

BIOGRAPHICAL SKETCH

Dr. Muhammad Abu Bakr Shabbir

Assistant Professor (TTS)

Ph.D, Huazhong Agricultural University (HZAU), Wuhan, China

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EDUCATION

INSTITUTION AND LOCATION	Qualification	MM/YY	FIELD OF STUDY
University of Agriculture, Faisalabad, Pakistan	DVM	06/2010	Veterinary Medicine
University of Agriculture, Faisalabad, Pakistan	M.Phil	12/2012	Microbiology
Huazhong Agricultural University, Wuhan, China	Ph.D	12/2018	Microbiology

A. AREAS OF INTEREST

My research interests are focused on the veterinary bacteriology, CRISPR-cas system usage to express protein in bacteria and the involvement of said system in virulence, antibiotic resistance and how this system changes the pathophysiology of bacteria. My future goals will be to utilize my potential of microbiology research in veterinary sciences.

B. POSITIONS AND HONORS

Positions and Employment

Aug 2019 – To date	Assistant Professor (TTS) Department of Microbiology, University of Veterinary and Animal Sciences (UVAS), Lahore.
Jan 2013 – Aug 2014	Lab Manager, K & N's poultry diagnostic and research institute at Abbottabad.
Nov 2011 – Dec 2012	Research Assistant, University Diagnostic Laboratory, University of Veterinary and Animal Sciences, Lahore.

Honors

2014-2018 Won Ph.D scholarship from Chinese Scholarship Council from September 2014 to December 2018.

C. PEER-REVIEWED PUBLICATIONS

Book Chapter

1. Pk/PD for prediction and contain of antimicrobial resistance. IAPC Publishing, Zagreb, Croatia, 2018.
2. Newcastle disease in mammalian species: The propensity of cross-species transmission towards public health perspective in Veterinary Pathobiology and Public Health (**Chapter No. 38**) **Authors:** Aziz Ul-Rahman, **Muhammad Abu Bakr Shabbir** and Muhammad Asif Raza. 1st edition (2021), Page No. 451–461.
3. Peste des petits ruminants in a wide range of domestic, wild and unusual hosts: A potential constraint in disease control efforts” in Animal Health Perspective (**Chapter 11**), **Authors:** Aziz Ul-Rahman, Momena Habib, **Muhammad Abu Bakr Shabbir**, Muhammad Furqan Shahid, Asif Mehmood and Muhammad Asif Raza. Volume 2, **Page No.** 86–96

4. Research Articles

NO.	TITLE AND AUTHORS	PUBLICATION DETAIL	IF
1.	Ahmad, W.; Shabbir, M.A.B. ; Ahmad, M.; Omer, M.O.; Mushtaq, R.M.Z.; Aroosa, S.; Iqbal, A.; Majeed, A. Insights into the Prognostic Role of Serum Interleukin-6 and Hematobiochemical Alterations in Cattle during Recent Outbreaks of Lumpy Skin Disease in Lodhran District, Pakistan.	Vaccines 11(1), 113.	7.0
2.	Aziz, Muhammad Waqar, Nadia Mukhtar, Aftab Ahamd Anjum, Muhammad Hassan Mushtaq, Muhammad Furqan Shahid, Muzaffar Ali, Muhammad Abu Bakr Shabbir , Muhammad Asad Ali, Muhammad Nawaz, and Tahir Yaqub. "Molecular Characterization and Selection of Indigenous SARS-CoV-2 Delta Variant for the Development of the First Inactivated SARS-CoV-2 Vaccine of Pakistan."	Vaccines 11, no. 3 (2023): 607.	7.0
3.	Shabbir MAB , Aziz ul-Rahman, Abdur Rauf Khalid, Nabeel Ijaz et al. "Inter-Relationship between a transcriptional regulator of flagella genes <i>cj0440c</i> and thiamine metabolic pathway in <i>Campylobacter jejuni</i> (2022).	BioMed Research International	3.411

