

MAHMOOD UL HASSAN

Lecturer

Department of Biotechnology

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Recent Objective:

I feel myself having better hands for scientific experimentation and enthusiasm to understand and explore more knowledge based on scientifically proven facts to acquire knowledge for serving mankind.

Qualification:

B.Sc Botany, Chemistry, Zoology from University of the Punjab

M.Sc Zoology from University of the Punjab

M.Phil Zoology from GC University Lahore

Work Experience:

- Working as a Lecturer at Institute of Industrial Biotechnology, **Government College University Lahore, Pakistan** since 23rd Feb.2010 to date.
- Research scientist in Institute of Medical Chemistry, Center for Pathobiochemistry and Genetics, **Medical University of Vienna, Austria** from 1st Feb. 2017 to 31st Jan. 2018.
- Research associate in Scottish Fish Immunology Research Centre, School of Biological Sciences, **University of Aberdeen, Scotland, UK** from July 2015 to October 2015. (Worked on Recombinant protein production, Isolation of protein by using His-tag in Prof. Christppher J. Secombes Laboratory).
- Research associate in Scottish Fish Immunology Research Centre, School of Biological Sciences, **University of Aberdeen, Scotland, UK** April 2011 to October 2011. (Worked on IFN genes amplification, cloning, sequencing and expression analysis in Prof. Christppher J. Secombes Laboratory).
- Lecturer at Institute of Industrial Biotechnology, GC University Lahore from Sep. 2009 to 23rd Feb. 2010 (on contract).
- Research/Teaching assistant at Department of Zoology, GC University Lahore from Sep. 2006 to Aug. 2009.

Research Grants and Contracts participated in:

Year	Title	Agency / Organization
2017	FWF Project part 09	www.sfb35.at
2015	INSPIRE	British Council
2011	IRSIP	HEC Pakistan

Selected Professional Presentation:

A poster presentation with the title “Exploring the role of charged amino acid residues in the transmembrane regions of the bile salt export pump (BSEP, ABCB11) for substrate transport” in 13th Young Scientist Association Symposium held on 8th-9th June at Medical University of Vienna, Austria.

Selected Research or Creative Accomplishment:

IFN Gene Sequences submitted to Gen Bank:

18 genes sequences of Type-I interferon with different subtypes of a, b, c, e and f of Rainbow Trout have been submitted in Gen Bank as a co-author along with research group of Prof. Christofer J. Secombes, Aberdeen University Scotland, UK.

Accession No. HF931021 to HF931038

URL- <http://www.ncbi.nlm.nih.gov/nuccore/HF931021>

Fields of research interest:

I am interested in the field of Immunology, Molecular Biology and Biochemistry.

Supervised research students:

- Students of M. Phil and BS Biotechnology & M. Phil and BS Microbiology were supervised for their research theses.

Skills in Hand: (Worked on the Techniques)

- ❖ Bioinformatics Tools for Primer designing, molecular docking and drug designing
- ❖ Gene amplification, ligation, transformation, cDNA preparation, RNA isolation and purification, Recombinant protein production their Isolation and purification.
- ❖ Gene amplification through Real Time PCR and their analysis.

- ❖ Pure culturing, Staining, Bio-chemical testing, Antibiotic susceptibility testing of microbes belonging to hazard level-I and hazard level-II
- ❖ Plasma membrane vesicles preparation
- ❖ Histopathology techniques for tissue fixation, embedding, sectioning and staining.
- ❖ Enumeration of microbes, Blood cells enumeration, Leukocytes isolation.
- ❖ Techniques for working with Tritium labeled radioactive compound

Selected Publications:

- 1- Zou, J., Gorgolione, B., Taylor, NGH., Summathed, T., Lee, P-T, Panigrahi, A., Genet, C., Chen, Y-M, Chen, T-Y, **Ul Hassan, M.**, Mughal, SM., Boudinot, P. & Secombes, CJ. (2014). 'Salmonids Have an Extraordinary Complex Type I IFN System: Characterization of the IFN Locus in Rainbow Trout *Oncorhynchus mykiss* Reveals Two Novel IFN Subgroups'. *The Journal of Immunology*, vol 193, no. 5, pp. 2273-2286.
[ONLINE] DOI: [10.4049/JIMMUNOL.1301796](https://doi.org/10.4049/JIMMUNOL.1301796)
- 2- Alam, A., Tabinda, AB., **Ul-Hassan, M.** and Yasar, A. (2014) Comparative Toxicity of Acetamiprid and *Azadirachta indica* Leave Extract on Biochemical Components of Blood of *Labeo rohita*. *Pakistan J. Zool.* 46(6): 1515-1520.
- 3- **Ul Hassan, M.** & Mughal, SM. (2015). Expression analysis of interferon regulatory factor 3 (IRF-3) under stimulation of LPS & Poly I.C in liver and spleen of *Cirrhinus mrigala* (Mori). *Biologia*. 61(1), 1-6.
- 4- **Ul Hassan, M.**, Mughal, SM. and Javed, MM. (2016) Analysis of TNF- α gene expression with Lipopolysacccharide (LPS) and Polyinosinic: polycytidylic acid (Poly I.C.) stimulation in Head kidney and Spleen of *Cirrhinus mrigala*. *The Journal of Animal and Plant Sciences*. 26 (6), 1872-1878.
- 5- Ashraf A, Ghani MU, Khan MU, Rehman HM, **Hassan MU**, Mehdi Z., (2022). Personalised Medicine; a Potential Therapy for Cystic Fibrosis. *Adv. Life Sci.* 9(4): 437-445.

6- Gillani, Tayiba, **Mahmood ul Hassan**, Najeeb Ullah, Abid Sarwar, Muhammad Hassan Farooq, Tariq Aziz, Metab Alharbi, Abdulrahman Alsahammar, and Abdullah F. Alasmari. (2023) Optimization of pyoverdine pigment biosynthesis conditions from a locally isolated strain of *Pseudomonas aeruginosa*. *Biomass Conversion and Biorefinery*. 1(13).

7- Imran Sohail , **Mahmood Ul Hassan** , Diethart Schmid Peter Chiba.(2024) The noncanonical nucleotide binding site 1 of the bile salt export pump is optimized for proper function of the transporter. *Cell Biol Int*. 48(5): 638-646.