

Application Guidelines for 2024NIG-JOINT
(Joint Research and Research Meeting)
National Institute of Genetics,
Research Organization of Information and Systems

1. Application Guidelines

(1) NIG-JOINT

National Institute of Genetics solicits joint 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: NIG-JOINT (A), NIG-JOINT (B) and NIG-JOINT (I).

As a general rule, travel expenses are provided to the researchers visiting NIG.

NIG-JOINT projects should be conducted during the period of time from April 1st, 2024 to March 31st, 2025. Applicants may submit new applications for the same research project for up to three consecutive years.

① **NIG-JOINT (A)**

- Eligible applicants are researchers affiliated with domestic or overseas universities or research institutes. Travel expenses required for the researchers to visit NIG to conduct joint research are provided.
- Up to 150,000 JPY can be requested by an applicant.

② **NIG-JOINT (B)**

- Eligible applicants are researchers affiliated with domestic or overseas universities or research institutes. Travel and research expenses (supplies and other expenses used within NIG, in principle) required for the joint research are provided.
- The joint research should be planned and conducted such that the applicant or his/her joint research members, whose names are listed on the application, stay at NIG for at least 7 days in total during the research period.
- Up to 700,000JPY can be requested by an applicant for combined travel and research expenses.
- The number of applications accepted will be limited compared to NIG-JOINT (A).
- You may simultaneously apply for NIG-JOINT (A) in case application for NIG-JOINT (B) is not approved. If you wish to take this option, please put a circle mark and fill in your budget for (A) (up to 150,000 JPY) in the appropriate spaces in the application.

③ **NIG-JOINT (I) – International Joint Research –**

- Eligible applicants are researchers affiliated with overseas universities or research institutes. Travel expenses required for the researchers to visit NIG to conduct joint research are provided.
- Applicants may request between 150,000JPY and 350,000JPY.
- About 5 Projects will be selected.
- You may simultaneously apply for NIG-JOINT (A) in case application for NIG-JOINT (I) is not approved. If you wish to take this option, please put a circle mark and fill in your budget for (A) (up to 150,000 JPY) in the appropriate spaces in the application.

(2) Joint Research Meeting

The research meeting is held for a comparatively small number of researchers from inside and outside of NIG. Since the research meeting must be held at NIG, travel expenses to visit NIG will be provided only for researchers from outside NIG. (The meeting cannot be held outside the NIG). However, if necessary, the research meeting may be held via an online meeting system or as a hybrid format.

The meeting must be held during the period from April 1st, 2024 to March 31st, 2025.

- Eligible applicants are NIG faculty and researchers affiliated with domestic or overseas universities or research institutes. Travel expenses to attend the meeting will be provided.
- For the research meetings held with online meeting systems, the minimum contract fee required to use the online meeting tool will be provided.
- Up to 350,000JPY can be requested by an applicant.

2. Applicants

The applicants should be, as a general rule, researchers affiliated with universities, inter-university collaborative research institutes and independent administrative organizations in Japan or researchers affiliated with overseas universities or research institutes. Please note that graduate students are not eligible to apply as the project representative, but they may be included as members of the joint research team.

3. Application

The application must be completed via the online application system called “Joint Research On-line Integrated System (JROIS)”.

JROIS: <https://jrois2.rois.ac.jp/>

(Instructions for operating the application system can be downloaded from the above URL.)

For more details regarding the online application system, please refer to the following NIG webpage (NIG-JOINT page).

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

(1) Before submitting the application, the applicant must consult closely with the prospective NIG representative regarding the project subject, title of research meeting, members, budget and other necessary matters. Overviews of research being conducted by researchers at NIG are described at the end of this application guideline.

(2) When applying for this program, please be sure to obtain approval from the head of your organization (or department). Submission of written approval is not required.

(3) Application forms must be uploaded and submitted in PDF · DOCX · ZIP format to JROIS.

The application form can be downloaded from the link below.

