National workshop

Next Generation Sequencing and Data Analysis

22- 28, March 2018

Organized by

Institution of Excellence

Vijnana Bhavana, University of Mysore, Mysuru – 570 006

Next Generation Sequencing and Data Analysis is Organized by Institution of Excellence, Vijanana Bhavana, University of Mysore, Manasagangotri, Mysuru 22nd -28th March, 2018 Next Generation Sequencing (NGS) has brought a new paradigm in genomics and transcriptomics data analysis. The application of NGS, mainly through whole-genome (WGS) and whole-exome technologies (WES), has produced a breakthrough in understanding the complexity of genomes, including point mutations, small insertions or deletions, copy number alterations and structural variations in disease conditions. By comparing these alterations to matched normal samples, researchers have been able to distinguish somatic and germ line variants in patient samples. Alongside, the whole transcriptome approach (RNA-Seq) can quantify gene expression profiles, detect alternative splicing, RNA editing and fusion transcripts. The transformative potential of NGS coupled with Bioinformatics analysis showed the immediate impact on clinical diagnostics along with focused research to develop personalized treatment strategy. Recognizing the importance, A National level workshop would be organized by Institution of Excellence for medical and biomedical faculties, researchers and students with an objective to provide training on next-generation sequencing data analysis with workflow of NGS platform. Hands on sessions on NGS data analysis would be conducted through effective use of bioinformatics resources to address complex biological issues.

This workshop is structured as modules consisting of hands on tutorials that would allow a good understanding of:

NGS Data Analysis, Basics of NGS Data Analysis , Introduction to Whole genome sequencing Data analysis – File formats, Tools and Applications, Discussion on the data analysis pipeline , Raw data - Quality check (QC) and Interpretation of the results., Whole Genome Data Analysis, Trimming threads/ Pre-Processing the roads , Alignment of the processed reads to the reference genome , Indexing of reference

Sorting the alignment , Variant calling , Whole Genome Data Analysis (continued), Visualization and Interpretation of the results, Questions and Discussion about data analysis, NGS handling work flow.

Who can attend?

M.Sc/M.Tech/M.B.B.S/MD/Ph.D students, Faculty members, Biomedical scientists, Clinicians from any branch of Biomedical sciences or a relevant field. Maximum no. of participants for the workshop would be restricted to 12. Candidate selection will be based on first come first serve basis.

Registration Fee: Nil

Note: Participants have to arrange accommodation on their own. No TA/DA will be provided by IOE, University of Mysore, Mysuru for attending the workshop.

How to Apply?

Candidates interested to participate in the workshop may send their registration form duly filled with prescribed formats, along with a one-page brief CV through email (ktchandru@ioe.uni-mysore.ac.in) to **Dr K. T. Chandrashekara, Principal Scientist, Institution of Excellence, Vijanana Bhavana, University of Mysore, Manasagangotri, Mysuru – 570 006 on or before 16/03/2018.** Selected candidates will be intimated by 18/03/2018.

Prof. G. Hemantha Kumar
Chief Coordinator

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Photo

Application Form

- Name :
- Designation :
- Department :
- Academic Address :

- Email :

- Contact Number :

- Why do you want to attend the workshop?

Signature of the Applicant

Signature of the Head of the Institution