

CURRICULUM VITAE

MUHAMMAD UMAR ZAFAR KHAN

DVM, M. Phil, Ph.D. (LVRI-CAAS) (Microbiology & Molecular Biology)

Assistant Professor/ HEC-Approved Supervisor/ RVMP/RVMF

Certified Master Trainer of Pedagogical Skills (Qatar & Canada)

Institute of Microbiology, University of Agriculture, Faisalabad (IOM-UAF), Pakistan.

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Career summary:

I committed myself to clinical practice in the early years of my veterinary profession, specializing in animal diagnosis and treatment. Further, during my doctoral studies, I progressed to veterinary clinical microbiology & molecular biology, emphasizing infectious diseases and veterinary-specific diagnostic methods. (PFGE, MLST, OR DNA sequence-based, etc.) This path allows me to combine practical clinical experience with specialist knowledge of microbiological threats, enabling me to contribute to veterinary science and comprehensive treatment. **ONE HEALTH ONE GLOBE.**

EMPLOYMENT:

- **Assistant Professor** Institute of Microbiology -UAF, Faisalabad, Pakistan (**Feb 2022- To date**)
- **Assistant Professor/** Head of Department of Veterinary Sciences, Superior University (**Sep 2021-Jan 2022**)
- **Research Associate** at State Key Laboratory of Innovative Team for GI Infection & Mucosal Immunity of Swine & Poultry Lanzhou Veterinary Research Institute Chinese Academy of Agricultural Sciences, China (**03-2017 to 08-2020**)
- Worked as **Incharge of 24/7 Extension** Service, UVAS, Lahore, and Veterinary Teaching Hospital at Sattar Walla Outreach Centre of University of Veterinary & Animal Sciences, Lahore, Pakistan. (**Sep 2013 to Aug 2016**)

EDUCATION:

PhD

Beijing China (2016-2020)

- **Thesis Title:** Profiling of the Molecular Typing of *Clostridium perfringens* isolated from Broiler Chicken in China & Pakistan. (**1st Study from China-Pakistan on DNA-Fingerprinting**)
- State Key Laboratory of Innovative Team for GI Infection & Mucosal Immunity of Swine & Poultry Lanzhou Veterinary Research Institute Chinese Academy of Agricultural Sciences, China
- **Major:** Preventive Veterinary Science (**Microbiology and Molecular Biology**)

M.Phil.

Lahore, Pakistan (2013-15)

- **Thesis Title:** Common Nosocomial Bacterial Isolation & Identification from Veterinary Hospitals.
- **University of Veterinary and Animal Sciences, Lahore, Pakistan**
- **Major:** Clinical Medicine

D.V.M.

Lahore, Pakistan (2008-13)

Major: Veterinary Medicine

- **University of Veterinary and Animal Sciences Lahore, Pakistan**
- **Outreach Activities/Community/Extension services**
- Incharge/Conducted a series of farmer days to demonstrate diseases of veterinary importance to the farmers elaborating on the benefits of healthy animal farming and 24/7 Extension services UVAS, Lahore.

PROJECTS:

1. A potent candidate drug formulation for controlling Net-b toxin-induced Necrotic Enteritis in poultry". (Budget 40,000\$ Submitted to Punjab Agriculture Board) As PI.[**Shortlisted**]
2. Genomic insights into the host-specific adaptation of a zoonotic *Clostridium perfringens* through Nanopore sequencing and implications for diagnostics. (Budget 13,636\$ as Co-PI Submitted to NIH). [**Decision Awaiting**]
3. Molecular Epidemiology and Antimicrobial Resistance Profiling of *Clostridium Perfringens* from Livestock and Poultry. As PI [**Submitted to Agriculture Linkages Program (ALP) 35,000\$**]
4. Structural Bioinformatics Of Net-B Toxin: A Novel Potent Candidate Drug Formulation For Controlling Necrotic Enteritis In Poultry : As PI [**Submitted to Higher Education Commission under NRP 32,500\$**]

