

**The Guideline for Application for 2016 Collaborative Research
and Research Meeting
National Institute of Genetics,
Research Organization of Information and Systems**

1. The Guidelines for Application

(1) Collaborative Research

National Institute of Genetics solicits Collaborative Research to be conducted between researchers from other universities or institutes and NIG faculties using NIG facilities and equipment on the proposed project. There are three types of research project: Collaborative Research (A1), (A2) and (B).

Travel expenses are provided to the researchers visiting NIG. They should be conducted during the period of time from April 1, 2016 to March 31, 2017. Applicants may submit applications with the same research subject as a new application up to three consecutive years, in principle.

① Collaborative Research (A1)

- Eligible applicants are researchers affiliated with domestic or overseas universities or research institutes. Travel expenses are provided for researchers visiting NIG for the Collaborative Research.
- Up to 200,000 JPY can be requested by an applicant.

② Collaborative Research (A2)

- Eligible applicants are researchers affiliated with overseas universities or research institutes. Travel expenses are provided for researchers visiting NIG for the Collaborative Research.
- More than 200,000JPY up to 500,000JPY can be requested by an applicant.
- Limited numbers of applications are to be accepted compared to (A1).
- As an option, you can simultaneously apply for Collaborative Research (A1), in case where (A2) application is not approved. If you wish to take this option, please put a circle mark and fill in your budget for (A1) (up to 200,000 JPY) in the appropriate spaces in the application.

③ Collaborative Research (B)

- Eligible applicants are researchers affiliated with domestic or overseas universities or research institutes. Travel and research expenses (expendable items used in NIG)

required for the collaborative research visiting NIG are provided.

- The collaborative research should be planned and conducted such that applicant or his/her collaborative research members whose names are listed on the application stay at NIG for more than 7 days in total during the research period.
- Up to 1,000,000 JPY can be requested by an applicant for travel and research expenses.
- Limited numbers of applications are to be accepted compared to (A1).
- As an option, you can simultaneously apply for Collaborative Research (A1), in case where (B) application is not approved. If you wish to take this option, please put a circle mark and fill in your budget for (A1) (up to 200,000 JPY) in the appropriate spaces in the application.

(2) Research Meeting

The research meeting will be held among small number of researchers from inside and outside of NIG. The travel expenses are provided for the visit to NIG, because the meeting should be held at NIG.

The meeting must be held in the period from April 1, 2016 to March 31, 2017.

- Eligible applicants are NIG faculties and researchers affiliated with domestic or overseas universities or research institutes and travel expenses for attending the meeting will be provided.
- Up to 500,000JPY can be requested by an applicant.

2. Applicants

The applicants should be, in principle, researchers affiliated with universities, inter-university collaborative research institutes and independent administrative organizations in Japan or researchers affiliated with overseas universities or research institutes.

3. Application

Please send your application with a seal of approval of your affiliation by post. (Any supervisory authority of the applicant is acceptable. In the case of overseas applicants, the approval of affiliation is not required.)

An application form can be downloaded from the NIG website.

<http://www.nig.ac.jp/nig/research-infrastructure-collaboration/nig-collaboration-grant>

4. Submission of the Application Form

Please write “Enc. Collaborative Research Application Form” in red on the front side of an envelope and send it by registered or certified mail. Those affiliated with research institute outside Japan can submit your application in PDF file via e-mail. In that case, please write “Application for NIG Collaborative Research + applicant’s name” in the subject line of your e-mail. A confirmation e-mail will be sent to you once your application has been received. If you do not receive it, please contact us immediately.

Mailing Address

Research Promotion Team, General Affairs and Project 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@nig.ac.jp

Application Deadline:

Applications must arrive no later than 12:00 am on January, 12 th, 2016.

(Japan standard Time)

5. Notification of the Outcome of Selection

The outcome of selection will be notified to the applicants after screening. The acceptance list will be also posted on NIG website.

6. Expenses Provided

The travel and research expenses are to be provided by NIG based on the rules of Research Organization of Information and Systems (ROIS).

Accommodation fee for those who stay at our guest house will be 2,500JPY/night, and for those who stay at a hotel in the city will be 6,000JPY/night.

7. Submission of Research Report

The report of Collaborative Research or Research Meeting should be submitted within 30 days after finishing the research.

8. Publication of Research Result

Researchers are requested to acknowledge NIG Collaborative Research as follows

when results based on this research are published, and send a copy of papers (PDF file is acceptable) to Research Promotion Team.

For Japanese : 国立遺伝学研究所共同研究 (2016-A1*, A2*, あるいは B*)

For English : NIG Collaborative Research Program (2016-A1*, A2*, or B*)

(* : Reference number in the acceptance list)

9. Others

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

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

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

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

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

(**** : extension number)

(3) NIG facilities and equipment are available to be used for the Collaborative Research and Research Meeting.

