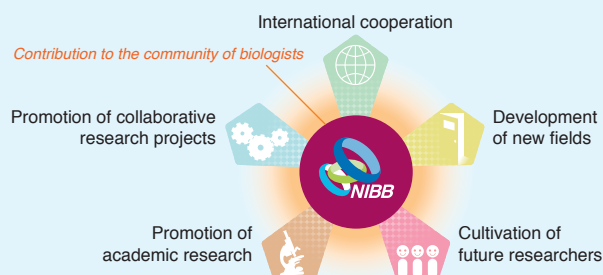


GOALS OF THE NATIONAL INSTITUTE FOR BASIC BIOLOGY

In the pursuit of progress in the field of biology, The National Institute for Basic Biology (NIBB) has set five goals regarding its activities. We consequently contribute to the world-wide community of biologists through our efforts to achieve these goals.



Promotion of academic research

One of our goals is the promotion of academic research, and this is accomplished through our research activities, which we will introduce throughout this brochure.

Promotion of Collaborative Research Projects

■ Collaborative Research Support

Research activities that are conducted using NIBB's facilities and in collaboration with NIBB's divisions/laboratories are solicited from external researchers. "Individual Collaborative Research Projects" are a basic method of supporting collaborations which provide external researchers with travel and lodging expenses when visiting NIBB's laboratories to conduct collaborative research. The "Collaborative research projects for new model organism development" and "Collaborative Research Projects for Bioresource Preservation Technology Development" projects are for developing and establishing new model organisms and new research technology. Research and travel expenses are provided for these projects. 'Collaborative Research Projects for Integrative Genomics' and 'Collaborative Research Projects for Integrative Bioimaging' are projects to facilitate a more integrated use of the NIBB Core Research Facilities and to allow more intensive support through the planning, experimental, data analysis, and publication stages. Travel and lodging expenses are also provided for these projects.

year	2019	2020	2021
Priority collaborative research projects	1	1	—
Collaborative research projects for new model organism development	—	2	3
Collaborative research projects for model organism and technology development	2	—	—
Individual collaborative research projects	60	46	42
Collaborative research projects for integrative genomics	66	56	58
Collaborative research projects for integrative bioimaging	22	19	24
NIBB workshops	3	2	4
Collaborative experiments using the Large Spectrograph	9	9	11
Support for NIBB training courses	0	0	0
Collaborative research projects for bioresource preservation technology development	14	10	10
Total	177	145	152

■ National BioResource Project

The National BioResource Project (NBRP) is a national project for the systematic accumulation, storage and supply of nationally recognized bio-resources (*i.e.*, experimental animals and plants, cells, DNA and other genetic resources), which are widely used as materials in life science research. To promote this national project, NIBB has been selected as a center for research on Medaka (*Oryzias latipes*), whose usefulness as a vertebrate model was first demonstrated by Japanese researchers. The usability of Medaka as a research material in biology has drawn increasing attention since its full genome sequence became available. NIBB is also a sub-center for the NBRP's work with Japanese morning glories and Zebrafish (p. 101-102).

■ Inter-University Bio-Backup Project for Basic Biology (IBBP)

To prevent damage caused by natural disasters to important biological resources, NIBB has managed the Inter-University Bio-Backup Project for Basic Biology (IBBP) from 2012 in collaboration with seven national universities for multiple preservation of genetic libraries and other invaluable bioresources used in cutting-edge research (p. 103-104).

■ Advanced Bioimaging Support (ABiS)

ABiS provides assistance pertaining to advanced imaging in research supported by Grants-in-Aid for Scientific Research. NIBB and NIPS contribute as core institutes to the ABiS network of domestic partner organizations that own and operate multiple types of advanced specialized imaging equipment. In 2018, ABiS joined the Global Bioimaging (GBI) network to represent the Japanese bioimaging community. ABiS also hosts training courses (p. 116-117).

International Cooperation

■ Collaborative Programs with Overseas Institutes

NIBB has formed an agreement with Center for Organismal Studies (COS) Heidelberg to promote joint research projects, collaborative symposia, and student exchange programs. The 2nd and 3rd meeting for NIBB-COS Heidelberg International Collaborations were held in June, 2021 and March, 2022 (p. 112). In these meeting, several discussions on new collaborative research were put forward.

NIBB plays a leading role in collaborative research programs between Princeton University and the National Institutes of Natural Sciences (NINS) on the life science research field. Collaborative research projects between NIBB and Princeton University are conducted under the support of the International Research Collaboration Center (IRCC) of the NINS (p. 112). NIBB also promotes personal and technological exchange with the European Molecular Biology Laboratory (EMBL) based on the academic exchange agreement between the EMBL and the NINS.

■ NIBB Conference

The NIBB Conferences are international conferences on prominent topics in biology that are organized by NIBB professors. Since the first conference in 1977 (the year of NIBB's founding), NIBB Conferences have provided researchers in basic biology with valuable opportunities for

international exchange. Unfortunately, this year's NIBB conference was cancelled due to the COVID-19 pandemic.

Development of New Fields of Biology

■ Establishment of new model organism

NIBB is working to establish novel model organisms in order to advance research on biological phenomena that are interesting but have been poorly analyzed.

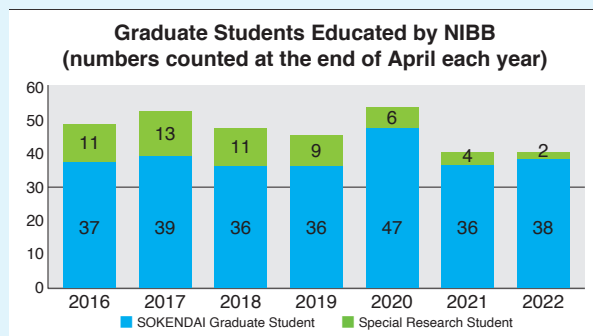
Cultivation of Future Researchers

■ Ph.D. program

NIBB constitutes the Department of Basic Biology in the School of Life Science of SOKENDAI (Graduate University for Advanced Studies). The department provides a five-year doctoral course for university graduates and a three-year doctoral course for graduate students with a master's degree. Additionally, graduate students enrolled in other universities can apply to be special research students eligible to conduct research under the supervision of NIBB professors. In any case, graduate students can receive financial support from NIBB based on the research assistant (RA) system from the beginning of the five-year course.

Due to its international collaboration with EMBL, graduate students are encouraged to attend PhD student symposia held at EMBL at least once during their doctoral program, where they are provided with an opportunity to give oral and poster presentations.

Students from Japan and abroad can also come to NIBB through our Internship Program. Internships give students an excellent opportunity to build international connections while experiencing hands on research in a world class institute (p. 118).



■ Outreach

NIBB's outreach activities aim to present cutting edge research results to the public via mass media through press releases or directly through internet-based platforms (*i.e.* web pages, Facebook, and Twitter). NIBB also cooperates in the education of undergraduate and young students through lectures and workshops (p.119-123).