RESEARCH INTERESTS:	PROFESSIONAL SKILLS
<ul style="list-style-type: none"> Bacterial Population Genetics Animal Disease Modeling (Mathematical and Statistical Models) Molecular biology / Biotechnology Emerging Animal Diseases and Public Health Development of Novel and Diagnostic Tools Biohazardous Waste Management / Bio Risk Management Care and Use of Biosafety Cabinet On-Farm Culture (Mastitis Control Strategy) <p>Animal Experimentation Skillful handling of laboratory animals including chicken, sheep, and rabbit Sample collection from a pet and large animal</p>	<p>Microbiology and Molecular Biology</p> <ul style="list-style-type: none"> Bacterial Isolation and Identification DNA/RNA extraction PCR /qPCR Protein purification and Western blot Gene cloning DNA Fingerprinting (PFGE/MLST) <p>Bioinformatics</p> <ul style="list-style-type: none"> Strategic design of PCR primers In-silico analysis of DNA sequence Next-Generation Sequencing Analysis (Variant, SNP Calling, Phylogenetic Analysis) Experience in software such as DNA-STAR, Snap Gene, and Bioedit. PAUP etc. Evolution and Phylogenetic Analysis (Bayesian) Molecular Docking R- Studio

PROFESSIONAL MEMBERSHIP:

- Frontline Foundation USA, Member
- British Society for Antimicrobial Chemotherapy, Member
- Pakistan Biological Safety Association, Member
- Pakistan Veterinary Medical Council, Member
- Member UVAS Alumni, Member

Serving As **Reviewer** of **Peer Review Journals**

- Frontiers In Microbiology
- Microbial Pathogenesis
- Antibiotics
- Pathogen's
- Pakistan Veterinary Journal
- Int Journal of Agriculture and Biology

Sr.No	STUDENTS	RESEARCH PROJECTS MPhil/PhD : AS SUPERVISOR	STATUS
1	Rabia Tahir (MPhil)	ISOLATION AND MOLECULAR IDENTIFICATION OF ANTIMICROBIAL RESISTANCE GENES IN ESCHERICHIA COLI ISOLATED FROM <i>PANTHERA LEO</i>	Graduated 2023
2	Shamas Ara (MPhil)	DETECTION OF ANTIMICROBIAL RESISTANCE AND RESISTANT GENE IN FAECAL ESCHERICHIA COLI ISOLATES FROM CAPTIVE DEER	Graduated 2023
3	Faiqa Tabassum (PhD Scholar)	MOLECULAR EPIDEMIOLOGY OF HEMOLYSINS PRODUCING STAPHYLOCOCCUS AUREUS AT HUMAN-ANIMAL-ENVIRONMENTAL INTERFACE	Research in Progress

4	Shehroz Sarfaraz (MPhil Scholar)	MOLECULAR CHARACTERIZATION, ANTIMICROBIAL RESISTANCE PROFILING, AND ASSESSMENT OF BIOFILM-PRODUCING POTENTIAL OF <i>CLOSTRIDIUM PERFRINGENS</i> TYPE A	Graduated 2024
5	Edah Nayab Victor (MPhil Scholar)	MOLECULAR CHARACTERIZATION, ANTIMICROBIAL PROFILING, AND BIOFILM FORMATION FROM <i>PSEUDOMONAS AERUGINOSA</i>	Graduated 2024
6	Aimen Majeed (MPhil Scholar)	MOLECULAR CHARACTERIZATION OF ESBL-PRODUCING <i>KLEBSIELLA PNEUMONIAE</i> ISOLATED FROM A URINE SAMPLE	Graduated 2024
7	Hina Khurshid (MPhil Scholar)	IDENTIFICATION AND MOLECULAR INVESTIGATION OF SHIGA TOXIN-PRODUCING <i>ESCHERICHIA COLI</i> ALONG ANTIMICROBIAL RESISTANCE PROFILE FROM HUMAN URINARY TRACT INFECTION	Graduated 2024
8	Ammara Naeem (MPhil Scholar)	ISOLATION AND MOLECULAR CHARACTERIZATIONS OF <i>STAPHYLOCOCCUS AUREUS</i> FROM THE NASAL CAVITY OF CATS AND DOGS AND ITS ANTIBIOTIC SUSCEPTIBILITY PROFILE	Graduated 2024

