification will also be put on the web page for inquiries as mentioned on page 96.)

#### Please direct inquiries to:

#### (for inquiries concerning forms of the guidelines and submission)

Office of Research Funding Administration,

Research and Coordination Division

Science and Technology Policy Bureau

Ministry of Education, Culture, Sports, Science and Technology (MEXT)

e-mail: kenkyuhi@mext.go.jp

URL: http://www.mext.go.jp/a\_menu/kansa/08122501.html

#### (for inquiries concerning the registration of the research institution in e-Rad)

Helpdesk of the Cross-ministerial Research and Development management system of the Ministry of Education, Culture, Sports, Science and Technology (MEXT)

Tel. 0120-066-877

(office hours: 9:30-17:30, except on Saturdays, Sundays, National Holidays and the New Year

Holidays (from December 29 until January 3))

URL: http://www.e-rad.go.jp/shozoku/system/index.html

#### (6) On the Submission of the Report on the Research Achievements

The research institution to which researchers belong has to collect and submit the reports on the research achievements. If the research institution has failed, without good reason, to submit the reports on the research achievements at the end of the research, it may happen that it is treated as indicated below. Therefore, it is the responsibility of the representative of the research institution to ensure that the report on the research achievements is submitted without fail.

No Grants-in-Aid for Scientific Research will be funded to researchers who do not submit
the report on the research achievements at the end of the research, without good reason.

Moreover, it may happen that the decision to grant the funding to the researcher in question is cancelled, or that an order to return the grant is issued. It may also happen that information, such as the name of the research institution to which the researcher in question belongs and other data, is made public.

Furthermore, if researchers have failed, without good reason, to submit the scheduled report on the research achievements, then implementation of other Grants-in-Aid for Scientific Research due to be implemented in the same fiscal year will be suspended.

#### (7) Obtaining Sufficient Knowledge about the Contents of the Application Procedures

The research institution should beforehand disseminate the contents of the Application Procedures to all the researchers on the campus. JSPS would especially like to request the dispersion of information on the items listed in the Application Procedures and the submission deadlines of application documents, in order to avoid potential misunderstandings.

Moreover, the Application Procedures are available on the section Grants-in-Aid for Scientific Research of the JSPS website (http://www.jsps.go.jp/j-grantsinaid/index.html). The website should be used as a reference.

## 2. Issues that Need to Be Verified When Compiling the Application Forms (Preparing the Proposal for Grant-in-Aid)

The contents of the Proposals for Grant-in-Aid should be verified in each research institution, and all the Proposals for Grant-in-Aid should be submitted to JSPS together. When doing so, special attention should be paid to the following points.

#### (1) Verification of the Eligibility to Apply

It should be verified whether the Principal Investigator, the Co-Investigator(s) (*kenkyū-buntansha*) and the Co-Investigator(s) (*renkei-kenkyūsha*) listed in the Proposal for Grant-in-Aid are persons who meet the requirements that are stipulated in the Application Procedures (see page 20), and also whether the researcher information is registered in e-Rad as "Eligible to Apply for Grants-in-Aids for Research".

Moreover, on this occasion, it should certainly be verified whether the researchers who apply are not persons who have been excluded from receiving grants-in-aid, due to an inappropriate use of grants-in-aid.

#### (2) Verification of the Registration of the Researcher Information in e-Rad

Individuals other than the Principal Investigator who try to apply, being the Co-Investigator(s) (*kenkyū-buntansha*) and the Co-Investigator(s) (*renkei-kenkyūsha*) who make up the Project Members should be individuals of whom the researcher information has been registered in e-Rad

#### as "Eligible to Apply for Grants-in-Aids for Research".

Regarding the registration (renewal) of the researcher information necessary when applying, the person in charge in the research institution to which the researcher belongs should perform the procedures using e-Rad.

Moreover, if there is any item, such as the institution, the position, or others, that needs to be corrected, even though he or she has already been included in the researcher list of the research institution, the applicant needs to register the correct information on the researcher list. Therefore, this should be verified.

#### (3) Verification of the Principal Investigator

The research institution should verify whether the Principal Investigator, the Co-Investigator(s) (*kenkyū-buntansha*), the Co-Investigator(s) (*renkei-kenkyūsha*) who have been listed in the Preparing the proposal for grant-in-aid prepared the Preparing the proposal for grant-in-aid after verifying the section "II. Details of the Call for Proposals", which are laid down in the Application Procedures.

#### (4) Verification of the Written Consent of the Co-Investigator (kenkyū-buntansha)

For each Co-Investigator (*kenkyū-buntansha*) who has been listed on the proposal for grant-in-aid, that the Principal Investigator prepared, the research institution should check the Written Consent of the Co-Investigator (*kenkyū-buntansha*) that the Principal Investigator collected.

#### (5) Verification of the Application Forms

Applicants should verify whether the application forms for grants-in-aid are in conformity with the prescribed format.

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

	Proposal for grant-in-aid					
Research category	First part	Second part				
Research Category	Application information (to be entered in the website)	Project description file				
Specially Promoted Research (New) (English Version)		S-1-1 (1)				
Specially Promoted Research (New) (Japanese Version)		S-1-1 (2)				
Specially Promoted Research (Continued)		S-1-2				
Scientific Research (S)		S-1-6				
Scientific Research (A)		S-1-7				
Research related to the screening panel for Overseas Academic Research		S-1-9				
Scientific Research (B)	To be entered in the	S-1-7				
Research related to the screening panel for Overseas Academic Research	electronic application system	S-1-9				
Scientific Research (C)		S-1-8				
Challenging Exploratory Research		S-1-10				
Grant-in-Aid for Young Scientists (A)		S-1-12				
Grant-in-Aid for Young Scientists (B)		S-1-12				
Continued Research Project (in the case of a major change in the research project)		S-1-13				

# 3. Submission and other matters of the Application Forms (Preparing the Proposal for Grant-in-Aid) Outline of the Electronic Application Procedures

- (1) The research institution should login in e-Rad, using the ID and the password for e-Rad, access the "Electronic Application System", obtain the information of the Proposals for Grant-in-Aid (PDF files) that the Principal Investigators prepared, and verify their contents and other matters.
- (2) The research institution should perform the "approval" process on all the proposals for grant-in-aid (PDF files) that have no mistakes in their contents. (It should submit (send) the proposals for grant-in-aid (PDF files) to JSPS.)

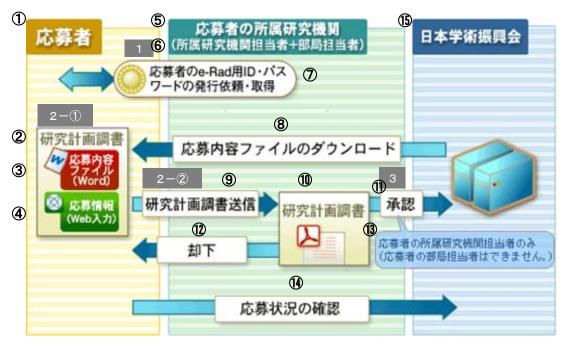
The deadline for the submission (sending) of the proposals for grant-in-aid is:

November 10 (Wednesday), 2010, 4:30 pm (This deadline should be observed strictly.)

- **Note 1** Application documents that are submitted (sent) after this deadline will not be accepted. Therefore, the documents should be submitted (sent) well in advance.
- **Note 2** After the submission (sending) of the application documents, it is not possible to make corrections or to re-submit them.
- (3) The electronic certificate, the ID and the password which are used in the e-Rad are designed to verify the research institution and the individual. Therefore, the handling and administration of them should be done carefully when carrying out the application procedures.

Moreover, an outline of the procedures for electronic application can be found below. However, for details on the "Electronic Application System", please refer to the "Operation Manual".

# Outline of the Electronic Application Procedures



- 1 applicant
- 2 proposal for grant-in-aid
- 3 project description file (Word)
- 4 application information (to be entered in the website)
- (5) the research institution to which the applicant belongs
- 6 person in charge in the research institution + person in charge in the department
- 7 request for issue and acquisition of the applicant's ID and password for e-Rad
- 8 downloading of the project description file
- 9 sending the proposal for grant-in-aid
- n proposal for grant-in-aid
- 1 approval
- 12 rejection
- (3) only the person in charge of the research institution to which the applicant belongs (The person in charge of the department of the applicant cannot make an approval.)
- (14) confirmation of the state of the application
- (15) the Japan Society for the Promotion of Science (JSPS)

# The person in charge of the research institution to which the applicant (Principal Investigator) belongs

The person in charge of the research institution to which the applicant belongs issues the ID and the password to the applicant.

