Purpose of the Research

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 in 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 characteristics, originality and expected results and significance of the research in the area
- 4) Differences in goals if you have applied for a grant for another research project falling into Scientific Research (A) that is associated with the present research; or differences in details of the research if you have applied for a grant for another research project falling into Scientific Research (A) that is not associated with the present research

`	(11) that is not associated t			
Purpose of the R	esearch (Outline)	*Concerning the Purpose of the	Research Project, the applica	nt should succinctly summarize and
describe in detail.	, -/		, II	•
Name of			Name of	
the research institution				
the research institution			the Principal Investigator	

	Scientific Research 5-2
Purpose of the Research (continued)	

Research	Plan	and	Metho	he
ixescai cii	ı lalı	anu	IVICLII	ш

The applicant should provide details of the research plan and the method 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 FY2013 and one for FY2014. The literature should be referred to as needed and main points should be highlighted. The plan and methods should indicate achievements through a discussion from different angles, such as action to be taken 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 the Co-investigator (kenkyu-buntansha) of the research team (using figures, tables and other visual aids) In case the research plan is being implemented together with Co-Investigators (kenkyu-buntansha), include the necessity and rationality of the project members, 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 (renkei-kenkyusha) 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)].

Moreover, if the research environment changes significantly halfway through the research period, the applicant should also describe the way how the location of the implementation of the research implementation methods, etc.

the location of the implementation of the research is sec			<i></i>
Research Plan and Method (Outline)	* Concerning the Research P	lan and Method to accomplis	sh the Purpose of the Research, the
applicant should succinctly summarize and describe in detail.			
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			ł
			ł
			ł
1			
Name of		Name of	
the research institution		the Principal Investigator	
		put III. Votigutoi	

Research Plan and Method (continued)					

			Belefitific Research 5-5
Dogowah Dlan and	Mothed (continued)		
Nesearch Plan and	d Method (continued)		
Nama of		N. C	
Name of		Name of	
the research institution		the Principal Investigator	

State of Preparations for the Research Plan and Methods to Disseminate the Research Results to Society and Citizens The following points should be highlighted and stated in a clear and specific manner: 1) The current state of research environment, such as research facilities, equipment and materials that are to be used in conducting the research 2) The state of preparation for starting the research, such as coordination and contact with project members, in case there are Co-Investigator(s) (kenkyu-buntansha) (This should also be stated if appropriate in the case that there are Co-Investigators (renkei-kenkyusha) and/or Research Collaborators.)						
3) How the resear	ch achievements v	vill be disseminate	ed to society and members of the public	J		
			_			
			r the Final Year of a Research Plan			
			plicants. (see procedures for application)] n of a continued research project having FY2013 as the final year	:- which the applicant)		
		_	cant should also state new findings in the research and other rese			
			ction (e.g., the degree to which the research has been developed an se continued research project stated here in <i>Research funding receive</i>	-		
on Scientific Rese						
Research Category	Screening Division	Project Number	Title of Research Project	Research Period		
	21/181011	1 (0.222.002		From FY_ to FY2013		
Initial Resear	ch Plan and	Results		to F 12013		
Reasons for A	applying					

Research Funding	Research Funding Received and Achievements						
_	of funded research that is being used for planning	ng the current research fro	om the grants that the Principal Investigator /				
Co-Investigator (kenkyu-buntansha) has received (including KAKENHI, research funding provided by his or her research institution, research							
	inistry/office, local public organization, research						
	ants into KAKENHI and others. The following sl						
	nding, state the research category (name of the						
	project, whether the applicant is the Principal I	-					
	clear statement of the research achievements a						
	s). (If there are research progress assessment resu						
	ion between the Research Plan and the Research						
Research S-9.)							
2) The applicant should	describe them and make a distinction by drawing	g a line between KAKENH	II and other research funding.				
Nama of		N					
Name of		Name of					
the research institution	1	the Principal Investigator					

Research Funding Received and Achievements (continued)					