Workshops/training Convened/Organized

- **Invited Speaker** for “Scientific Writing and Publishing” at Lanzhou Veterinary Research Institute, Lanzhou, China **02-Sep-2024**
- **Focal Person** One Day International Workshop on “Computer Aided Development of Antimicrobial Agents” **28-Nov 2023** in Collaboration with HEVTTC, China.
- **The Organizer** Two Days Workshop on “Primer Designing and Phylogenetic Analysis and its Application in Life Science” **25-26 Oct 2023**, UVAS Lahore, Pakistan.
- Nominated for the National Faculty Development Program (NEDP) for Newly Inducted Faculty Members by Higher Education Commission, Pakistan **20 Feb 2023- 10 Mar 2023**.
- Two Days Workshop on Effective Pedagogical Strategies for Lecturers and Assistant Professors (Master Trainer Series) .**17-18-Nov-2022**
- **Organized** a One-day Workshop on Primer Designing, PCR Optimization, Phylogenetic Analysis, and Its Application in Biomedical fields funded by **EFS-USDA 24-Aug-2022** at the Institute of Microbiology University of Agriculture Pakistan.
- **Guest Speaker** in Summer School from **6-19 June 2022** at Kazakh National Agrarian University, Kazakhstan.
- **Guest Speaker** in Winter School from **15-27 February 2021** at Kazakh National Agrarian University, Kazakhstan.
- **Resource Person** One-Day Workshop on Understanding Phylogenetic Analysis and its Interpretation **20-Feb 2020** CVAS, Jhang, Pakistan.
- **Resource Person** Two-Day Workshop on Understanding Phylogenetic Analysis and its Interpretation **11-12 Feb 2020** UVAS, Lahore Pakistan
- Nominated as **Curator of PubMLST** scheme for *Clostridium perfringens* (**Since January 2019**) <https://pubmlst.org/cperfringens/>
- **Invited speaker** at International Conference on “Trans-Boundary Diseases of Veterinary and Public Health **4th to 6th October 2018**, UVAS, Lahore, Pakistan.
- Chinese Government Scholarship (CSC) Winner from **2016 –2020**

- Won a scholarship of 1000 USD from University of Idaho Center for Health in the Human
- Ecosystem (CHHE) in recognition of outstanding application & exemplary work in my field
(May 2018)

Courses Taught to: DVM/ BS(H) Micro/ BS(H) HND, BS(H) FST	
Undergraduates	Postgraduates
i. MB-306 Introduction to Molecular Biology	i. MICRO-702 Advanced Bacteriology and Mycology (Old Scheme)
ii. MICRO-302 Introduction to Veterinary Microbiology	ii. MICRO-702 Cellular and Molecular Immunology
iii. MICRO-402 Introduction to Veterinary Bacteriology and Mycology	iii. MICRO-704 Infectious Diseases and One Health
iv. MB-302 Microbial Physiology and Metabolism	iv. MICRO-706 Microbial Physiology
v. MB-508 Community Health and Hygiene	v. MICRO-709 Public Health Microbiology
vi. MB-507 Food and Dairy Microbiology	vi. MICRO-705 Microbial Pathogenesis and Virulence
vii. MB-406 Genetic Engineering and Microbial Biotechnology	vii. MICRO-700 Introductory Microbiology
viii. MB-503 Antimicrobial Resistance and Infection Control	viii. MICRO-711 Environmental Microbiology
ix. MB-505 One Health	
x. MB-410 Introduction to Microbial Genetics	
xi. MB-510 Immunodiagnostics	
xii. MB-511 Computational Biology	
xiii. Micro-402 General Veterinary Bacteriology and Mycology	

CONFERENCES/WORKSHOPS ATTENDED

- Hands-on training on the *Latest Bioinformatics Tools & Technologies*, Department of Bioinformatics and Computational Biology Virtual University of Pakistan **October 08-09,2018**
- International Training workshop on traditional Chinese Veterinary Medicine & Techniques Lanzhou, **China.2017**
- International Training Workshop on Major Transboundary Animal Diseases Diagnosis Technology, (LVR)I, Lanzhou, **China.2017**
- International Seminar on “*Emerging pathogens and BSL III Facility*” organized by The Pirbright Institute UK and University of Veterinary and Animal Sciences Lahore Pakistan, **October 25, 2016**
- Master Trainer program for “*Laboratory biosafety and risk management*” September 7-11, 2015, at the Department of Microbiology, University of Veterinary and Animal Sciences (UVAS), **Lahore Pakistan.**

Abstract Published:

2nd International Brain and Biomedicine Conference (IBCC-2024)