#### The applicant (Principal Investigator)

- 2-(1) The applicant logs into e-Rad using the ID and the password he or she received, and then accesses the "electronic application system" and prepares the proposal for grant-in-aid (PDF file), by entering the application information (to be entered in the website) and by attaching the project description file (items in the attached file).
- 2-(2) If there are no mistakes in the proposal for grant-in-aid (PDF file) the applicant prepared, he or she should submit the proposal for grant-in-aid (PDF file) to the person in charge of the research institution to which he or she belongs, by performing the "completed and submission".

# The person in charge of the research institution to which the applicant (Principal Investigator) belongs

- By approving the proposal for grant-in-aid (PDF file) the person in charge of the research institution to which the applicant belongs submits (sends) it to JSPS.
  - Moreover, if the proposal for grant-in-aid (PDF file) that the applicant submitted is not approved due to mistakes or other reasons, it will be rejected and the applicant will be requested to make corrections.

# (Reference 1) Screening Panels and Other Matters

# 1. Screening Panels

The screening for a Grant-in-Aid for Scientific Research is carried out by the Scientific Research Grant Committee of the Japan Society for the Promotion of Science (JSPS), and it is based on the application documents (Proposal for grant-in-aid).

For "Specially Promoted Research", the judges (i.e. screening committee) are organized separately for each of the three areas (1) humanities/social sciences, (2) science/engineering, and (3) biological sciences. They will make a selection of research projects for which an interview will be organized and conduct the interviews. This selection will be based on the proposals for grants-in-aid and the opinions in writing of the screening panel. (These opinions will be prepared by a panel comprising three persons in charge of writing the opinions, either domestic (based in Japan) or overseas.)

The screening is scheduled to be carried out in two stages. In the first stage of the screening (document-based screening), the committee consists of six judges in the case of "Scientific Research (S)", "Scientific Research (A/B)" ("General"), and four judges in the case of "Scientific Research (C)", "Challenging Exploratory Research", and "Grant-in-Aid for Young Scientists (A/B)". The judges carry out the screening individually. Subsequently, the second stage of the screening, which takes the form of a conference of judges conducting a screening (collegial screening), is scheduled to be carried out. Furthermore, in the case of "Scientific Research (S)", screening through an interview is scheduled.

For "Scientific Research (A/B)" (screening division "Overseas Academic Research") the examination of the applications will be conducted by a collegial meeting which will be organized separately for each the following areas:humanities, social sciences, science/engineering, and biological sciences.

The screening takes place behind closed doors. The submitted application documents are not returned to the applicants.

# 2. Screening Methods, Key Points, and Other Matters

The "evaluation rules" (rules concerning the screening and evaluation for Grants-in-Aid for Scientific Research, called "screening and evaluation rules" below) are available on the section Grants-in-Aid for Scientific Research of the JSPS website (http://www.jsps.go.jp/j-grantsinaid/index.html).

(The "screening and evaluation rules" for FY2011 will be posted on the JSPS website around early October.)

# 3. Notification of the Screening Results

#### (1) Specially Promoted Research

- 1) JSPS will issue a notification in writing on the results of the selection of the research projects for which an interview will be organized. (This is scheduled for March)
- 2) The Ministry of Education, Culture, Sports, Science and Technology (MEXT) will issue a notification in writing to the research institution on whether the research project has been selected or not, based on the results of the screening. (This is scheduled for early April.)
- 3) JSPS will issue a notification containing the opinions expressed in the screening results and a summary of the state of the screening to the Principal Investigator of the research project that has been selected. JSPS is also planning to make an outline of the opinions expressed in the screening results available to the general public. Moreover, to Principal Investigators who have not been selected a notification containing the approximate ranking among the research projects that have been screened, in addition to the opinions expressed in the screening results and a summary of the state of the screening, is planned to be issued.

#### (2) Research Categories Other than Specially Promoted Research

- 1) The results of the selection based on interviews on the proposed project for "Scientific Research (S)" will be notified to the research institution in writing (planned for March).
- 2) The results of the examination performed by the screening panels will be notified to the research institution in writing (planned for early April. for "Scientific Research (A/B/C)", "Challenging Exploratory Research", "Grant-in-Aid for Young Scientists (A/B)", and for late May for "Scientific Research (S)" and "Grant-in-Aid for Young Scientists (S)").
- 3) If researchers who applied for "Scientific Research", "Challenging Exploratory Research" or "Grant-in-Aid for Young Scientists (A/B)", and whose applications have not been accepted, wish to have the results of the first stage of the screening disclosed (document-based screening), the approximate ranking per research field (area) and the score (average score) and the "standard-format opinion" given by the judges of the screening committee for each element which is taken into account when rating will be disclosed through the electronic application system.

# (Reference 2) Procedures on the Handling of Grants-in-Aid for Scientific Research

March 30, 1965
Announcement of the MEXT No. 110

Revision: Bunkoku No. 309 of 1968, Bunkoku No. 159 of 1981, Bunkoku No. 127 of 1985, Bunkoku No. 156 of 1986, Bunkoku No. 35 of 1998, Bunkoku No. 114 of 1999, Bunkoku No. 181 of 2000, Bunkoku No. 72 of 2001, Bunkoku No. 133 of 2001, Bunkoku No. 123 of 2002, Bunkoku No. 149 of 2003, Bunkoku No. 68 of 2004, Bunkoku No. 134 of 2004, Bunkoku No. 1 of 2005, Bunkoku No. 37 of 2006, Bunkoku No. 45 of 2007, and Bunkoku No. 64 of 2008.

Procedures on the Handling of Grants-in-Aid for Scientific Research are stipulated as follows. Procedures on the Handling of Grants-in-Aid for Scientific Research

(Purpose)

Article 1 The handling of Grants-in-Aid for Scientific Research should comply with the Law Concerning the Optimization of Budgets for Subsidiaries (No, 179, 1955, hereinafter "the Law") and the ordinance for the enactment of the Law Concerning the Optimization of Budgets for Subsidiaries (No. 255, 1955) and with the elements stipulated in these rules.

#### (Definitions)

Article 2 In these rules, a "Research Institution" is an institution in which academic research is conducted. The items listed below fall under the definition of "Research Institution".

- (1) Universities or inter-university research institutes (including corporations that run such organizations and are designated by the Minister of Education, Culture, Sports, Science and Technology, as required by elements stipulated separately)
- (2) MEXT's facilities and other organizations engaged in scientific research
- (3) Technical colleges
- (4) Laboratories and other institutions run by the national or local government, corporations based on a special law, laboratories run by such corporations or corporations based on Article 34 of the Civil Law (No. 89, 1996), that the Minister of Education, Culture, Sports, Science and Technology designates for scientific research, as required by elements stipulated separately.

- 2. In these rules, the "Principal Investigator" is the researcher who bears the responsibility for the implementation of the project in question as a member of that project that is the object of funding of a grant-in-aid for scientific research, as stipulated in article 2 clause 3 of the Law.
- 3. In these rules, the "Co-Investigator" (*kenkyū-buntansha*) is a researcher who conducts the project in question in cooperation with the Principal Investigator as a member of that project that is the object of funding of a grant-in-aid for scientific research and in which two or more researchers jointly conduct one research project.
- 4. In these rules, the "Co-Investigator" (*renkei-kenkyūsha*) is a researcher who participates to research that is a project that is the object of funding of a grant-in-aid for scientific research, in cooperation with the Principal Investigator or the Co-Investigator(s) (*kenkyū-buntansha*), and under the supervision of the Principal Investigator or the Co-Investigator(s) (*kenkyū-buntansha*).
- 5. In these rules, a "Research Collaborator" is a person, other than the Principal Investigator, the Co-Investigator(s) (kenkyū-buntansha) or the Co-Investigator(s) (renkei-kenkyūsha), who collaborates in research that is a project that is the object of funding of a grant-in-aid for scientific research.
- 6. In these rules, "illicit use" is use of the grant-in-aid for scientific research for other purposes, intentionally or by serious negligence, or use that violates the content of the decision to fund the grant-in-aid for scientific research, or the conditions it implies.
- 7. In these rules, "illicit activities" are forgery, manipulation or plagiarism of data, information or survey results that are appearing in published research results within a project that is the object of funding of a grant-in-aid for scientific research.
- 8. Among the institutions to which belong people who engage in research and who contribute to the promotion of science, the research laboratories and other institutions or corporations mainly engaging in research (that are established by a corporation or another legal person that is set up according to the laws and ordinances of Japan) are considered as "research institutions", as mentioned in this clause, if they are designated by the Minister of Education, Culture, Sports, Science and Technology, as required by elements stipulated separately.