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

4. Online Application Deadline ※Application has been extended until noon on Thursday, December 7th, 2023.

~~Applications must be submitted no later than noon (12 PM JST) on Friday, December 1st, 2023.~~

***Your application will not be accepted under any circumstances if you don't submit it by the above deadline.**

5. Selection

The outcome of selection and amount of budget allocation are determined after screening by NIG committee and research representatives will be notified via e-mail by the end of March 2024. Applications from those who have been adopted as research representatives in the past, regardless of whether it is a new or a continuous project, will be reviewed with an emphasis on the status of the past budget implementation.

Please note that the implementation rate for proposals adopted in the past will be considered as one of the criteria in the evaluation of applications.

Please also note that the allocation amounts may be reduced due to limited budget.

6. Change of Research Group

(1) If there is a change in the research representative's organization or position, the said researcher must change the registered information on the "Edit User" screen of JROIS website. If the research representative's affiliation is changed, a written approval (fixed format) from the new organization should be submitted. (No official seal or signature is required.)

(2) If there is a change in research representative, addition or removal of joint research members, or a change in the joint research member's organization or position, please submit an addition/change form (only in Japanese) through the NIG representative immediately.

(3) The NIG representative must submit the cancelation form in the event that the joint research and/or a Joint Research Meeting is unable to be conducted due to unavoidable circumstances.

7. Expenses Provided

(1) The travel and research expenses are to be provided by NIG based on the rules of Research Organization of Information and Systems (ROIS). Because the expenses are allocated only to NIG, not to other organizations, they should be claimed through an NIG representative. Accommodation fees for those who stay at the NIG guest house will be 2,500JPY/night and for those who stay at a hotel in the city will be 8,000JPY/night.

(Outside researchers visiting NIG to attend meetings or conduct research should stay at the NIG guest house whenever possible.) Please note that travel expenses may not be fully provided if other business or private site visits are included in the trip.

(2) Research representatives are requested to spend the full amount of the budget as soon as possible. If you are unable to spend the full amount due to unavoidable circumstances, please submit a statement explaining the reason (free format) and return the unspent portion of the budget by the end of December. Additionally, we request that you contact the Research Promotion Team as soon as it becomes obvious that the budget will not be fully spent.

8. Submission of Research Report

The research representatives are required to fill in the "FOR MEXT Report (at the end of research)" on the Edit Application screen of JROIS by April 30th, 2025 for both "Joint Research" and "Research Meeting", and upload the research report in PDF·DOCX·ZIP format from the same screen for submission.

The research report form can be downloaded from the link below.

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

9. Publication of Research Result

You are requested to acknowledge NIG joint research as follows when results based on this research project are published, and submit a copy of papers together with the research report via JROIS.

NIG-JOINT (reference number)

*Reference number 【serial number + category (A,B or I) + year】 , will be issued in the “acceptance notification” which will be sent to the successful applicant.

Example: (Successful applicant : Taro Iden, reference number : 1A2024)

“This work was supported by NIG-JOINT (1A2024) to T. Iden.”

10. Others

(1) NIG facilities and common equipment are available to be used for the joint research. Please refer to the following URL for the available common equipment.

<https://www.nig.ac.jp/nig/research-infrastructure-collaboration/common-equipment>

(2) When holding a Joint Research Meeting, NIG representatives are requested to post the meeting schedule on the NIG website and inform all NIG members at least two months prior to the date of the meeting.

(3) If gene recombination and/or animal experiments are planned, NIG representatives are requested to submit an “experiment on gene recombination plan” and/or “experiment on animals plan” application form to the Research Promotion Team after acceptance of the application. As for animal experiments, researchers directly handling experimental animals are requested to apply for an NIG qualification screening and undergo training regardless of their affiliation. We strongly hope that all researchers comply with regulations and conduct the research properly.

(4) Researchers who handle radioisotopes at NIG are requested to register as a radiation worker before using them.

