

Dr. Neelam Zeb (*Assistant Professor*)

Objectives

I am enthusiastic and energetic person with ability to learn and adapt quickly to changing circumstances accepting challenges and to tackle them even in situation under pressure. My education enables me to achieve the targets and objectives of my work effectively either on my own or as a part of team.

Personal Information

Permanent Address:

Department of Biotechnology,
Women University Mardan

E-mail:

neelamzeb@wumardan.edu.pk

Father Name	:	Muhammad Yaqoob
Date of Birth	:	11-07-1989
Place of Birth	:	Mardan (Khyber Pakhtunkhwa)
Gender	:	Female
Nationality	:	Pakistan
Marital status	:	Married
Mother language	:	Pushto
NIC Number	:	16101-8078425-0

Major Courses in M. Phil & PhD:

Genomics, Proteomics and Bioinformatics, Scientific Writing, Plant-Microbe

Interaction, Food and Fermentation Technology, Immunology, Immunotoxicology, Advances in Microbiology and Biotechnology, Biosafety, Probiotics, Entrepreneurship in Microbiology etc.

Education / Qualification			
Year	Qualification	Institution	Division /CGPA
2021	PhD (Biotechnology)	National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad Pakistan affiliated with Pakistan institute of Engineering and Applied Sciences (PIEAS), Islamabad, Pakistan	4/4
2013	M.phil (Microbiology)	Quaid-i-Azam	4.4/5
2011	B.S (Hons) (Biotechnology)	University of Peshawar, Peshawar	1 st
2007	F.Sc Pre-Medical	B.I.S.E Mardan	1 st
2004	S.S.c (Science)	B.I.S.E Mardan	1 st

Research Title PhD:

Improvement of Super Koji (*A. oryzae*) for Enhanced Production of Thermostable Endoglucanase and Immobilization on Nano-structure Supports

Research Title M. Phil:

Purification and characterization of Thermophilic Amylase from *Bacillus* sp. TS9 isolated from Shadrah hot spring, Islamabad, Pakistan”.

Distinction

Awarded with Merit Scholarship in M. Phil

Awarded with IRSIP (International Research Support Initiative Program) fellowship in PhD

Research Project in IRSIP:

Computational Study on Flavonol biosynthesis by nonheme iron dioxygenases

Laboratory Experience:

- Biological Data Analysis
- Microbiological Techniques
- Microscopy
- DNA Extraction
- Biosafety and Biosecurity

- Biochemical Techniques
- Biological Sample Collection & Handling
- Enzyme Extraction from Microorganisms
- Enzyme Optimization, Characterization and Purification
- Enzyme Kinetics and Enzyme Immobilization

Experience:

- One year Research Experience at Microbiology Research Lab, Department of Microbiology, Quaid-i-Azam University, Islamabad, Pakistan.
- Five years Research Experience at Enzyme Engineering and Biofuels Lab, Industrial Biotechnology, National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, Pakistan.
- Six Months Research Experience at School of Analytical and Chemical Sciences, Manchester Institute of Biotechnology, University of Manchester, UK.
- Working as a Lecturer at Department of Biotechnology and Microbiology, Women University Mardan since 10th October, 2016 till 30th June, 2023.
- Started working as Assistant Professor at Department of Biotechnology, Women University Mardan from 1st September, 2023.

Other Roles:

- Member of Affiliation Committee, Women University Mardan
- Member of Board of Studies of Department of Biotechnology, Biochemistry, Chemistry and Zoology, Women University Mardan
- Member of Board of faculty, Women University Mardan
- Member of Academic Council, Women University Mardan.
- In-charge of Annual Report Committee, Women University Mardan
- Serving as Editor of National Journal of Biological Sciences (NJBS)
- Program Team (PT) member of Department of Biotechnology
- Member of Senate (2019-2022), Women University Mardan
- Faculty Proctor of Department of Biotechnology
- Member of Science Society, Women University Mardan
- Biosafety Officer in Institutional Biosafety Committee.

Publications:

