

# Dr. Neelam Zeb

## *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*

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

## *Permanent Address:*

Department of Biotechnology,  
Women University Mardan

## *E-mail:*

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## 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 <sup>st</sup>
2007	F.Sc Pre-Medical	B.I.S.E Mardan	1 <sup>st</sup>
2004	S.S.c (Science)	B.I.S.E Mardan	1 <sup>st</sup>

### 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.

### 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 10<sup>th</sup> October, 2016.

### **Other Roles:**

- In-charge of Annual Report Committee, Women University Mardan
- Serving as Managing 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

### **Publications:**

- *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)**
- *Flavonol biosynthesis by nonheme iron dioxxygenases: 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  $\alpha$ -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:

- Participated in Youth Tech Festival, organized by Directorate of Science and Technology (DoST) at IT University Shankar, Mardan on 3<sup>rd</sup> 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 26<sup>th</sup> & 27<sup>th</sup> 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 17<sup>th</sup> October-19<sup>th</sup> October.
- Attended the 18<sup>th</sup> International Annual Virtual Conference on “**Infectious Diseases in the Era of Pandemic**” organized by “Medical Microbiology & Infectious Diseases Society of Pakistan (MMIDSP)” held from 27<sup>th</sup> to 29<sup>th</sup> 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 14<sup>th</sup> April, 2021.
- ✓ The second webinar focused on ‘**COVID 19: Herd Immunity**’ and was held on 21<sup>st</sup> April, 2021.
- ✓ The third webinar focused on ‘**Current COVID 19 Situation: India vs Pakistan**’, held on 28<sup>th</sup> April, 2021.
- ✓ The fourth webinar focused on ‘**SOPS+Vaccination = Solution for Covid-19 Pandemic**’ that was held on 5<sup>th</sup> May, 2021.
- ✓ The fifth webinar focused on ‘**Understanding Covid-19 Antibody Test**’ and was held on 19<sup>th</sup> May, 2021.
- ✓ The sixth webinar focused on ‘**Covid-19: Transitioning towards a New Normal**’ that was held on 26<sup>th</sup> May, 2021.
- Attended one day workshop on “**World Rankings & Self- Assessment Report making**” that was held on 25<sup>th</sup> February, 2021.
- Participated in “3<sup>rd</sup> International Conference on Empowering the Nation through Science” organized by Women University Mardan on 23<sup>rd</sup> to 25<sup>th</sup> April, 2019 at Margalla Hotel, Islamabad.
- Participated and Presented in “1<sup>st</sup> International Conference on Biotechnology and Biocomputing” organized by Department of Biotechnology, Islamic International University, Islamabad on 31<sup>st</sup> January to 1<sup>st</sup> February, 2019.
- “4<sup>th</sup> International Conference on “Dairy Science Park and Industrial Exhibition” on 1<sup>st</sup> – 5<sup>th</sup> November, in Konya Turkey.
- “8<sup>th</sup> international Annual Health Conference” on 25<sup>th</sup>-26<sup>th</sup> April, 2017 at Khyber Medical University, Peshawar.
- Work Shop on "Tissue/Cell cultures of Cancer Samples and its Clinical Applications" on 24<sup>th</sup> April, 2017 at Khyber Medical University, Peshawar.
- “Cancer Awareness” Seminar on 16<sup>th</sup> Feb, 2017 at Abdul Wali Khan University, Mardan.

- “2<sup>nd</sup> National Training workshop on Enzyme Engineering: An efficient tool to increase the efficiency of industrial Biocatalysts”, 4<sup>th</sup>-6<sup>th</sup> 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 5<sup>th</sup> Novemeber, 2015.
- “1<sup>st</sup> National Training workshop on Enzyme Engineering: An efficient tool to increase the efficiency of industrial Biocatalysts”, 2<sup>nd</sup>-4<sup>th</sup> November, 2015 at National institute for Biotechnology and Genetic Engineering
- Conference on “2<sup>nd</sup> National student conference” at National institute for Biotechnology and Genetic Engineering 16<sup>th</sup>-18<sup>th</sup> 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.