1. *Clostridium perfringens* type A Isolated from Poultry Origin: Insights into Prevalence, Molecular Characterization, and Antimicrobial Resistance Profiling Muhammad Shehroz Sarfraz , Sultan Ali , Rizwan Aslam , Mavra Choudhary, Saad Zafar, Muhammad Shahid Mahmood¹ , Edah Nayab Victor , Faisal Masoud¹ , **Muhammad Umar Zafar Khan***
2. UTI infection caused by *Escherichia coli* isolated from Humans: Molecular characterization of Shiga Toxin-Producing *Escherichia coli*, and Antimicrobial resistance profiling Hina Khurshid*, Sultan Ali, Rizwan Aslam, Muhammad Shahid Mahmood¹, Farah Naz, **M. Umar Zafar Khan¹**
3. Occurrence of Multi-Drug Resistance *Pseudomonas aeruginosa* from Dermal Infection in Faisalabad Sadia Yousuf, Rimsha Siddique, Mavra Choudhary, Noor Fatima, Tehreem Rana¹, **M Umar Zafar Khan**, Muhammad Shahid Mahmood, Rizwan Aslam, Sultan Ali*
4. Antibiotic Resistance Profiling of *Campylobacter jejuni* isolated from cattle in District Faisalabad, Punjab Mavra Choudhary, Aqsa Akram, Noor Fatima, **Muhammad Umar Zafar Khan**, Muhammad Naveed Anwar, Muhammad Sohail Sajid, Muhammad Shahid Mahmood, Rizwan Aslam, Sultan Ali*
5. Molecular Characterization of Shiga-Toxigenic *Escherichia Coli* O157 in Goat and Camel Milk Javeria Mumtaz, Ahmed Aniq Raza, Rahmeen Qamar, **Umar Zafar Khan**, Muhammad Shahid Mahmood, Rizwan Aslam, Muhammad Naveed Anwar, Sultan Ali
6. Preparation And Evaluation Of Oil-Adjuvanted Inactivated Bivalent Vaccine Against Avian Influenza Virus (AIV) And Newcastle Disease Virus (NDV) Areeba Javaid, Hafsa, Zahida Riaz, Sultan Ali, Muhammad Naveed Anwar, **Muhammad Umar Zafar Khan**, Muhammad Asim, Muhamad Shahid Mahmood and Faisal Masoud **IPEX, 2024.**
7. Antimicrobial Resistance Profiling Of Biofilm Forming *Clostridium Perfringens* Type A Isolates From Broiler Birds: A One Health Concern Muhammad Shehroz Sarfraz, Sultan Ali¹, Muhammad Saqib, Muhammad Shahid Mahmood, Shumaila Khalid, Tahir Munir, **Muhammad Umar Zafar Khan* (IPEX 2024)**
8. Development And Evaluation Of Chitosan Nanoparticles And Montanide As Vaccine Adjuvant For Inactivated Newcastle Disease Vaccine Zahida Riaz¹, Hafsa, Sultan Ali, Muhammad Naveed Anwar, **Muhammad Umar Zafar Khan**, Muhamad Shahid Mahmood and Faisal Masoud. **(IPEX, 2024)**

PUBLICATIONS

1. Muneeb, M., Khan, E. U., Ali, M., Haque, M. N. U., **Khan, M. U. Z.**, & Ahmad, S. (2025). Comparative Effects of Antibiotic and Antimicrobial Peptide on Growth Performance, Gut Morphology, Intestinal Lesion Score, Ileal Microbial Counts, and Immune Status in Broilers Challenged with Necrotic Enteritis. *Probiotics and Antimicrobial Proteins*, 1-15. **(Q1)**
2. Nisar Khan, et al. (2025). Possible role of companion birds in one health implication of multidrug-resistant *Pseudomonas aeruginosa* isolated from feces of captive wild birds, *Journal of Wildlife and Biodiversity*, 9(1), 262-279. DOI: <https://doi.org/10.5281/zenodo.14634661>
3. Yang S, **Khan MUZ** [1st Equal], Pan S, Zhang X, Fang Y, Gai W, Zhang J and Liu Y, 2024. Rapid detection of *Lawsonia intracellularis* by a quantitative PCR based on immunomagnetic