Connection between the Research Plan and the Research Project which received a Research Progressian Connection between the Research Plan and the Research Project which received a Research Progressian Connection between the Research Plan and the Research Project which received a Research Progressian Connection between the Research Plan and the Research Project which received a Research Project Which Project Which Project Which Project Which Project Which Project Which Project Wh	
Assessment	
If the Principal Investigator of the current application received a research progress assessment in FY2011 or in FY2012, as a Principal Investigator of "Specially Promoted Research", "Scientific Research (S)", "Grant-in-Aid for Young Scientists (S)" or "Grant-in-Aid for Creative Scientific Research", he or she should describe it in this section. The researcher should describe the connection between the research plan and the research project which received a research progress assessment in this section (e.g. what kind of connection is there, how the researcher will advance the research which received a research progress assessment in concrete terms, etc.).	r s
Name of Name of	

the Principal Investigator

the research institution

Scientifi	ic Research S-10
Protection of Human Rights and Compliance with Laws and Regulations (see procedures	for application.)
Describe the measures and actions that you will take if your research involves compliance with the related laws and reg	
, , , , , , , , , , , , , , , , , , , ,	, <u> </u>
requiring the consent and the cooperation of the other party when implementing the research plan, research requiring	
handling of personal information and research requiring efforts regarding bioethics and safety measures). This applies	s to surveys, research,
experiments which require an approval procedure in an ethics committee inside and outside the research institution,	such as for example
questionnaire surveys in which personal information is involved, interview surveys, the use of provided samples, analys	
	is study of the framula
genome, recombinant DNA experiments, experiments on animals, etc. Please indicate where this is not applicable.	J
Rationality and Justification of the Research Costs	
The applicant should explain the rationality, necessity and grounds for calculating the research costs to be stated on thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and person remuneration) exceeds 90% of the entire research funding, or if there is any other predominant cost.	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in Research Plan and Methods. Indicate the nec	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.
thereafter, based on the scale and organization of the research given in <i>Research Plan and Methods</i> . Indicate the new breakdown) if, in any fiscal year of the research project, any of the costs (equipment, travel expenses and personal p	cessity of the cost (e.g.

Major	· Equip	ment Currently Use	d (See pre	naration and e	ntry procedu	res of proposal fo			Research (S)
	earch		Specif	fications (t	vpe and	Exclusive/	FY of		
	tution	Equipment	r	performance	ce)	Joint Use	Installation	R	emarks
Staten	nent of	Costs for Equipme	ent (See	the procedure	es for prepar	ing and entering	the proposal	for grant-in	-aid for Scientific
		t: Thousands of yen)	`						
FY	Items	and Specifications	Qty	Unit Price	Amount (¥)	Names (Researche	of Main U		When to Purchase
2013				11100	(+)	(Research)	or und mis	itution	Turchase
Name of	•		•	· '	Name of				-
the resear	ch institution	n			the Princip	oal Investigator			

	rocedure for preparing and entering Consumables		Travel Exp	enses	Personnel Expen		Miscellan	eous
FY	Consumables				Remunerat	tion	Wiisconan	
	Item	Amount (¥)	Item	Amount (¥)	Item	Amount (¥)	Item	Amour (¥)
			(Domestic)					
2013			(Overseas)					
	Total		Total		Total		Total	
			(Domestic)					
2014			(Overseas)					
	Total		Total		Total		Total	
			(Domestic)					
2015			(Overseas)					
	Total		Total		Total		Total	
			(Domestic)					
2016			(Overseas)					
	Total		Total		Total		Total	
			(Domestic)					
2017			(0)					
2017			(Overseas)					

<u>Scientific Research S-13</u> <u>Proposal of the Researcher Conducting Scientific Research (S) for FY2013</u>

