Deepanshu Bansal

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Blissful ■ **E**nergetic ■ **S**olver ■ **T**utor

"Bringing the universe into the classroom"

EDUCATION

Gautam Buddha University
M.Sc Biotechnology
Greater Noida, India   **Oct' 2021 - Jun' 2023**
CGPA: 9.0/10

Kurukshetra University
B.Sc Science (biotechnology)
Kurukshetra, India   **May' 2018 - May' 2021**
Percentage: 92.8%

SOFT SKILLS

- Empathy, Great at Presentations, Adaptability, Public Speaker, Problem Solver, Consistent Learner, Patience, Communication , Collaboration, Critical thinking.

RESEARCH EXPERIENCE

Gautam Buddha University
M.Sc. Biotechnology| Oct 2021 - Jun 2023

Project 1 - Metagenomics: A Game Changer In Diagnostics And Surveillance Of Emerging Pathogens In Diseases Outbreaks

- Metagenomics sequencing and Bioinformatics analysis of Metagenomic data.
- Early detection of novel emerging pathogens and Dignosis of polymicrobial infection.
- Exploitation of human microbiome and it's metabolites as potential diagnostic marker and drug target.
- Future clinical diagnostic through Metagenomics in public health laboratories for faster diagnosis and precise treatment.

Project 2 - Expression And Purification Of Thermostable Taq Polymerase And Reverse Transcriptase

- Preparation of buffers, competent cells of DH5α and BL21 E.coli cells, Transformation, Plasmid isolation.
- IPTG concentration and time optimisation for both enzymes.
- Purification of Taq Polymerase and Reverse Transcriptase and SDS-PAGE experiments to see purified protein bands.
- Enzyme assay using PCR amplification with purified taq polymerase and Reverse Transcriptase.
- Testing of Taq polymerase in different buffers.
- Qualificarion, batch fermentation, Lypholization of purified Taq polymerase.

Kurukshetra University
B.Sc Science (Biotechnology)| May 2018 - May 2021

Project- Homology Searching of Amylase enzyme using BLAST

- Studying BLAST Algorithm and different types of BLAST.
- Study BLAST output, bit score, E-value, description, graphic summary, Alignments etc.
- Using BLASTp tool, the homology searching of query sequences given against protein database on NCBI.
- Learn about Genbabk, Refseq, Entrez, pubchem, FASTA, PDB, Pubmed, OMIM etc.

LAB TECHNIQUES EXPERIENCE

- **Preparation of stock and working solutions, Glycerol stock**
- **UV-Vis spectrophotometry, microscopy**
- **Sterilization, Media preparation**
- **Microbial culture, Gram staining, Colony characteristics study**
- **DNA, RNA and plasmid isolation and their quantification.**
- **Restriction digestion , Gene cloning, Ligation,**
- **Competent cell formation, Transformation.**
- **Electrophoresis, PCR, colony PCR**
- **Expression and purification of recombinant protein, genome editing tools.**
- **Bioinformatics - database, BLAST, ClustalW, Pubmed**
- **Phylogenetic analysis, Gene prediction, RNA structure prediction.**
- **PDB, CRISPOR, Homology modelling, SnapGene, Sol genomics etc.**
- **Plant tissue culture techniques in Tomato, brinjal.**
- **ELISA, blood group identification**
- **SDS-PAGE, Blotting.**
- **Bioreactor assembly , batch fermentation , microfilteration etc**
- **Basics of Biostatistics method of analysis.**
- **CRISPR-CAS, Guide RNA Designing**
- **Primer designing**
- **Chromatography**
- **MS-Office tools**
- **Data analysis**
- **Lyophilization**

TEACHING EXPERIENCE

- **Home tutions- Gharaunda, Karnal , panipat, Kurukshetra, Greater Noida**
- **Filo online tutor**
- **Tutorbin online tutor**
- **Byjus Student counseling**
- **Online tutions on Google meet , Zoom using pen tab**
- **Freelancing on digital platforms as doubt solver and test series maker.**

ACHIEVEMENTS

- **CSIR-UGC-NET+ JRF 2023 dec qualified with AIR 113.**
- **GAT-b qualified, score 154, rank 84**
- Certificate of excellence performance - Haryana board
- District, state, zonal level quiz competition positions.
- Bharat vikas parishad - competition winner
- National level talent search examination certificate

HOBBIES

Reading, Digital Skills Learning, Cooking, Anime watching