#### (The objects of Grants-in-Aid for Scientific Research)

- Article 3 Grants-in-Aid for Scientific Research shall mean funding for projects listed under each of the following points.
  - (1) Basic research activities that are scientifically important and are conducted by a researcher either individually or in as a team of two or more researchers on the same project. This research may also include practical research that is in an elementary stage.
  - (2) Results of scientific research made public by an individual or a scientific organization

- (hereinafter "publication of research results")
- (3) Other projects concerning academic research, as stipulated separately by the Minister of Education, Culture, Sports, Science and Technology.
- 2. Based on the rules in Article 15, Number 1 of the Law on the Japan Society for the Promotion of Science (Law No. 159 of 2002), the Minister of Education, Culture, Sports, Science and Technology provides Grants-in-Aid for Scientific Research to projects conducted by the Japan Society for the Promotion of Science (hereinafter called "JSPS"), as required by elements stipulated separately.

## (Projects for which no Grants-in-Aid for Scientific Research will be provided)

- Article 4 Notwithstanding of the previous article, no Grants-in-Aid for Scientific Research will be funded for a period stipulated in each of the following numbered points for projects that are conducted by persons (including academic societies, and this also applies for the articles mentioned below) who are mentioned in the following numbered points. However, this does not apply to projects other than projects of which the decision to provide the funding of grants-in-aid for scientific research has been cancelled (hereinafter "project subject to grant cancellation"), according to Clause 1, Article 17 of the Law, for which persons mentioned in number 4 receive funding, and to projects that are conducted based on a plan identical to the proposal for grant-in-aid mentioned in Clause 1 and Clause 3, Article 6.
  - (1) A person who made fraudulent use of a grant-in-aid for scientific research in a project subject to grant cancellation: from 2 to 5 years starting from the next fiscal year following the fiscal year in which that person has been ordered to refund the grant-in-aid for scientific research related to a project subject to grant cancellation, in accordance with Clause 1, Article 18 of the Law. The exact length of the period deemed appropriate (between 2 and 5 years) will be decided, taking into consideration the content of the fraudulent use in question and other factors.
  - (2) A person who conspired with a person as mentioned in the previous point in fraudulent use of a grant-in-aid for scientific research: the same period as the period during which no grant will be funded for the project conducted by the person mentioned in the previous point, in accordance with the rule in the previous point.
  - (3) A member of a project subject to grant cancellation who used a grant-in-aid for scientific research in violation of Clause 1, Article 11 of the Law: 2 years starting from the next fiscal year following the fiscal year in which that member has been ordered to refund the grant-in-aid for scientific research related to a project subject to grant cancellation. (This does not apply to persons mentioned in the previous point 2.)
  - (4) A Principal Investigator or a Co-Investigator (kenkyū-buntansha) who conducted a project

subject to grant cancellation in cooperation with a Principal Investigator or a Co-Investigator (*kenkyū-buntansha*) who falls under point 1. or 3. (except persons mentioned under the previous point; the same applies to the points below), or a Principal Investigator or a Co-Investigator (*kenkyū-buntansha*) of a project subject to grant cancellation in which a Co-Investigator (*renkei-kenkyūsha*) who falls under point 1. participated, or a Principal Investigator or a Co-Investigator (*kenkyū-buntansha*) of a project subject to grant cancellation in which a Research Collaborator who falls under the same point 1. cooperated: 1 year following the fiscal year in which he/she has been ordered to refund the grant-in-aid for scientific research related to a project subject to grant cancellation, in accordance with Clause 1, Article 18 of the Law.

- (5) A person who obtained funding by a grant-in-aid for scientific research by deceit or other fraudulent means, or a person who conspired in this deceit or other fraudulent means: 5 years starting from the next fiscal year following the fiscal year in which that person has been ordered to refund the grant-in-aid for scientific research.
- (6) A person of whom it has been established that he/she committed fraudulent acts (including cases where it has been established that the person bears responsibility for the content of a research paper that is connected with to research results of which it has been established that fraudulent acts have been committed): from 1 to 10 years starting from the next fiscal year following the fiscal year in which is has been established that the fraudulent acts in question have been committed. The exact length of the period deemed appropriate (between 1 and 10 years) will be decided in the Academic Deliberation Council for Science and Technology, taking into consideration the content of the fraudulent acts in question and other elements.
- 2. Notwithstanding the previous article, no Grants-in-Aid for Scientific Research will be provided during a period stipulated separately by the Minister of Education, Culture, Sports, Science and Technology for projects conducted by persons who are listed under each of the following points, and of whom it has been decided that no benefit that is provided by the state or by independent administrative legal entities, as stipulated separately by the Minister of Education, Culture, Sports, Science and Technology (hereinafter called "particular benefit"), will be provided for a certain period.
  - (1) a person who used a particular benefit for other purposes than the one is intended for, or a person who conspired in use for other purposes in question.
  - (2) for a project that is the object of funding of a particular benefit, a person who violated the content of the decision to fund him/her a particular benefit, the conditions connected to that funding and other laws and ordinances, or the punishment based on these laws and ordinances by the head of an independent administrative legal entity or a national institution.
  - (3) a person who obtained the funding a particular benefit by deceit or other fraudulent means,

- or a person conspired in its use by deceit or other fraudulent means.
- (4) a person of whom it has been established that he/she committed fraudulent acts in a project funded with a particular benefit.

# (Applicants for a Grant)

- Article 5 The following persons can apply for Grants-in-Aid for Scientific Research mentioned in Numbers 1 and 2, Clause 1, Article 3 (excluding grants mentioned in Clause 2 of the same article; hereinafter called "grant").
  - (1) The representative of the researchers who conduct scientific research funded with grants for scientific research.
  - (2) An individual who publishes research results or the representative of an academic society that publishes such results funded with grants for the publication of research results.

#### (Proposal for grant-in-aid)

- Article 6 Persons who attempt to apply for grants (excluding persons who conduct screening and evaluation in JSPS) shall mean persons who beforehand submit a Proposal for Grant-in-Aid on the scientific research or the publication of research results, in a form that is stipulated separately, to the Minister of Education, Culture, Sports, Science and Technology.
- 2 The submission deadline for the Proposal for Grant-in-Aid mentioned in the previous section is announced every year by the Minister of Education, Culture, Sports, Science and Technology.
- Persons who attempt to apply for grants, although they conduct screening and evaluation in JSPS, shall mean persons who submit Proposals for Grant-in-Aid concerning their scientific research and other matters to JSPS, as required by elements stipulated separately.
- The deadline for the abovementioned submission of a proposal for grant-in-aid is announced by JSPS every year.

#### (Decisions concerning the grants)

- Article 7 The Minister of Education, Culture, Sports, Science and Technology decides on the persons who attempt to obtain grants and on the planned amount that they attempt to obtain (hereinafter called the "amount planned to be provided"), based on the Proposal for Grant-in-Aid mentioned in Clause 1 and 3 of the previous article, and beforehand notifies the amount planned to be provided to this person.
- When deciding on the persons who attempt to obtain grants and the amount planned to be provided, the Minister of Education, Culture, Sports, Science and Technology hears the opinion of the Academic Deliberation Council for Science and Technology concerning the Proposals for Grant-in-Aid that have been submitted to the Minister of Education, Culture, Sports, Science

and Technology. However, in accordance with the provisions of Clause 3 of the previous article, concerning Proposals for Grant-in-Aid that have been submitted to JSPS, receiving a report from JSPS is sufficient, and it is not necessary to hear the opinion of the Academic Deliberation Council for Science and Technology.

Article 8 When persons who received the notification mentioned in Clause 1 of the previous article attempt to apply for grants, they have to submit a grant application form of which the form has been stipulated separately to the Minister of Education, Culture, Sports, Science and Technology, by the time to be prescribed by the Minister of Education, Culture, Sports, Science and Technology.

Based on the grant application form mentioned in the previous clause, the Minister of Education, Culture, Sports, Science and Technology decides on the provision of the grant, and notifies the contents of this decision and, in case conditions have been attached to it, these conditions to the person who applied for a grant.

