

Dr. Maryam Iqbal

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RESEARCH TECHNIQUES AND TRAINING:

Top Skills

- Isolation and culturing of Mouse Hepatocytes
- Mouse model of liver fibrosis
- Differentiation of Stem Cells toward Hepatic Lineage
- Animals' surgery and transplantation of stem cells
- Immunostaining
- Histological staining (H &E staining, Masson Trichome staining, Sirius red staining)
- DNA extraction from blood
- RNA Extraction from blood, Cells and Tissue
- Gel-Electrophoresis
- Western Blotting
- In vitro antiglycation Assay and PTP 1B inhibition.

Equipment

- Real time PCR
- Confocal Microscope
- ELIZA microplate reader
- Flow cytometry
- Spectrophotometry
- Spectrofluorophotometry

Software Image J software, graph pad prism 7 and relevant software's to above equipment's etc.

Language English; Urdu

EDUCATION:

Year of completion **PhD Biochemistry**
2023

Abdul Wali Khan University, Mardan (AWKUM), KPK, Pakistan.

Thesis: Combinatorial Therapeutic Potential of Stem Cells and New Chemical Entities for the attenuation of Liver Fibrosis

EXPERIENCE:

2023 to Present **ASSISTANT DIRECTOR TEACHING**

University of Veterinary and Animal Sciences Swat, KP, Pakistan

2023 to Present **Lecturer BIOCHEMISTRY (Visiting)**

University of Veterinary and Animal sciences Swat, KP, Pakistan

2020 **Researcher (IRSIP)**

National University of Singapore

Research work:

- Culturing of Bone Marrow Derived Stem Cells
- Isolation and culturing of Mouse Hepatocytes
- Immunostaining
- Real time PCR analysis
- Training on Equipment's available in Lab of Physiology NUS (Singapore)

2018-2019 **Lecturer Biochemistry**

Abdul Wali Khan University Mardan KP, Pakistan

2016-2023 **Lecturer Biochemistry**

Seena institute of Medical Sciences Swabi, KP

2011-2015 **Lecturer Chemistry**

Govt. Girls Degree College Karnal Sher Killi, Swabi, KP, Pakistan

Research interests:

1. Culturing Stem cells and Hepatocytes Cells
2. Cell therapy for Liver Regeneration
3. Using stem cells for therapy of different diseases of Liver Diseases.

PUBLICATIONS:

1. **Maryam Iqbal**, Sulaiman Shams, Huma Rafiq, Momin Khan et al; (2023), Combinatorial Therapeutic Potential of Stem Cells and Benzimidazol Derivatives for the Reduction of Liver Fibrosis. *Pharmaceuticals* 2023, 16(2), 306; <https://doi.org/10.3390/ph16020306>.
2. Huma Rafiq Muhammad Ayaz, Haider Ali Khan, **Maryam Iqbal**, Sulaiman Shams et al., (2022) "Therapeutic potential of stem cell and melatonin on the reduction of CCl₄ induced liver fibrosis in experimental mice model". *Brazilian Journal Biology*, 2022 Mar 16; 84:e253061. <https://doi.org/10.1590/1519-6984.253061>.
3. Mahboob Ali, Momin Khan, Khair Zaman, Abdul Wadood, **Maryam Iqbal**, Aftab Alam, Sana Shah, Ashfaq Ur Rehman, Muhammad Yousaf, Rafaila Rafique and Khalid Khan*(2020) Chalcones: As potent α -amylase enzyme inhibitors; synthesis, in vitro, and in-silico studies. *Journal of Medicinal Chemistry*.
<https://pubmed.ncbi.nlm.nih.gov/32525781>.
4. Sulaiman Shams, Fawad Iqbal, Muhammad Ayaz, Haider Ali Khan, Huma Rafiq, Nazia Imran, **Maryam Iqbal** at all (2024) Effect of Stone Dust on the Health Status of Workers in Marble Industries of Khyber Pakhtunkhwa Pakistan. *Journal of Population Therapeutics & Clinical Pharmacology*
<https://www.jptcp.com/index.php/jptcp/article/view/4567/4504>.
5. Muhammad Ayaz, **Maryam Iqbal**, Sulaiman Shams at all (2024) Preconditioning of Stem Cells with Silver Nanoparticles can Reduce Liver Fibrosis in Mice. *Journal of population therapeutics & clinical Pharmacology*
<https://www.jptcp.com/index.php/jptcp/article/view/5225/>