- *Nutritional Status, Knowledge and Adherence to Dietary Advice in Type-2 Type 2 Diabetes Mellitus (T2DM) patients at Tertiary Care Hospital, Peshawar-A case Control Study (N-KAD study).* Pakistan Journal of Medical and Cardiological Review, 2026, ISSN 3007-2387. **(Co-Author).**
- *Sulphur and its Influence on Plants Stress Responses* (Chapter: 2026, In book: Mineral Nutrients to Mitigate Abiotic Stress in Crops, Publisher: Elsevier. **(First Author).**
- *Morphology controlled fabrication of zinc phosphate hierarchical microspheres for room temperature ammonia gas sensor.* Sensors and Actuators Reports 2025, 9 1 00288, ISSN 2666-0539. **(Co-Author).**
- *A Recent Review on Cotton and Climate Change in Pakistan: Impacts, Mitigation and Adaptations.* Insights-Journal of Health and Rehabilitation 2025, 3(2), 631-638. **(Co-Author).**
- *Therapeutic Potential of Eucalyptus Camalduensis: An Evidence based Review.* Frontier in Medical and Health Research, 2025, 3(2), 938-954. **(Co-Author).**
- *Effect of pH and metal ions produced from Probiotic lactic acid bacteria.* Journal of Animal Sciences 2021, 5(4), 1-13. **(First Author).**
- *Production of quality compost from Pennywort plant wastes.* Pakistan Journal of Biochemistry and Biotechnology 2021, 2 (2), 248-260. **(Co-Author).**
- *A Review on Strain Development, Purification, Characterization and their Industrial Applications.* J. Bacteriol Mycol. 2021; 8(5): 1180. **(First Author).**
- *Characterization of Amylase Produced by Thermophilic Bacillus sp. TS9.* National Journal of Biological Sciences 2020; 1(1): 51-61. **(First Author).**
- *Purification of Amylase Produced by Thermophilic Bacillus sp. TS9.* National Journal of Biological Sciences 2020; 1(1): 31-49. **(Co-Author).**
- *Flavonol biosynthesis by nonheme iron dioxygenases: A computational study into the structure and mechanism.* Journal of Inorganic Biochemistry, 198 (2019) 110728. **(First Author).**
- *Random mutagenesis of super Koji (Aspergillus oryzae): improvement in production and thermal stability of α -amylases for maltose syrup production.* J. BMC Microbiology (2018) 18:200. **(Co-Author).**
- *Hollow mesoporous hydroxyapatite nanostructures; smart nanocarriers with high drug loading and controlled releasing features.* International Journal of Pharmaceutics 544 (2018) 112–120. **(Co-Author).**
- *Phylogenetic analysis of newly isolated protease producing salt tolerant psychrophilic bacteria from Tirich Mir glacier, Pakistan.* International Journal of Biosciences (IJB), Vol. 7, No. 2, p. 159-169, 2015. **(Co-Author).**

Seminar/ Conference/ Symposium:

- Organized Two-Days Training Workshop on “**Biosafety and Waste Management**”, held on 27th and 28th April, 2026 at Women University Mardan.
- Organized the Workshop on “Research Writing and End Note” on 22nd April, 2026 at Women University Mardan.
- Participated in “Thalassemia Awareness Seminar” as guest Speaker held on 14th May, 2026 at Bakhshali Campus of Women University Mardan.
- Organized and participated in International Conference on “The Future Reimagined: Innovation through Science, Social Science and Global Collaboration” (FutureCON-2026), held on 10th and 11th February, 2026 at Al-Hamra Hotel, Mardan.
- Participated in one day workshop on “Understanding of Programme Review for Effectiveness and Enhancement (PREE Framework), held on 16th February, 2026 organized by Quality Enhancement Cell, Women University Mardan.
- Organized seminar on Educational Outreach and Awareness, held on 23rd December, 2025 at Women University Mardan.
- Participated in “Thalassemia Awareness Seminar” as guest Speaker held on 10th November, 2025 at “The girls Kingdom School and College, Mardan”.
- Organized Seminar on “Challenges in Students Research and Crafting a Robust Research Synopsis: From Idea to Approval” held on 27th October, 2025 at Women University Mardan.
- Participated in 2nd International Sustainable Agriculture and Genetic resources Conference on “Biofortification of Field Crops and Nutritional Security” held on 7th & 8th October, 2025, organized by Department of Agriculture, Hazara University, Mansehra.
- Organized and participated in 9th International Conference on Sustainable Development Goals for a Better Future (ICSDGBF-2025) Islamabad, held on 19th and 20th February, 2025 at Comstech Islamabad.
- Organized one day training workshop on “Response Surface Methodology (RSM) and Research Statistical Treatment of data held on 18th December, 2024 at Women University Mardan.
- Organized one day seminar on “Prevention of Drug Abuse and Youth Delinquency in Higher Education Institutions (HEIs) jointly organized by Women University Mardan and Center of Excellence on Countering Violence Extremism held on 12th December, 2024.
- Organized two-days’ Workshop on “Hands on Training Workshop on Biosafety and Lab Waste Management”, held on 24th and 25th October, 2024 at Women University Mardan.
- Organized and participated in International Conference on Food and Applied Sciences (ICFAS-24) at Nathia-gali, held on 19th to 21st August, 2024.
- Organized one day training Workshop on “Essentials of Intellectual Property Rights (IPR)” held on 11th November, 2024 at Women University Mardan.