#### (Changes in the scientific research and other matters)

Article 9 When recipients of a grant attempt to change the contents of the scientific research and other matters or the allocation of the budget (excluding minor changes stipulated separately by the Minister of Education, Culture, Sports, Science and Technology), they should beforehand obtain the approval of the Minister of Education, Culture, Sports, Science and Technology.

## (Limitation on the use of the grant)

Article 10 The recipients of a grant should restrict the use of the grant to the costs necessary for the scientific research etc.

### (Report on results)

Article 11 Upon completing scientific research etc., the recipients of the grant should promptly fill in and submit the form for reporting the results to the Minister of Education, Culture, Sports, Science and Technology. This also applies where the fiscal year concerning the decision concerning the relevant grant has terminated. The form for the report is available elsewhere.

- In case there is equipment, furnishings or books (hereinafter called "equipment") that has been purchased using the grant, a detailed statement on the purchase of equipment and other matters should be attached to the report on results mentioned in the previous clause, using a form stipulated separately.
- A report on results mentioned in the latter part of the clause 1 should be attached with a document specifying a plan on the scientific research etc. scheduled for the fiscal year that follows.

#### (Final decision concerning the amount of the grant)

Article 12 After receiving the report mentioned in the early part of Clause 1 in the previous article, the Minister of Education, Culture, Sports, Science and Technology checks the report and conducts an investigation, as necessary. If JSPS concludes that the result of the scientific research etc. agrees with the decision concerning the grant and conditions included in it, JSPS may decide the amount of the grant and report it to the relevant recipient.

#### (Arrangement and storage of accounts and other matters)

Article 13 Recipients of a grant should retain the accounts on the balance of the grant, retain the receipts and other related documents, and store these accounts and documents for five years after the end of the fiscal year in which the grant has been provided.

#### (Investigation on accounting)

Article 14 When deemed necessary, the Minister of Education, Culture, Sports, Science and Technology may investigate or issue directives concerning the grant recipient's accounting or demand that a recipient reports on its accounting.

#### (Investigation on the state of the research and other matters)

Article 15 When deemed necessary, the Minister of Education, Culture, Sports, Science and Technology may request that a grant recipient files a report on the status of his/her scientific research and other matters, or may investigate the status of his/her scientific research and other matters.

#### (Publication of progress of research)

Article 16 In printing or publication by other means, the Minister of Education, Culture, Sports, Science and Technology may publish all or part of descriptions in the report of results of scientific research and the report mentioned in the previous article that concern the progress of research.

#### (Donation of equipment and suchlike)

Article 17 If the recipient of a grant mentioned in (1) of Article 5 partly appropriated the grant to the purchase of equipment etc. the recipient should promptly donate the equipment etc. to one or more of the research institutions that the recipient belongs to.

In the event that promptly donating the equipment and other things causes inconvenience to the research, recipients of grants mentioned in (1) of Article 5 are allowed not to donate the equipment in question, until the inconvenience to the research in question is resolved, provided that they obtained the approval of the Minister of Education, Culture, Sports, Science and Technology. This applies notwithstanding the provisions in the previous clause.

Article 18 The Minister of Education, Culture, Sports, Science and Technology decides separately on necessary issues concerning Grants-in-Aid for Scientific Research mentioned in Article 3, Clause 1, Number 3.

#### (Other)

Article 19 The Minister of Education, Culture, Sports, Science and Technology decides on necessary issues concerning the handling of grants other than the issues that have been stipulated in these rules, as they arise.

#### Additional Rules

These rules take effect from April 1, 1965.

Additional Rule (Bunkoku 309 of November 30, 1968)

These rules take effect from November 30, 1968).

Additional Rule (Bunkoku 159 of October 15, 1981)

This Announcement will be enforced from the day of its promulgation.

Additional Rule (Bunkoku 127 of November 2, 1985)

This Announcement will be enforced from November 2, 1985, and will take effect for grants after FY1985.

Additional Rule (Bunkoku 156 of December 25, 1986)

This Announcement will be enforced from December 25, 1986, and will take effect for grants after FY1986.

Additional Rule (Bunkoku 35 of March 19, 1998)

This Announcement will be enforced from March 19, 1998, and will take effect for grants after FY1998.

Additional Rule (Bunkoku 114 of May 17, 1999)

This Announcement will be enforced from the day of its promulgation and will take effect from April 11, 1999.

Additional Rule (Bunkoku 181 of December 11, 2000)

This Announcement will be enforced from the day (January 6, 2001) of the enforcement of the Law Revising a Part of the Cabinet Act (Law No. 88 of 1999).

Additional Rule (Bunkoku 72 of April 19, 2001)

This Announcement will be enforced from the day of its promulgation and will take effect from April 19, 2001.

Additional Rule (Bunkoku 133 of August 2, 2001)

1 This Announcement will be enforced from the day of its promulgation.

Legal entities that, at the time of the enforcement of this announcement, are actually research institutions according to the rules in Article 2, Number 3 of the Rules for the Handling of Grants-in-Aid for Scientific Research before the revision, and institutions that, at the time of the enforcement of this announcement, actually received the designation according to the rules in Number 4 of the same article, will be considered as research institutions that received the designation according to the rules in Article 2, Number 4 of the revised Rules for the Handling of Grants-in-Aid for Scientific Research.

#### Additional Rule (Bunkoku 123 of June 28, 2002)

This Announcement will be enforced from the day of its promulgation and will take effect for grants after FY2002.

## Additional Rule (Bunkoku 149 of September 12, 2003)

- However, the revised rules in Article 3, Clause 2, the revised rules in Article 5, Clause 1, Clause 3 and Clause 4, and the revised rules in Article 6, Clause 2 will be enforced from October 1, 2003.
- The rules in Article 3, Clause 3 of the revised Rules for the Handling of Grants-in-Aid for Scientific Research, that are stipulated in this Announcement, will not apply for projects conducted by researchers who in the past conducted a project subject to grant cancellation of which the day when the refunding of the Grant-in-Aid for Scientific Research is ordered falls before the day of the enforcement of this Announcement.

#### Additional Rule (Bunkoku 68 of April 1, 2004)

- 1 This Announcement will be enforced from April 1, 2004.
- The rules in Article 3, Clause 3, Number 3 of the revised Rules for the Handling of Grants-in-Aid for Scientific Research, that are stipulated in this Announcement, will not apply to researchers who conducted a project subject to grant cancellation, using a Grant-in-Aid for Scientific Research of which the decision to fund was made before the enforcement of this Announcement.

#### Additional Rule (Bunkoku 1 of January 24, 2005)

- 1 This Announcement will be enforced from the day of its promulgation.
- The rules in Article 3, Clause 4 and Clause 5 of the revised Rules for the Handling of Grants-in-Aid for Scientific Research, that are stipulated in this Announcement, will not apply to projects conducted by researchers who conducted a project of which the day when the refunding of the Grant-in-Aid for Scientific Research is ordered falls before the day of the enforcement of this Announcement, or researchers who conspired with these researchers in question.

#### Additional Rule (Bunkoku 37 of March 27, 2006)

This Announcement will be enforced from April 1, 2006.

Additional Rule (Bunkoku 45 of March 30, 2007)

This Announcement will be enforced from April 1, 2007.

Additional Rule (Bunkoku 64 of May 19, 2008)

- This Announcement will take effect from May 19, 2008, and will take effect for grants after FY2008. However, the revised rules in Article 2, Clause 1, Number 4 take effect from the day of the enforcement of the Law on the Adjustment of Related Laws Upon the Enforcement of the Law on General Corporate Juridical Persons and General Foundational Juridical Persons, and the Law on the Authorization of Public Interest Incorporated Associations and Public Interest Incorporated Foundations (Law No. 50 of 2006).
- The rules in Article 4, Clause 1, Number 1 and Number 3 of the revised Rules for the Handling of Grants-in-Aid for Scientific Research (hereinafter called "New Rules"), stipulated in this Announcement, do not apply to persons who committed illicit use of grants in projects of which the decision to fund the Grant-in-Aid for Scientific Research has been cancelled, in accordance with the rules in Article 17, Clause 1 of the Law Concerning the Optimization of the Enforcement of Budgets for Grants (Law No. 179 of 1955; hereinafter called "the Law"), and of which the day when the refunding of the Grant-in-Aid for Scientific Research is ordered falls before September 12, 2003, in accordance with the rules in Article 18, Clause 1 of the Law. The rules in Article 4, Clause 1, Number 1 and Number 3 of the New Rules do not apply either to recipients of funded projects who conducted use of Grants-in-Aid for Scientific Research in violation of the rules in Article 11, Clause 1 of the Law (excluding persons who are defined as recipients of funded projects according to the Article 2, Clause 3 of the Law and who fall under Article 4, Clause 1, Number 1 or Number 2 of the New Rules).
- The rules in Article 4, Clause 1, Number 4 of the New Rules do not apply to Principal Investigators or Co-Investigators (*kenkyū-buntansha*) of projects of which the decision to fund has been taken before April 1, 2004.
- The rules in Article 4, Clause 1, Number 2 and Number 5 of the New Rules do not apply to persons who conspired in the fraudulent use of Grants-in-Aid for Scientific Research, or persons who received the funding of Grants-in-Aid for Scientific Research by deceit or other fraudulent means, or persons who conspired in the use of deceit or other fraudulent means in question, in projects of which the day when the refunding of the Grant-in-Aid for Scientific Research is ordered falls before January 24, 2005.

