

Intensive Hands on Workshop on Human Genome and Transcriptome Data Analysis

March 27-30, 2017

Center for Systems Biology and Molecular Medicine,
Yenepoya Research Centre, Mangalore

(<http://csbmm.yenepoya.edu.in/genomics/index.php>)



Bengaluru Genomics Center
Hereditary Disorders



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UNIVERSITY
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Overview

Center for Systems Biology and Molecular Medicine (CSBMM) is a premier center for Genomics, Proteomics and Computational Biology. The scientists at CSBMM are carrying out cutting edge research by employing NextGen sequencing-based genomics and transcriptomics to understand and enable biomedical discoveries intended towards translation in the areas of research, performance of livestock and plant biology. CSBMM has also established a state-of-the-art proteomics facility to discover and validate candidate biomarkers in human diseases ranging from infectious diseases to cancers. As a part of the academic program of Yenepoya University, scientists at CSBMM will share their expertise in NextGen sequencing-based genomic data analysis with young researchers in India, through this workshop. The organizing team of this workshop has successfully conducted over 20 national workshops on NextGen sequencing-based genomic and transcriptomic analysis. Several faculty and students from reputed Research Institutes and Universities from India have participated in these workshops.

Contents of the workshop

Introductory lectures on high-throughput sequencing methods have been arranged. Hands-on sessions are designed to assess and apply quality control, analysis method to perform alignment of whole-genome and whole-exome sequencing data against human reference and subsequent variant identification and functional annotation. Differential expression analysis using transcript assembly of RNA-Seq data and interpretation of large genome datasets of human will be performed. Publicly available online resources for data and analysis will be demonstrated. A new interdisciplinary subject of proteogenomics will be carried out hands-on. A live demonstration of sequencing using Oxford nanopore platform will be performed.

The hands-on training on genomic data analysis and annotation carried out during the workshop will result in a manuscript, which will be submitted to an international peer reviewed journal for publication. All the participants will be co-authors on this manuscript.

Registration

Open to students and researchers from academia and industry. Applications must include a short CV.

To register for the workshop please visit:

<http://www.csbmm.yenepoya.edu.in/genomics/register.php>

Registration Fee

Students: Rs. 17,250/- (Rs. 15,000 + 15% ST)

Academics: Rs. 23,000/- (Rs. 20,000 + 15% ST)

Industry: Rs. 28,750/- (Rs. 25,000 + 15% ST)

Foreign Participants: \$600

(*ST: Service Tax)

A concession of Rs. 2,000/- in the registration fee will be provided for:

1. Students and faculty from Jammu and Kashmir and North east India
2. Group registration of 3 or more students from the same Institute

Contact:

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Workshop focus

- High-throughput sequencing
- Data formats
- Quality control of data
- Analysis tools
- Genome alignment
- Variant analysis
- Transcript assembly
- Proteogenomics
- R packages—NGS analysis
- Visualization using IGV

Resource personnel

- Dr. T. S. Keshava Prasad, CSBMM
- Dr. Harsha Gowda, IOB
- Dr. Malali Gowda, TDU, FRLHT
- Dr. Roopalakshmi K., BGC
- Dr. Sneha M. Pinto, CSBMM
- Dr. Yashwanth Subbannayya, CSBMM
- Dr. Pratigya Subba, CSBMM
- Dr. Prashant Kumar Modi, CSBMM
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