(5) Outside researchers visiting NIG to attend meetings or conduct research should stay at the NIG guest house whenever possible. However, they may stay at a hotel in the city in the event the guest house is fully booked.

(6) Ownership of intellectual property rights created through joint research at NIG will be considered based on the regulations of ROIS employee invention.

(7) NIG assures that private information submitted in the application shall be used only for screening the proposal. When a proposal has been accepted , the name of the research representative, his/her institute and the research project title will be posted on the NIG website and annual reports.

(8) As a general rule, in an effort to simplify procedures NIG does not issue a “business-trip request” form for Joint Research or Research Meetings. We sincerely ask outside researchers visiting NIG to follow appropriate business trip procedures according to the rules of their affiliated institute.

【Contact Information】

Department of Administration

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

Research Outline

(Updated: October 1st, 2023)

Department/Center	Laboratory	Faculty	Research outline
Department of Informatics	Gene- Expression Analysis	OKUBO, Kousaku / Professor	“How can we make use of data and information at our finger-tip in making smarter decisions in our own contexts?” Without solving this question, all analytical and descriptive efforts that digitalize the reality end up in vain. Our tentative answer/goal for this is to develop method to enhance “fluidity” and “utility”of medical knowledge among humans and machines.
	Genetic Informatics	KAWAMOTO, Shoko /Associate Professor	We are working on research and development of databases and information retrieval system for the national bio-resource project (NBRP).
	Genome Evolution	KUROKAWA, Ken / Professor HIGASHI, Koichi / Assistant Professor	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.
	Genome Diversity	MORI, Hiroshi / Associate Professor	Our main research goal is to understand the relationships between the habitat of organisms and genome diversity. To facilitate the studies using comparative genomics and metagenomics, we are also developing various bioinformatics methodologies.
	Biological Networks	ARITA, Masanori / Professor KOSHIMIZU, Shizuka / Assistant Professor	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 TANIZAWA, Yasuhiro / Assistant Professor	Intelligent information technology for structural and functional annotations of large-scale nucleotide sequences.
Department of Genomics and Evolutionary Biology	DNA Data Analysis	IKEO, Kazuho / Associate Professor	Evolutionary study of genomic structure and gene expression pattern to elucidate the evolutionary mechanism of central nervous system and sensory organs. Evolutionary genomics analysis of various species. Metagenome analysis. Developing databases and computer software for biological research.

	Plant Genetics	SATO, Yutaka / Professor NOSAKA (TAKAHASHI), Misuzu / Assistant Professor	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.
	Evolutionary Genetics	AKASHI, Hiroshi / Professor	We infer mechanisms of genome evolution using population genetic and comparative genomic approaches. Current interests include global forces such as biosynthetic constraints that underlie weak selection.
	Ecological Genetics	KITANO, Jun / Professor YAMASAKI, Yo / Assistant Professor	We use threespine stickleback fishes to investigate the genetic and molecular mechanisms underlying adaptation and speciation.
	Comparative Genomics	TOYODA, Atsushi / Project Professor	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.
	Molecular Life History	KURAKU, Shigehiro / Professor KAWAGUCHI, Akane / Assistant Professor	We focus on vertebrates and bridge molecular-level laboratory approaches and genome informatics, in order to document genome evolution and elucidate its mechanism.
Department of Gene Function and Phenomics	Symbiosis and Cell Evolution	MIYAGISHIMA, Shin-ya / Professor FUJIWARA, Takayuki / Assistant Professor	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.
	Model Fish Genetics	SAKAI, Noriyoshi / Associate Professor	We establish reliable protocols for genetically modification of zebrafish using sperm, and analyze the molecular mechanisms of spermatogenesis and early development in zebrafish.
	Plant Cytogenetics	NONOMURA, Ken-ichi / Associate Professor TSUDA, Katsutoshi / Assistant Professor	We aim to elucidate the regulatory system of plant germ-cell development and chromosome kinetics, mainly using seed-sterile rice mutants.
	Mammalian Neural Circuits	IWASATO, Takuji / Professor NAKAGAWA, Naoki / Assistant Professor	We are studying molecular and cellular mechanisms of neuronal circuit development in the mammals, using mouse genetics and other related methods.