4.	Shabbir MAB , Tang Y, Wu Q, Li J, Shabbir MZ, Ahmed S, Sattar A, Maan MK, Hao H and Yuan Z (2018). "The CRISPR-cas system promotes antimicrobial resistance in <i>Campylobacter jejuni</i> "	Future Microbiology	3.190
5.	Shabbir MAB , Tang Y, Hao H, Xu Z, Lin M, Cheng G, Dan M, Wang X, Liu Z and Yuan Z (2018). "The involvement of Cas9 gene in virulence of <i>Campylobacter jejuni</i> ".	Frontiers in Cellular Microbiology and Infection.	3.520
6.	Shabbir MAB , Shabbir MZ, Sajid A, Wu Q, Maan MK, Ahmed S, Li J, Hao H and Yuan Z (2018). "CRISPR-cas system: Biological function in microbes and its use to treat antimicrobial resistant pathogens".	Annals of Clinical Microbiology and Antimicrobials	2.924
7.	Shabbir MAB , Hao H, Shabbir MZ, Hussain HI, Iqbal Z, Ahmed S, Sattar A, Iqbal M, Li J and Yuan Z. "Survival and Evolution of CRISPR-Cas System in Prokaryotes and Its Applications".	Frontiers in Immunology (2016). 7:375	6.429
8.	Shabbir MAB , Hao H, Shabbir MZ, Wu Q, Sattar A and Yuan Z. "Bacteria vs. Bacteriophages: Parallel Evolution of Immune Arsenal"	Frontiers in Microbiology (2016). 7:1292.	4.019
9.	Wu, Xiangyun, Jiayi Liu, Jiawei Feng, Muhammad Abu Bakr Shabbir , Yali Feng, Rui Guo, Meifang Zhou et al. "Epidemiology, Environmental Risks, Virulence, and Resistance Determinants of <i>Klebsiella pneumoniae</i> From Dairy Cows in Hubei, China."	<i>Frontiers in microbiology</i> (2022). 13, 858799	5.640
10.	Haider, Muhammad Zulqarnain, Muhammad Abu Bakr Shabbir , Tahir Yaqub, Adeel Sattar, Muhammad Kashif Maan, Sammina Mahmood, Tahir Mehmood, and Hassana Bin Aslam. "CRISPR-Cas System: An Adaptive Immune System's Association with Antibiotic Resistance in <i>Salmonella enterica</i> Serovar Enteritidis (2022).	BioMed Research International	3.411
11.	Abdul Hafeez, M., Mehdi, M., Aslam, F., Ashraf, K., Aleem, M.T., Khalid, A.R., Sattar, A., Waheed, S.F., Alouffi, A., Alharbi, O.O. and Shabbir, M.A.B. , 2022. Molecular Characterization of <i>Toxoplasma gondii</i> in Cats and Its Zoonotic Potential for Public Health Significance.	<i>Pathogens</i> , 11(4), p.437.	3.492
12.	Yaqub, Tahir, Muhammad Nawaz, Muhammad Z. Shabbir, Muhammad A. Ali, Imran Altaf, Sohail Raza, Muhammad AB Shabbir et al. "A Longitudinal Survey for Genome-based Identification of SARS-CoV-2 in Sewage Water in Selected Lockdown Areas of Lahore City, Pakistan: A Potential Approach for Future Smart Lockdown Strategy (2021).	Biomedical and Environmental Sciences	3.118
13.	Hussain, Hafiz Iftikhar, Amjad Islam Aqib, Mohamed N. Seleem, Muhammad Abubakar Shabbir , Haihong Hao, Zahid Iqbal, Muhammad Fakhar-e-Alam Kulyar, Tean Zaheer, and Kun Li. "Genetic basis of molecular mechanisms in β -lactam resistant gram-negative bacteria."	Microbial Pathogenesis (2021): 105040	3.73
14.	Wu, Qin, Muhammad Abu Bakr Shabbir , Dapeng Peng, Zonghui Yuan, and Yulian Wang. "Microbiological inhibition-based method for screening and identifying of antibiotic residues in milk, chicken egg and honey	Food Chemistry 363 (2021): 130074	7.514
15.	Wu, Qin, Qiang Zhu, Muhammad Abu Bakr Shabbir , Adeel Sattar, Dapeng Peng, Yanfei Tao, Dongmei Chen, Zonghui Yuan, and Yulian Wang. "The search for a microbiological inhibition method for the rapid, broad-spectrum and high-throughput screening of six kinds of antibiotic residues in swine urine."	Food Chemistry 339 (2021): 127580.	7.514
16.	Wu, Qin, Xiushuan Liu, Xiaolei Dun, Muhammad Abu Bakr Shabbir , Dapeng Peng, Zonghui Yuan, and Yulian Wang. "The screening and identification of six commonly used antibiotics in swine kidney by a microbiological inhibition method."	Microchemical Journal 161 (2021): 105796.	3.594
17.	Iqbal, Zahid, Hafiz Iftikhar Hussain, Mohamed N. Seleem, Muhammad Abu Bakr Shabbir , Adeel Sattar, Amjad Islam Aqib, Xiuhua Kuang, Awais Ihsan, and Haihong Hao. "RNA-seq-based transcriptome analysis of a cefquinome-treated, highly resistant, and virulent MRSA strain	Microbial Pathogenesis 160 (2021): 105201.	3.73
18.	Maan, Muhammad Kashif, Adeel Sattar, Kun Mi, Muhammad Abu Bakr Shabbir , Shuyu Xie, Li Xin, Saeed Ahmed, Samah Attia Algharib, Lingli Huang, and Zonghui Yuan. "Integration of PK/PD for dose optimization of aditoprim against <i>Trueperella pyogenes</i> causing endometritis in bovines."	Microbial pathogenesis 142 (2020): 104097.	3.73
19.	Ul-Rahman, Aziz, Muhammad Abu Bakr Shabbir , Muhammad Waqar Aziz, Saima Yaqub, Asif Mehmood, Muhammad Asif Raza, and Muhammad Zubair Shabbir. "A comparative phylogenomic analysis of SARS-CoV-2 strains reported from non-human mammalian species and environmental samples."	Molecular biology reports 47, no. 11 (2020): 9207-9217.	1.089
20.	Ul-Rahman, Aziz, Muhammad Abu Bakr Shabbir , Asif Mehmood, and Muhammad Zubair Shabbir. "Genotypic and Sub-genotypic Diversity of Avian Paramyxoviruses 2, 4 and 6."	Pakistan Veterinary Journal	1.318