- Organized one day seminar on “Endnote” held on 30th May, 2024, organized by Department of Biotechnology and ORIC, Women University Mardan.
- Organized Dosti Peshawar Literature Festival, 2024, Mardan Chapter at Women University Mardan held on 1st March, 2024.
- Organized and presented in “6th International Conference: Scientific Outlook of Sustainable Development Goals” organized by Women University Mardan in partial collaboration with OIC, COMSTECH and PASTIC, Islambad, held on 15th to 16th January, 2024.
- Organized and presented in “Hands on Training Workshop on Basic Lab Skills” held on 4th to 8th December, 2023 at Women University Mardan.
- Participated in two days training on “Establishing Effective Biosafety and Biosecurity Management Systems at Institutional level” held on 7th - 8th September, 2023 at Sheldon Rezidor, Peshawar.
- Participated in one day National Level Consultative workshop under the establishment of the Institutional Biosafety Committees Project in select Universities of Khyber Pakhtunkhwa, Punjab & Balochistan, held on 25th January, 2023 at Best Western Hotel, Islamabad

- Participated in two days Refresher Training workshop on “Bio-risk Management” at Women University Mardan, organized by Association by Bio-risk Management in collaboration with Health Security Partners and Biotechnology Laboratory, Women University Mardan, KP held on 18th – 19th January, 2023.
- Participated in Youth Tech Festival, organized by Directorate of Science and Technology (DoST) at IT University Shankar, Mardan on 3rd March, 2022.
- Participated in Two-Days Online Workshop on “Fundamentals and Applications of Nuclear Magnetic Resonance Spectroscopy (NMR)” organized by Department of Chemistry, Women University Mardan on 26th & 27th October, 2021.
- Participated in three days workshop on “Bio-risk Management Basic Training” at Women University Mardan, organized by Association by Bio-risk Management in collaboration with Health Security Partners and Biotechnology Laboratory, Women University Mardan, KP held on 17th October-19th October.
- Attended the 18th International Annual Virtual Conference on “**Infectious Diseases in the Era of Pandemic**” organized by “Medical Microbiology & Infectious Diseases Society of Pakistan (MMIDSP)” held from 27th to 29th May, 2021.
- Attended a series of online Webinars on „**COVID-19 Pandemic and role of Microbiologist**“ organized by American Society of Microbiology.
- ✓ The first webinar focused on „**COVID 19 Vaccination in Pakistan and Related Concerns**’ and was held on 14th April, 2021.
- ✓ The second webinar focused on „**COVID 19: Herd Immunity**’ and was held on 21st April, 2021.
- ✓ The third webinar focused on „**Current COVID 19 Situation: India vs Pakistan**’, held on 28th April, 2021.
- ✓ The fourth webinar focused on „**SOPS+Vaccination = Solution for Covid-19 Pandemic**’ that was held on 5th May, 2021.
- ✓ The fifth webinar focused on „**Understanding Covid-19 Antibody Test**’ and was held on 19th May, 2021.
- ✓ The sixth webinar focused on „**Covid-19: Transitioning towards a New Normal**’ that was held on 26th May, 2021.
- Attended one day workshop on “**World Rankings & Self- Assessment Report making**” that was held on 25th February, 2021.
- Participated in “3rd International Conference on Empowering the Nation through Science” organized by Women University Mardan on 23rd to 25th April, 2019 at Margalla Hotel, Islamabad.
- Participated and presented in “1st International Conference on Biotechnology and Biocomputing” organized by Department of Biotechnology, Islamic International University, Islamabad on 31st January to 1st February, 2019.
- “4th International Conference on “Dairy Science Park and Industrial Exhibition” on 1st – 5th November, in Konya Turkey.
- “8th international Annual Health Conference” on 25th-26th April, 2017 at Khyber Medical University, Peshawar.
- Work Shop on "Tissue/Cell cultures of Cancer Samples and its Clinical Applications" on 24th April, 2017 at Khyber Medical University, Peshawar.
- “Cancer Awareness” Seminar on 16th Feb, 2017 at Abdul Wali Khan University, Mardan.
- “2nd National Training workshop on Enzyme Engineering: An efficient tool to increase the efficiency of industrial Biocatalysts”, 4th-6th December, 2016 at National

institute for Biotechnology and Genetic Engineering.

- Symposium related to “Diabetes and Heart diseases” at National institute for Biotechnology and Genetic Engineering on 5th November, 2015.
- “1st National Training workshop on Enzyme Engineering: An efficient tool to increase the efficiency of industrial Biocatalysts”, 2nd-4th November, 2015 at National institute for Biotechnology and Genetic Engineering
- Conference on “2nd National student conference” at National institute for Biotechnology and Genetic Engineering 16th-18th September, 2015.

Languages and Computer Literacy:

English, Urdu, Pushto (Both written and spoken skills)

- Having experience in All Operating Systems, MS Word, MS Excel, MS PowerPoint, & also work and command on Internet Browsing & Email.