# (Reference 3) Procedures on the Handling of JSPS Grants-in-Aid for Scientific Research (Scientific Research, etc.)

(Rule No. 17, October 7, 2003)

Revision: Rule No. 9, April 14, 2004

Revision: Rule No. 14, September 10, 2004

Revision: Rule No. 1, February 2, 2005

Revision: Rule No. 7, April 7, 2005

Revision: Rule No. 9, April 14, 2006

Revision: Rule No. 12, April 2, 2007

Revision: Rule No. 9, June 10, 2008

Revision: Rule No. 6, April 19, 2010

#### (General rules)

Article 1 The handling of Grants-in-Aid for Scientific Research (Scientific Research etc.), hereinafter "grants") provided by the Japan Society for the Promotion of Science (hereinafter "JSPS") should comply with the Law Concerning the Optimization of Budgets for Subsidiaries (No, 179, 1955, hereinafter "the Law"), the ordinance for the enactment of the Law Concerning the Optimization of Budgets for Subsidiaries (No. 255, 1955), Japan Society of the Promotion of Science Act (No. 159, 2002) and the handling rules for the Grants-in-Aid for Scientific Research (notification by Ministry of Education, No. 110, 1965, hereinafter "Handling Rules") and the Management Procedures.

#### (Objectives)

Article 2 The aim of the Management Procedures is to specify items for handling the object, application, granting and suchlike concerning a grant provided by JSPS to researchers so that the grant can be appropriately and efficiently used in compliance with Clause 1, Article 16 of the Requirements for Grants-in-Aid for Scientific Research (scientific research etc.) (decision by the Minister of Education, April 12, 1999, hereinafter "Grant Requirements") and Article 14 of Japan Society for the Promotion of Science Work Procedures (Rule No. 1, 2003).

## (Definitions)

- Article 3 In the Management Procedures, Grants-in-Aid for Scientific Research (Scientific Research etc.) refers to the following items as specified in Article 3 of the Grant Requirements.
  - (1) The cost of scientific research that concerns:
    - a) Scientific Research;

- b) Challenging Exploratory Research;
- c) Young Scientists (S);
- d) Research Activity Start-up; or
- e) Encouragement of Scientists
- (2) Grant-in-Aid for JSPS Fellows
- (3) Grant-in-Aid for Creative Scientific Research
- (4) Grant-in-Aid for Publication of Scientific Research Results (except those concerning the publication of research results)
- In the Management Procedures, a research institution refers to an institution that engages in academic research and falls under any of the following definitions provided in Article 2, Clause 1 of Handling Rules.
  - (1) Universities or inter-university research institutes (including corporations that run such organizations and are designated by the Minister of Education, Culture, Sports, Science and Technology)
  - (2) MEXT's facilities and other organizations engaged in scientific research
  - (3) Technical colleges
  - (4) Laboratories and other institutions run by the national or local government, corporations based on a special law, laboratories run by such corporations or corporations based on Article 34 of the Civil Law (No. 89, 1996), that the Minister of Education, Culture, Sports, Science and Technology designates for scientific research
- 3. In these Management Procedures the "Principal Investigator" is the researcher who bears the responsibility for the implementation of the project in question as a member of that project that is the object of funding of a grant-in-aid for scientific research, as stipulated in article 2 clause 3 of the Law.
- 4. In these Management Procedures the "Co-Investigator" (kenkyū-buntansha) is a researcher who conducts the project in question in cooperation with the Principal Investigator as a member of that project that is the object of funding of a grant-in-aid for scientific research and in which two or more researchers jointly conduct one research project.
- 5. In these Management Procedures the "Co-Investigator" (*renkei-kenkyūsha*) is a researcher who participates to research that is a project that is the object of funding of a grant-in-aid for scientific research, in cooperation with the Principal Investigator or the Co-Investigator(s) (*kenkyū-buntansha*), and under the supervision of the Principal Investigator or the Co-Investigator(s) (*kenkyū-buntansha*).
- 6. In these Management Procedures a "Research Collaborator" is a person, other than the Principal Investigator, the Co-Investigator(s) (*kenkyū-buntansha*) or the Co-Investigator(s) (*renkei-kenkyūsha*), who collaborates in research that is a project that is the object of funding of

- a grant-in-aid for scientific research.
- 7. In these Management Procedures "illicit use" is use of the grant-in-aid for scientific research for other purposes, intentionally or by serious negligence, or use that violates the content of the decision to fund the grant-in-aid for scientific research, or the conditions it implies.
- 8. In these Management Procedures "illicit activities" are forgery, manipulation or plagiarism of data, information or survey results that are appearing in published research results within a project that is the object of funding of a grant-in-aid for scientific research.
- 9. Among the institutions to which belong people who engage in research and who contribute to the promotion of science, the research laboratories and other institutions or corporations mainly engaging in research (that are established by a corporation or another legal person that is set up according to the laws and ordinances of Japan) are considered as "research institutions", as mentioned in this clause, if they are designated by the Minister of Education, Culture, Sports, Science and Technology.

#### (The objects of grants)

- Article 4 Projects that are object of funding (hereinafter "funded project(s)") with grants should meet the following conditions.
  - (1) Basic research activities that are scientifically important and are conducted by a researcher either individually or in as a team of two or more researchers on the same project. This research may also include practical research that is in an elementary stage.
  - (2) Results of scientific research made public by an individual or a scientific organization (hereinafter "publication of research results")
- The funded costs should be those necessary for a funded project and deemed by JSPS as deserving of a grant.

#### (Projects for which no grants will be provided)

- Article 5 Notwithstanding Clause 1 of the previous article, no grant will be funded for a period stipulated in each of the following numbered points for projects that are conducted by persons (including academic societies, and this also applies for the articles mentioned below) who are mentioned in the following numbered points. However, this does not apply to projects other than projects of which the decision to provide the funding of grants-in-aid for scientific research has been cancelled (hereinafter "project subject to grant cancellation"), according to Clause 1, Article 17 of the Law, for which persons mentioned in number 4 receive funding, and to projects that are conducted based on a plan identical to the proposal for grant-in-aid mentioned in Clause 1, Article 7.
  - 1. A person who made fraudulent use of a grant-in-aid for scientific research in a project subject

to grant cancellation:

from 2 to 5 years starting from the next fiscal year following the fiscal year in which that person has been ordered to refund the grant-in-aid for scientific research related to a project subject to grant cancellation, in accordance with Clause 1, Article 18 of the Law. The exact length of the period deemed appropriate (between 2 and 5 years) will be decided, taking into consideration the content of the fraudulent use in question and other factors.