	Multiscale Sensory Structure	YONEHARA, Keisuke / Professor MATSUMOTO, Akihiro / Assistant Professor	We use mice and marmosets to understand the structure, function, development, disease, and environmental adaptation of visual neural circuits at multi-levels, including genes, neural circuit physiology, and behavior.
	Multicellular Organization	SAWA, Hitoshi / Professor NEGISHI, Takefumi / Assistant Professor	We are studying the mechanisms that produce a variety of cell types through asymmetric cell divisions using the nematode <i>C.elegans</i> .
	Brain Function	HIRATA, Tatsumi / Professor KAWASAKI, Takahiko / Assistant Professor ZHU, Yan / Assistant Professor	Development of the vertebrate nervous system with special focus on neuronal network formation.
	Molecular and Developmental Biology	KAWAKAMI, Koichi / Professor ASAKAWA, Kazuhide / Specially Appointed Associate Professor	Genetic studies on development, morphogenesis and behaviors by using a model vertebrate zebrafish.
	Microbial Physiology	NIKI, Hironori / Professor	We investigate higher order structure of chromosomes and their dynamics in yeast and bacteria through genetic and cell biological analysis.
	Mouse Genomics Resource	KOIDE, Tsuyoshi / Associate Professor	For understanding genetic basis of behavioral diversity, behavioral and genetic analyses are applied on a variety of mouse resources including wild-derived strains. We are developing genome editing methods in mice for analyzing function of genes.
Department of Chromosome Science	Genome Dynamics	MAESHIMA, Kazuhiro / Professor HIBINO, Kayo / Assistant Professor	Our research interest lies in determining how a long string of genomic DNA is three-dimensionally organized in living cells, 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 TORISAWA, Takayuki / Assistant Professor	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 the <i>C. elegans</i> embryo.
	Chromosome Biochemistry	MURAYAMA, Yasuto / Associate Professor KUROKAWA, Yumiko / Assistant Professor	We investigate molecular mechanism underlying regulation of chromosome organization and dynamics by recapitulating their biochemical reactions using purified proteins. We now especially focus on SMC complexes.

	Physics and Cell Biology	SHIMAMOTO, Yuta / Associate Professor SAITO, Kei / Assistant Professor	Our laboratory uses a combination of biophysics, biochemistry, cell biology, and materials science to study how the mitotic spindle properly assembles and segregates chromosomes in cell division.
	Molecular Cell Engineering	KANEMAKI, Masato / Professor	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.
	Invertebrate Genetics	SAITO, Kuniaki / Professor MIYOSHI, Keita / Assistant Professor	We investigate molecular mechanisms of <i>Drosophila</i> gene expression and repression through biochemical and genetic techniques. Especially, we are focusing on the small RNA pathways and chromatin regulation during germ cell development.
Center for Frontier Research	Gene Quantity Biology	SASAKI, Mariko / Associate Professor	We study molecular mechanisms underlying genomic changes in eukaryotic cells. We mainly use budding yeast and human cell cultures and analyze genomic changes that result in changes to DNA quantity, using genetic and molecular biology tools. We specialize in isolating Mbp-sized DNA and separating it by Pulsed-Field Gel Electrophoresis.
	Theoretical Ecology and Evolution	YAMAMICHI, Masato / Associate Professor	We combine mathematical models, microcosm experiments, and meta-analyses to investigate complex feedbacks between rapid evolution and ecological processes.
Chemical and Radioisotope Management Unit		ANDACHI, Yoshiki / Assistant Professor	We study microRNA-mediated post-transcriptional regulation in <i>C. elegans</i> using our original methods for the detection of microRNAs and target genes.