

NAJEEB ULLAH KHAN

BS, MPhil, PhD Physiology

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[Google Scholar](#)

Summary

Cardiovascular physiologist with research focused on oxidative stress-mediated inflammatory signaling pathways underlying myocardial infarction pathogenesis and therapeutic modulation through the integration of in vivo and computational approaches. Contributed to multiple research projects involving computational biology, animal studies, molecular experiments, histopathology, and statistical analysis. Skilled in network pharmacology, molecular docking, and in silico ADMET prediction. Expanding international research experience through collaborative and interdisciplinary projects.

Teaching Experience

Lecturer Physiology Roles & Responsibilities	The University of Faisalabad, Pakistan Teaching various subjects of Physiology to undergraduate students, along with the supervision of Undergraduate and Postgraduate students	(Aug 2025 – Till Date)
Teaching Assistant Roles & Responsibilities	University of Agriculture, Faisalabad, Pakistan Assisted in practical sessions, supported students with assignments, and handled grading, attendance, and teaching materials	(Jan 2024 – May 2024)

Education

PhD Physiology Thesis Title	University of Agriculture, Faisalabad, Pakistan Investigating the Therapeutic Potential of <i>Ficus Carica</i> Leaves Extract Against Induced Myocardial Infarction in Rat Model	(2022-2026)
MPhil Physiology Thesis Title	University of Agriculture, Faisalabad, Pakistan Impact of Dietary Modulations on Gut Health in Commercial Broiler Birds	(2020-2022)
BS Physiology Report Title	Government College University Faisalabad, Pakistan Clinical Pathology Diagnostics and Laboratory Techniques Relevant to Biomedical and Physiological Research	(2016-2020)

Research Interests

- Cardiovascular Physiology
- Molecular Biology
- Omics Techniques
- Computational Biology
- Experimental disease model

Professional Experience

Research Assistant Roles & Responsibilities	University of Agriculture, Faisalabad, Pakistan Contributed to multiple research projects by performing computational biology, animal studies, molecular experiments, and histopathological analysis.	(Sep 2020 – Jul 2025)
Internee Roles & Responsibilities	Faisalabad Institute of Cardiology, Pakistan Performed routine specimen processing, hematological and biochemical tests, microscopy, and maintained laboratory documentation and biosafety standards	(Feb 2020 – Mar 2020)

Technical Skills & Tools

Molecular Biology and Physiology Lab

- DNA and RNA extraction, PCR, Gel electrophoresis, spectrophotometry, ELISA
- Cellular and Tissue Analysis: Histopathology, staining, microscopy
- Animal Handling
- Gained practical experience in electrophysiological techniques, including electrocardiography (ECG) and electromyography (EMG)

Molecular Docking and In Silico Studies

- Conducted in silico studies utilizing chemical and protein databases, including PubChem and RCSB PDB.
- Performed molecular docking using Chimera, Molecular Operating Environment, PyRx, and Discovery Studio for virtual screening and ligand-protein interaction analysis.
- Experienced in molecular modeling and analysis with software tools such as Molecular Operating Environment (MOE), Chimera, Discovery Studio, and SwissADME for drug design and ADMET prediction.
- Skilled in preparing and analyzing docking results, including binding affinity calculations and visualization of molecular interactions

Research Projects

Partial Research Grant
(90,000/-PKR)

University of Agriculture, Faisalabad, Pakistan
Office of Research Innovation and Commercialization (ORIC)

(Jun 2024)

Research Articles

- **Khan NU**, Hassan SU, Aslam B, Umer S. *Ficus carica* leaf extract ameliorates cardiac injury through Nrf2/Keap1 pathway activation and dual oxidase inhibition. Iran J Basic Med Sci 2025; 28: 1679-1690. **IF: 2.7**
- **Khan NU**, Hassan SU, Aslam B, Umer S. Investigating the therapeutic potential of *Ficus carica* leaves extract in a rat model of induced myocardial infarction. J Anim Plant Sci 2026; 36(3): 861-871. **IF: 0.5**
- Haider U, Ahmad M, Nasir W, **Khan NU**, Tariq MS, Aslam B, Rehman SU, S Junming. Therapeutic Potential of *Carica papaya* (L.) Extract on NRF2/KEAP1 and Apoptotic Pathways in Asbestos-Induced Lung Toxicity. Food Sci Nutr 2026. **IF: 3.8**
- Haider U, Aslam B, **Khan NU**, Nasir W, Tariq MS. Protective effects of *Carica papaya* leaf extract on the gut-lung axis in asbestos-exposed rats. J Anim Plant Sci 2026; 36(5): 1-12. **IF: 0.5**
- Nasir W, Haider U, Ahmad M, **Khan NU**, Tariq MS, Faisal MN. Effect of xylanase enzyme supplementation with wheat-based feed on growth rate, metabolic performance, and gut microbial functionality in broiler chicken. Pak J Zool 2026;(Accepted) **IF: 0.5**
- **Khan NU**, Roobi A, Ahmad M, Haider U, Nasir W, Tariq MS, Hassan SU, Kulyar MF. Mechanistic insights into the cardioprotective effects of *Ficus carica* leaf extract in myocardial infarction through integration of computational and experimental approaches. Mol Nutr Food Res 2026; (**Under Review**). **IF: 4.2**

