

HAFIZ MUHAMMAD SAFWAN

Lecturer, Department of Surgery

Faculty of Veterinary Science,

Cholistan University of Veterinary and Animal Sciences, Bahawalpur | 2018 – Present

PhD Candidate in Animal Medicine and Health | Department of Animal Medicine and Surgery, Faculty of Veterinary Medicine, Universitat Autònoma de Barcelona (UAB), Spain

Email: HafizMuhammad.Safwan@autonoma.cat | Mobile: +34 627 270 300

Email: hafizmsafwan@cuvas.edu.pk

PROFESSIONAL PROFILE

Veterinary researcher specializing in canine leishmaniasis, molecular diagnostics, veterinary immunology and experimental vaccine evaluation. Experienced in longitudinal multicenter clinical studies, qPCR-based diagnostics, immunological assays, and evaluation of vaccine safety, immunogenicity and efficacy. Additional expertise in clinical and laboratory research, data analysis, scientific writing and interdisciplinary collaboration.

EDUCATION

PhD in Animal Medicine and Health — Universitat Autònoma de Barcelona, Spain (2022 – Present)

Thesis title: Advancing vaccine development as a preventive tool in canine *Leishmania infantum* infection

MPhil in Veterinary Surgery — University of Veterinary and Animal Sciences, Pakistan (2016 – 2018)

Doctor of Veterinary Medicine (DVM) — University of Veterinary and Animal Sciences, Pakistan (2010 – 2015)

RESEARCH EXPERIENCE

Experimental vaccine research: Longitudinal evaluation of an experimental vaccine against canine *Leishmania infantum* in a randomised, blinded multicenter clinical study.

Molecular diagnostics: Comparative evaluation of hair and blood qPCR for *Leishmania* detection; first-author publication in *Parasites & Vectors* (2026).

Cellular immunity assessment: Evaluation of a modified tube-based IFN- γ whole blood assay (WBA); manuscript in final preparation for submission.

Clinical and laboratory work: Clinical sampling, laboratory procedures, sample processing, data organization and statistical analysis.

Scientific collaboration and mentoring: Scientific writing, manuscript preparation, oral presentations and support of junior researchers.

PUBLICATIONS

- Safwan HM, Alcover MM, Murillo-Picco A, Baxarias M, Fisa R, Ordeix L, Solano-Gallego L. Hair quantitative PCR outperforms blood analysis for detecting *Leishmania* DNA in dogs: a non-invasive tool for clinical states of infection. *Parasit Vectors*. 2026 May 27. doi: 10.1186/s13071-026-07449-3.
- Rabbani AH, Safwan HM, Waheed A, Ullah Q, Naseer O, Sohail ML, Shahid M, Ali S, Hussain K, Ali A, Khan YR, Ahmad AS. Pharmacological therapeutics and implications of opioid administration in veterinary practices: A current perspective. *Pure Appl Biol*. 2023;12(1):61–71. doi: 10.19045/bspab.2023.120007.
- Naseer O, Rauf M, Jalees MM, Wadood F, Safwan HM, Shahid M. Sero-molecular epidemiology of blood donors infected with Hepatitis C virus (HCV) in Peshawar, Pakistan. *Pure Appl Biol*. 2023;12(2):1009–1016.
- Rabbani AH, Khan YR, Naseer O, Qudratullah, Safwan HM, Waheed A, Ali A, Waqas M. Biocompatibility and postoperative complications of different subcutaneous suturing methods in cats undergoing ovariohysterectomy by midline incision. *Thai J Vet Med*. 2021;51(3):577–585. doi: 10.56808/2985-1130.3153.

5. Safwan HM, Chudhary AS, Maan MK, Abbas SW, Abbas G, Nasir S. Comparative evaluation of suturing techniques, skin staples and surgical glue for the treatment of auricular hematoma in dogs. *Int J Anim Husbandry Vet Sci.* 2018;3:27–31.
6. Abbas SW, Ali MN, Abbas G, Safwan HM, Sajid M, Mehmood M. Comparative effectiveness of general anesthesia in doves using a combination of ketamine and diazepam. *Adv Zool Bot.* 2018;6(4):95–100.

INTERNATIONAL SCIENTIFIC TRAININGS

2026: Summer School “Epidemiology, Genetics and Modelling for Infectious Disease Control”, EU-LI-PHE COST Action CA22112, **University of Edinburgh, Scotland, United Kingdom, 31 August–4 September 2026.**

2026: Final Meeting, COST Action, **COST Headquarters, Brussels, Belgium, 10 July 2026**

2026: Training school “From Data to Action: Estimation Methods and Data Visualization for Antimicrobial Resistance Burden”, COST Action CA21145, **University of Pula, Croatia, 22–26 June 2026.**

2026: “PRAGMATICK Workshop on predictive mapping tools for ticks and tickborne pathogens” COST Action CA21170, **Vienna, Austria, 22 March 2026.**

2024: Training school “Cell Culture as In Vitro Models for Newly Developed Drugs against Vector-Borne Parasitic Diseases”, COST Action CA21111, **University of Warsaw, Poland, 25–27 September 2024.**

2024: Training school “Natural Products in Antiparasitic Drug Discovery: Experimental and Computational Approaches”, COST Action CA21111, **University of Naples Federico II, Italy, 18–20 June 2024.**

2023: Training school “Drug Discovery against Parasitic Vector-Borne Diseases, In Vitro Assay Development and Screening”, COST Action CA21111, **Fraunhofer ITMP, Hamburg, Germany, 8–10 May 2023.**

SCIENTIFIC PRESENTATIONS

Oral communication: “Real-time PCR for the detection of different states of *Leishmania infantum* infection.” Safwan HM*, Alcover M, Murillo A, Baxarias M, Molnár A, Solano-Gallego L. Animal Leishmaniosis International Veterinary Event (ALIVE-2), **Nice, France, 18–20 April 2024.**

Co-author, oral communication: “A modified IFN- γ release whole blood assay to determine *Leishmania infantum* cellular immunity in dogs.” Murillo-Picco A*, Jiménez-Fortunato C, Safwan HM, Martín J, Solano-Gallego L. Animal Leishmaniosis International Veterinary Event (ALIVE-2), **Nice, France, 18–20 April 2024.**

Clinical lecture, Faculty of Veterinary Medicine, **Universitat Autònoma de Barcelona**, 28 February 2025.

TECHNICAL & ANALYTICAL EXPERTISE

Molecular diagnostics: DNA extraction, real-time qPCR, sample processing and result interpretation.

Veterinary immunology: ELISA, IFN- γ whole blood assays and cellular immune response assessment.

Clinical research: Longitudinal patient follow-up; blood, hair and urine sample collection and processing.

Data analysis: Jamovi, JMP, GraphPad Prism, R and Microsoft Excel.

Scientific communication: Scientific writing, manuscript preparation, literature review and oral presentations.

EUROPEAN RESEARCH NETWORKS (COST ACTIONS)

Working Group member in multiple COST Actions spanning One Health, veterinary infectious diseases, antimicrobial treatment, livestock phenomics, animal welfare, vector-borne diseases and environmental impacts of veterinary medicines.

PROFESSIONAL MEMBERSHIP & LANGUAGES

Pakistan Veterinary Medical Council (PVMC)

Languages: Urdu (Native) | English (Professional working proficiency) | Spanish (Intermediate)