(4) When holding Research Meeting, NIG representatives are requested to post the meeting program on the NIG website and give notice to all NIG members by at least one month prior to the date of the meeting.

(5) If gene recombination and/or animal experiments are planned, NIG representatives are requested to submit Experiment-on-Gene Recombination plan and/or Experiment-on-Animals plan application form to Research Promotion Team after acceptance of the application. As for animal experiments, researchers directly handle experimental animals are requested to apply for NIG qualification screening and undergo a training regardless of their affiliation. We strongly hope that all researchers comply with regulations and conduct the research properly.

- (6) Researchers who handle Radioisotope at NIG are requested to register as Radiation Worker after acceptance of the application.
- (7) Those who visit NIG for attending meeting or conducting research are to stay at our guest house, in principle.
However, they can stay at a hotel in the city if the guest house is fully booked.
- (8) Ownership of intellectual property rights created in the Collaborative Research of NIG will be considered based on the regulations of ROIS employee invention.
- (9) NIG assures that private information for this application should be used only for screening 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 annual reports.
- (10) Please note that NIG would not prepare the form of “business-trip request” for the Collaborative Research and Research Meeting because of simplicity of procedures. Please contact us as mentioned below if you need the form. We sincerely ask outside researchers visiting NIG to process the business trip appropriately in the affiliated institute.

Department of Administration

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Research outline

(Updated: September 1st,2016)

Department	Division	Faculty	Ext.	Research outline
Molecular Genetics	Centrosome Biology	KITAGAWA, Daiju / Professor	5828	We mainly focus on understanding the mechanisms of centrosome duplication by using the combination of innovative and multi-disciplinary approaches. We are utilizing <i>C. elegans</i> embryos and human cell culture as model systems.
		TAKAO, Daisuke/Assistant Professor	5828	
Molecular Genetics	Molecular Cell Engineering	KANEMAKI, Masato / Professor	5830	To understand DNA transactions in human cells, we generate conditional cells using the auxin-inducible degron technology for genetic and cytological analyses. We also develop new technologies for construction of mutant human cells.
		NATSUME, Toyoaki / Assistant Professor	5866	
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	
		HIZUME Kohji / Assistant Professor	6757	
Cell Genetics	Symbiosis and Cell Evolution	MIYAGISHIMA, Shin-ya / Professor	9411	In order to understand endosymbiotic evolution of eukaryotes, we are studying coordinating mechanisms of eukaryotic cell and organelle/endosymbiont proliferation using algae, plants, and protists.
		FUJIWARA, Takayuki / Assistant Professor	9414	
Developmental Genetics	Neurogenetics	IWASATO, Takuji / Professor	6773	We are studying molecular and cellular mechanisms of neuronal circuit development in the mammals, using mouse genetics and other related methods.
		MIZUNO, Hidenobu / Assistant Professor	6777	
Developmental Genetics	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	
		MUTO, Akira / Assistant Professor	6739	
Population Genetics	Population Genetics	SAITOU, Naruya / Professor	6790	We study evolution of genes and genomes, in particular human evolution. We also develop methods for study of genome evolution.
		JINAM, Timothy / Assistant Professor	6787	
	Evolutionary Genetics	Evolutionary Genetics	AKASHI, Hiroshi / Professor	6793
MATSUMOTO, Tomotaka / Assistant Professor			5820	
Ecological Genetics	Ecological Genetics	KITANO, Jun / Professor	9415	We use threespine stickleback fishes to investigate the genetic and molecular mechanisms underlying adaptation and speciation.
		ISHIKAWA, Asano / Assistant Professor	9416	