Book Chapters

- Atique F, S Waris, **NU Khan**, K Shafique, R Kousar, H Ateeque, MM Jafar, M Farooq, 2025. Cardiovascular disease triggered by hypothalamic-pituitary-adrenal axis activation following stress stimulation. In: Advances in Pharmacology and Integrative Therapeutics (Aslam B, W Majeed, A Iftikhar, S Javed, I Abbas, Eds). FahumSci, Lahore, Pakistan, pp: 90-94. ISBN: 978-627-7745-13-4.

Conference Abstract

- Impact of Dietary Modification on Digestive Physiology of Broiler Birds. Usman Haider, Wania Nasir, **Najeeb Ullah Khan**, Muhammad Naeem Faisal. 19-21 March 2023. ASES V. International Health, Engineering and Sciences Conference. Ankara, Turkey.
- Association of Insulin Resistance and Thyroid Hormone Levels with Metabolic Dysfunctions in Women in PCOS. Wania Nasir, Usman Haider, **Najeeb Ullah Khan**, Muhammad Naeem Faisal. 2-3 February 2023. International Mediterranean Congress. Beirut, Lebanon.
- Prevalence of Cases of Respiratory Distress Syndrome Leading to Asthma Due To Industrial Pollution in the Faisalabad District. Wania Nasir, Usman Haider, **Najeeb Ullah Khan**, Alishbah Roobi, Noreen Aslam, Lubna Majeed, Jawad Aslam, Jannat Saleem, Ayesha Javed, Ayesha Ahmad, and Muhammad Naeem Faisal. 26-27 November 2022. International Dicle Scientific Research and Innovation Congress. Diyarbakır, Turkey.

Certifications

- Certificate of Participation in 3-Day International Workshop on Coordinative Locomotor Training featuring international experts in physiotherapy and rehabilitation from South Korea (19-21 September 2025)
- Certificate of Appreciation in DICE Competition MNS-UAM. 31 October 2022
- Certificate of Participation in the E-Quiz competition conducted by the Physiological Society of UVAS, Lahore (13 January 2022)
- Certificate of Participation in Two-day Workshop on “Promoting Research Excellence in Academics Across Pakistan” (1st and 2nd February 2022)

Workshops & Conferences

- Participated in 3rd International Conference on Advanced STEAM Education (ICASE-02025) [19-20 November 2025]
- Participated in 1st Pakistan Young Physiologists Symposium (PYPS-2023) on “The Dynamics of Metabolic Disorders: Era of Alternative & Complementary Medicine” [12-13 January 2023]
- Participated in Two-day Workshop on “Promoting Research Excellence in Academics Across Pakistan” [1-2 February 2022]

Professional Memberships

- Member of The Physiological Society, London, United Kingdom
- Member of American Society of Microbiology
- Member of [The Physiological Society Pakistan](#)

Honors & Awards

- **Institutional Engagement Award (£500)** The Physiological Society, United Kingdom
Awarded for contributions to the planning and execution of Physiology Week activities.
- **Merit-based Laptop Award** Prime Minister of Pakistan
Laptop Award for Academic Excellence (Top 5% of Batch)
- **Benevolent Fund Scholarship** Government of the Punjab, Pakistan
Special Merit Scholarship (PKR 50,000) per year. Awarded for achieving 90% or higher in BS Physiology
Link: <https://pbf.punjab.gov.pk/scholarships>
- **Motorcycle Awarded under the Student Bike Scheme** Chief Minister of Punjab, Pakistan
Link: <https://bikes.punjab.gov.pk/>

Administrative Activities

- Coordinated and managed the Coordinated Locomotor Training (CLT) workshop featuring international experts in physiotherapy and rehabilitation from South Korea [19-21 September 2025]
- Organize “2nd International Brain and Biomedicines Conferences” [08-09 May 2024]
- Organize One-day Symposium on “Post COVID Interventional Medicine in Cardiovascular Disorder” [08 March 2024]
- Organize Two days 2nd Training Workshop on “Disease Animal Modeling in Biomedical Research” [04-05 March 2024]
- Organize the festivities of the “World Physiology Week” [20-24 November 2023]

Software Skills

- **Statistical & Data Analysis:** SPSS, R, Minitab, GraphPad Prism
- **Image & Histology Analysis:** ToupView, ImageJ
- **Reference Management:** Mendeley

Language Skills

- ENGLISH (Advanced-C1)
- URDU (Mother Language)

References

- **Dr. Bilal Aslam**
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- **Dr. Marium Zafar**
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