21.	Ul-Rahman, Aziz, and Muhammad Abu Bakr Shabbir. "In silico analysis for development of epitopes-based peptide vaccine against Alkhurma hemorrhagic fever virus."	Journal of Biomolecular Structure and Dynamics 38, no. 10 (2020): 3110-3122	3.310
22.	Ul-Rahman, Aziz, Muhammad Abu Bakr Shabbir , Mushtaq Ahmed, and Muhammad Zubair Shabbir. "A comparative evaluation of serum biochemistry profile and antigenic relatedness among velogenic and mesogenic Avian avulavirus 1 infection in chickens and pigeons."	Tropical Animal Health and Production (2020). 1-8.	1.089
23.	Wu, Qin, Xiaoyan Gao, Muhammad Abu Bakr Shabbir , Dapeng Peng, Yanfei Tao, Dongmei Chen, Haihong Hao et al. "Rapid multi-residue screening of antibiotics in muscle from different animal species by microbiological inhibition method."	Microchemical Journal (2020). 152:104417	3.206
24.	Sattar, A., Hafeez, M. A., Wu, Q., Tahir, A. H., Shabbir, M. A. B. , Chen, D., ... & Yuan, Z. (2020). Disposition of cyadox in domesticated cats following oral, intramuscular, and intravenous administration.	Journal of Veterinary Pharmacology and Therapeutics (2020) 43(2), 97-107.	1.175
25.	Huang, Lingli, Muhammad Kashif Maan, Dongting Xu, Muhammad Abu Bakr Shabbir , Menghong Dai, and Zonghui Yuan. "Pharmacokinetic-pharmacodynamic modeling of cyadox against Escherichia coli in swine."	Microbial pathogenesis 135 (2019): 103650.	2.581
26.	Huang, Lingli, Muhammad Kashif Maan, Dongting Xu, Shabbir MAB , Menghong Dai, and Zonghui Yuan. "Pharmacokinetic-pharmacodynamic modeling of cyadox against Escherichia coli in swine."	Microbial pathogenesis (2019). 135:103650	2.581
27.	Wu, Q., Zhu, Q., Liu, Y., Shabbir, M. A. B. , Sattar, A., Peng, D., & Yuan, Z. A microbiological inhibition method for the rapid, broad-spectrum, and high-throughput screening of 34 antibiotic residues in milk.	Journal of Dairy Science. (2019)	3.082
28.	Wu, Qin, Dapeng Peng, Qianying Liu, MAB Shabbir , Abdul Sajid, Zhenli Liu, Yulian Wang, and Zonghui Yuan. A novel microbiological method in microtiter plates for screening seven kinds of widely used antibiotics residues in milk, chicken egg and honey.	Frontiers in microbiology (2019)	4.259
29.	Ahmad, Awais Ali, MAB Shabbir , Yang Xin, Muhammad Ikram, Mian Abdul Hafeez, Chunqun Wang, Ting Zhang et al (2019). Characterization of the Complete Mitochondrial Genome of a Whipworm Trichuris skrjabini (Nematoda: Trichuridae)	Genes (2019). 10 (6):438	3.331
30.	Liu Q, Lei Z, Guo J, Liu A, Lu Q, Fatima Z, Khaliq H, MAB Shabbir , Maan MK, Wu Q, Dai M, Wang X, Pan Y and Yuan Z. Mequindox-Induced Kidney Toxicity Is Associated With Oxidative Stress and Apoptosis in the Mouse.	Frontiers in Pharmacology (2018). 9:436.	3.83
31.	Li J, Hao H, Cheng G, Liu C, Ahmed S, MAB Shabbir , Hussain HI, Dai M and Yuan Z. Microbial Shifts in the Intestinal Microbiota of Salmonella Infected Chickens in Response to Enrofloxacin.	Frontiers in Microbiology (2017). 8:1711.	4.076
32.	Li, J., Hao, H., Cheng, G., Wang, X., Ahmed, S., Shabbir, M. A. B. , et al. The effects of different enrofloxacin dosages on clinical efficacy and resistance development in chickens experimentally infected with Salmonella Typhimurium.	Scientific Reports (2017). Doi:10.1038/s41598017-12294-7	4.122
33.	Ahmed S, Ning J, Cheng G, Ahmed I, Li J, Mingyue L, Qu W, Iqbal M, MAB Shabbir and Yuan Z. Receptor based screening assays for the detection of antibiotic residues-A review.	Talanta (2017). 176-186	3.545
34.	Sattar, Adeel, Shuyu Xie, Lingli Huang, Zahid Iqbal, Wei Qu, MAB Shabbir , Yuanhu Pan, Hafiz Iftikhar Hussain, Dongmei Chen, Yanfei Tao, Zhenli Liu, Mujahid Iqbal and Zonghui Yuan. "Pharmacokinetics and Metabolism of Cyadox and Its Main Metabolites in Beagle Dogs Following Oral, Intramuscular, and Intravenous Administration	Frontiers in Pharmacology (2016). 7:236	3.83
35.	Sattar Adeel, Shuyu Xie, Xu Wang, Hafiz Iftikhar Hussain, Zahid Iqbal, Yuanhu Pan, Mujahid Iqbal, MAB Shabbir , and Zonghui Yuan. Metabolism and toxicity of arsenicals in mammals.	Environmental Toxicology and Pharmacology (2016). 48:214-224.	2.77
36.	Shabbir MZ, Jamil T, Ali AA, Ahmad A, Naeem M, Chaudhary MH, Bilal M, Ali MA, Muhmmad K, Yaqub T, Bano A, Mirza AI, MAB Shabbir , McVey WR, Patel K, Francesconi S, Jayarao BM and Rabbani M. Prevalence and distribution of soil-borne zoonotic pathogens in Lahore district of Pakistan.	Frontiers in Microbiology (2015). 6:917.	4.076
37.	Anees, M., M. Z. Shabbir, K. Muhammad, J. Nazir, MAB Shabbir , J. J. Wensman and M. Munir. Genetic analysis of Peste des petits ruminants virus from Pakistan.	Veterinary Research (2013). 9:60.	2.903