- 2. A person who conspired with a person as mentioned in the previous point in fraudulent use of a grant-in-aid for scientific research:
  - the same period as the period during which no grant will be funded for the project conducted by the person mentioned in the previous point, in accordance with the rule in the previous point.
- 3. A member of a project subject to grant cancellation who used a grant-in-aid for scientific research in violation of Clause 1, Article 11 of the Law:
  - 2 years starting from the next fiscal year following the fiscal year in which that member has been ordered to refund the grant-in-aid for scientific research related to a project subject to grant cancellation. (This does not apply to persons mentioned in the previous point 2.)
- 4. A Principal Investigator or a Co-Investigator (*kenkyū-buntansha*) who conducted a project subject to grant cancellation in cooperation with a Principal Investigator or a Co-Investigator (*kenkyū-buntansha*) who falls under point 1. or 3. (except persons mentioned under the previous point; the same applies to the points below), or a Principal Investigator or a Co-Investigator (*kenkyū-buntansha*) of a project subject to grant cancellation in which a Co-Investigator (*renkei-kenkyūsha*) who falls under point 1. participated, or a Principal Investigator or a Co-Investigator (*kenkyū-buntansha*) of a project subject to grant cancellation in which a Research Collaborator who falls under the same point 1. cooperated:
  - 1 year following the fiscal year in which he/she has been ordered to refund the grant-in-aid for scientific research related to a project subject to grant cancellation, in accordance with Clause 1, Article 18 of the Law.
- 5. A person who obtained funding by a grant-in-aid for scientific research by deceit or other fraudulent means, or a person who conspired in this deceit or other fraudulent means:
  - 5 years starting from the next fiscal year following the fiscal year in which that person has been ordered to refund the grant-in-aid for scientific research.
- 6. A person of whom it has been established that he/she committed fraudulent acts (including cases where it has been established that the person bears responsibility for the content of a research paper that is connected with to research results of which it has been established that fraudulent acts have been committed): from 1 to 10 years starting from the next fiscal year following the fiscal year in which is has been established that the fraudulent acts in question

- have been committed. The exact length of the period deemed appropriate (between 1 and 10 years) will be decided, taking into consideration the content of the fraudulent acts in question and other elements.
- 2. Notwithstanding Clause 1 of the previous article, a grant will not be granted for a period stipulated in Article 2 of the Decision of the Minister of Education, Culture, Sports, Science and Technology of August 24, 2004 for projects conducted a person mentioned in each of the following numbered points, about whom it has been decided not to provide him/her a particular benefit for a fixed period, as stipulated in Article 1.
  - (1) a person who used a particular benefit for other purposes than the one is intended for, or a person who conspired in use for other purposes in question.
  - (2) for a project that is the object of funding of a particular benefit, a person who violated the content of the decision to fund him/her a particular benefit, the conditions connected to that funding and other laws and oridnances, or the punishment based on these laws and ordinances by the head of an independent administrative legal entity or a national institution.
  - (3) a person who obtained the funding a particular benefit by deceit or other fraudulent means, or a person conspired in its use by deceit or other fraudulent means.
  - (4) a person of whom it has been established that he/she committed fraudulent acts in a project funded with a particular benefit.

#### (Applicants for a Grant)

- Article 6 Persons are eligible to apply for a grant mentioned in Clause 1, Article 4, should meet the following requirements.
  - (1) Applicants for a grant concerning scientific research should fall into the following categories:
    - a) If researchers who belong to a research institution conduct scientific research, the representative of the researchers who conduct the scientific research in question;
    - b) If one researcher (excluding JSPS Fellows) who does not belong to a research conducts scientific research alone, that researcher in question;
    - c) If a JSPS Fellow conducts scientific research, that JSPS Fellow in question;
    - d) If a Foreign JSPS Fellow and a host researcher jointly conduct scientific research, the host researcher
  - (2) An individual who publishes research results or the representative of an academic society that publishes such results funded with grants for the publication of research results.

#### (Proposal for grant-in-aid)

Article 7 An application for a grant requires that a proposal for grant-in-aid on scientific research or the publication of research results (hereinafter "scientific research etc.") be submitted to

- JSPS. The form for the proposal for grant-in-aid is available.
- The deadline for the abovementioned submission of a proposal for grant-in-aid is announced by JSPS every year.

#### (Notification of the planned amount of grant)

Article 8 In accordance with a proposal for grant-in-aid mentioned in Clause 1 of the previous article, JSPS should decide the recipient of a grant and the planned amount of money given to the recipient (hereinafter "planned amount of grant") and report the amount to the recipient in advance.

#### (Allocation of the screening and other matters)

- Article 9 When making decisions concerning the recipient of a grant or the planned amount of a grant in accordance with the previous article, JSPS should consult the Grants-in-Aid for Scientific Research Committee to discuss issues concerning the allocation of grants and suchlike.
- 2. Rules on the organization and operation of the abovementioned committee are stated elsewhere.

# (Grant application form)

Article 10 When filing an application for a grant, an applicant who received a notification mentioned in Article 8 should fill in and submit the grant application form to JSPS by the deadline specified by JSPS.

#### (Decisions concerning the grants)

- Article 11 Upon receiving a request for a grant in accordance with the previous article, JSPS should check documents concerning the request and conduct field survey or suchlike necessary, to make sure that the project deserves the grant and the calculation of the amount of the grant is not erroneous.
- 2. If JSPS considers that a grant should be given as a result of the abovementioned survey, it should promptly decide on providing the grant.
- 3. JSPS stipulates the following requirements for providing a grant.
  - (1) A change in details and cost allocation of scientific research etc. conducted by a grant recipient requires that the approval of JSPS be obtained in advance.

However, this may not apply to a minor change that is decided by JSPS in consultation with the Minister of Education, Culture, Sports, Science and Technology without compromising the objective of the funded project.

- (2) Grant recipients should obtain the approval of JSPS in stopping or discontinuing a funded project.
- (3) If a funded project cannot be completed within the scheduled period or if the fulfillment of a funded project seems too difficult, the grant recipient should promptly report it to JSPS and follow its directions.
- (4) To sign a contract to fulfill a funded project and make the relevant payments, the grant recipient should, in compliance with the national contract and the provisions concerning payment, endeavor to maintain the high level of efficiency in the use of costs so that minimum and equitable costs can result in maximum benefit.
- 4. After making a decision concerning a grant, JSPS should promptly report details of the decision and the conditions it includes to the relevant applicant.

#### (Withdrawal of the application)

- Article 12 An applicant for a grant may withdraw the application by the date specified by JSPS if the applicant receives the notification mentioned in Clause 4 of the previous article and if the applicant is dissatisfied with the details of the decision on a grant concerning the notification or conditions included in the decision.
- 2. Withdrawal of an application in accordance with the abovementioned provisions is considered that no decision on a grant to the relevant application has been made.

#### (Limitation on the use of the grant)

Article 13 The recipients of a grant should restrict the use of the grant to the costs necessary for the scientific research etc.

#### (Report on results)

- Article 14 Upon completing scientific research etc., the recipients of the grant should promptly fill in and submit the form for reporting the results to JSPS. This also applies where the fiscal year concerning the decision concerning the relevant grant has terminated. The form for the report is available elsewhere.
- A report on results mentioned in the latter part of the previous clause should be attached with a document specifying a plan on the scientific research etc. scheduled for the fiscal year that follows.

#### (Final decision concerning the amount of the grant)

Article 15 After receiving the report mentioned in the early part of Clause 1 in the previous article,

JSPS checks the report and conducts an investigation, as necessary. If JSPS concludes that the result of the scientific research etc. agrees with the decision concerning the grant and conditions included in it, JSPS may decide the amount of the grant and report it to the relevant recipient.

#### (Account books and other documents)

Article 16 Recipients of a grant should retain the accounts on the balance of the grant and retain the receipts and other related documents for five years after the end of the fiscal year in which the grant has been provided.

#### (Investigation on accounting)

Article 17 When deemed necessary, JSPS may investigate or issue directives concerning the grant recipient's accounting or demand that a recipient reports on its accounting.

#### (Investigation on the state of the research and other matters)

Article 18 When deemed necessary, JSPS may demand that a grant recipient files a report on the status of its scientific research etc. and may also conduct an on-site investigation.

#### (Publication of progress of research)

Article 19 In printing or publication by other means, JSPS may publish all or part of descriptions in the report of results of scientific research and the report mentioned in the previous article that concern the progress of research.

#### (Donation of equipment and suchlike)

- Article 20 If the recipient of a grant mentioned in (1) a) of Article 6 partly appropriated the grant to the purchase of equipment etc., the recipient should promptly donate the equipment etc. to one or more of the research institutions that the recipient belongs to.
- 2. If the recipient of a grant mentioned in (1) b) of Article 6 partly appropriated the grant to the purchase of equipment etc. worth 50,000 yen or more, the recipient should donate the equipment etc. to a school or other educational or research institution no later than the termination of the research period.
- 3. If the recipient of a grant specified in (1) c) or d) in Article 6, Clause 1 partly appropriated the grant to the purchase of equipment etc. worth 50,000 yen or more, the recipient should promptly donate the equipment etc. to the research institution where he/she engages in research or to which he/she belongs.
- 4. Where it is deemed inconvenient for a grant recipient to promptly donate the purchased equipment etc. to the research institute, the equipment etc. may not be donated until the time the

abovementioned donation is no longer likely to create such inconvenience, provided that JSPS's approval is obtained, notwithstanding the provisions in Clause 1.

