

Fareeha Akhtar
University Diagnostic Laboratory,
University of Veterinary & Animal Sciences, Lahore, Pakistan. 54000
E-mail: farihaakhtar@uvas.edu.pk
Cell: +92-333-4295094 Off: +92-42-99212594

ACADEMIC CAREER

University of Veterinary and Animal Sciences, Lahore.

Ph. D Microbiology

2013

University of Veterinary and Animal Sciences, Lahore

M. Phil (Microbiology)

First Division

2008

University of Veterinary And Animal Sciences, Lahore

Doctor of Veterinary Medicine

First Division

2005

VISION

To obtain a meaningful and challenging position that enables me to learn the veterinary research and technology field for advancement, professional development and establishment of a productive, independent research works. Committed to impart best knowledge and skills to the community by growing with advancements in the field of conventional and advanced diagnostic techniques for infectious diseases.

AREAS OF COMPETENCE

I have good knowledge of Veterinary Sciences especially Veterinary Microbiology, Immunology and disease diagnosis of infectious diseases. I have competence with the modern and conventional diagnostic tools and various bioinformatics tools to analyze research data and ambitious to further explore the bioinformatics use in veterinary disease diagnosis.

WORK EXPERIENCE

University of veterinary and animal sciences, lahore

University Diagnostic Laboratory

Assistant Professor

November, 2015 to date

University of veterinary and animal sciences, lahore

University Diagnostic Laboratory

Lecturer

June 2007 to November, 2015

Remount Veterinary And Farms Corps, Military Head Quarter Gp Okara .

Embryo transfer technique lab

Veterinary Officer

November 2006 to June 2007

Society Of Prevention Of Cruelty to Animals (SPCA), UVAS, Lahore

Worked as Volunteer trainee Doctor

2003 – 2005

COUNTRIES VISITED

UNITED STATES OF AMERICA (USA),

UNITED KINGDOM (UK),

AUSTRALIA,

ABU DHABI,

TUNISIA,

SAUDI ARABIA,

DUBAI.

TECHNICAL EXPERTISE:

I have a good laboratory management (**ISO 17025**) and techniques experience for clinical as well as applied research and disease diagnosis. I am also a **technical assessor for Pakistan National Accreditation council (PNAC)**.

Molecular Biology Technique

- Standardization of PCR, RT-PCR, Real Time – PCR for different Bacteria, Viruses and protozoas.
- Multiplex PCR for genotyping
- Sequence analysis via Bioedit and construction of phylogenetic tree by using MEGA 7
- Protein analysis by using Phyre 2 and PyMOL etc.

Immunofluorescence technique

- Fluorescent antibody test (FAT) for identification of virus and bacteria using monoclonal and group specific antibodies.

Microbial Technique

- Isolation, Identification and Quantification of different type of bacteria such as *Salmonella*, *E coli*, *Staphylococcus*, *Streptococcus*, *Pseudomonas*, *Proteus*, *Clostridium* and *Klebsiella* etc.

- Antimicrobial susceptibility testing.

Egg Inoculation and Cell Culture Technique

- Isolation and identification of virus via egg inoculation technique.
- Culture of different cell lines like Vero, BHK and preparation of primary cell lines like Chicken embryo fibroblast cells, Chicken embryo kidney cells, and Chicken embryo liver cells, etc.

Serological Technique

- Identification and titration of virus/serum by Haemagglutination and Haemagglutination inhibition (HI) test.
- Different types of ELISA such as direct, indirect, Sandwich, competitive and dot ELISA
- Virus/Serum neutralization test, AGID, RBPT etc.

Parasitology

- Haemoparasites diagnosis by direct smear method
- PCR based diagnosis of hemoparasites
- Fecal parasites examination by
- Direct smear,
- Fecal floatation and fecal sedimentation
- Egg per gram (EPG)

Hematology and blood chemistry

- Complete blood count (CBC)
- Liver function test
- Renal function test
- Serum electrolytes

Animal handling experience

- Experience in maintenance, care and handling of lab animal like mice, rat and chickens for experimental studies.

