The NIBB Genome Informatics Training Course

NIBB organizes a series of training courses on up-to-date research techniques for researchers from mainly Japanese universities and institutions. In 2014 we held two of these training courses on Genome Informatics. The two-day programs offer lectures and hands-on tutorials to introduce basic knowledge and skills to deal with genomic scale large data such as those obtained by next-generation sequencing (NGS). The programs are specially designed for biologists who are not familiar with bioinformatics.

"Introduction to RNA-seq - from the basics of NGS to de novo analyses"

September 17 (Thu) -19 (Fri), 2014

■Organizer: Dr. Shuji Shigenobu (NIBB Core Research Facilities)
■Lecturers: Dr. Shuji Shigenobu, Dr. Masanao Sato, Dr. Ikuo Uchiyama, Dr. Katsushi Yamaguchi, Dr. Taro Maeda
■Participants: 20 (including 2 from NIBB)
■Program:
1. Overview: Transcriptome data analysis
2. Introduction to statistics
3. Introduction to "R"
4. Basic format and tools of NGS
5. RNA-seq 1: Basics
6. RNA-seq 2: Genome-based analysis
7. RNA-seq 3: de novo assembly
8. Multivariate statistics
9. Practical exercises

"Introduction to Next-generation DNA Sequence Data Analysis"

September 19 (Thu) -20 (Fri), 2013

■Organizer: Dr. Shuji Shigenobu (NIBB Core Research Facilities)
■Lecturers: Dr. Shuji Shigenobu, Dr. Ikuo Uchiyama, Dr. Masanao Sato, Dr. Katsushi Yamaguchi, Ms. Hiroyo Nishide, Dr. Taro Maeda
■Participants: 22 (including 3 from NIBB)
■Program:
1. Overview
2. UNIX for beginners
3. NGS basic data formats
4. NGS basic tools
5. Introduction to statistics
6. Basics of RNA-seq
7. RSA-seq genome base
8. Multivariate statistics
9. Introduction to "R"
10. RNA-seq de novo
11. Practical exercises

The 2nd NIBB Bioimage Analysis Training Course

This course was held as a workshop of the Department of Imaging Science, the Center for Novel Science Initiative, NINS. The aim of the course was to deliver enough basic knowledge to attendees that they would be able to descriminate the difficulty of the problems facing them with image analysis; giving the ability to solve easy problems alone, while allowing communication with experts regarding more challenging analyses. The course therefore was centered on basic methods of image analyses, basic techniques of ImageJ, and writing of simple macros of ImageJ. At the end of the course, lecturers and participants discussed real problems some of the participants are facing. During the practice using PCs seven volunteers, some from NIBB and others from outside, supported participants. There was also an introduction of NIBB as a collaborative research institute by the vice-director Prof. Ueno during the get-together. Answers to questionnaires on the course were mostly favorable.

(Yasuhiro Kamei)

December 10 (Wed) -12 (Fri), 2014

■Organizers: Dr. Yoshitaka Kimori, Dr. Kagayaki Kato, Dr. Yasuhiro Kamei, Dr. Shigenori Nonaka, Dr. Takashi Murata, Dr. Hiroshi Koyama
■Supervisors: Dr. Naoto Ueno, Dr. Toshihiko Fujimori
■Participants: 21 (including 2 from NIBB)
■Program:
- Basis of image data processing and analysis (lecture and practice)
- Usage of ImageJ software and its macros (lecture and practice)
- Quantitative analysis of images (lecture and practice)
- Selection of microscopes and important points in obtaining images (lecture)