38.	Shabbir, M. Z., S. Zohari, T. Yaqub, J. Nazir, MAB Shabbir and N. Mukhtar. Genetic diversity of Newcastle disease virus in Pakistan: a countrywide perspective.	Virology Journal (2013). 10:170.	2.465
39.	Shabbir, MZ., Park, J., Rabbani M, Muhammad K, Younus M, Rehman M, MAB Shabbir , Ahmad A and Harvill ET. Molecular identification of respiratory microbiota of a young ostrich (<i>Struthio camelus</i>) using tracheo broncho alveolar lavage.	Journal of Animal and Plant sciences (2013). 23 (5):1276-1280.	0.407
40.	Shabbir MZ, RK Khalid, DM Freitas, MT Javed, M Rabbani, T Yaqub, A Ahmad, MAB Shabbir and M Abbas. Serological evidence of selected abortifacients in a dairy herd with history of abortion.	Pakistan Veterinary Journal (2013). 33 (1):19-22	1.217
41.	Munir, M., M. Z. Shabbir, T. Yaqub MAB Shabbir , N. Mukhtar, M. R. Khan and M. Berg. Complete Genome Sequence of a Velogenic Neurotropic Avian Paramyxovirus 1 Isolated from Peacocks (<i>Pavo cristatus</i>) in a Wildlife Park, Pakistan.	Journal of Virology (2012). 86(23):13113-13114.	2.465
42.	Shabbir, M.Z., R. K. Khalid, D.M. Freitas, M. T. Javed, M. Rabbani, A. Ahmad, T. Yaqub, MAB Shabbir and M. Abbas. A case study on serological evidence of selected abortifacients in a dairy herd with history of abortion in Lahore.	Pakistan Veterinary Journal (2012). 33 (1):19-22.	1.217
43.	Ahmad, A., M. Rabbani, M. Z. Shabbir, K. Muhammad, T. Yaqub, M. K. Saleemi, R. K. Khalid, MAB Shabbir and S. Y. Alvi. Comparative suitability of ear notch biopsy and serum pairs for detecting nature of bovine viral diarrhoea virus infection in dairy herds.	Pakistan veterinary Journal (2012). 32 (3):451-455.	1.217
44.	Shabbir, M. Z., M. M. Nazir, A. Maqbool, M. Lateef, MAB Shabbir , A. Ahmad, M. Rabbani, T. Yaqub, M. U. Sohail, and M. Ijaz. Seroprevalence of <i>Neospora caninum</i> and <i>Brucella abortus</i> in Dairy Cattle Herds with High Abortion Rates.	Journal of Parasitology (2011). 97 (4):740-742.	1.395