SOFTWARE SKILLS

- **MEGA 7.0.9**

- **Bio Edit**
- **Phyre 2**
- **Pimol**
- **Spd viewer**
- **SPSS20**
- **SAS 9.4**
- **Minitab**
- **Microsoft Windows applications, Primer 3, Blast2 Sequence, etc.**

INTERNATIONAL TRAININGS, WORKSHOPS, CONFERENCES AND SYMPOSIUMS

- Participated in **“International Buffalo congress”** held at Pearl continental hotel Lahore, organized by University of Veterinary and Animal Sciences, Lahore, February 17-18, 2019.
- Participated in **“International Livestock Nutrition Summit”** held at University of Veterinary and Animal Sciences, Lahore, February 21-22, 2017.
- Participated in five days congress on **“One Health Eco health”** at **Melbourne, Australia**, Dec, 03-07, 2016.
- Participated in eighteen days hands on training on **“Advanced molecular diagnostics of Avian Mycoplasmosis”** at the molecular Diagnostic Laboratory Department of Pathobiology & Veterinary Sciences, **University of Connecticut, Storrs United States of America (USA)**, Aug, 19-Sep, 5 2014.
- Three days **International Conference in Tunisia** titled **“International Engagement: Responsible Bioscience for a Safe and Secure Society”** “organized by AAAS (2011).
- Three days **“34th SAARC countries science conference”** held at University of Veterinary and Animal Sciences (UVAS) Lahore on February 20- 22, 2006.

NATIONAL TRAININGS, WORKSHOPS, CONFERENCES AND SYMPOSIUMS

- Participated in two days “**Hands-on training workshop on research methodologies in food and nutrition**” held on March, 2020, organized by Department of Food Science and Human Nutrition, UVAS Lahore.
- Participated in two days “**National training workshop on the recombinant DNA technology for the production of biological products**” organized by Institute of Biochemistry and biotechnology (IBBT), October 30-31, 2019.
- Participated in “**The faculty development training**” held on 18th to 20 March 2019, at Conference Hall, UVAS Lahore.
- Participated in two days’ workshop on “**National workshop on Cell culture techniques for the production of biologics**” organized by Quality Operations Laboratory, October 24-25, 2018.
- Participated in three days “**international poultry expo**” held at expo centre Lahore , September 27-29, 2018.
- Participated in one day workshop on “**1st workshop for biosafety officers**” organized by Institutional biosafety committee, April 12, 2018.
- Participated in two days’ workshop on “**2nd workshop for biosafety officers**” organized by Institutional biosafety committee, April 13-14, 2018.
- Participated in three days “**international livestock, dairy and poultry congress (ILDPC)**” held at expo Centre Lahore, March 19-20, 2018.
- Participated in two days workshop on “**Hands on practical training on tools used for next generation sequencing based microbiome and sequencing data analysis**” under CRDF funded international collaborative research project, organized by Quality Operations Laboratory, December 14-15, 2016.
- Participated in three days training on “**Laboratory Management System**” at Marriot hotel Karachi, organized by NIH on Aug 9-11, 2016.

- Participated in Two days “**Fermenter studies and end-product analysis by HPLC**” held at Government college university (GCU), Lahore on June 29-30, 2015
- Participated at the eve of “**World camel day**” at department of livestock management, University of agriculture Faisalabad on June 21, 2014.
- Participated in Two days “**Laboratory Animals Hands-on Workshop**” held at UDL-UVAS, Lahore on June 18-19, 2014
- Participated in five days workshop on “**Data analysis methodologies and use of various statistical tools including SAS 9.4 , Minitab and SPSS 20**” organized by Bio Statistical Consulting Centre, Faculty of Life Sciences & Business Management (FLSBM), UVAS, LHR held on 4th-8th March, 2014 at UVAS.
- Participated in two days workshop on “**Project Formulation Workshop**” organized by Pakistan Science Foundation, on 27th-28th March, 2014 at UVAS.
- Two days “**International livestock, Dairy & poultry congress (ILDPC)**” held at Aiwan-e- Iqbal, Lahore on March 11-12, 2014.
- Three days “**International Poultry Expo**” held at expo centre Lahor, organized by Pakistan poultry association on Sep 26-28, 2013.
- Participated in national awareness conference on “**Tuberculosis a Zoonosis**” organized by QOL, UVAS, LHR on April 16, 2013.
- Participated in one day workshop on “**Genome extraction from soil samples & its processing**” batch-II held at UDL,UVAS on Feb 20, 2012.
- Two days training on “**Application of bioinformatics in understanding the nature of microbes**” under DTRA, USA funded research project (2012).
- One Day Provincial advocacy seminar on **World TB day 2011** organized by Pakistan Medical Society in collaboration with Provincial TB control programme Punjab at UVAS.
- Participated in one month training on **Professional competency enhancement program for teachers (PCEPT)** organized by National academy of HEC at UVAS Lahore.

