



Sehar Fatima

Date of birth: 14/05/2003 | **Place of birth:** Chakwal, Pakistan | **Nationality:** Pakistani | **Phone number:**

(+92) 3160896405 (Mobile) | **Email address:** seharfatima651@gmail.com |

Address: Block b police foundation ,pwd islamabad, 46000, Rawalpindi / Islamabad, Pakistan (Home)

ABOUT ME

I am a biotechnology graduate with a strong academic and research foundation in molecular biology, microbiology, and bioinformatics. My experience includes hands-on work in DNA extraction, PCR, genomics, and vaccine-related research during internships at leading national institutes. I have also contributed to research in functional foods, fermentation, and gut microbiota, with a particular interest in probiotics, prebiotics, and sustainable biotechnological solutions. Alongside my research experience, I have engaged in science communication, teaching, and academic mentoring, which has strengthened my ability to explain complex concepts clearly. I am now seeking opportunities for advanced research where I can contribute to innovative projects in biotechnology, microbiology, and applied life sciences

WORK EXPERIENCE

GCSE CHEMISTRY AUDITOR – SCIENCE BY MIR UK SCHOOL – 01/03/2026 – Current – UNITED KINGDOM

- Conduct detailed audits of GCSE Chemistry, and biology lessons, ensuring alignment with UK curriculum standards and learning objectives.
- Evaluate teaching methodologies, lesson delivery, and student engagement strategies to enhance academic quality.
- Review and provide constructive feedback on instructional content, assessments, and classroom practices.
- Identify gaps in conceptual understanding and recommend improvements for better student performance.
- Collaborate with educators to maintain high-quality, student-centred learning experiences in an online environment.
- Ensure accuracy, clarity, and scientific integrity in all chemistry-related materials.

UNDERGRADUATE RESEARCHER – NATIONAL UNIVERSITY OF MEDICAL SCIENCES – 11/07/2025 – 20/02/2026 – RAWALPINDI, PAKISTAN

Project: In-vitro Assessment of Red Algae Extract as a Potential Prebiotic for the Growth of *Bacillus clausii*

- Performed in vitro experiments to evaluate the prebiotic potential of red algae extract on the growth of *Bacillus clausii*.
- Prepared culture media, performed autoclave sterilisation, and maintained aseptic bacterial culturing conditions.
- Assessed microbial growth and viability using OD₆₀₀ measurements, colony-forming unit (CFU) counts, serial dilution, antibiotic screening, and MTT assays.
- Maintained strict biosafety and aseptic techniques throughout all laboratory procedures.

Recorded and analysed experimental data using MS Office tools to interpret microbial response and research outcomes.

Project: Formulation and optimization of fermented plum-based functional beverage

- Developed and optimised a fermented functional beverage using plum juice and pulp for gut microbiota enhancement.
- Designed fermentation experiments by optimising pH, temperature, incubation time, and culture conditions.
- Monitored microbial activity and fermentation efficiency under controlled laboratory conditions.
- Operated basic microbiology laboratory equipment while ensuring biosafety and aseptic protocols.
- Collected, processed, and interpreted experimental data using MS Excel and other MS Office tools to support research findings.

VOLUNTEER WORK – MILLENNIUM CAMPUS NETWORK UNITED NATIONS ACADEMIC PROJECT – 02/2025 – 10/2025

Department: Global admission committee

- Served as a member of the Global Admissions Committee for the Millennium Fellowship Class of 2025, a prestigious leadership program by MCN and the United Nations Academic Impact.
- Systematically evaluated applications from undergraduate leaders assessing project viability, leadership potential, and commitment to the United Nations SDGs.
- Collaborated with a global team to review a historic pool of 60,000+ applications, resulting in the selection of 4,000+ Fellows on 290+ campuses worldwide.
- Conducted virtual interviews with finalists to provide qualitative assessments on leadership, passion, and program fit.

