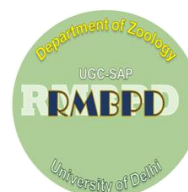




2nd International RMBPD Colloquium
Deciphering Bioregulatory Mechanism in
Health and Disease using 'Omics' Approach
 Sponsored by UGC-Special Assistance Program
February 24-25, 2022
 Commemorating 100 years of University of Delhi



PRE-CONFERENCE WORKSHOP ON GENOMICS DATA ANALYSIS

(23rd February, 2022)

Lectures (9:15 AM-11:30 AM)

Lectures	Timing	Title of the talk	Speakers
Introductory Lecture	9:15 – 9:30 AM	Introduction to the workshop	Prof. Alok C. Bharti, DU
Lecture I	9:30- 10:30 AM	Introduction to genomic databases, different sequencing technologies and terminologies	Dr. Harpreet Singh, ICMR
Lecture II	10:30- 11:00 AM	Overview on NGS data analysis (Different file formats, tools and methods) and Introduction to galaxy NGS data analysis platform	Dr. Dibyabhaba Pradhan, ICMR-AIIMS
Lecture III	11:00- 11:30 AM	R for Data Science	Dr. Geetika Sethi, ICMR-AIIMS

Hands on training (12:00 Noon- 5:00 PM)

Sessions	Timing	Modules	Moderators
Session I	12:00 Noon - 1:30 PM	Galaxy Account Management Quality Assessment (FastQC, compute quality statistics, quality score boxplot, nucleotides distribution) Processing of Reads (Trim sequences)	Dr. Dibyabhaba Pradhan, ICMR-AIIMS, Dr. Harish Batra Dr. Vikas Gaur, DU
Session II	2:30 - 5:00 PM	Alignment to Reference/Read Mapping (bowtie2, bwa, hisat2) Results (BEDTools, SAM Tools) Downstream analysis – Differential gene expression analysis, Gene ontology enrichment and protein-protein interaction network analysis (limma, ballgown, DESeq, clusterprofiler, Cytoscape) Visualization (Genome browser, IGV)	Dr. Dibyabhaba Pradhan, ICMR-AIIMS, Dr. Vikas Gaur, DU

- **Prerequisites:** Basic understanding of molecular biology; Personal laptops required.
- **Who can Participate:** Masters students, PhD Scholars, and Researchers from Life-Sciences.
- Each candidate will be given a certificate after successful completion of workshop.
- **Registration fees:** INR 500/- (Lunch and Tea included), Maximum intake is 40 people. First come first serve basis