4. Article: Durrani RH, Sheikh AA, Humza, M, Ashraf S, Kokab A, Mahmood T and Khan **MUZ**, **2024**. Evaluation of antibiotic resistance profile and multiple antibiotic resistance index in avian adapted *Salmonella enterica* serovar Gallinarum isolates. Pak Vet J. <http://dx.doi.org/10.29261/pakvetj/2024.253> (Q1)
5. **Zafar Khan MU**, Khalid S, Humza M, Yang S, Alvi MA, Munir T, Ahmad W, Iqbal MZ, Tahir MF, Liu Y and Zhang J (2022) Infection Dynamics of *Clostridium perfringens* Fingerprinting in Buffalo and Cattle of Punjab Province, Pakistan. Front. Vet. Sci. 9:762449. doi: 10.3389/fvets.2022.762449. (Q1)
6. **Khan, M. U. Z.**, Humza, M., Yang, S., Iqbal, M. Z., Xu, X., & Cai, J. (2021). Evaluation and optimization of antibiotics resistance profile against *Clostridium perfringens* from buffalo and cattle in Pakistan. *Antibiotics*, 10(1), 59. . (Q1)
7. **Khan, M. U. Z.**, Liu, B., Yang, S., Xu, X., Wang, Y., & Cai, J. (2021). Genetic diversity of *Clostridium perfringens* strains isolated from broiler chickens revealed by PFGE analysis in China and Pakistan. *Pakistan Veterinary Journal*, 41(1). . (Q1)
8. **Khan, M.U.Z.**; Humza, M.; Yang, S.; Alvi, M.A.; Iqbal, M.Z.; Zain-ul-Fatima, H.; Khalid, S.; Munir, T.; Cai, J. Occurrence and Toxicogenetic Profiling of *Clostridium perfringens* in Buffalo and Cattle: An Update from Pakistan. *Toxins* **2021**, 13, 212. <https://doi.org/10.3390/toxins13030212> . (Q1)
9. Yang, S.; **Zafar Khan, M. U** [1st Equal]. Liu, B.; Humza, M.; Yin, S.; Cai, J. In Vitro Analysis of TGF- β Signaling Modulation of Porcine Alveolar Macrophages in Porcine Circovirus Type 2b Infection. *Vet. Sci.* **2022**, 9, 101. <https://doi.org/10.3390/vetsci9030101> (Q2)
10. Yanhua Wang, **Muhammad Umar Zafar Khan**, Xiao Xu, and Jianping Cai* *Clostridium perfringens* VirS/VirR two-component system regulation mechanism <http://kns.cnki.net/kcms/detail/35.1284.R.20190722.1145.004.html>,
11. Xiao Xu, Yanhua Wang, **Muhammad Umar Zafar Khan**, Jianping Cai* Development of an RPA diagnostic method for *Gallus gallus* for *Clostridium perfringens*. <http://www.cqvip.com/QK/93994A/201912/7100636195.html>
12. Moon, A.; Sun, Y.; Wang, Y.; Huang, J.; **Zafar Khan, M.U.**; Qiu, H.-J. Lactic Acid Bacteria as Mucosal Immunity Enhancers and Antivirals through Oral Delivery. *Appl. Microbiol.* **2022**, 2, 837-854. <https://doi.org/10.3390/applmicrobiol2040064> (Q2)
13. Alvi, M.A., Ali, R.M.A., Li, L., Saqib, M., Qamar, W., Hassan, A., Ghafoor, M., Rahman, S.U., **Khan, M.U.Z.**, Fu, B.Q. and Liu, Y., 2023. Phylogeny and population structure of *Echinococcus granulosus* (sensu stricto) based on full-length cytb-nad2-atp6 mitochondrial genes—First report from Sialkot District of Pakistan. *Molecular and Biochemical Parasitology*, 253, p.111542 (Q1)
14. Sheikh M, Khan HM, **Zafar Khan MU**, Sharif A. Formulation, Evaluation and Optimization of Antimicrobial Potential of Herbal Cream Containing *Allium sativum*, *Moringa oleifera* Extracts and *Thymus vulgaris* Oil. *Curr Pharm Biotechnol.* 2023 May 4. doi: 10.2174/1389201024666230504124838. Epub ahead of print. PMID: 37143275 (Q2)

