Purpos	e of	the	Research
I UI DUB	·		

The applicant shall indicate the general nature of the research and the specific purpose of the research, <u>after succinctly summarizing it and providing an outline at the beginning</u>, and with the existing academic literature referred to where necessary. In particular, details shall be given clearly with a focus on the following points. [Refer to the rules relating to the screening and evaluation for grants-in-aid for scientific research.]

- 1) Scientific background for the research (e.g., domestic and overseas trends related to the research and positioning of the research; how the applicant has reached the concept based on his or her achievements in earlier research work; and details of achievements of past research work where the purpose of this project is to attain a greater level of knowledge in a similar area)
- 2) What will be elucidated and to what extent will it be pursued during the research period

3) Scientific cha	3) Scientific characteristics, originality and expected results and significance of the research in the area							
Purpose of the describe in detail.	ne Research	(Outline)	*Concerning the Purpose of the l	Research Project, the applica	nt should succinctly summarize and			
Name of the research				Name of the Principal				
institution				Investigator				

Scientific Research C (General) - 2 **Purpose of the Research (continued)** 

### **Research Plan and Method**

The applicant should provide details of the research plan and the methods for achieving the objectives of the research in a clear and specific manner, after succinctly summarizing it and providing an outline at the beginning. The plan should be divided into one for FY2012 and one for FY2013. The literature should be referred to as needed and main points focused on. The plan and methods should indicate achievements through a discussion from different angles, such as the action in the event that the research does not progress as originally planned. Where the research plan is being implemented by a group, indicate the specific roles of the Principal Investigator and Co-Investigator (*kenkyu-buntansha*) of the research team (using figures, tables and other visual aids). Include the necessity and rationality of the research group, and the relationship to the purpose of the research from the scientific viewpoint.

In addition, in order to clearly indicate the general view of the research team, state the roles of Co-Investigators (*kenkyu-buntansha*) and Research Collaborators [overseas co-researchers, company-employed researchers not eligible to apply for KAKENHI, graduate students and others (the names and the number of members may be stated)].

	at the number of memoris may be a			J
Research Plan	and Method (Outline)	* Concerning the Research P	an and Method to accomplish th	ne Purpose of the Research, the
	etly summarize and describe in detail.	0	F	
applicant should succine	my summarize and describe in detail.			
				<u> </u>
				<u> </u>
Name of the research			Name of the Principal	
institution			Investigator	
			30tt-Buttor	

Scientific Research C (General) - 4 **Research Plan and Method (continued)** 

			Scientific Research	ch C (General) - 5
State of Prep	parations for	the Resear	ch Plan and Methods to Disseminate the Re	search Results to
Society and C	Citizens			
1) The current sta 2) The state of pr (kenkyu-bunta Collaborators.	te of research envi eparation for starti nsha) (This should )	ronment, such as ng the research, s l also be stated if	d in a clear and specific manner: research facilities, equipment and materials that are to be used in co such as coordination and contact with research members, in case the appropriate in the case that there are Co-Investigators (kenkyu-bun o society and members of the public	re are Co-Investigator(s)
			· · · · · · · · · · · · · · · · · · ·	
			r the Final Year of a Research Plan plicants. (see procedures for application)]	
participates as the reasons for the necost). (Do not in	e Principal Invest ew application bas	igator. The applicated on a reconstruction achievements	an of a continued research project having FY2012 as the final year cant should also state new findings in the research and other research (e.g., the degree to which the research has been developed a of the continued research project stated here in <i>Research fun</i> .)	earch achievements and a justification of the
Research	Screening Division	Project Number	Title of a Research Project	Research Period
Category	Division	Number		From FY_ to FY2012
Initial Resear	ch Plan and	Results		
Reasons for A	applying			

Name of the research

institution

Name of the Principal

Investigator

## **Recent Research Activities**

The applicant should fill in the important research papers/articles, books, industrial property rights and invited lectures relating to the research in the sequence of publication from new to old with serial numbers assigned. Lines should be drawn between groups of research papers and others published in the same calendar year to separate them. Forthcoming research papers/articles in academic journals may be included, only if they have been accepted for publication.

