

The Guideline for Application for 2010 Collaborative Research and Research Meeting
National Institute of Genetics,
Research Organization of Information and Systems

1. The Guidelines for Application

(1) Collaborative Research

The Purpose is to promote collaborative research between NIG faculty and researchers outside of NIG.

Based on applications from the researchers, the NIG researchers collaborate with them for conducting the research on the subject of application.

The following two categories are solicited for Collaborative Research : (A) and (B).

Collaborative Research is usually conducted during the period of time from April 1, 2010 to March 31, 2011. It can be extendable up to 3 years.

① Collaborative Research (A)

- Travel expenses only are provided for conducting the Collaborative Research within the accepted budget.
- The travel expenses are, in principle, to be paid only to the researchers who visit NIG for conducting the Collaborative Research.
- A total amount of money for the budget is up to 300,000JPY for each application of Collaborative Research(A). If the proposed budget is over 300,000JPY in your application, you are kindly requested to give the specific reason for that.

② Collaborative Research (B)

- Based on an application, both travel expenses and research expenses are provided to the researchers within the accepted budget. (For research expenses, only expendable items to be used in NIG can be bought).
- Once accepted, the representative of applicants or its collaborative researchers may stay for more than 14 days at NIG.
- Travel expenses are to be paid only when the researchers visit NIG for Collaborative Research.
- For each of applications accepted, up to 300,000JPY are provided for travel expenses, and up to 1,000,000JPY is given for research expenses. If the budget in the application is over the limit, you are kindly requested to give a specific reason.
- About 10 applications are usually to be accepted
- When your application is not accepted in Collaborative Research(B), the application

can be considered in Collaborative Research(A),when requested. In this case, you are requested to mention it in the application form.

(2) Research Meeting

The Purpose is to promote exchange of information between NIG faculty and researchers outside of NIG.

Based on applications from the researchers, the Research Meeting can be held in collaboration with the NIG researchers.

We provide travel expenses for visiting place where the Research Meeting is held. The Research Meeting should be held with the period from April 1, 2010 to March 31, 2011.

- Based on the application, travel expenses for the Research Meeting are to be provided.
- The Research Meeting is, in principle, held in NIG. The travel expenses are to be paid only to the non-NIG researchers who visit NIG for participating the Research Meeting.
- A total amount of money for the budget should be up to 500,000JPY per an application. If the budget is beyond this limit, you are requested to state a specific reason.

2. Exceptions

There are some exceptions as below;

(1) Collaborative Research

In the Collaborative Research only when the NIG researchers need to visit a research institution where the non-NIG researchers of Collaborative Research belong to, the travel expense can be used for it (within provided travel expenses). This can be done at any time.

(2) Research Meeting

Because Research Meeting is held in NIG, in principle, travel expenses are to be paid only to the non-NIG researchers who visit NIG. However, Research Meeting can be held at the outside of NIG, (in domestic only, when necessary.)

3. Applicants

【Collaborative Research (A)】

The applicant should be, in principle, a researcher who belongs to a university, an inter-university collaborative research institute and independent administrative organizations within Japan. A researcher who belongs to the foreign research institution can also apply for this category. (In principle, Principal Investigator)

【Collaborative Research (B)】

The applicant should be, in principle, a researcher who belongs to a university,

inter-university collaborative research institute and independent administrative organizations within Japan. (In principle, Principal Investigator)

【Research Meeting】

The applicant should be, in principle, a researcher who belongs to a university, inter-university collaborative research institute and independent administrative organizations. A researcher who belongs to the foreign research institution can also apply for this category. (In principle, Principal Investigator)

4. Application

Please submit an application form issued by NIG to the administration office with the administrative approval. (Any supervisory authority of the applicant is acceptable. In the case of the overseas applicants, the approval is exempt from this requirement.)

An application form can be downloaded from the NIG website.

<http://www.nig.ac.jp/welcome/kyoudoukenkyu/annai.html>

5. Submission of the application form

Mailing Address

Research Promotion Team, Research Promotion Section

Department of Administration

National Institute of Genetics, Research Organization of Information and Systems

Yata1111, Mishima, Shizuoka

411-8540 JAPAN

Phone: +81-55-981-6728

E-mail: kyodo-mail@lab.nig.ac.jp

Application Deadline:

(Not later than) January 5 , 2010

Please note “Enc. Collaborative Research Application Form” in red on the envelope.

6. Notification of the Outcome of Selection

The outcome of application will be notified to the successful candidates after screening.

The acceptance list will be also posted on NIG website.