15. Zhang, J.; Hou, Q.; Ma, W.; Chen, D.; Zhang, W.; Wubshet, A.K.; Ding, Y.; Li, M.; Li, Q.; Chen, J.; Dai, J.; Wu, G.; Zhang, Z.; Zaberezhny, A.D.; Pejsak, Z.; Tarasiuk, K.; **Zafar Khan, M.U.**; Wang, Y.; He, J.; Liu, Y. A Naked-Eye Visual Reverse Transcription Loop-Mediated Isothermal Amplification with Sharp Color Changes for Potential Pen-Side Test of Foot-and-Mouth Disease Virus. *Viruses* **2022**, *14*, 1982. <https://doi.org/10.3390/v14091982> (Q1)
16. Yang, Liu, Yin, Shang, Zhang, **Muhammad Umar Zafar Khan**, Cai. (2019). *Porcine Circovirus* Type 2 Induces Single Immunoglobulin Interleukin-1 Related Receptor (SIGIRR) Down-regulation to Promote Interleukin-1 β Upregulation in Porcine Alveolar Macrophage. *Viruses*, *11*(11), 1021. doi:10.3390/v11111021 (Q1)
17. Alvi MA, Ohiolei JA, Saqib M, Tayyab MH, **Zafar Khan MU**, Li L, Aqib AI, Hassan A, Alvi AA, Qamar W, Fu B-Q, Yan H-B and Jia W-Z (2020) First Report on Molecular Characterization of *Taenia multiceps* Isolates from Sheep and Goats in Faisalabad, Pakistan. *Front. Vet. Sci.* 7:594599. doi:10.3389/fvets.2020.594599 (Q1)
18. Yang, S., Li, L., Yin, S., Shang, Y., Khan, **M. U. Z.**, He, X.... Cai*, J. (2018). Single-domain antibodies as promising experimental tools in imaging and isolation of porcine epidemic diarrhea virus. *Applied Microbiology and Biotechnology*.doi:10.1007/s00253-018-9324-7 (Q1)
19. Yang, S., Yin, S., Shang, Y., Liu, B., Yuan, L., **Zafar Khan, M. U.** Cai, J. (2017). Phylogenetic and genetic variation analyses of *porcine circovirus* type 2 isolated from China. *Transboundary and Emerging Diseases*, 65(2), e383–e392. doi:10.1111/tbed.12768 (Q1)
20. Hasnain, Mirza J., **Muhammad UZ Khan**, Khizra Maqsood, Tahera Aslam, Masroor E. Babar, Shunli Yang, Huma Sohail, Muhammad T. Pervez, and Jianping Cai. "An Overview of Pathways Network Analysis of Pendred Syndromic Genes: Pathways Network Analysis of Pendred Syndromic Genes." *Proceedings of the Pakistan Academy of Sciences: B. Life and Environmental Sciences* 57, no. 2 (2020): 15-26.(Q4)
21. Sadiq S, Ahmad MUD, Chaudhry M, Akbar H, Mushtaq MH, Shehzad F, Hassan S, **Khan MUZ**, 2021. Molecular epidemiology of zoonotic Salmonella Enteritidis isolated from poultry and human sources by multilocus sequence typing. *Pak Vet J*, 41(2): 264-268. <http://dx.doi.org/10.29261/pakvetj/2020.103> (Q1)

Articles Accepted/Submitted (2024)

22. Shumaila Khalid, Waqar Ahmad, **Muhammad Umar Zafar Khan****, Muhammad Humza Muti-ur-Rehman Khan*, Qamar-un-Nisa, Tahir Munir Antibacterial Effect of Platelet-Rich Plasma (PRP) Against Bubaline Mastitis as a Novel Alternative.(**Heliyon**)
23. Rida Haroon Durrani ^{1, †}, Ali Ahmad Sheikh ^{1, *}, Muhammad Humza ^{2, †}, Salman Ashraf ¹, Aleena Kokab ¹, and Tauqeer Mahmood ⁴ **Muhammad Umar Zafar Khan** ^{3, **} Establishment and Characterization of Antibiotic Resistance Profile against Avian Salmonellosis in Poultry Chicks. (**Under review, Pakistan Veterinary Journal**)
24. MS Sarfaraz, Zafar Khan MU, Khalid S, Humza M, Yang S, Alvi MA, Munir T, Ahmad W, Iqbal MZ, Tahir MF, Liu Y and Zhang J **Zafar Khan MU***, A systematic review and meta-analysis on prevalence and antimicrobial resistance profile of *Campylobacter jejuni* isolated from food and food-related materials in Pakistan (2011–2023) (*Int Journal of Food Microbiology*)
25. Muhammad Shehroz Sarfraz, Sultan Ali, Muhammad Saqib, Muhammad Shahid Mahmood, **Muhammad Umar Zafar Khan*** Antimicrobial Resistance Profiling of Biofilm Forming *Clostridium perfringens* type A Isolates from broiler birds: A one Health Concern (Submitted Animal Bioscience)