Moreover, if the need arises, it is also possible to fill in the recent research activities of the Co-Investigators (*renkei-kenkyusha*). If the recent research activities are filled in, double lines should be drawn to distinguish between them. (The double lines can be moved.) They should be filled in per researcher in the sequence of publication from new to old. (It is not necessary to draw lines between every year.)

	1	
Year of Publication	Names of the Principal Investigator and Co-Investigator(s) (kenkyu-buntansha)	Title of Published Research Papers/Articles, Books, and Other Publications (For published research papers/articles, state the title, the names of authors, name of the journal, referee reading, volume, page numbers of the initial and final pages and the year of publication.)  The abovementioned sequence of such items is not compulsory as long as all of the items are included. If there are many authors, only include several authors omitting others (if any authors' names are omitted, state the number of the authors and the order on the author list for the related researchers). The Principal Investigator should be marked with a double underline, Co-Investigator(s) (kenkyu-buntansha) with a single underline, and the Co-Investigator(s) (renkei-kenkyusha) with a dotted underline.
2011 onward		
2010		
2009		
2008		
2007		
(renkei-	f the Co-Investigator kenkyusha) institution, academic tion)	Titles of published research papers/articles, titles of books, etc. (Please do not mention items which have been mentioned in the section above as recent research activities of the Principal Investigator or Co-Investigator(s) (kenkyu-buntansha)).

Recen	t Research Activiti	es (continued)		
Year of Publication	Principal	es (continued) Title of Research Papers/Articl	es, Books, and Other Publi	cations
ub!	Investigator/			
ar ica	Co-Investigator			
of tio	(kenkyu-buntansha)			
n				
Name of	the research		Name of the Principal	
institution			Investigator	
	I		-	

Research Funding Received and Achievements  State the achievements of funded research that is being effectively used for planning the current research from the grants that the Principal
Investigator/Co-Investigator (kenkyu-buntansha) has received (including KAKENHI, research funding provided by his or her research
institution, research funding paid by any ministry/office, local public organization, research promotion corporation, private corporation and any
current research funding). Classify the grants into KAKENHI and others. The following should be taken into consideration:
1) For each research funding, state the research category (name of the system for research funding other than KAKENHI), period (fiscal year), title of the research project, whether the applicant is the Principal Investigator or Co-Investigator ( <i>kenkyu-buntansha</i> ) eligible costs of the
research. Also give a clear statement of the research achievements and interim and after-the-fact assessment results (only to be made by the
funding organizations). (If there are research progress assessment results for KAKENHI for FY2010 or in FY2011, they should be described
in the section "Connection between the Research Plan and the Research Project which received a Research Progress Assessment" on
Scientific Research C (General) -9.)  2) The applicant should describe them and make a distinction by drawing a line between KAKENHI and other research funding.

	desearch Project which received a Research Progress
Assessment	
Investigator of "Specially Promoted Research", "Scientific Resea Creative Scientific Research", he or she should describe it in this sec • The researcher should describe the connection between the rese	research progress assessment in FY2010 or in FY2011, as a Principal rch (S)", "Grant-in-Aid for Young Scientists (S)" or "Grant-in-Aid for ction.  arch plan and the research project which received a research progress how the researcher will advance the research which received a research
Name of the research	Name of the Principal
name of the research institution	Name of the Principal Investigator

	Scientific Research C (General) - 10
Protection of Human Rights and Compliance with Laws and Regu	ulations (see procedure for application)
Describe the measures and action that you will take if your research involves compliance w	·
requiring the consent and the cooperation of the other party when implementing the resear	• , •
handling of personal information and research requiring efforts regarding bioethics and saf	
experiments which require an approval procedure in an ethics committee outside the resear	ch institution, such as for example questionnaire
surveys in which personal information is involved, interview surveys, the use of provided	samples, analysis study of the human genome,
recombinant DNA experiments, experiments on animals, etc. Please indicate where this is not	
Rationality and Justification of the Research Costs	
reactionally and sustineation of the research costs	
The applicant should explain the rationality, necessity and grounds for calculating the rese	arch cost to be stated on the following page and
The applicant should explain the rationality, necessity and grounds for calculating the rese	
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i>	Methods. Indicate the necessity of the cost (e.g.
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i>	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan and</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and
The applicant should explain the rationality, necessity and grounds for calculating the reset thereafter, based on the scale and organization of the research given in <i>Research Plan ana</i> breakdown) if, in any fiscal year of the research project, any of the costs (equipment,	Methods. Indicate the necessity of the cost (e.g. travel expenses, and personnel expenditure and

