

DEPARTMENT OF MICROBIOLOGY

GOVT. V.Y.T. PG AUTONOMOUS COLLEGE, DURG



Workshop and Dry Lab on Bioinformatics (17-24 December 2021)

Brief report: Resource Person: Dr. Ranjana Sahu, BMM, Sec.9 Bhilai

- **17.12.2021**: Concept of Bioinformatics: Definition, Aim, Tool and Database Development and Branches of Bioinformatics
- **18.12.2021:** Applications of Bioinformatics Molecular Medicine, Personalized Medicine, Preventive Medicine, Gene Therapy, Drug Development, Waste Cleanup, Microbial Genome Applications, Antibiotic Resistance, Alternative Energy Sources, Climate Change Studies, Development of Drought Resistance Varieties and Improve Nutritional Quality; Bioinformatics and Internet
- 20.12.2021: EMBL-EBI: A Center for excellence for Biology Research; Main services, Website, Database Channels, Tools Microarray Analysis, Protein Function Analysis, Proteomic Services, Sequence Analysis, Sequence similarity searching, DDBJ (DNA Data Bank of Japan) and NCBI (National Centre for Biotechnology Information) and Gene Bank
- 21.12.2021: Database, Biological Database, Types, Sequence Retrieving and Manipulation Network, NCBI home page, The Entrez System, Database, GenBank Divisions, EST, GSS, HTG, WGS, Whole Genome Shotgun Projects, UniGene, RefSeq and its benefits, Accession numbers, TPA Database, Examples of Header section, Table section, Sequence section, FASTA format, Data Analysis Tools BLAST (Basic Logical Alignment Search Tool).
- **23.12.2021:** PubMed Literature Links, basics, Goals, MeSH, BioMed Central, Facts of Open Access Publishing, Public Library of Science (PLOS), PLOS Journals, Publishing Policies, CiteXplore Goals, Data and Context,
- **24.12.2021:** Protein Data Bank (PBD), Expert Protein Analysis System (EXPASY), Transcription and Translation Tool, Genomics, Characterization and Annotation and Typical uses.