- Participated in two days workshop on “**Experimental Design and Data Analysis**” organized by Department of statistics & computer sciences FLSBM UVAS LHR.
- Participated in four days “**6th Asian Buffalo Congress**” held at pearl continental Lahore, organized by UVAS on Oct-27-30, 2009.
- One day national workshop on “**Techniques in transgenic**” organized by Department of livestock production and molecular biology & biotechnology, UVAS Lahore on September 02, 2008.
- One day National conference on “**Prion Disease A threat to livestock and Pakistan**” held at University of Veterinary and Animal Sciences (UVAS) Lahore on May 20, 2008.
- Two days “**International livestock & poultry congress (ILPC)**” held at University of Veterinary and Animal Sciences (UVAS) Lahore on April 22- 23, 2008.
- A talk on “**Importance of disease diagnostics in veterinary field**” at Radio station of Pakistan on March 20, 2008 at 12:30 p.m
- International conference and training on “**Education for wildlife sustainability**” organized by Department of wildlife & ecology, University of Veterinary and Animal Sciences (UVAS) Lahore from January 30 - 31 2008.
- Twelve days 35th Postgraduate training course on “**Nuclear & other advanced techniques in Agricultural & biological research**”,held at Nuclear institute for Agricultural and Biology (NIAB), Faisalabad, Pakistan on December 04- 15, 2007.
- One-day seminar on “**Rabies Day**” by University of Veterinary and Animal Sciences Lahore &, Marush (Pvt) Ltd, Pakistan on November 29, 2007.
- A talk on “**Guidelines for rural women’s to control diseases in their animals**” at Radio station of Pakistan on October 25, 2007 at 10:30 p.m
- Six days workshop on “**Molecular diagnosis of Bird flu virus**” University of Veterinary and Animal Sciences (UVAS) Lahore on September 25- 30, 2006.

- Participated in awareness seminar on antivivisection and demonstration of alternatives **“Cat works” as speaker** held at University of Veterinary and Animal Sciences (UVAS) Lahore by vets care organization on March 15, 2006.
- One day seminar on **“Rabies and Buffalo Pox”** by SAVERS, University of Veterinary and Animal Sciences Lahore, Pakistan on May 19, 2005.

MANAGEMENTAL COURSES AND TRAININGS PERTAINING TO ISO 17025

- Participated in two days training workshop on **“Uncertainty of Measurement”** organized by centre for improvement and change management on June 21-22, 2009.
- Participated in five days training workshop on **“Assessor training course based on ISOIEC 17025:2005 according to APLAC”** organized by Pakistan national accreditation council(PNAC) on March 24-28, 2009.

TRAININGS CONDUCTED AS RESOURCE PERSON

1. Resource person for **“Lab assisted disease diagnostic techniques”** from December 26th, 2016 - January 6th 2017.
2. Resource Person on **“Lab assisted disease diagnostic techniques 1st session** (May 31-June 01, 2016) Organized by University Diagnostic Lab, UVAS, Lahore
3. Resource Person on **“Lab assisted disease diagnostic techniques 2nd session** (June 02-June 03, 2016) Organized by University Diagnostic Lab, UVAS, Lahore
4. Resource Person on **“Molecular based testing of microbial contaminants in bull’s semen” 1st session** (May 30-June 01, 2016) Organized by University Diagnostic Lab, UVAS, Lahore.
5. Resource Person on **“Molecular based testing of microbial contaminants in bull’s semen” 2nd session** (June 02-June 06, 2016) Organized by University Diagnostic Lab, UVAS, Lahore.

