

DR. RIZWANA SULTAN

Assistant Professor (BPS-19) | Veterinary Pathology

Department of Pathology

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PROFESSIONAL PROFILE

Dynamic and highly accomplished academician and researcher with extensive experience in Veterinary Pathology and Infectious Disease Pathobiology. Proven record of winning international research funding and driving structural program developments within higher education institutions. Passionate about diagnostic pathobiology, molecular histopathology, and introducing holistic natural therapeutic protocols into animal models.

ACADEMIC QUALIFICATIONS

Degree / Program	Year	University / Institution	Distinction / Funding
Ph.D. (Veterinary Pathology)	2020	University of Veterinary and Animal Sciences (UVAS), Lahore	Completed with distinction. Funded by EWABO Chemikalien GmbH (Germany) / VETMED® (Pakistan)
M.Phil. (Pathology)	2014	UVAS, Lahore	Completed with high standing (CGPA 3.90/4.00)
D.V.M. (Doctor of Veterinary Medicine)	2012	College of Veterinary & Animal Sciences, Jhang (UVAS)	Undergraduate professional degree (CGPA 3.02/4.00)

RESEARCH SPECIALIZATION & CORE INTERESTS

- Poultry Pathology & Infectious Disease Pathobiology
- Diagnostic Histopathology (Conventional & Molecular platforms)
- Post-Mortem Diagnostics & Clinical Necropsy (Poultry, domestic animals, and wildlife)

- Alternative Medicine Systems & Essential Oils (Antimicrobial, anti-inflammatory, and immunomodulatory mechanisms)

PRINCIPAL RESEARCH PROJECTS (AS PI)

Project Title	Focus Area	Funding Agency	Grant Amount
Effect of Mentofin on Serum Biochemistry	Antibody responses of broilers to H9N2 Avian Influenza	EWABO Chemikalien GmbH (Germany) / VETMED® (Pakistan)	Rs. 157,225/-
Evaluation of Aldecoc	Amelioration of farm surface contamination by Eimeria Oocysts to enhance coccidiostat efficacy	EWABO Chemikalien GmbH (Germany) / VETMED® (Pakistan)	Rs. 281,950/-

PROGRAM DEVELOPMENT & LEADERSHIP ROLES

- Curriculum Development Team Member: Co-designed and successfully launched the foundational framework for the 4-year B.S. (Hons) Medical Laboratory Technology program (Morning & Evening sessions) at CUVAS.
- Curriculum Development Team Member: Spearheaded the generation and integration of the M.Phil Pathology degree platform at CUVAS.
- Class Coordinator, BS MLT Batches (2021-2025 & 2025-2029)

Postgraduate Research Mentorship:

- **Ph.D. Supervision:** Primary Research Supervisor for 02 actively engaged doctoral students.
- **M.Phil. Supervision:** Supervised 07 students; 04 students under supervision. Supervised 07 as major member; 04 students under supervision as major member.

SCHOLARLY PUBLICATIONS

Peer-Reviewed Journal Articles:

- Wu, D., Feng, J., Wen, D., Wang, H., Lu, S., Sultan, R., Li, K., ... & Li, B. (2025). Identification and whole genome sequencing analysis of *Bacillus subtilis* K35-1, a highly efficient cellulose in forage degrading bacterium. *BMC Microbiology*, 25(1), 451.
- Zainab Lanjar, Rohma Fatima, Maryam Saddiqa, Muhammad Khizer Hayat, Imtiaz Ali Soomro, Tayyaba Riaz, Umair Younas, Qaiser Akram, Muhammad Ahsan Naeem, Muhammad Adnan Aslam, & Rizwana Sultan. (2024). Comprehensive analysis of COL1A1 expression, methylation, and genetic alterations in liver hepatocellular carcinoma. *Journal of Population Therapeutics and Clinical Pharmacology*, 31(6), 1014-1027.
- Hu, H., Umair, M., Khan, S. A., Sani, A. I., Iqbal, S., Khalid, F., Sultan, R., et al. (2024). CDCA8, a mitosis-related gene, as a prospective pan-cancer biomarker: implications for survival prognosis and oncogenic immunology. *American Journal of Translational Research*, 16(2), 432.
- Chen, P., Yawar, W., Farooqui, A. R., Ali, S., Lathiya, N., Ghous, Z., Sultan, R., et al. (2024). Transcriptomics data integration and analysis to uncover hallmark genes in hypertrophic cardiomyopathy. *American Journal of Translational Research*, 16(2), 637.
- Wang, J., Gilani, S. F., Noor, N., Ahmed, M. R., Munazir, M., Zubair, A., Sultan, R. ... & Hameed, Y. (2024). Decoding the DSCC1 gene as a pan-cancer biomarker in human cancers via comprehensive multi-omics analyses. *American Journal of Translational Research*, 16(3), 738.
- Khan, K., Sultan, R., Shah, S. Q. A., Farooq, Z., Rehman, N. U., Munir, H., & Khan, J. M. (2024). Head and neck cancer risk and Human Papillomavirus: Bradford Hill Criteria Based Evaluation. *Journal of Population Therapeutics and Clinical Pharmacology*, 31(1), 1536–46.
- Khan, K., Rafiq, A., Sultan, R., Sana, S., Bashir, U. K., & Khan, A. H. (2024). Seroprevalence of Newcastle Disease Virus and Avian Influenza H9N2 in Various Districts of South Punjab, Pakistan from 2020 to 2022. *International Journal of Agriculture and Biology*, 31(2), 84-88.
- Khan, M. A., Sethar, A., Gull, S., Munir, B., Arshad, N., Soomro, I. A., R. Sultan ... & Aftab, A. (2024). PIM1 Expression And Regulatory Mechanisms: Decoding Its Significance In Liver Hepatocellular Carcinoma (LIHC) Pathogenesis. *Migration Letters*, 21(S11), 1234-1246.
- Rehman, A., Majeed, U., Shafi, A., Shahbaz, M., Baboo, I., Sultan, R., Manzoor, Z., et al. (2024). Evaluation of Antioxidant Capacity and Bioactive Compounds in Capsicum Annum L. Red Peppers Following Drying in a Polycarbonate Greenhouse. *Eurobiotech Journal*, 8(1), 12–22.

- Ali Raza, Riaz Ahmed Gul, Ali Raza, Khalid Mehmood, Abdul Qayyum & R. Sultan. (2024). Epidemiology And Haemato- Biochemical Stress Associated with Parasitic Infestation Along with Therapeutic Trials of Eprinomectin Goats. *Pakistan Journal of Zoology*, 1-8.
- Majeed, U., Shafi, A., Shahbaz, M., Khan, K. U. R., Iqbal, K. J., Akram, K., Baboo, I., Sultan Rizwana et al. (2023). Assessment of Growth Inhibition of Eugenol-Loaded Nano-Emulsions against Beneficial *Bifidobacterium Sp.* along with Resistant *Escherichia Coli* Using Flow Cytometry. *Fermentation*, 9(2).
- Muhammad Saeed, Farhana Aslam, Muhammad Sajjad Khan, Asghar Ali Kamboh, Zahid Farooq, Rifat Ullah Khan, Rizwana Sultan, Ahmed Ali Moryani and Huayou Chen. (2023). Nutritional significance and health benefits of quail's meat and eggs: an Empirical review. *Pakistan Journal of Zoology*.
- Sultan, R., Aslam, A., Tipu, M. Y., Rehman, H., Usman, S., Anjum, A., ... & Iqbal, M. Z. (2021). Pathology and molecular characterization of *Eimeria tenella* isolated from clinically infected broiler chickens in district Lahore, Pakistan. *Pakistan Journal of Zoology*, 54(1), 1-9.
- Anjum, Ahsan, Asim Aslam, Raheela Akhtar, Tahir Yaqub, Rizwana Sultan, Saba Usman, Aneela Zameer Durrani, and Muhammad Usman. (2020). Molecular detection and pathological investigation of contagious bovine pleuropneumonia in selected districts of Punjab, Pakistan. *Pakistan Journal of Zoology*, 52(2), 797.
- Sultan, Rizwana, Asim Aslam, Muhammad Yasin Tipu, Habib Ur Rehman, Ahsan Anjum, Werner Krull, Taha Kumosani, Houssam Shaib, and Elie K. Barbour. (2019). Appraisal of a new patented method for control of chicken coccidiosis. *Journal of Applied Animal Research*, 47(1), 573-581.
- Sultan, Rizwana, Asim Aslam, Gulbeena Saleem, Ahsan Anjum, Werner Krull, Taha Kumosani, and Elie K. Barbour. (2017). Studies on Performance, Immunity, and Safety of Broilers Vaccinated with Killed H9N2 Vaccine and Supplemented with Essential Oils of Mentofin® in Drinking Water. *International Journal of Applied Research in Veterinary Medicine*, 15(2).
- Kumosani, T., Y. Obeid, H. Shaib, K. Abualnaja, S.S. Moselhy, A. Iyer, R. Sultan, A. Aslam, A. Anjum, and E. Barbour. (2017). Standardization of a protocol for quantitative evaluation of anti-aerosolized influenza virus activity by vapors of a chemically-characterized essential oil blend. *J Prev Infect Control*, 3(2), 6.

