AKSHTA MAHODAY

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Certifications

Whole genome sequencing of bacterial genomes- Tools and Application (Dec 2021)

R Programming
(John Hopkins University- Coursera specialization certificate)

Plant Media formulation & tissue culturing (Plantika tissue culture Lab Pvt. Ltd., Indore)

Astrobiology and search for extraterrestrial life (Coursera Specialization Certificate)

Development Tools / Languages

- Software / Products: Emboss, ORF Finder, BLAST tools, Marvinsketch, Molegro virtual Docker

- Development Tools / Languages: R Programming, Basic Shell Scripting & RNA sequencing, Python

- Genomics & Proteomics Tools: Softberry, Genscan, Ensemble, Swissprot, Bioedit, SOPMA, Rasmol, Swiss-PDB viewer

- MSA Tools: Clustalomega, ClustalW2, ClustalX, tcofee, Cobalt, Muscle

- Databases: NCBS, EMBL, dbSNP, Zinc Chemical database

Awards / Achievements

- "Discovery Work: Successfully identified Two novel compounds exhibiting a promising potential against oncogenic EGFR treatment in Glioblastoma therapy"

- "Attained the 3rd rank in university-wide ranking"

- "Awarded as a Top presenter on 'Biotech Crops and sustainability at university on National Science Day"

Profile

I have a diverse skill set that includes molecular biology and bioinformatics. I excel virtual screening, molecular docking, and NGS data analysis. My practical experience includes plant tissue culture procedures as well as thorough documentation practices. With great practical and communication skills gained via internships and project experiences, I thrive on challenges and take a proactive and collaborative approach to achieving significant results.

Experience

Eminent Biosciences **Bioinformatics Analyst (intern)**

Project undertaken: Computer aided drug designing targeting Glioblastoma.

- Successfully conducted structure based virtual screening, focusing on the discovery of potential drugs to inhibit progression of glial cancer
- Led in-depth analysis of 50+ PubChem phyto-compounds as potential drug candidates
- Executed molecular docking and virtual screening using Molegro Virtual Docker for over 30 query compounds.
- ADMET profiling, drug- drug comparative analysis, and pharmacophore studies were performed

Training:
Roles & Responsibilities:

- Conducted detailed analysis of 50+ gene sequences, employing bioinformatics tools and techniques
- Performed Next Generation sequencing using Tuxedo and Trinity pipeline.
- Contributed to ongoing research projects by providing insights and recommendations based on analyzed data
- Worked on virtual machines to set up and manage computational environments for bioinformatics tasks

CSIR-SRTP, NBRI, Lucknow **(Research trainee)**

Roles & Responsibilities:

- Acquired knowledge in wet lab skills, tissue culturing techniques and media formulations
- Contributing to a comprehensive understanding of ethical consideration in scientific inquiry
- Successfully participated in online discussion and presentations

Govt. Nimar Research & Extension, East Nimar **(Intern).**

Project undertaken: Clonal propagation of *eucalyptus tereticornis* by sprouting method.
Sector: Research and extension

- Executed experimental protocols for sprouting of ***eucalyptus tereticornis***, monitored growth parameters and contribute to the ongoing advancement of clonal propagation in forestry
- Implemented protocols for disease prevention contributing to the overall health of the clonal population.

Education:

- **Master of Science in Biotechnology,** Jiwaji University, Gwalior *CGPA – 9.1* (07/19 – 08/21)
- **Bachelor of Science in Biotechnology,** DAVV University, Indore (07/16 – 06/19)