6. Resource Person on **“Molecular and microbiological lab techniques”** (for professionals of fisheries department Punjab) from May 24-June 06, 2016, Organized by University Diagnostic Lab, UVAS, Lahore.
7. Training provided as Resource Person on **“Lab assisted disease diagnostic techniques”** from December 07-18, 2015, Organized by University Diagnostic Lab, UVAS, Lahore
8. Training provided as Resource Person on **“Molecular Diagnostics”** from June 23-25, 2015, Organized by University Diagnostic Lab, Institute of biochemistry and biotechnology (IBBT) and Quality Operations Lab (QOL), UVAS, Lahore.
9. Training provided as Resource Person on **“Master trainer program for laboratory biosafety & risk management”** from Sep 07-11, 2015, under research project, viral and hemorrhagic fever disease surveillance, diagnostic testing and laboratory capacity building in Pakistan.
10. Training provided as Resource Person on **“Practical aspects of poultry health management”** from Feb 04, 2015, Organized by University Diagnostic Lab, UVAS, Lahore.
11. Training provided as Resource Person on **“Accreditation of labs over ISO 17025”** from December 04-06, 2013, Organized by University Diagnostic Lab, UVAS, Lahore.
12. Training provided as Resource Person on **“Current approaches for the diagnosis and control of avian mycoplasmas”** from September 03-04, 2012, Organized by University Diagnostic Lab, UVAS, Lahore, in collaboration with University of Connecticut (UCONN), USA.
13. Training provided as Resource Person to ADIO’S & VO’S of DADRS, L&DDD, Punjab on **“Advanced Laboratory Techniques for Veterinary Disease Diagnostics”** from May 17-21, 2010, Organized by University Diagnostic Lab, UVAS, Lahore.
14. Training provided as Resource Person to ADIO’S & VO’S of DADRS, L&DDD, Punjab on **“Basic Disease Diagnostics in Livestock and Poultry”** from April 5-10, 2010, Organized by University Diagnostic Lab, UVAS, Lahore.

15. Training provided as Resource Person to SROs, VO of Poultry Research Institute (PRI), L&DDD, Punjab on “**Advanced Diagnostics and Control of Poultry Diseases**” from March 15-20, 2010, Organized by University Diagnostic Lab, UVAS, Lahore.

RESEARCH EXPERIENCE

POSTGRADUATE RESEARCH PROJECT:

M.phil project

“Study on immunogenicity of *in-vitro* propagated Hydropericardium syndrome virus in broilers”

PhD project

“Genotyping of pathogenic *Ecoli* from animals, poultry, human, and sewage water”

RESEARCH PROJECTS EXECUTION

Sr. No	Title of the Research Project	Principal Investigator	Collaborating Scientist	Estimated cost	Funding Agency	Current Status
1.	Characterization of <i>Mycoplasma gallisepticum</i> isolates from Pakistan and their use in production of biologics.	Prof. Dr. Masood Rabbani (Pakistan Side) Prof. Dr. Mazhar I. Khan (US Side)	Dr.Fareeha Akhtar (Team member)	\$ 2,25,440	BEP, USA under PAK-US S&T Coop. Program	Completed

2.	Molecular Diagnosis and control of early calf mortality	Prof.Dr. Tahir Yaqub	Dr.Fareeha Akhtar (Team member)	Rs: 17.407 Million	Punjab Agriculture research Board (PARB), Pakistan	Completed
3.	Strengthening of Facilities at University Diagnostic Lab and Establishment of Animal House at University of Veterinary and Animal Sciences, Lahore	Prof. Dr. Masood Rabbani	Dr.Fareeha Akhtar (Team member)	Rs: 38.108 Million	HEC, Islamabad	Completed

RESEARCH PUBLICATIONS

Topic of Paper	Name of Journal	Year of Publication
“Effect of storage temperature on the microbiological quality of fish meat from two different managerial systems” Accepted in Pakistan journal of zoology. Ms Ridda Haroon, Dr Fareeha Akhtar, Dr Ali Ahmad Sheikh.	Pakistan journal of zoology (Impact Factor 0.7)	2020
Comparative antibiotic resistance profile of Acinetobacter spp. isolated from fish, chicken and beef meat Aftab Ahmad, Fareeha Akhtar , Muhammad Ilyas Khan, Hameed Ur Rehman, Syeda Alia Gerdazi, Uzma Ghani, Muhammad Hanzalah Khan, Uzma Ayaz, Hira Mushtaq, Nausheen Abdul Malik, Nasir Mahmood, Matiullah, Wahid Shah, Malik Nawaz Shuja	Int. J. Biosci. 14(4), 305-316,	2019
“Optimization Of Multiplex PCR For Detection Of Gram	Pak. J. Agri. Sci., Vol.	2018