5. Notwithstanding Clause 3, a special researcher may keep the purchased equipment etc. until when he/she is no longer qualified as a special researcher.

(Other)

Article 21 In addition to those specified in the Application Procedures, the rules necessary for the handling of grants should be provided elsewhere in the application guidelines and suchlike.

**Additional Rules** 

The rules will be enforced on October 7, 2003 and take effect on October 1, 2003.

The provisions in Article 4-2 do not apply to a funded project that is going to be implemented by a researcher who, before September 12, 2003, was ordered to refund Grants-in-Aid for Scientific Research to his/her project subject to grant cancellation in accordance with Clause 1, Article 18 of the Law.

The JSPS's handling of Grants-in-Aid for Scientific Research before the day the Management Procedures take effect in compliance with JSPS Grants-in-Aid for Scientific Research (Scientific Research) Management Procedures (Rule No. 6, June 9, 1999) is deemed as JSPS's handling of a grant in accordance with the relevant provisions in the Management Procedures.

Additional Rule (No. 9, 2004)

1. Takes effect on April 1, 2004

Provisions in No. 3 of Clause 1, Article 4-2 do not apply to researchers who conducted a project subject to grant cancellation for which the grant was decided before the time the Rules take effect.

Additional Rule (No. 14, 2004)

Takes effect on August 27, 2004

Additional Rule (No. 1, 2005)

1. Takes effect on January 24, 2005

2. Clauses 2 and 3 of Article 4-2 do not apply to projects conducted by a researcher who was ordered to refund Grants-in-Aid for Scientific Research before the day the Rules take effect, or who conspired with such a researcher.

Additional Rule (No. 7, 2005)

Takes effect on April 1, 2005

Additional Rule (No. 9, 2006)

Takes effect on April 1, 2006

Additional Rule (No. 12, 2007)

Takes effect on April 1, 2007

Additional Rule (No. 9, 2008)

1. This rule was set up from June 10, 2008, and takes effect for the grants of FY2008 and later.

2. The rules No. 1 and No. 3 of clause 1, article 5 of the revised Management Procedures (hereinafter "New Procedures") do not apply to persons who conducted illicit use in projects of which the decision to fund a grant was cancelled, or to project members who used a grant-in-aid for scientific research in a way that violates the rules under clause 1, article 11 of the Law, in projects of which the day when the return of the grant-in-aid for scientific research was ordered fell before September 12, 2003. This is in accordance with the rules of clause 1 of article 18 of the Law. (This does not apply to the persons mentioned in No. 1 or No. 2, clause 1, article 5 of the New Procedures.)

3. The rule No. 4, clause 1, article 5 of the New Procedures does not apply to the Principal Investigator or the Co-Investigator(s) (*kenkyū-buntansha*) of projects of which the decision on funding of the grant was taken before April 1, 2004.

4. The rules No. 2 and No. 5, clause 1, article 5 of the New Procedures do not apply to persons who conspired in illicit use of grants-in-aid for scientific research, to persons who obtained a grant-in-aid for scientific research by deceit or by other illicit means, or to persons who conspired in this deceit or other illicit means in question, in projects of which the day when the return of the grant-in-aid for scientific research was ordered fell before January 24, 2005.

Additional Rule (No. 6, 2010)

Takes effect on April 1, 2010.

1. State of Allocation of Grants-in-Aid for Scientific Research for FY2010

# (1) New Projects

As of July 2010

	Numbe	er of proposed p	projects		Amount all	ocated per project		
Research category	Applications	Applications approved	Approval rate	Amount allocated	Average	Maximum		
rants-in-aid for cientific Research	# [ 95,534 ] 89,207	# [ 21,484 ] 19,604	% [ 22.5 ] 22.0	(1,000 yen) (63,297,521 ) 58,823,870 [16,633,470 ]	3,001	(1,000 yen) [ 182,800 ] 163,000		
Specially promoted Research	[ 83 ] 111	[ 12 ]	[ 14.5 ] 13.5	[ 1,389,100 ] 1,538,500 [ 461,550 ]	102,567	[ 182,800 ] 163,000		
Scientific Research on Priority Areas	[ 1,945 ] 1,063	[ 442 ] 279	[ 22.7 ] 26.2	[ 1,365,500 ] 778,600	[ 3,089 ] 2,791	[ 9,000 ] 10,000		
Scientific Research on Innovative Areas (Research in a proposed research area)	[ 3,332 ] 3,285	[ 567 ] 678	[ 17.0 ] 20.6	[ 4,919,300 ] 8,552,200 [ 2,565,660 ]	12,614	[ 157,200 ] 143,100		
Scientific Research on Innovative Areas (Research a proposed research project) *	[ 728 ] —	[ 80 ]	[ 11.0 ]	[ 658,200 ] — — — — — — — — — — — — — — — — — — —	[ 8,228 ]	[ 8,700 ] —		
Scientific Research(S)	[ 489 ] 462	[ 100 ]	[ 20.4 ]	[ 4,120,700 ] 3,716,100 [ 1,114,830 ]	41,754	[ 107,400 ] 97,800		
Scientific Research(A)	[ 2,366 ] 2,296	[ 567 ] 536	[ 24.0 ] 23.3	[ 7,440,700 ] 7,110,100 [ 2,133,030 ]	13,265	[ 34,800 ] 33,200		
Scientific Research(B)	[ 11,019 ] 9,714	[ 2,749 ] 2,489	[ 24.9 ] 25.6	[ 15,116,200 ] 13,585,300 [ 4,075,590 ]	5,458	[ 14,400 ] 14,200		
Scientific Research(C)	[ 33,019 ] 31,443	[ 7,764 ] 7,471	[ 23.5 ] 23.8	[ 11,303,300 ] 10,361,600 [ 3,108,480 ]	1,387	[ 3,600 ] 3,500		
challenging Exploratory Research	[ 13,336 ] 12,505	[ 1,640 ] 1,412	[ 12.3 ] 11.3	[ 2,660,800 ] 2,250,900	[ 1,622 ] 1,594	[ 3,500 ] 3,300		
Young Scientists(S) *	[ 562 ] —	[ 35 ] —	[ 6.2 ]	[ 768,700 ] — — ]	[ 21,963 ]	[ 50,400 ]		
Young Scientists(A)	[ 1,871 ] 1,941	[ 350 ] 343	[ 18.7 ] 17.7	[ 2,936,200 ] 2,530,600 [ 759,180 ]	7,378	[ 19,900 ] 18,900		
Young Scientists(B)	[ 23,355 ] 22,817	[ 6,487 ] 5,578	[ 27.8 ] 24.4	[ 10,268,500 ]	1,443	[ 3,500 ] 3,600		
Encouragement of Scientists	[ 3,429 ] 3,570	[ 691 ] 714	[ 20.2 ] 20.0	[ 350,321 ] 349,470	[ 507 ] 489	[ 820 ] 800		
ublication of Scientific Research Results	[ 1,163 ] 1,155	[ 486 ] 515	[ 41.8 ] 44.6	[ 1,284,600 ] 1,250,300	[ 2,643 ] 2,428	[ 41,800 ] 27,100		
SPS Fellows	[ 2,583 ] 2,799	[ 2,583 ] 2,799	[ 100.0 ]	[ 2,102,100 ] 2,073,900	[ 814 ] 741	[ 3,000 ] 2,500		
Total	[ 99,280 ] 93,161	[ 24,553 ] 22,918	[ 24.7 ] 24.6	[ 66,684,221 ] 62,148,070 [ 16,633,470 ]	2,712	[ 182,800 ] 163,000		

Notes:

1. The figures in [ ] indicate the previous fiscal year

2. The figures in [ ] indicate indirect costs (excluded from the total)

3. For items marked with an asterisk (\*), no new call for proposals is organized in FY2010.

4. "Scientific Research on Innovative Areas (Research in a proposed research area) 'Support Activity in 3 Areas of Bioscience'", "Grant-in-Aid for Research Activity Start-up"