6. Muhammad Ayaz, Ikram Ullah, Nazia Imran, **Maryam Iqbal**, Sulaiman Shams at all (2024) Characterization and Anti-hepatic Fibrosis Activity of AgNPs Produced through Green Synthesis Method using Citrullus colocynthis Plant Extract: Characterization and Anti-hepatic Fibrosis Activity of AgNPs. Journal of population therapeutics & clinical Pharmacology <https://www.jptcp.com/index.php/jptcp/article/view/6033>.
7. Tahseen Anwer, Iqra Shahzadi, Syed Anwaar Hussain Shah, Amna Nasir, Arslan khan, **Maryam Iqbal**, Sayeda Nimra Jabeen at all (2025) Solar Photocatalytic Removal of Natural Organic Matter using Fluorinated Calcium Zincate Grafted on Gravel. Indus Journal of Bioscience Research <https://induspublishers.com/IJBR/article/view/429/421>.
8. Muhammad Tauseef Ahmad, Muhammad Tahir Sarfraz khan, Esha Mustafa, Rahmeen Ajaz, Mirza Muhammad Arslan Azam, **Maryam iqbal**, Shahzada Khurram Adrian Shah, Muhammad Umair (2025) Evaluating The Diagnostic Efficacy of Rt-Pcr And Immunohistochemistry For Peste Des Petits Ruminants In Goats: Insights Into Age-Related Susceptibility In Endemic Regions of Pakistan. History of Medicine <https://historymedjournal.com/HOM/index.php/medicine/article/view/1128>.
9. Tariq Azam, IbadUllah, **Maryam Iqbal**, Fatima Atta, Basit Ali Khan, Murad Ali Khan. (2025). Malaria Parasite Prevalence and Diagnostic Strategies in Khyber Pakhtunkhwa, Pakistan. Journal of Animal and Plant Research. <https://theskyscience.com/index.php/japr/article/view/50/34>
10. Khalid Aziz, Muhammad Ashraf, Farwa Batool, Fareeha Imran, Shahzada Khurram Adrian shah, Hafiz Misbah ud Din, **Maryam Iqbal**, Sana Siddique , Umber Rauf , Hafiz Munsif Alam (2025). Investigation of the Cardio Protective Role of Justicia Adhotoda Leaf Extract Against Isoproterenol-Induced Myocardial Infarction in Rat Model. Scholars Academic Journal of Bioscience research <https://saspublishers.com/journal-details/sajb/161/1585/>
11. Muhammad bilal, Muhammad adeel faizan, Muhammad shahbaz, Shahzada Khurram Adrian shah, Muhammad Najmus Saqib, Arsalan said, Sher Muhammad, Maaz Noor, **Maryam Iqbal**, Umair Ahmad (2025). The Association Between Nutritional and Managemental Practices and the Incidence of Reproductive Disorders in Large Ruminant. Indus Journal of Bioscience Research. <https://induspublishers.com/IJBR/article/view/993/918>
12. Syed ali shuja, Muhammad usman, Waqar younis, Saba Iftekhhar, Faisal ali samoon, Maqsood ahmad, sahar hafeez, mehtab chohan, **Maryam Iqbal** (2025). Effect of Immune-Modulating Interventions on Trained Immunity and Disease Resistance

- against Avian Influenza in Commercial Poultry: A Controlled Trial. Indus Journal of Bioscience Research <https://induspublishers.com/IJBR/article/view/1220/1140>
13. Hazrat Umar Khan, Duaa Tariq, Eman Shafqat Abbasi, Azka Sadat, Safa Naseem, Abdus Salam, Javeria Maqbool, **Maryam Iqbal** (2025). Association between Household Food Insecurity and Nutritional Status among Preschool Children in Dir Lower Khyber Pakhtunkhwa Pakistan. Annual Methodological Archive Research Review. <http://amresearchreview.com/index.php/Journal/article/view/75>.
 14. Waqar younis, Nazima yousaf khan, Farah Tanveer, Muhammad asfandiyar khan, Muhammad Tayyab, Tariq Aziz, Hafiz Munsif Alam, **Maryam Iqbal** (2025). Exploring the Combined Impact of Probiotics and Organic Acids as Alternatives to Antibiotics on Gut Microbiome Balance and Disease Resistance in Broilers: A Randomized Controlled Trial. Indus Journal of Bioscience Research <http://induspublishers.com/IJBR/article/view/1278>.
 15. Hafiz Nidaullah, Ibadullah Jan, Sahar Nigar, Saima Sohni, **Maryam Iqbal**, Khalid Khan, Shoiab Sultan (2025). Blood Chemistry, Liver Function and Serum Glucose Profiles of Broilers Health offered Mixed Herbal Recipes. Global Research Journal of Natural Science and Technology (Multidisciplinary journal) <https://www.grjnst.com/index.php/view/article/view/46>.

AWARDS:

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- ✓ IRSIP (International Research Support Initiative Program) HEC

REFERENCES:

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 - ✧ **Professor, Dr. Umar Sadique Khattak**
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