Positive Foodborne Pathogens From Retail Quail Meat” Iqra Safdar , Ali Ahmad Sheikh, Fareeha Akhtar , Javed Muhammad , Tanveer Hussain , Mawra Gohar , Amna Kanwal and Ayesha Tabassum	55(4), 955-958;	
“Physicochemical factors affecting persistence of Francisella tularensis in soil” J. Muhammad, M. Rabbani, K. Muhammad, M. Wasim, A. Ahmad, A. A. Sheikh, F. Akhtar , A. Rasool, I.Khattak, T. Bashir, Z. U. Islam and M. Rasheed.	Published in <i>J Ani. Plant Sci vol 27, No 3.</i> (Impact Factor 0.448)	2017
“Lipopolysaccharide gene based development and optimization of diagnostics for Francisella tularensis” J. Muhammad, M. Rabbani, K. Muhammad, M. Wasim, K. Dewan, A. A. Anjum, A. A. Sheikh, A. Ahmad, F.Akhtar , M. Nisar, B. M. Jayarao and G. S Kirimanjeswara..	Published in <i>J Ani. Plant Sci vol, 27(4):1161-1166</i> (Impact Factor 0.448)	2017
“Molecular Characterization And Phylogenetic Analysis Of Mycoplasma Synoviae Isolated From Chicken” A. Rasool , A. A. Anjum, M. Rabbani , M. Lateef , F. Akhter , H. Afroz ³ , J. Muhammad and M. Nawaz	Published in <i>J Ani. Plant Sci vol 27, No 5(The J. Anim. Plant Sci. 27(5):2017)</i> (Impact Factor 0.448)	2017
Preparation of Mycoplasma synoviae antigens and evaluation by Rapid Slide Agglutination and Enzyme linked Immunosorbent Assay” A. Rasool ¹ , A. A. Anjum , M. Rabbani, M. Lateef , M. Nawaz , F. Akhtar , A. Kanwal and S. Sattar	Published in <i>J Ani. Plant Sci vol 27, No 3(27(3): 2017, Page: 841-847</i> ISSN: 1018-7081) (Impact Factor 0.448)	2017
F.Akhtar , M. Rabbani, K. I. Muhammad, M .Younus, AA.Sheikh,A. Ghafoor, A Ahmad, J.Muhammad, A. Rasool, A.Y.Shaheen (2016) Comparative antibiotic resistance profile of the multidrug resistant e. Coli isolated from commercial and backyard poultry Accepted in <i>J</i>	The Journal of Animal & Plant Sciences (Impact Factor 0.448)	2016

