

AKS E ZEHRA

📍 HYDERABAD, TELANGANA, INDIA ✉️ aksi21.zehra@gmail.com 📞 9565454265 🌐 in/aks-e-zehra

OBJECTIVE

Recent Biotechnology graduate from Osmania University with a solid academic foundation and hands-on experience in **Molecular biology**. Worked on project related to **drug design targeting Methicillin-Resistant *Staphylococcus aureus* (MRSA)**. Skilled in advanced biotechnological techniques, with a strong dedication to driving innovation in research and development within the life sciences sector.

PROJECT

TITLE: Transformation, Overexpression, and Protein Purification of Cross-Bridge Forming femX protein from Methicillin Resistant *Staphylococcus aureus* (MRSA)

Project Student under supervision of **Dr. Someswar Rao Sagruthi** (Assistant Professor) at **Molecular Medicine laboratory**, Department of Genetics & Biotechnology (OU),
March 2024 -September 2024.

- **Transformation** of femX plasmid into **DE3 BL21** host cells and **BL21** plain host cells by **CaCl₂ Method**.
 - **Overexpression** by inoculating transformed cell colony including **IPTG induction, Centrifugation** of culture broth followed by **Sonication** for further **Purification**.
 - **Protein Purification** of femX protein by **Affinity Column Chromatography** using Ni-NTA Agarose(beads).
 - **Gel Electrophoresis for protein analysis (SDS PAGE)** for results of pure fem X protein.
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EDUCATION

Masters of Science in Biotechnology

Osmania University, Hyderabad
Hyderabad, Telangana • 2022 - 24

Bachelor of Science (Chemistry)

Minor in Zoology, Botany
University of Lucknow, Lucknow
Lucknow, Uttar Pradesh • 2018-2021

Intermediate (ISC)

Science (PCB)
Girls' High School & College, Prayagraj
Prayagraj, Uttar Pradesh • 2016-18

Secondary High School (ICSE)

Science, Commerce
Girls' High School & College, Prayagraj
Prayagraj, Uttar Pradesh • 2016

SKILLS

- Handling of basic biotechnology equipment such as **pH meter, Cooling centrifuge, Cooling Shaker incubator, Sonicator, Laminar flow, Automated autoclave, Electrophoretic set, Nanodrop, etc.**
- During Academic practical and Project work, I gained a profound experience of techniques such as **Protein & Plasmid Isolation, DNA/RNA extraction, RT-PCR, Plasmid Transformation using BL21-DE3 & BL21 plain cells, Overexpression consist of Inoculation, IPTG Induction & Sonication** followed by **Protein Purification** which includes **Affinity column chromatography, SDS gel electrophoresis.**
- Other techniques such as **Infiltration of plant (*Nicotiana sp.*), Streaking, Spreading, Serial Dilution method.**
- At demonstrative level, I gained knowledge about **Western Blotting.**
- Other Bioinformatical skills: **Virtual screening, Molecular docking** and Data Analysis using **GraphPad Prism**, for thorough examination of experimental data **In Silico Drug Design.**

CERTIFICATES

- **Cancer Biology**
IISc Bangalore •2023
- **CRISPR Cas9 Workshop**
Biotechnika •2023

LANGUAGES

- English (fluent)
- Hindi (native)

I would like to apply for this opportunity to collaborate or work with your team. Thank you for your time and consideration. I look forward to the possibility of working together.

Best regards,

Aks E Zehra.