7. Expenses Provided

Expenses will be provided by NIG within the accepted budget. The travel expenses are to be provided based on the rule of Research Organization of Information and

Systems (ROIS).

8. The Report of Research

The report of Collaborative Research or Research Meeting should be submitted to the Director-General of NIG within 30 days immediately after finishing the research.

Please understand that the report might be published in an annual report of NIG.

When you write papers and make presentation within the framework of this grant, you are requested to specifically mention this grant as follows:

For Japanese : 国立遺伝学研究所共同研究 (2009-A*あるいはB*)

For English : NIG Cooperative Research Program (2009-A* or B*)

(* : Reference number in the acceptance list)

In the case of thesis, it or its copy may also be submitted to the Director-General.

9. Others

(1) We strongly hope that an applicant should consult with the faculty of NIG as to the following details before submitting an application form.

(I) Collaborative Research : Proposed Research Title, expected participants,
required expenses and other necessary matters.

(II) Research Group : Name of the Research Group, purpose of the research,
proposed conducting date, expected participants,
required expenses and other necessary matters.

(2) Attached please see the document regarding the guidelines of research and the faculties in charge.

If you would like to call the faculties, please dial +81-55-981-****.

(**** : extension number)

(3) NIG makes available to our facilities for the Collaborative Research and Research Group.

(4) If you experiment for gene recombination and/or animals, you are requested to submit of Experiment-on-Gene Recombination plan and/or Experiment-on-Animals plan application form through the representative of NIG after acceptance of your application. We strongly hope that you comply with regulations and conduct the research properly.

- (5) If you use Radioisotope at NIG, you are requested to register for Radiation Worker after acceptance of your application.
- (6) We make the researchers who visit NIG for Collaborative Research or Research Group available to our Guest house.
- (7) Regarding intellectual property created in the Collaborative Research of NIG, Ownership of the right is to be considered based on the regulations of ROIS employee invention.
- (8) NIG assures that private information for this application should be used only for examining the proposal. Regarding the accepted proposal, the representative of the research, his/her institute and the research project title will be posted on NIG website and a publication.
- (9) Please note that NIG would not prepare the form of “business-trip request” for the Collaborative Research and Research Group because of simplicity of procedures. Please contact us mentioned below if needed.

Department of Administration

Research Promotion Team, Research Promotion Section

National Institute of Genetics, Research Organization of Information and Systems

Yata1111, Mishima, Shizuoka

411-8540 JAPAN

Phone: +81-55-981-6728

E-mail: kyodo-mail@lab.nig.ac.jp

Research outline

(Update:1st November,2009)

Research Department	Research Division	In charge of faculty	Extension	Research outline
Molecular Genetics	Molecular Genetics	FUKAGAWA, Tatsuo /Professor	6792	Molecular genetic, cell biological, biochemical, and structure biological methods are employed to study the mechanism for chromosome segregation during cell division.
		HORI, Tetsuya /Assistant Professor	6744	
		NISHINO, Tatsuya /Assistant Professor	6744	
Molecular Genetics	Mutagenesis	YAMAOKA, Fumiaki /Professor	6748	There is targeted maintenance of chromosomal integration through DNA damage repair, recombination etc, especially with their linkage to ubiquitin or ubiquitin-like modification of the proteins involved in the process.
		TSUTSUMI, Yasuhiro /Assistant Professor	6747	
	Molecular Mechanisms	SEINO, Hiroaki /Assistant Professor	6745	I am studying molecular mechanisms of cell cycle regulation in fission yeast by genetic and biochemical approaches.
Cell Genetics	Cytogenetics	KOBAYASHI, Takehiko /Professor	6881	Relationship between genome instability (especially,of repetitive sequences) and cellular functions is studied.
		IIDA, Tetsushi /Assistant Professor	6882	
Cell Genetics	Microbial Genetics	ARAKI, Hiroyuki /Professor	6754	Genetic and biochemical approach to elucidate molecular mechanism and regulation of eukaryotic DNA replication and checkpoint control using budding yeast.
		TANAKA, Seiji /Assistant Professor	6758	