1. Nanotechnology: A synergistic approach for enhanced therapeutic outcomes in alternative medicine. Sarwar F, Mahmood A, Sarwar A, Rana TA, Batool N, Mahmood S, Naz G, Ali A, **Khan MUZ** and Aslam RS, **2024**. Complementary and Alternative Medicine: Nanotechnology-I. Unique Scientific Publishers, Faisalabad, Pakistan, pp: 153-163. <https://doi.org/10.47278/book.CAM/2024.062>
2. **Clostridium difficile Infection (CDI) in Human-Animal Interface: A One Health Perspective 2023** Saad Zafar¹, **Muhammad Umar Zafar Khan¹**, Muhammad Shahid Mahmood¹, Rao Zahid Abbas², Muhammad Numan Akram³, Muhammad Naveed Anwar¹, Muhammad Imran Arshad¹, Rizwan Aslam¹, Mavra Chouhdary¹, Noor Fatima¹ and Sultan Ali^{1*} One Health Tri aid Unique Scientific Publishers.
3. **Bacterial Biofilms and their Regulatory Approaches 2023** Muhammad Adnan Liaquat¹, Muhammad Shahid Mahmood¹, Muhammad Numan Akram², Muhammad Imran Arshad¹, Rizwan Aslam¹, Muhammad Kasib Khan³, **Muhammad Umar Zafar Khan¹**, Noor Fatima¹ and Sultan Ali^{1*} * One Health Tri aid Unique Scientific Publishers.
4. **Antimicrobial Residues and Food of Animal Origin 2023** Noor Fatima¹, Muhammad Shahid Mahmood¹, Muhammad Naveed Anwar¹, Rizwan Aslam¹, Muhammad Imran Arshad¹, Zeeshan Nawaz², **Muhammad Umar Zafar Khan¹**, Mudassir Ali³, Mavra Chouhdary¹ and Sultan Ali^{1*} * One Health Tri aid Unique Scientific Publishers.

Manuals: (As 1st & Co-Author)

5. [Computational Biology: A beginner's guideline for exploring exquisiteness of dry lab realm \(Hands-on Training Manual\)](#)
6. A Concise Laboratory Manual of Systematic Bacteriology (for UGS), **2nd Edition (Published)**
7. Practical Manual of Veterinary Bacteriology and its Field Application (for UGS) **1st Edition, (In Press)**
8. Practical Manual on Molecular Biology for UGS **1st Edition (In press)**

Other scholarly activities

(i) Editorial/Advisory/scholarly work:

1. HEC-approved Ph.D. supervisor
2. Editor (Technical) Veterinary Observer Monthly
3. Tutor AN Qasmi w.e.f. 15-09-2022 till to-date
4. Reviewer Microbial Pathogenesis (Elsevier) (Q1)
5. Reviewer International Journal of Agriculture and Biology (IJAB)
6. Reviewer Pakistan Veterinary Journal (Q1)

Administrative work, co-curricular and extracurricular activities, etc.

1. Assistant Superintendent (Sir Syed Hall UAF (April 2022- to date)
2. Member Quality Enhancement Cell (QEC), UAF (Aug-2022-to-date)
3. Internships Incharge BS(Hons) Microbiology, Institute of Microbiology, UAF (Jul-2022-to-date)
4. Co-Advisor Undergraduate students Institute of Microbiology, UAF (Jul-2022-to-date)
5. Co-Advisor Undergraduate students DVM 7th Semester FVS UAF (Jul-2022-to-date)
6. Member, Board of Studies, Clinical Medicine and Surgery, UAF (Sep-2022-to-date)
7. Member Quality Enhancement Cell (QEC) UAF. (Oct-2022-to date)

LANGUAGE SKILLS

1) English	2) Arabic	3) Chinese	4) Urdu
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References: Will be furnished on demand.