Peer-Reviewed Book Chapters:

- Bibi H, Hu R, Sultan R, Ali S, Ramzan A, Ashfaq MM, Bahar E, Mehmood K and Zhang H, 2026. Integrated control strategies for poultry skeletal disorders: From nutrition to precision farming. In: Rao Zahid Abbas, Tayyaba Akhtar, Shahid Hussain Farooqi and Shamreza Aziz (eds), *Emerging Infectious Diseases in the 21st Century: Zoonoses, Vectors and Global Health Challenges*. Unique Scientific Publishers, Faisalabad, Pakistan.
- Sultan R, Liu K, Ali S, Bibi H, Ramzan A, Ashfaq MM, Bahar E, Mehmood K and Zhang H, 2026. Molecular pathogenesis of tibial dyschondroplasia: Emerging mechanisms and signaling networks. In: Rao Zahid Abbas, Tayyaba Akhtar, Shahid Hussain Farooqi and Shamreza Aziz (eds), *Emerging Infectious Diseases in the 21st Century: Zoonoses, Vectors*

and Global Health Challenges. Unique Scientific Publishers, Faisalabad, Pakistan, pp: 122-128. <https://doi.org/10.47278/book.TL/2026.220>

- Sultan, R. and Jabbar, M. (2025). The Healing Breath: Essential Oils and their Impact on Respiratory Infections. In Holistic Health, Unique Scientific Publishers, Chapter No: 25-162.
- Anjum, A., Khan, B., Sultan, R., Khan, I. A., Raza, M. A., Kabeer, S. W., Buzdar, M. A., Mehmood, M., Riaz, M. F., & Saheer Ishaq. (2025). Chapter 28: Navigating Hematological Disorders from Diagnosis to Treatment.
- Saeed, M., Khan, M. S., Sultan, R., Aqib, A. I., Naseer, M. A., Muzammil, I., ... & Alagawany, M. (2022). Herb and Plant-derived Supplements in Poultry Nutrition. In Antibiotic Alternatives in Poultry and Fish Feed (pp. 19-32). Bentham Science Publishers.
- Saeed, M., Siddique, F., Sultan, R., El Sayed, S. A., Ahmed, S. Y., Farag, M. R., ... & Alagawany, M. (2022). Use of Chicory (*Cichorium intybus*) and its Derivatives in Poultry Nutrition. In Antibiotic Alternatives in Poultry and Fish Feed (pp. 98-110). Bentham Science Publishers.

CONFERENCES, PRESENTATIONS & WORKSHOPS

- Organizing Chair & Guest Speaker: 'Balancing the Tightrope: Managing Academic and Everyday Life Stress for Success and Well-Being' at CUVAS Bahawalpur.
- Chief Guest & Event Organizer: 'Breast Cancer Awareness: Early Detection for Protection' seminar at CUVAS.
- Oral Presenter: International Brain and Biomedicines Conference (IBBC-2023), Government College University (GCU), Faisalabad.
- International Keynote Presenter (Thailand): Presented research on 'Effect of Mentofin on Serum Biochemistry and Antibody Response of Broiler to H9N2 Avian Influenza' at the International Symposium on Essential Oils.
- Capacity Building Program for University Management (5-day workshop, CUVAS Bahawalpur, 2025).
- One day International Veterinary Conference on Small Animals and Birds (East Windsor Animal Hospital, NJ, USA, 2023).
- 4th International Workshop on 'Pathology of Animal Diseases' (UVAS/Davis Thompson Foundation, 2023).
- Hands-on Training in Biorisk Management (PBSA/CUVAS, 2019).
- Advanced Histopathology Training (5-day workshop, UVAS-Lahore, 2017).
- One day Seminar on Amelioration of Camel Udder Health Through Mastitis Vaccine and Novel Antimicrobial Combination (2024).
- One day Seminar on Controlling Infectious Disease in Livestock and Poultry (2024).

ADMINISTRATIVE APPOINTMENTS & UNIVERSITY SERVICE

- Deputy Director, Student Affairs, CUVAS
- Member, Advanced Studies and Research Board (ASRB), CUVAS
- Superintendent (Girls Hostel), CUVAS

CLINICAL SERVICES & PROFESSIONAL AFFILIATIONS

Diagnostic Services:

- Provides expert post-mortem/necropsy reports and field outbreak investigations for poultry, domestic livestock, and wild animals at the Department of Pathology, CUVAS.

Professional Memberships:

- Member of Pakistan Veterinary Medical Council (PVMC)
- Member of UVAS Alumni Association