	Name						Date of Birth (age)		(_	years old)
Researcher	Institution, Academic Unit, Position				Academic Degree			Field of Specialization		
Recent R	Research Activ	vitios								
			ay rasaarah na	pers/articles, books	(avaluding t	ovthoo	ka abatraata	of acadomic mostiv	ac and	summeries of
			-	-	-				-	
lectures), industrial property rights and invited lectures in the sequence of publication from new to old with serial numbers assigned. Forthcoming										
	research papers/articles in academic journals may be included, if they have been accepted for publication. Titles of Published Research Papers/articles, Titles of Books and Other Publications									
				•						
				the names of authors		-				
				e mentioned sequen			-	-		
Only include	some authors omitt	tting oth	ners, if there are	e many authors (if ar	y authors' na	mes ar	e omitted, sta	te the number of the	author	rs and the order
on the auth	or list for the rel	lated r	esearchers). T	he Principal Invest	igator should	d be	marked with	a double underlin	ne, Co	-Investigator(s)
(kenkyu-bunt	ansha) with a single	le under	line, and the Co	o-Investigator(s) (ren	ikei-kenkyush	a) wit	h a dotted und	derline.		
							1			
Name of					Name of					
the research in	stitution				the Princ	ipal Inv	estigator			
						•	-			

Scientific Research S-14 **Recent Research Activities (continued)**

To be filled in and attached to the pro-	oposal for	grant-in-aid fo	r each Princi	pal Investigator and
Co-Investigator (kenkyu-buntansha)				

5

	7				Scientific Research S-1
Name of					
researcher Application for Rese	arch Funding, the Curr	ent State	e of Fundin	g and I	Effort
be sufficiently implemented applicant correctly states the Co-Investigator (kenkyu-bung granted and (3) other activities more than one. For the exthe proposal for grant-in-aid 1) Fill in Effort with a petime is set at 100%. 2) State the title of the research funding the case whether it is "plated by Include research funding to In the case where the should also state the case."	without causing unreasonable dup ne budget for the proposed reseatansha) should take into account the es at the time of application by the act method for filling in the necess for Scientific Research S. ercentage of time allocation (%) ne search project at the beginning of R ENHI for "Scientific Research on a need research" or "invited research ng to be competitively provided by applicant is conducting research in details of the research funding. Mothis effect in the section "Difference	lication or rch project he following Principal Insary data, the cessary for esearch Fundamental Innovative 1.1. The research I line with preover, if the research is the research of the resea	excessive concert that he or she g: (1) research for the applicant shout the implementate anding Applied for Areas (Research h institution to was a specific purposthe amount province that he concerns the should be amount province and the concerns that the concerns the shear that the concerns the shear that the concerns the conce	receives unding unanguish be ald verify tion of the r. in a properties (missicided to early).	swhether a research project will be able to f research funding. It is necessary that the and uses. The Principal Investigator or der application, (2) research funding to be tween sources of research funding, if there the procedures for preparing and entering research where the entire yearly working osed research area)", the applicant should esearcher belongs. on) of his/her research institution, he or sho ich individual is not clear, he or she should for additional application for a grant for the
(1) Research Funding	g Applied for				
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	Role (Principal Investigator or Co-Investiga tor (kenkyu-bun tansha))	Budget for FY2013 (throughout the period) (thousands of yen)	Effort (%)	Differences in details of research and reasons for additional application for a grant for the current research project (In the case of a Principal Investigator of a KAKENHI (or a researcher who receives the grant for the whole program, like, for example, the Project Leader), the amount to receive for the whole research period (or for the whole program) should be entered)
Research project for which a grant is applied Scientific Research (S) (2013)			()		(total budget in thousands of yen

Name of

the Principal Investigator

Name of

the research institution

To be filled in and attached to the proposal for grant-in-aid for each Principal Investigator and Co-Investigator (*kenkyu-buntansha*)

Application for Research Funding, Current State of funding and Effort (continued)							
(2) 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-Investig ator	Budget for FY2013 (throughout the period) (thousands of	Effort (%)	Differences in details of research and reasons for additional application for a grant for the current research project (In the case of a Principal Investigator of a KAKENHI (or a researcher who receives the grant for the whole program, like, for		
		(kenkyu-bu	yen)		example, the Project Leader), the amount to receive for the whole research period (or for the whole program) should be entered)		
(2) Other activities		ntansha))			research period (or for the whole program) should be entered)		
(3) Other activities							
work than the aforesa	search and educational activities aid research activities under appli	100					
Total			100				
(Total of the effort in (1), (2) as	nd (3) above)	(%)					