<i>Ani. Plant Sci vol 26, No 5.</i>		
F.Akhtar , M. Rabbani, K. I. Muhammad, M .Younus, AA.Sheikh, R. Akhtar, J. Muhammad, A.Rasool (2016) Determination of phylogenetic groups of pathogenic <i>E. coli</i> isolated from commercial chicken from Pakistan. Accepted in <i>J Ani. Plant Sci vol 26, No 4.</i>	The Journal of Animal & Plant Sciences (Impact Factor 0.448)	2016
A. Rasool, S. Akhtar ¹ , K. Muhammad, M. Rabbani, A. A. Anjum, J.Muhammad, A.Ahmad, A.A.Sheikh, F.Liaqat, F.Akhtar , R.Tahir Comparative Evaluation Of Factors Affecting Hemagglutinatingactivity Of Avian Influenza (H9) Virus (2016). Turk J Vet Anim Sci (2016) 40, doi:10.3906/vet-1504-80	Turkish journal of veterinary and animal sciences(Impact Factor 0.2)	2016
S.Raza., M.Rabbani., N.Ahmad., A.Ahmad., K.Muhammad., F Akhtar and.H. Rehman(2013) Uterine microbial flora of Nili-Ravi buffalo during estrus and its relationship with pregnancy rate in Pakistan. Buffalo bulletin 2013 Vol.32 (special issue):564-567.	Buffalo Bulletin. (Impact Factor 0.048)	2013
Afridi S.Q, M.N. Zahid, M.Z.Shabbir, N. Mukhtar, M.Y. Tipu, F. Akhtar , T. Yaqub (2013). Prevalence of HCV genotypes in district Mardan. Virology J. 20;10:90.	Virology journal (Impact Factor 2.089)	2013
Rasheed M, SF Rehmani, M Iqbal, A Ahmad, F Akhtar , R Akhtar, T Bibi, HB Aslam, SQ Afridi, N Mukhtar (2013). Seropositivity of Avian Influenza Virus Subtype H9N2 among Human population of Selected Districts of Punjab, Pakistan. J. Inf. Mol. Bio. 1 (2).	Journal of Infection and Molecular Biology	2013
Ahmad, A., M. Rabbani, K. Muhammad, M. Z. Shabbir, T. Yaqub, K. Munir, F. Akhter and A. Cepica (2011). Prevalence of Bovine Viral Diarrhea Virus persistency in 12 Holstein cattle dairy herds of Charlottetown, Canada. <i>Pakistan J. Zool.</i> , (43 (2): 255-261.	Pakistan journal of zoology (Impact Factor 0.338)	2011
Nasir, A., M. Ashraf, M. S. Khan, T. Yaqub, A. Javeed, M. Avais and F. Akhtar (2010). Seroprevalence of Neospora Caninum in dairy buffalo in Lahore District, Pakistan. J. Parasitol. doi: 10.1645/GE-2687.1.	Journal of parasitology (Impact Factor 1.4)	2010

Shabbir, M. Z., M. Rabbani, T. Yaqub, A. Ahmad, F. Akhtar , K. Muhammad, M. Hussain and M. Ahmed (2009). Trends in isolation and antimicrobial susceptibility of mastitis causing pathogens of Nili Ravi Buffalo. <i>Pakistan J. Zool. Suppl. Ser.</i> , 9: 273-279.	Pakistan journal of zoology (Impact Factor 0.338)	2009
Ahmad, A., M. Rabbani, M. Z. Shabbir, T. Yaqub, A. Ahmed, and F. Akhtar . (2008). Status of IgG antibodies against Mycoplasma gallisepticum in non vaccinated commercial poultry breeder flocks. <i>J. Ani. Plant Sci.</i>	The Journal of Animal & Plant Science (JAPS) (HEC “Y” Category)	2008

AWARDS/MERITS/HONOURS

- Got HEC Indigenous PhD Scholarship
- Selected as Veterinary Officer by Federal Public Service Commission in November 2006.
- Selected as Veterinary Officer in Punjab Rural Support Programme in February 2006.
- Member of the 125th year History Book Committee of UVAS
- Merit Scholarship during DVM (UVAS)

ADVISORY SERVICES RENDERED, IF ANY:

- Technical assessor of Pakistan national accreditation council (PNAC).
- In participation, made University Diagnostic Lab, internationally Accredited to ILAC through ISO 17025 Certification by PNAC
- Implementation of Lab Management System (ISO 17025) for sustainability of University Diagnostic Lab.

MEMBERSHIPS

- Member of American Society of Microbiology (**ASM**)
- Life time member of Pakistan Biosafety association (**P.B.S.A**)
- Member **P.V.M.C** Pakistan
- Advisor **Vets Care club**
- Advisor **Blood donor society**
- * President **Vets Care club** 2004-05
- * Member **SAVERS** 2004-05
- * Member **Literary club** 2002
- * Executive Member of **Society of veterinary physiology** 2001

SPORTS ACHIEVEMENTS

- * Vice President of girls hockey club (2008).

REFERENCES

- **Professor. Dr. Masood Rabbani**
Pro Vice Chancellor/Dean (Faculty of Veterinary Sciences),
University of Veterinary and Animal Sciences, Lahore
mrabbani@uvas.edu.pk
- **Professor Dr. Aamir Ghafoor**
Director, University Diagnostic laboratory,
University of Veterinary and Animal Sciences, Lahore
aamir.ghafoor@uvas.edu.pk
- **Professor Dr. Tahir Yaqub**
Chairman, Department of Microbiology,
University of Veterinary and Animal Sciences, Lahore.
tahiryaqub@uvas.edu.pk