(Unit: in thousands of yen)

	nent of Costs for Equipment	Statement of Costs for Consumables				
	procedures for preparing and entering a Proposal for C	Grant-in-Aid for				
Scientific	c Research (C) (General).)	J	for Grant-in-Aid for Scientifi	c Research (C) (General).)		
	Item and Specifications		_			
FY	(unit price $\times$ qty) (institute where	Amount	Item	Amount		
2012	equipment is installed)					
2012						
Name of	the research		Name of the Principal	•		
institution			Investigator			
mstitutiOll			1111031154101			

(Unit: thousands of yen)

Staten	Statement of Costs for Travel Expenses (See the procedures for preparing and entering a Proposal for Grant-in-Aid for Scientific Research (C) (General).)									
	Domestic Travel		Overseas Travel Expenses		Personnel Expendito		Miscellaneo	us		
	Item		Item				Item	Amount		
FY 2012	Domestic Tra Expenses Item		Overseas Tra Expenses Item	Amount	Personnel Expendity Remuneration Item		Item	Amount		

## Application for Research Funding, Current State of Funding and Effort

(Since examiners will refer to the information stated here in the second screening (collegial screening) when they discuss whether a research project will be able to be sufficiently implemented without causing unreasonable duplication or excessive concentration of research funding. It is necessary that the applicant correctly states the budget for the proposed research project that he or she receives and uses. The applicant should take into account the following: (1) research funding under application, (2) research funding to be granted and (3) other activities at the time of application by the Principal Investigator. Distinguish between sources of research funding, if there is more than one. For the exact method for filling in the necessary data, the applicant should verify the procedures for preparing and entering the proposal for grant-in-aid for Scientific Research C (General).

- 1) Fill in Effort with a percentage of time allocation (%) necessary for the implementation of the research where the entire yearly working time is set at 100%.
- 2) State the title of the research project at the beginning of *Research funding applied for*.

  3) In the case of a KAKENHI for "Scientific Research on Innovative Areas (Research in a proposed research area)" or "Scientific Research on Priority Areas", the applicant should state whether it is "planned research" or "invited research".

  4) Include research funding to be competitively provided by the research institution to which the researcher belongs.

(1) Research funding	applied for							
(1) Research funding Funding system and name of the research funding (research period and name of the funding organization	Title of the research project (name of the Principal Investigator)	Role (Principal Investigator or Co-Investigator (kenkyu-buntan sha)))	Budget for FY2012 (throughout period) (tho of yen)	the	Effort (%)	reasons for a grant for a (In the case of a the grant for the Leader), the am	es in details of research and or additional application for a the current research project a Principal Investigator (or a researcher who rec whole program, like, for example, the Project bount to receive for the whole research period (c ram) should be entered)	ceives
Research project for which a grant is applied Scientific Research (C) (General) (2012)		Principal Investigator						
Name of the research institution				Name Investi		Principal		

Application for Research Funding, a Current State of Funding and Efforts (continued)					
(2) Research funding to be provided					
Funding system and name of	Title of the research project	Role (Principal	Budget for	Effort	Differences in details of research and
the research funding (research	(name of the Principal	Investigator	FY2012 (throughout the	(%)	reasons for additional application for a
period and name of the funding		or Co-Investiga	period) (thousands	(70)	
organization	Investigator)	tor	of yen)		grant for the current research project
		(kenkyu-bun tansha))			(In the case of a Principal Investigator (or a researcher who receives the grant for the whole program, like, for example, the Project
		<i>"</i>			Leader), the amount to receive for the whole research period (or for
					the whole program) should be entered)
(3) Other activities					
(3) Other activities  ( State the effort for the research and educational activities that are carried out as work )					
other than the aforesaid research activities being applied for or to be funded.					
				100	
Total			100		
(Total of	the effort in (1), (2) and (3) above	)		(%)	