1. "Scientific Research in Aid for Encouragement of Scientists" are excluded 123

# (2) Newly approved and continued

As of July 2010

		Number of proposed projects										Amount allocated per project							
Research category	Α	applications	s	Aj	pplications	;	Ap	proval r	ate	1	Amount allocated		Average Maximum						
rants-in-aid for ientific Research	ί	# 125,433 126,189		(	51,330 56,481	)	ĺ	% 40.9 44.8		(	144,061,843	)	(1,000 yen) [ 2,867 ] 2,551	(	(1,000 yen) 317,500 274,700				
Specially promoted Research		152 176	)	(	81 3 80	)	(	53.3 45.5	)	( (	6,465,200		[ 82,891 ] 80,815	(	317,500 274,700				
Scientific Research on Priority Areas	[	4,259 1,848	)	(	2,756 1,064	)	[	64.7 57.6	)	[	22,799,400 7,436,800	)	[ 8,273 ] 6,989	(	225,100 112,100				
Scientific Research on Innovative Areas (Research in a proposed research area)	ĺ	3,530 4,045	)	(	765 1,438	)	[	21.7 35.6	)	(	16,168,900		[ 10,936 ] 11,244	(	219,300 209,100				
Scientific Research on Innovative Areas (Research a proposed research project)		809 160	)	(	161 D	)	(	19.9 100.0	)	(	1,288,200 1,179,000 353,700		[ 8,001 ] 7,369	(	10,000 10,000				
Scientific Research (S)	[	789 794	)	(	398 ) 417	)	(	50.4 52.5	)	(	10,913,100		[ 24,259 ] 26,171	(	107,400 97,800				
Scientific Research (A)	(	3,635 3,655	)	[	1,822 1,878	)	(	50.1 51.4	)	(	17,582,800		[ 9,477 ] 9,363	(	34,800 33,200	•			
Scientific Research (B)	(	15,911 15,492	)	(	7,619 8,236	)	[	47.9 53.2		[	32,402,200		[ 4,090 ] 3,934		14,400 14,200				
Scientific Research (C) challenging Exploratory Research		44,236 47,141	)	(	18,966 23,142	)	(	42.9 49.1	)	(	23,686,812		[ 1,112 ] 1,024	(	3,600 3,500				
		14,834 14,358	)	[	3,138 3 3,265	)	(	21.2 22.7	)	(	4,210,682 4,203,770	)	[ 1,342 ] 1,288	(	3,500 3,300				
Young Scientists(S) *		635 108	)	(	108 108	)	(	17.0 100.0	)	[	1,527,700		[ 18,369 ] 14,145	(	50,400 27,200				
Young Scientists(A)		2,313 2,540	)	(	792 938	)	(	34.2 36.9	)	( (	5,075,900	-	[ 5,970 ] 5,411	(	19,900 18,900				
Young Scientists(B)		29,968 31,281	)	(	13,100 D 14,020	)	(	43.7 44.8	)	( (	16,530,918 16,170,953 4,851,286		[ 1,262 ] 1,153	(	3,500 3,600				
Research Activity Start-up *	(	933 1,021	)	(	933 3 1,021	)	[	100.0 100.0	)	(	899,238		[ 1,070 ] 881	(	1,500 1,500				
Encouragement of Scientists	ſ	3,429 3,570	)	(	691 7 714	)	[	20.2 20.0	)	(	350,321 349,470	)	[ 507 ] 489	(	820 800				
blication of Scientific Research Results		1,177 1,180	)	ί	500 ) 540	)	(	42.5 45.8	)	(	1,334,900 1,368,000	)	[ 2,670 ] 2,533	(	41,800 27,100				
PS Fellows	(	6,238 6,544	)	(	6,238 3 6,544	)	(	100.0 100.0	)	(	4,682,449 4,740,682	)	[ 751 ] 724	(	3,000 3,000				
eative Scientific Research *	ſ	59 39	)	ζ	59 39	)	(	100.0 100.0	)	( (	4,013,600 2,537,200 761,160		[ 68,027 ] 65,056	(	102,800 99,700				
Total	(	132,907 133,952	)	(	58,127 63,604	)	(	43.7 47.5	)	[	157,172,126 152,707,725 40,382,701		[ 2,704 ] 2,401	(	317,500 274,700				

Notes:

1. The figures ir [ ] indicate the previous fiscal year

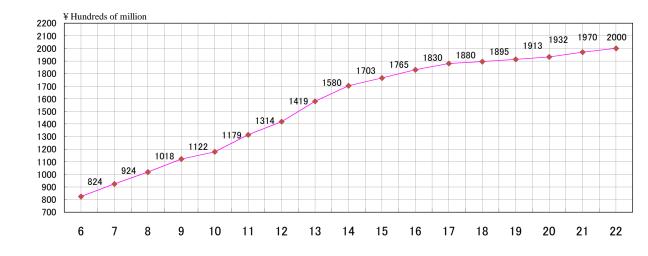
2. The figures in[ ] indicate indirect costs (excluded from the total

3. In case of items marked with an asterisk (\*), only continued projects have been accounted for.

4. "Scientific Research on Innovative Areas (Research in a proposed research area) 'Support Activity in 3 Areas of Bioscience'', "Research Activity Start-up Support" (new) and "Special Grant-in-Aid for Encouragement of Scientists" are exclude

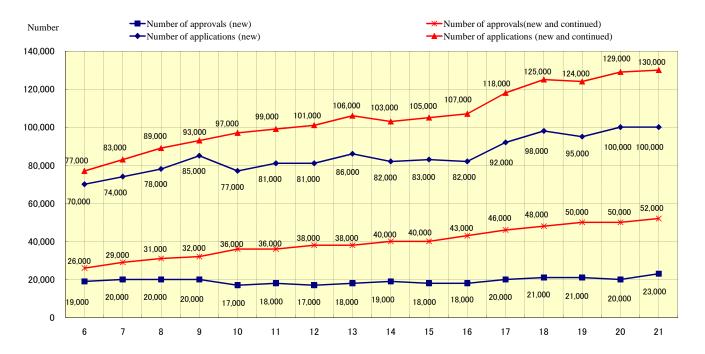
# 2. Changes in budgets and other information

### O Changes in budgets and other information



FY	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Budget (¥ hundreds of millions)	824	924	1,018	1,122	1,179	1,314	1,419	1,580	1,703	1,765	1,830	1,880	1,895	1,913	1,932	1,970	2,000
Year-on-year increase (%)	12.0	12.1	10.2	10.2	5.1	11.5	8.0	11.3	7.8	3.6	3.7	2.7	0.8	0.9	1.0	2.0	1.5

# O State of applications and approvals



# O State of applications

	FY	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Appro	oval rate (%)	27.0	27.6	26.1	24.6	22.2	21.8	21.6	21.1	22.7	21.4	22.5	21.6	21.5	22.2	20.3	22.5
Fullfill	ling rate (%)	33.8	35.2	35.1	34.0	37.6	36.1	37.3	35.8	38.5	37.9	40.7	38.6	38.6	40.4	38.4	40.3

# **Inquiries**

- 1. Inquiries about the invitation of applications should be directed to the following divisions through the research institution.
  - (1) About the invitation of applications:

Overall application guidelines, scientific research (A, B and C), Challenging Exploratory Research, Grant-in-Aid for Young Scientists (A and B)

Research Aid Division I, Research Program Department, Japan Society for the Promotion of Science

Phone: 03-3263-4682,4779,4798,0980,1878,0964,4724,4764,0976,4796

Specially Promoted Research, Scientific research(S), Grant-in-Aid for Young Scientists (S)

Research Aid Division II, Research Program Department, Japan Society for the Promotion of Science

Phone: 03-3263-4254 (Specially Promoted Research)

03-3263-4388,4388,4632(Scientific Research (S))

03-3263-1431,4326,4617 (Grant-in-Aid for Young Scientists (S))

(2) For inquiries concerning the use of the JSPS electronic application system for projects funded by grants-in-aid for scientific research:

**Call center:** 0120-556739 (toll-free)

\* Available from 9:30 to 17:30 every day except Saturdays, Sundays and holidays

The following phone numbers are also available: 03-3263-1902 and 03-3263-1913

System Management Team, Policy Planning, Information and Systems Division, General Affairs Division, Japan Society for the Promotion of Science

- (3) For inquiries concerning the use of the Cross-ministerial Research and Development management system (e-Rad):
  - **e-Rad help desk:** 0120-066-877 (toll-free)
  - \* Available from 9:30 to 17:30
  - \* The following phone numbers are also available: 03-5638-5361 (until March 31, 2011)
- (4) About "Report on the Status of the Implementation of the System, Based on the Guidelines on the Management and Audit of Public Research Funds at Research Institutions":

Office of Research Funding Administration, Research and Coordination Division, Science and Technology Policy Bureau, the Ministry of Education, Culture, Sports, Science and Technology

Phone: 03-6734-4014

2. The application guidelines can be viewed on the JSPS website.

Application forms can be downloaded from the following website.

JSPS's website on Grants-in-Aid for Scientific Research

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