Developmental Genetics	Developmental Genetics	HIROMI, Yasushi /Professor	6767	Developmental genetics of organogenesis in <i>Drosophila</i> .
		ASAOKA, Miho / Assistant Professor	6811	
	Gene Expression	SHIMIZU, Hiroshi / Assistant Professor	6768	Our group is currently investigating the physiological mechanism of Hydra and other members of phylum Cnidaria and its relation to the mechanism of pattern formation e.g. regeneration and budding.
		IWASATO, Takuji /Professor	6773	We are studying molecular and cellular mechanisms of neuronal circuit development in the mouse somatosensory system (whisker-barrel system) using mouse genetics. We are also interested in roles of alpha-chimerin in brain development and function.
MIZUNO, Hidenobu / Assistant Professor	6777			
Molecular and Developmental Biology	KAWAKAMI, Koichi /Professor	6740	Genetic studies on development, morphogenesis and behaviors by using a model vertebrate zebrafish.	
		ASAKAWA, Kazuhide / Assistant Professor		6739
Population Genetics	Population Genetics	SAITOU, Naruya /Professor	6790	We study evolution of genes, in particular human evolution.
		SUMIYAMA, Kenta / Assistant Professor	6787	We also develop methods for study of gene evolution.
		TAKANO, Toshiyuki /Associate Professor	6781	Studies of principles of genetic variation and evolution that can be used to make future predictions.
TAKAHASHI, Aya / Assistant Professor	6782			

	Evolutionary Genetics	AKASHI, Hiroshi /Professor OSADA, Naoki* / Assistant Professor *Starting on Jan,1	6793	Population genetic methods are employed to study natural selection in genome evolution, especially global constraints related to biosynthesis.
Integrated Genetics	Human Genetics			
	Agricultural Genetics	KAKUTANI, Tetsuji /Professor	6801	Control and function of epigenetic gene modifications in Arabidopsis.
		SAZE, Hidetoshi / Assistant Professor	6807	
		TARUTANI, Yoshiaki* / Assistant Professor *Starting on Mar,1		
	SHIBAHARA, Kei-ichi / Associate Professor	5828	Combinations of molecular genetics, cytology and biochemistry are applied to analyze the function and organization of nuclear higher-order structures.	
	NISHIJIMA, Hitoshi / Assistant Professor	5830		
	Brain Function	HIRATA, Tatsumi /Associate Professor	6721	Development of the vertebrate nervous system with special focus on neuronal network formation.
		KAWASAKI, Takahiko / Assistant Professor	6721	

Genetic Strains Research Center	Mammalian Genetics	SHIROISHI, Toshihiko / Professor TAMURA, Masaru / Assistant Professor TAKADA, Toyoyuki / Assistant Professor	6818 6816 6820	In order to understand genetic regulation of complex traits, such as morphogenesis and energy metabolism, we are conducting genetic analyses using mouse spontaneous mutants (variants) and genetically modified mutants.
	Mammalian Development	SAGA, Yumiko / Professor KOKUBO, Hiroki / Assistant Professor MORIMOTO, Mitsuru* / Assistant Professor *Starting on April, 1	6829 6815	We study the early developmental events and the regulatory mechanisms during mouse embryogenesis through generation and analyses of gene-knockout and transgenic mice . We are especially interested in the organs derived from mesoderm (heart, lung, somite), and the germ cell system.
	Mouse Genomics Resource	KOIDE, Tsuyoshi / Associate Professor	5843	For understanding genetic basis of behavioral diversity, behavioral and genetic analyses are applied on a variety of mouse resources including wild-derived strains.
	Model Fish Genomics Resource	SAKAI, Noriyoshi / Associate Professor SHINYA, Minori / Assistant Professor	5848 5849	We establish reliable protocols for genetically modification of zebrafish using sperm, and analyze the molecular mechanisms of spermatogenesis and early development in zebrafish.
	Plant Genetics	KURATA, Nori / Professor KUBO, Takahiko / Assistant Professor	6808 6802	We perform analyses of genetic programs of reproductive and embryonic developmental process, as well as studies on the mechanism of reproductive isolation in rice. Wild species resources of rice are also used for evolutionary and diversity studies.

	Microbial Genetics	NIKI,Hironori / Professor FURUYA,Kanji / Assistant Professor	6870 6827	We investigate higher order structure of chromosomes and their dynamics in yeast and bacteria through genetic and cell biological analysis.
	Invertebrate Genetics	UEDA,Ryu / Professor	6823	Genome-wide RNAi mutant fly library is established to study genome function in a variety of biological traits of fly development.
Center for Genetic Resource Information	Genetic Informatics	YAMAZAKI, Yukiko /Associate Professor	6885	As the information center of the genetic resources, we have been constructing databases and continuously inventing better way to distribute data in order to utilize the resources to its fullest potential.
	Genome Biology	KOHARA,Yuji / Professor ANDACHI, Yoshiki / Assistant Professor	6854	We are performing a systematic analysis of expression and function of the genome of the nematode C.elegans, aiming at understanding of the gene network for development.
			6860	
Comparative Genomics	FUJIYAMA,Asao / Professor TOYODA,Atsushi /Associate Professor	6788 6788	Our group aims at understanding of the evolutionary view on species, and genomic structure of human population/ individual through large-scale comparative genomics.	
Structural Biology Center	Biological Macromolecules	MAESHIMA, Kazuhiro / Professor	6864	Our research interest lies in determining how a long string of genomic DNA is three-dimensionally organized in mitotic chromosomes and the nucleus, and how the organized genome functions during cellular proliferation, differentiation, and development. We are using a novel combination of molecular cell biology and biophysics to elucidate 3D-organization and dynamics of human genome chromatin.
	Multicellular Organization			

