

### **Genomics: Principles, Techniques, and Applications**

## 6 Days Workshop on

# Genomics: Structural and Functional Analysis

## **Topics Covered:**

- Finding of a Gene Sequence
- Structural Analysis of a Gene
- Functional Analysis of a Gene
- Application and Scope of Genomics in the Industry

**E-Certificate** 

### **Register Now**

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## Course Fee Rs. 3000

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#### **Course Overview:**

This course introduces **genomics**, covering the structure, function, and mapping of genomes. This course emphasizes the role of genomics in health, disease, and personalized medicine. Through a combination of lectures and hands-on workshops, students/professionals will acquire theoretical knowledge and practical skills in analysing genomic data, understanding gene function, and applying genomic technologies in research and clinical settings.

#### Learning Objectives:

- Understand the principles of genomics and its importance in biological research and medicine.
- Learn about genome sequencing technologies, data analysis, and functional genomics.
- Gain practical experience in using computational tools for genome analysis and interpretation.
- Explore the applications of genomics in disease research, drug discovery, and precision medicine.

#### **Course Offerings:**

#### 1. Foundational Concepts:

- Introduction to genomics: genome structure, function, and organization.
- Overview of genome sequencing technologies (Sanger sequencing, next-generation sequencing).
- Gene expression and regulation: RNA sequencing and transcriptomics.
- Functional genomics: gene annotation, epigenetics, and gene-environment interactions.

#### 2. Hands-on Experience with Tools and Technologies:

- $\circ$   $\;$  Using tools to assemble and annotate genomic sequences.
- Working with **BLAST**, **BWA**, and **SAMtools** to perform sequence alignment.
- Analysing transcriptome data, differential gene expression, and splicing events.
- $\circ$   $\;$  Identify genetic variations associated with diseases and traits.

#### Registration Link: https://ibri.org.in/ProjectTrainingRegistrationForm.pdf

#### For Payment, Scan this QR Code



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