

## OBJECTIVE

Motivated molecular bio scientist with an MSc in Biotechnology and NIH-funded Master's in Bioethics, experienced in microbiology (MRSA, E. coli), protein science, and plant/mammalian cell culture. Seeking a PhD position to pursue cross-disciplinary biotechnology research, contribute to laboratory projects, and explore sustainable and translational applications in microbial, plant, and protein systems.

## CONTACT

- 00971-553735663
- sanya.ahm86@gmail.com

## EDUCATION

### **MPHIL/PHD IN MOLECULAR MEDICINE AND DRUG RESEARCH** (Incomplete)

Dr. Panjwani Center for Molecular Medicine and Drug Research (PCMD), International Center for Chemical and Biological Sciences (ICCBS), University of Karachi, Pakistan (2011–2013)

### **MASTERS IN BIOETHICS**

Aga Khan University, Pakistan (2008–2010), Fogarty International Center, National Institutes of Health (NIH), USA

### **MASTER OF SCIENCE – BIOTECHNOLOGY**

University of Karachi, Pakistan (2007–2008)

### **BACHELOR OF SCIENCE (HONS) – BIOTECHNOLOGY**, University of Karachi, Pakistan (2004–2006)

# Sanya Ahmed

Molecular bio scientist with research experience in microbiology, plant and mammalian cell culture, protein production, enzyme kinetics, and structural analysis. Skilled in mentoring, lab documentation, and ethical research practices, with teaching experience across university, school, and private settings. Licensed UAE science teacher and certified Hijamah (wet cupping) therapist with clinical experience (~1 year). Emerging interest in, but not limited to, cross kingdom and translational studies in ageing, bioluminescence and cupping effluent. Open to cross-disciplinary, sustainable biotechnology research, with basic Python and foundational omics skills. Resilient, adaptable, and eager to contribute to laboratory projects aligned with the PI's research goals.

## **EXPERIENCE**

### **RESEARCH EXPERIENCE**

#### **M.Sc. Thesis Research Project (2007–2008)**

- Studied antibiotic resistance in *E. coli* strains from Karachi, Pakistan
- Cultured gram negative, *E. coli* strains
- Extracted and purified DNA by gel electrophoresis
- Transformed strains to test presence of resistance
- Cured strains to verify the resistance is plasmid based
- Reviewed literature, with scientific writing and referencing

#### **Junior Research Fellow (JRF), PCMD-ICCBS, University of Karachi (2011–2013)**

- Conducted enzyme kinetics studies for Thymidine Phosphorylase
- Screened potent compounds for therapeutic applications in oncology
- Cultured gram positive, MRSA Strains
- Designed primers and performed PCRs for MRSA genome, with restriction analysis
- Extracted and purified DNA
- Performed MRSA protein production, chromatographic extraction, purification, and NMR-based structural studies
- Reviewed literature, with scientific writing and referencing

## LANGUAGE PROFICIENCY:

IELTS, BRITISH COUNCIL, 7.5,  
DECEMBER 2010

## SOFT SKILLS

- Communication (written & verbal)
- Problem-Solving & Critical Thinking
- Adaptability & Flexibility
- Collaboration & Networking
- Creativity & Innovation
- Adaptability and Resilience
- Time Management & Organization

## RESEARCH INTERESTS

- Microorganisms, plants, and mammalian cell lines (no animal handling)
- Protein structure–function relationships
- Ageing, bioluminescence, and cross-kingdom studies.
- Wet cupping therapy effluent studies
- Sustainable biotechnology solutions for health and environment.

## TEACHING EXPERIENCE

- **Science Teacher** – Year 5 to Year 9, Al Mawahib British Private School, UAE (Sept 2024 – July 2025)
- **Science Teacher** – Al Hameed Private School, Pakistan (May 2022 – Nov 2023)
- **Lecturer – Biomedical Engineering** – Sir Syed University of Engineering & Technology, Pakistan (Jul 2009 – Jul 2013) Biology, Biostatistics, Physiology and Biomaterials.

## TECHNICAL SKILLS

- **Molecular Biology & Microbiology:** PCR, cloning, plasmid preparation, bacterial/yeast culture, mammalian cell culture, plant handling; research on MRSA (Gram-positive) and E. coli (Gram-negative).
- **Protein Science & Biochemistry:** Enzyme kinetics, protein production, assisted in protein purification (chromatography), exposure to NMR-based structural analysis.
- **Research & Data Management:** Primer design, lab documentation, EndNote referencing, ethical data stewardship.
- **Teaching & Mentorship:** UAE licensed Biologist specialist; university and school-level science teaching; private tutoring; peer mentoring in molecular techniques and reference management.
- **Bioethics:** NIH-funded Master's emphasizing responsible and reproducible research.
- **Professional Practice:** Certified Hijamah (wet cupping) therapist with ~1 year clinical experience.
- **Analytical & Emerging Skills:** Basic Python; openness to learn omics and advanced protein studies; sustainability-focused approaches.

## CAREER VISION

I aim to apply my molecular biology training, protein science experience, and bioethics background to pursue cross-disciplinary, sustainable biotechnology research. I am adaptable to diverse laboratory environments and eager to contribute to experimental design, data collection, and analysis aligned with the PI's research objectives, while learning new techniques and expanding my expertise in translational multi omics studies.

---