	Biomolecular Structure	SHIRAKIHARA, Yasuo /Associate Professor ITO, Hiroshi / Assistant Professor	6887 6862	We determine the three dimensional atomic structure of proteins, nucleic acids or their complexes by x-ray diffraction analysis in order to understand the working mechanism of the targets.
	Gene Network	SUZUKI, Emiko /Associate Professor KURUSU, Mitsuhiko / Assistant Professor	6812 6813	Combinations of molecular genetics of Drosophila and high-resolution light and electron microscopy are employed to study functional implication of structural and molecular organization of neuronal cells, with particular focus on neuronal network formation.
Center for Information Biology and DNA Data Bank of Japan	DNA Data Analysis	GOJOBORI, Takashi /Professor IKEO, Kazuho /Associate Professor SUZUKI, Yoshiyuki / Assistant Professor FUKUCHI, Satoshi / Assistant Professor	6847 6851 6852 6837	Evolutionary study of genomic structure and gene expression pattern of animals to elucidate the evolutionary mechanism of central nervous system, including the brain and eyes. Molecular evolutionary analysis of viruses through developing methods for detecting natural selection. Research and development of databases and programs related to biological information.
	Gene Function Research			

	Gene-Product Informatics	NAKAMURA, Yasukazu /Professor KAMINUMA, Eli / Assistant Professor	6859 3308	Research to integrate Life Science Databases based on the International Nucleotide Sequence Databases in DDBJ. Intelligent information technology for structural and functional annotations of genomes.
	Research and Development of Biological Databases	TAKAGI, Toshihisa / Professor	5821	
	Gene-Expression Analysis	OKUBO, Kousaku / Professor OGASAWARA, Osamu /Assistant Professor	5838 5836	Integration of gene expression data Analysis of gene expression data and construction of integrated databases, construction of a database of data analysis methods, and construction of theoretical models of gene expression evolution.
Center for Frontier Research	Neural Morphogenesis	EMOTO, Kazuo /Associate Professor	5860	We combine fly genetics, imaging, and biochemical approaches to investigate the interplay between genetic and epigenetic control of neural morphogenesis, and deduce the functional importance of these regulatory systems in disease etiology. In particular, we focus our researches on genetic and molecular regulation of dendritic patterning, maintenance, and plasticity in <i>Drosophila</i> PNS neurons.
	Cell Architecture	KIMURA, Akatsuki /Associate Professor	5854	To understand the three-dimensional architecture of the cell and its dynamics, quantitative imaging and modeling approaches are employed. Specific targets of the research are size and shape of organelles, the mechanics of cytokinesis, and cytoplasmic streaming in <i>C. elegans</i> embryo.

Experimental Farm		NONOMURA, Ken-ichi / Associate Professor	6872	We aim to elucidate the regulatory system of plant germ-cell development and chromosome kinetics, mainly using seed-sterile rice mutants.
		MIYAZAKI, Saori /Assistant Professor	6874	
Adjunct Faculty	Nucleic Acid Chemistry	NATSUME, Tohru /Professor	6748	Protein networks and chemical biology.
		IWAI, Kazuhiro / Professor	6748	Regulation of protein by post-translational modification.
	Cytoplasmic Genetics	BALLING, Rudi / Professor	6818	Animal models of human diseases.
		KURODA, Shinya / Professor	6845	Systems biology of signal transduction.
	Physiological Genetics	PATEL, Nipam H. / Professor	6767	Genetic and evolutionary studies of embryonic pattern formation.
		KIMBLE, Judith E. / Professor	6740	Controls of germline stem cells and their niche.
	Theoretical Genetics	HARTL, Daniel L. /Professor	6790	Process about organisms evolve and new species come into being.
		HASEGAWA, Masami /Professor	6847	Phylogenetic evolutionary biology.
	Applied Genetics	COLOT, Vincent / Professor	6795	Arabidopsis Epigenetics and Epigenomics.
		KADOWAKI, Takashi / Professor	6854	Functional Molecular Genetics of Diabetes.