

WORKSHOP CONVENER

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ABOUT THE WORKSHOP

With the advent of Next-Generation sequencing technology, it has become possible for the scientists to look into the whole genome of an individual, as well as the whole transcriptome at any given time and space quite reliably and affordably. Because of this it has become a very integral part of many biotechnology and molecular biology research projects, mainly because of its versatility and capability to elucidate complex information, which was hitherto very expensive and out of reach of many laboratories. Technology being expensive and requires expertise to analyze the data, NGS research is mostly outsourced and hence, remains elusive. Perhaps, to overcome the bottleneck, a two-day workshop on **Next Generation Sequencing - NGS** is proposed at national level. It aims to address the key issues in the field of health care and agriculture which involves producing appropriate data using the relevant strategies and applying updated as well as existing tools and algorithms at various stages of data analysis.

Two Days Workshop on Next Generation Sequencing

-NGS-

2nd -3rd March 2023

SPONSORED BY



**DBT, Government of India,
New Delhi**

Organized by



**Department of Bioinformatics,
School of Life Sciences
Pondicherry University,
Puducherry-605014, INDIA**

TOPICS TO BE COVERED

- Overview of NGS data (Gene expression profiling & Whole transcriptome analysis) and its application in Medicine & Agriculture
- Sequence Analysis & Genome Assembly (Alternative splicing isoform identification & Rare and novel transcript discovery)
- Genome Annotation (gene fusions, isoforms, and structural variants)
- Prediction of Genomic Variants from NGS data (Allele-specific expression studies & disease-associated SNVs)

RESOURCE PERSON:

Speakers

- **Dr. Rupesh K. Deshmukh,**
Associate Professor,
Central University of Haryana, Haryana

Hand-on session

- Genetic Mapping
- Map based gene cloning
- Whole genome resequencing
- Linkage map development
- QTL mapping
- GWAS
- Locus specific candidate gene identification

ORGANIZING SECRETARY

Dr. M. Suresh Kumar,
Professor,
Department of Bioinformatics,
Pondicherry University,
Puducherry-605014, INDIA
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OBJECTIVE OF THE WORKSHOP

Our two-day comprehensive workshop on Next Generation Sequencing with a special emphasis to RNA-seq aims at providing systematic Hands-on training on the pipelines to perform experiments and exploring the different bio-statistical and bioinformatics data analysis tools. Participants will be trained to use popular tools and techniques necessary for performing NGS data analysis.

WHO SHOULD ATTEND

Post graduate students, researchers and academicians from any disciplines of Life Sciences interested in learning the strategies and tools to explore, visualize and understand genome analysis and their functions.

ABOUT DEPT. OF BIOINFORMATICS

The Department of Bioinformatics in Pondicherry University was started as a Sub Distributed Information Centre of the Department of Biotechnology, Govt. of India (DBT) in 1991. The mandate of the department is to train manpower and conduct research in various areas of Bioinformatics and Computational Biology. The Department offers two master's programs M.Sc. (Bioinformatics) and M.Tech. (Computational Biology with the support of Department of Biotechnology, Govt. of India) and Ph.D. program in Bioinformatics. The department has taken up several research projects and has offered modular courses in Bioinformatics under this Grant. Currently the department is facilitated with all the basic infrastructure (dry and wet lab

equipments and tools) and has 12 faculty members with versatile expertise and has established with reputed foreign institutes.

ABOUT PONDICHERRY UNIVERSITY

Pondicherry University is a Central University in Puducherry, founded in 1985 by Government of India. The University is a collegiate university with a jurisdiction spread over the Union Territories of Puducherry, Andaman and Nicobar Islands. Occupying ~800 acres, this University offers more than 65 programs and is placed within the top 1000 QS World University Rankings (WUR), 2022 and appears to be in the top 20 among Indian institutions.

HOW TO APPLY

The candidates can apply through the google form (**link provided**) on/before **20th Feb 2023**.
Registration fee: Pondicherry University- **Rs. 300** and others- **Rs. 750/-**

REGISTRATION LINK:

<https://forms.gle/NCSQWbdVjx31S76ZA>

PAYMENT DETAILS

Account No: **788827115**
IFSC Code: **IDIB000P152**
Account Name: **Department of Bioinformatics**
Branch: **Indian Bank**, Pondicherry University Branch, Kalapet

ORGANIZING COMMITTEE

Dr. Basant K. Tiwary, - Professor
Dr. Dinakar R. Ampasala - Professor
Dr. R. Krishna - Professor
Dr. Archana Pan - Professor
Dr. R. Amutha - Professor
Dr. B. Syed Ibrahim - Assoc. Professor
Dr. K.M. Kumar - Assoc. Professor
Dr. A. Murali - Asst. Professor
Dr. S. Mohane Coumar - Asst. Professor
Dr. V. Amouda - Asst. Professor

CONTACT DETAILS

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DEPARTMENT WEBSITE

<https://www.bicpu.edu.in/>

ACCOMMODATION

The participants are requested to make their own transport and accommodation arrangements. On prior request, limited accommodation will be arranged outside the campus on a paid basis only. Lunch and refreshments on the workshop days will be provided by the organizers