Integrated Genetics	Human Genetics	INOUE, Ituro / Professor NAKAOKA, Hirofumi / Assistant Professor	6795 6796	Medical genomic study using high-throughput sequencing data is a promising procedure to create an innovate healthcare system and open a new aspect of population genetics.
	Agricultural Genetics	KAKUTANI, Tetsuji / Professor TARUTANI, Yoshiaki / Assistant Professor INAGAKI, Soichi / Assistant Professor	6801 6807 6807	Control and function of epigenetic gene modifications in Arabidopsis.
	Brain Function	HIRATA, Tatsumi / Professor KAWASAKI, Takahiko / Assistant Professor YAN, Zhu / Assistant Professor	6721 6721 6721	Development of the vertebrate nervous system with special focus on neuronal network formation.
Center for Frontier Research	Cell Dynamics and Organization	ODA, Yoshihisa / Associate Professor	6800	To understand the mechanism underlying plant cell wall patterning, we study the dynamic behavior of cortical cytoskeletons and small GTPases in xylem cells.
	Quantitative Mechanobiology	SHIMAMOTO, Yuta / Associate Professor	6784	Our laboratory studies mechanisms of force-based regulation in the mitotic spindle and the cell nucleus. Using our expertise of controlled mechanical manipulation and high-resolution fluorescence imaging, the micro-mechanics of these intracellular structures, assembled in Xenopus egg extracts, are quantitatively analyzed.
Genetic Strains Research Center	Mammalian Genetics	SHIROISHI, Toshihiko / Professor TAKADA, Toyoyuki / Assistant Professor AMANO, Takanori / Assistant Professor	6818 6820 6816	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 KATO, Yuzuru / Assistant Professor AJIMA, Rieko / Assistant Professor	6829 6832 6832	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 YOSHIMI, Kazuto / Assistant Professor	5843 5845	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 KAWASAKI, Toshihiro / 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	SATO, Yutaka, / Professor	6808 6802	The goal of our research is to understand molecular mechanisms governing early processes of plant development using a series of rice embryogenesis defective mutants. Currently we are focusing on the mechanism of regulating the cell division pattern and plasticity in cellular differentiation in rice embryo.
	Microbial Genetics	NIKI, Hironori / Professor AOKI, Keita /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 / Project Professor KONDO, Syu / Assistant Professor	6823 6824	Genome-wide RNAi mutant fly library is established to study genome function in a variety of biological traits of fly development.
	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 / Project Professor ANDACHI, Yoshiki / Assistant Professor	6854 6860	We are performing a systematic analysis of expression and function of the genome of the nematode <i>C.elegans</i> , aiming at understanding of the gene network for development.
Structural Biology Center	Biological Macromolecules	MAESHIMA, Kazuhiro / Professor IDE, Satoru / Assistant Professor HIBINO, Kayo / Assistant Professor	6864 6878 6878	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.

	Cell Architecture	KIMURA, Akatsuki / Professor KIMURA, Kenji / Assistant Professor	5854 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.
	Multicellular Organization	SAWA, Hitoshi / Professor IHARA, Shinji / Assistant Professor	6845 6844	We are studying the mechanisms that produce a variety of cell types through asymmetric cell divisions using the nematode <i>C.elegans</i> .
	Gene Network	SUZUKI, Emiko / Associate Professor TAMORI, Yoichiro / Assistant Professor	6812 6813	Combinations of molecular genetics of <i>Drosophila</i> and high-resolution light and electron microscopy are employed to study functional implication of structural and molecular organization of cells, currently focusing on nervous tissue, imaginal discs and follicle epithelia.
Center for Information Biology	DNA Data Analysis	IKEO, Kazuho / Associate Professor	6851	Evolutionary study of genomic structure and gene expression pattern of animals to elucidate the evolutionary mechanism of central nervous system and sensory organs. Evolutionary genomics analysis of various species such as <i>Drosophila</i> and viruses. Aquatic metagenome analysis. Developing databases and computer software for biological research.
	Biological Networks	ARITA, Masanori / Professor	9449	Network analysis of metabolic pathways based on comprehensive identification and quantification of metabolites (metabolomics); Bioinformatics related to plant secondary metabolism and lipid metabolism
	Genome Informatics	NAKAMURA, Yasukazu / Professor KAMINUMA, Eli / Assistant Professor	6859 6859	Intelligent information technology for structural and functional annotations of large-scale nucleotide sequences.
	Research and Development of Biological Databases	TAKAGI, Toshihisa / Professor	5821	We are researching to apply distributed database software technology and/or parallel-distributed computing software technology to huge life science databases including DDBJ. Studies on analyzing biological data with using supercomputer.
	Gene- Expression Analysis	OKUBO, Kousaku / Professor HARA, Kazuo / Assistant Professor	5838 5836	Representation of Bio Medical knowledge. Analysis of gene expression data, and construction of integrated omics databases, database of data analysis methods, construction of theoretical models of gene expression evolution.

	Comparative Genomics	TOYODA, Atsushi / Project Professor	6788	We have been conducting advanced genomics research on the plasticity of genome structure and functions using most advanced genome technology such as New-Generation Sequencers.
	Genome Evolution	KUROKAWA, Ken / Professor MORI, Hiroshi / Assistant Professor	9437 9438	We are interested in understanding about microbial genome evolution and microbial community dynamics, and we are currently reaching out in the following two major research directions; I. Facilitate the development of an integrated database “MicrobeDB.jp”, II. Microbial community dynamics.
Experimental Farm		NONOMURA, Ken-ichi / Associate Professor TSUDA, Katsutoshi / Assistant Professor	6872 6874	We aim to elucidate the regulatory system of plant germ-cell development and chromosome kinetics, mainly using seed-sterile rice mutants.
Center for Advanced Genomics		FUJIYAMA, Asao / Project Professor NOGUCHI, Hideki / Associate Professor	6788 9459	Development of new algorithms for <i>de novo</i> sequence assemblies, and analytical tools for comparative genomics employing massive data produced from next generation sequencers.