D. PROJECTS WON

Sr. #	Title (Topic)	Progress
1.	Molecular characterization and potential transmission of colistin resistant genes in <i>Escherichia coli</i> from poultry to humans.	Ongoing by International Foundation for Sciences

E. COFERENCE/ SEMINAR ORGANIZED

December 27, 2021 to January 07, 2022	Resource person for two weeks training course on “ Modern Diagnostic Techniques PCR and Ultrasonography ” organized by UVAS in collaboration with GRASP project implemented by International Trade Centre (ITC) funded by EU, Govt. of Balochistan.
October 05 -06, 2021	Participated in training titled “ Refresher Course on Biorisk Management ” at Virology Laboratory, IOM, UVAS, Lahore
July 13 -14, 2021	Resource person for the workshop titled “ Diagnosis of COVID-19 Using RT-PCR ” at BSL-3 Laboratory for emerging pathogens, organized by IOM, UVAS Lahore
July 06 -08, 2021	Resource person for the workshop titled “ Working in BSL -3 Laboratory for Emerging Pathogens ” organized by IOM, UVAS Lahore
March 10 -12, 2021	Resource Person for the Workshop titled “ Officers of Diagnostic Labs Regarding Advanced Concepts of Biorisk Management ” organized by Directorate of Animal Disease Diagnostic, Reporting & Surveillance, L&DD department Punjab in collaboration with IOM, UVAS, Lahore
February -22, 2021 to March 05, 2021	Resource person for two weeks hands-on training workshops entitled “ Laboratory Biosafety, Equipment Maintenance and Microbiological Testing ” organized by Institute of Microbiology (IOM), UVAS Lahore
November 23-27, 2020	Participated in “ Faculty Orientation Training for University of Sargodha and University of Veterinary and Animal Sciences, Lahore ” organized by PHEC
October 13 -15, 2020	Resource person for three days hands-on training on “ Laboratory biosafety, equipment maintenance and waste disposal ” for laboratory assistants of L&DD, Punjab organized at IOM, UVAS, Lahore
October 12 -16, 2020	Participated in “ Virtual Training on Biorisk Management ” at Virology Laboratory, Department of Microbiology, UVAS, Lahore
March 2 -4, 2020	Participated in “ 2nd international workshop on basic mechanism of disease and poultry pathology ” organized by Department of Pathology, UVAS Lahore
April 13-14, 2020	Resource person for the workshop titled “ Diagnosis of COVID-19 using RT-PCR ” at BSL-3 Laboratory for Emerging Pathogens, Department of Microbiology, UVAS Lahore
July 06 -08, 2021	Resource person for the workshop titled “ Working in BSL -3 Laboratory for Emerging Pathogens ” organized by IOM, UVAS Lahore
Sep 13-15, 2019	Pak Poultry Association and UVAS Lahore International Poultry Expo 2019

F. Academic Editor: Canadian Journal of Infectious Diseases and Medical Microbiology

G. Reviewer of International Journal

1. Infection and Drug Resistance
2. Genetic Research
3. Frontiers in Public Health
4. BioMed Research International
5. Food Chemistry
6. Critical reviews in Microbiology
7. International Journal of General Medicine
8. Antibiotics

