

Public call for collaborative research for fiscal year 2017 (Genomics, Epigenomics and Transcriptomics)

Since having been recognized as a Joint Usage/Research Center for the Multi-Stratified Host Defense System on April 1, 2010, the Medical Institute of Bioregulation, Kyushu University has been promoting collaborative research with researchers involved in host-defense studies. We have established two projects: (1) an instrument usage type project in which collaborative research is conducted using the multi-stratified levels of research facility infrastructure and the technology of this institute (a maximum budget of 500,000 yen, including travel and accommodation expenses, is distributed); and (2) a collaborative research type project (travel and accommodation expenses only) that aim at clarifying the host-defense system using the knowledge accumulated about host defense in this institute. We publicly call for research proposals for fiscal year 2017.

1. Field of research: Genomics, Epigenomics and Transcriptomics

We plan to conduct development research on the analytical method of the mechanism of the formation of interpersonal differences in human phenotypes, and collaborative research on the host-defense mechanism at the genomic and epigenomic levels, and disease development due to the breakdown of the mechanism. The following instruments for gene analysis are available for use:

- 1) DNA sequencing analysis using next generation sequencers.



The Research Center for Transomics Medicine possesses five types of instruments: Illumina HiSeq2500, HiSeq1500, GAIIX, and MiSeq and Roche GS FLX. The Illumina sequencers are suitable for exome analysis, gene expression analysis, chromatin analysis (ChIP-seq), etc., and the FLX is suitable for *de novo* sequencing, etc. You can use the instrument most suitable for your analysis.



2) DNA sequencing and fragment analysis by Sanger sequencing.

Sequencing and microsatellite marker DNA fragment analysis by Applied Biosystems Model 3130 and 3730 sequencers.



The ABI PRISM® 3730 Genetic Analyzer is a 96 capillary electrophoresis system. It is capable of performing sequencing analysis and fragment analysis, and can be used in various applications by using different lengths of capillaries. The ABI PRISM® 3130 Genetic Analyzer is a 16 capillary system and is capable of performing fragment analysis using Gene Mapper software.

3) Microarray Analysis

Microarray analysis by Affymetrix GeneChip System.



Affymetrix GeneChip sare the most frequently used technology for genome-wide expression profiling; from the various available microarray platforms. In medical research, expression profiling by microarrays holds great promises for better understanding of diseases, identification of new therapeutic targets and

2. Qualification of applicants

Researchers belonging to universities, national or public institutions, or equivalent institutions

3. Period of research

From April 1, 2017 to March 31, 2018

4. How to apply

Required Documents: Prescribed application form (1 original and 1 copy).

The application form is downloadable at <http://www.bioreg.kyushu-u.ac.jp>.

Please fill out the application form and send it to the address below by post or e-mail. Please discuss the contents with the facilitator of the institute before sending in your completed application form.

Application deadline: Friday, February 24, 2017.

Send to: Yoichiro Shibata / Mihoko Nakano(contact person)

General Affairs Section, Academic Research Cooperation Division, Administrative Office (Medical Sciences, Dental Science and Pharmaceutical Sciences), Kyushu University

Address: 3-1-1, Maidashi, Higashi-ku, Fukuoka 812-8582, JAPAN

Mail: ijksomu@jimu.kyushu-u.ac.jp

Tel: +81-92-642-6672; Fax: +81-92-642-6776

5. Acceptance or rejection

Once the review committee has made a decision to either accept or reject the application, you will be informed of the result as soon as possible.

6. Report of the results

Please submit a report describing the progress and results of the research once the study has been completed. If you have published a paper based on the results of the study, please acknowledge the facilities of our institute that you have used in the paper as follows:

"This work was partly performed in the Cooperative Research Project Program of the Medical Institute of Bioregulation, Kyushu University."

In addition, please submit a copy of the reprint of the paper.

7. Others

(1) Once a research theme has been chosen, the researcher responsible for the experiment must become a collaborator of the Medical Institute of Bioregulation. The researcher who wishes to receive reimbursement for travel expenses as a collaborator should answer "yes" to the "requirement of travel expense" in an application form.

(2) If you wish to conduct an urgent experiment, we may accept your application even after the application deadline. Please contact Yoichiro Shibata / Mihoko Nakano (contact person), the General Affairs Section, Academic Research Cooperation Division, Administrative Office (Medical Sciences, Dental Science and Pharmaceutical Sciences), Kyushu University.

8. Mandatory expenses

Research and travel expenses are provided, as per the budget. Travel expenses are also provided to research collaborators, as per the budget. Please contact the facilitator of the institute before beginning a collaborative research.

9. Handling of intellectual properties

Intellectual properties are handled in accordance with the Intellectual Property Handling Rules of Kyushu University.

10. Inquiries

- Regarding the application for collaborative research:
Yoichiro Shibata / Mihoko Nakano (contact person)
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(Medical Sciences, Dental Science and Pharmaceutical Sciences), Kyushu University
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Tel: +81-92-642-6672; Fax: +81-92-642-6776

- Inquiries about available instruments and technology (Genomics):
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Medical Institute of Bioregulation, Kyushu University
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- Inquiries about available instruments and technology (Epigenomics):
Hidehiro Toh (Lecturer)
Division of Epigenomics and Development, Research Center for Transomics Medicine,
Medical Institute of Bioregulation, Kyushu University
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- Inquiries about available instruments and technology (Transcriptomics):
Yasuyuki Ohkawa (Professor)
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Medical Institute of Bioregulation, Kyushu University
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