

Dr. Rizwana Sultan

Assistant Professor (BPS-19), Department of Pathology



Education:

- Ph.D. (Veterinary Pathology) — University of Veterinary and Animal Sciences (UVAS), Lahore, 2020. Completed with distinction; funded by EWABO Chemikalien GmbH (Germany) / VETMED® (Pakistan).
- M.Phil. (Pathology) — UVAS, Lahore, 2014.
- D.V.M. (Doctor of Veterinary Medicine) — College of Veterinary & Animal Sciences, Jhang (UVAS), 2012

Designation:

Assistant Professor (BPS-19)

Department:

Department of Pathology, Cholistan University of Veterinary & Animal Sciences (CUVAS), Bahawalpur, Pakistan

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Biography:

Dr. Rizwana Sultan is an Assistant Professor in the Department of Pathology at the Cholistan University of Veterinary & Animal Sciences (CUVAS), Bahawalpur. She is a dynamic and highly accomplished academician and researcher with extensive experience in Veterinary Pathology and Infectious Disease Pathobiology, and a proven record of securing international research funding and driving structural program development within higher education institutions. She is passionate about diagnostic pathobiology, molecular histopathology, and introducing holistic natural therapeutic protocols into animal models. She holds a Ph.D. in Veterinary Pathology from UVAS Lahore (2020, funded by EWABO Chemikalien GmbH, Germany / VETMED®, Pakistan), an M.Phil. in Pathology from UVAS Lahore (2014), and a D.V.M. from UVAS Jhang (2012). Her ORCID iD is 0000-0001-5172-8219.

Google Scholar Profile: [Rizwana Sultan \(Jhang\)](#)

Areas of Interest:

- 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)

Trainings/Courses/ Workshops:

- Capacity Building Program for University Management — 5-day workshop, CUVAS Bahawalpur (2025)
- 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)

Publications:

- Wu, D., Feng, J., Wen, D., Wang, H., Lu, S., Sultan, R., Li, K., et al. (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., et al. (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., Sultan, R., et al. (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 in 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, R., 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).
- Saeed, M., Aslam, F., Khan, M. S., Kamboh, A. A., Farooq, Z., Khan, R. U., Sultan, R., Moryani, A. A., & Chen, H. (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., et al. (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, A., Aslam, A., Akhtar, R., Yaqub, T., Sultan, R., Usman, S., Durrani, A. Z., & Usman, M. (2020). Molecular Detection and Pathological Investigation of Contagious Bovine Pleuropneumonia in Selected Districts of Punjab, Pakistan. *Pakistan Journal of Zoology*, 52(2), 797.
- Sultan, R., Aslam, A., Tipu, M. Y., Rehman, H., Anjum, A., Krull, W., Kumosani, T., Shaib, H., & Barbour, E. K. (2019). Appraisal of a New Patented Method for Control of Chicken Coccidiosis. *Journal of Applied Animal Research*, 47(1), 573-581.
- Sultan, R., Aslam, A., Saleem, G., Anjum, A., Krull, W., Kumosani, T., & Barbour, E. K. (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., Obeid, Y., Shaib, H., Abualnaja, K., Moselhy, S. S., Iyer, A., Sultan, R., Aslam, A., Anjum, A., & Barbour, E. (2017). Standardization of a Protocol for Quantitative Evaluation of Anti-Aerosolized Influenza Virus Activity by Vapors of a Chemically-Characterized Essential Oil Blend. *Journal of Preventive Infection & Control*, 3(2), 6.

Books edited Book chapters or monographs published:

- Bibi, H., Hu, R., Sultan, R., Ali, S., Ramzan, A., Ashfaq, M. M., Bahar, E., Mehmood, K., & Zhang, H. (2026). Integrated Control Strategies for Poultry Skeletal Disorders: From Nutrition to Precision Farming. In R. Z. Abbas, T. Akhtar, S. H. Farooqi, & S. Aziz (Eds.), *Emerging Infectious Diseases in the 21st Century: Zoonoses, Vectors and Global Health Challenges* (pp. 129-135). Unique Scientific Publishers, Faisalabad, Pakistan.
- Sultan, R., Liu, K., Ali, S., Bibi, H., Ramzan, A., Ashfaq, M. M., Bahar, E., Mehmood, K., & Zhang, H. (2026). Molecular Pathogenesis of Tibial Dyschondroplasia: Emerging Mechanisms and Signaling Networks. In R. Z. Abbas, T. Akhtar, S. H. Farooqi, & S. Aziz (Eds.), *Emerging Infectious Diseases in the 21st Century: Zoonoses, Vectors and Global Health Challenges* (pp. 122-128). Unique Scientific Publishers, Faisalabad, Pakistan.
- Sultan, R., & Jabbar, M. (2025). The Healing Breath: Essential Oils and their Impact on Respiratory Infections. In *Holistic Health*, Unique Scientific Publishers, Chapter 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., & Ishaq, S. (2025). Navigating Hematological Disorders from Diagnosis to Treatment (Chapter 28).
- Saeed, M., Khan, M. S., Sultan, R., Aqib, A. I., Naseer, M. A., Muzammil, I., et al. (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., et al. (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 attended/presented papers or posters:

- International Keynote Presenter (Thailand): 'Effect of Mentofin on Serum Biochemistry and Antibody Response of Broiler to H9N2 Avian Influenza', International Symposium on Essential Oils.
- Oral Presenter: International Brain and Biomedicines Conference (IBBC-2023), Government College University (GCU), Faisalabad.
- One-day International Veterinary Conference on Small Animals and Birds, East Windsor Animal Hospital, NJ, USA (2023).
- 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).
- Organizing Chair & Guest Speaker: 'Balancing the Tightrope: Managing Academic and Everyday Life Stress for Success and Well-Being', CUVAS Bahawalpur.
- Chief Guest & Event Organizer: 'Breast Cancer Awareness: Early Detection for Protection' seminar, CUVAS.

Any other addition:

Program Development & Leadership Roles:

- Curriculum Development Team Member — co-designed and 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.
- Program Coordinator, BS MLT Program (2021–2025)
- Program Coordinator, M.Phil Pathology Program (2023–2025)
- Class Coordinator, BS MLT Batches (2021-2025 & 2025-2029)

Teaching Portfolio & Mentorship:

- Ph.D. Level: Oncology (PATH-752)
- M.Phil Level: Advanced Clinical Pathology (PATH-702), Molecular Pathobiology (PATH)
- DVM Level: Poultry Pathology (PATH-611, 9th Semester)
- BS MLT Level: Clinical Laboratory Practices (MLT-613), Chemical Forensic Pathology (PATH-505/504), Clinical Pathology (PATH-503), Systemic Pathology (PATH-404), Health Care Waste Management (MLT-506), Methodological Report Writing (PATH-602)
- Ph.D. Supervision: Primary Research Supervisor for 3 actively engaged doctoral students
- M.Phil. Supervision: Primary Research Supervisor for 3 students; Advisory Committee Member for 3 additional students

Principal Research Projects (as PI):

- Effect of Mentofin on Serum Biochemistry — antibody responses of broilers to H9N2 Avian Influenza. Funded by EWABO Chemikalien GmbH (Germany) / VETMED® (Pakistan). Grant amount: Rs. 157,225/-
- Evaluation of Aldecoc — amelioration of farm surface contamination by Eimeria oocysts to enhance coccidiostat efficacy. Funded by EWABO Chemikalien GmbH (Germany) / VETMED® (Pakistan). Grant amount: Rs. 281,950/-

Administrative Appointments & University Service:

- Deputy Director, Student Affairs, CUVAS
- Member, Advanced Studies and Research Board (ASRB), CUVAS
- Assistant Hall Warden (Girls Hostel), CUVAS
- Member, University Scrutinize Committee & Institutional Hiring Board
- Member, Mess/Cafeteria Committee
- Member, Day Care Centre Committee

Clinical Services & Professional Affiliations:

- Provides expert post-mortem/necropsy reports and field outbreak investigations for poultry, domestic livestock, and wild animals, Department of Pathology, CUVAS.
- Member, Pakistan Veterinary Medical Council (PVMC)
- Member, Pakistan Society of Veterinary Pathology
- Lifetime Member, Pakistan Society of Parasitology, UVAS Lahore
- Member, UVAS Alumni Association

Academic References:

- Prof. Dr. Riaz Hussain,
Dean, Faculty of Veterinary Sciences,
Cholistan University of Veterinary and Animal Sciences (CUVAS), Bahawalpur, Pakistan.
Email: dr.riaz.hussain@iub.edu.pk

- Dr. Hafiz Iftikhar Hussain,
Assistant Professor, Department of Pathology,
Cholistan University of Veterinary and Animal Sciences (CUVAS), Bahawalpur, Pakistan.
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