RESEARCH INTERN – NATIONAL AGRICULTURE RESEARCH COUNCIL – 03/02/2025 – 18/03/2025 – ISLAMABAD, PAKISTAN

Department: National institute for genomics and advanced biotechnology(NIGAB)

- DNA extraction, quantification, and quality analysis (nanodrop and gel electrophoresis).
- PCR amplification and Optimization techniques.

- Data analysis, Gel documentation. and interpretation of experimental results.
- Exposure to genomic tools for crop improvement and sustainable agriculture.
- Report writing and documentation of experimental protocols.

CO-ORDINATOR NUMS SCIENTIFIC SOCIETY – NATIONAL UNIVERSITY OF MEDICAL SCIENCES – 03/2025 – Current – RAWALPINDI, PAKISTAN

- Organized and coordinated scientific seminars, workshops, and academic events.
- Liaised with faculty, speakers, and students for effective event execution.
- Supported content development, promotions, and reporting of scientific activities.

RESEARCH INTERN – NATIONAL INSTITUTES OF HEALTH PAKISTAN – 03/09/2024 – 30/09/2024 – ISLAMABAD, PAKISTAN

Department: Biological production division,NIH

- Training on Vaccine development for different diseases and quality assurance.
- Hands on experience with immunoglobulin extraction and sera purification.
- insights into public health strategies and lab management.

● EDUCATION AND TRAINING

21/02/2022 – 06/02/2026 Rawalpindi, Pakistan

BACHELOR OF SCIENCE IN BIOTECHNOLOGY (BS HONOURS) National University of Medical Sciences, Rawalpindi

Website <https://numspak.edu.pk/> | **Field of study** Biotechnology | **Final grade** 3.65 | **Level in EQF** EQF level 6 |

Thesis IN Vitro Assessment of Red Algae Extract as a potential prebiotic for the Growth of Bacillus clausii

2019 – 2021 Chakwal, Pakistan

HIGHER SECONDARY EDUCATION Kallar Kahar Science College for Girls, kallar kahar

Field of study Pre-medical | **Final grade** 91% | **Level in EQF** EQF level 4

2017 – 2019 Chakwal, Pakistan

SECONDARY EDUCATION Kallar kahar Science Higher Secondary School for Girls, kallar kahar

Field of study Science | **Final grade** 94% | **Level in EQF** EQF level 2

01/2025 – 03/2025

LEADERSHIP TRAINING COURSE Aspire Institute

- Selected as a global fellow for a prestigious Harvard-affiliated leadership and professional development program.
- Completed interactive modules on leadership, social impact, emotional intelligence, and personal branding.
- Collaborated with international peers on cross-cultural projects addressing global challenges.
- Enhanced skills in communication, problem-solving, critical thinking, and community leadership.

Field of study Leadership program

● HONOURS AND AWARDS

09/12/2025

HPAIR's Harvard Conference – Harvard Project for Asian and International Relations

Selected to attend the HPAIR Asia Conference 2026 in Harvard University's historic campus in Cambridge, Massachusetts, organized by Harvard University, focused on leadership, policy, and global collaboration.

● NETWORKS AND MEMBERSHIPS

2024 – CURRENT America

American Society for microbiology

Recognized as a Global Outreach Student Member of ASM, engaging in international scientific exchange and professional development opportunities. Actively participated in microbiology-focused discussions, webinars, and networking to expand knowledge of global research trends and innovations in microbial sciences.

- Member of the British Society for Gene and Cell Therapy (BSGCT), contributing to the global network of researchers in genetic and cellular medicine.
- Engaged with scientific updates, conferences, and publications focused on gene therapy, cancer research, and regenerative medicine.
- Committed to advancing awareness and understanding of innovative biotechnological approaches in gene and cancer therapy.

● SKILLS

Project management | Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation | Microsoft Office: Word, Excel, Powerpoint, Outlook, OneNote

Skills

Scientific Report Writing | Communication and Public Speaking | project management | Teamwork | Data analysis | Research skills

● LANGUAGE SKILLS

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user