

ARFAN AHMAD (DVM, MSc (Hons), PhD)

Professor,

Institute of Microbiology, University of Veterinary and Animal Sciences, Lahore 54000,
Pakistan

Technical Assessor: ISO 17025:2017

Member National Disease control Committee, Pak Poultry Association

Ex-Production Manager, Poultry vaccine production unit-Ottoman Pharma, Lahore

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Teaching and Research:

Teaching various undergraduate and postgraduate courses and research on pathogens of Poultry and Livestock. Beside teaching and research, diagnosis of various diseases of poultry and Livestock is also one of the areas of concern.

Employment History:**Professor of Microbiology** (2022 – to-date)**Associate Professor** of Microbiology (2018 – 2022)**Assistant Professor** of Microbiology (2012 - 2018)**Lecturer** of Veterinary Disease Diagnostics (2006 – 2012)**Honors, Awards and Professional Memberships:**

- Member of the **125th year History Book Committee** of UVAS
- HEC Scholarship for one year **PhD split program**
- Working as **Co-PI** in one national and **PI** in one national research project
- Working in **UVAS-24/7 Extension services**
- Membership, Pakistan Veterinary Medical Council (**PVMC**)
- Lifetime Membership, Pakistan Society of Parasitology (**PSP**)
- Lifetime Membership, Pakistan Biological Safety Association (**PBSA**)
- Member BS (Hons) Microbiology internship Placement

Research Projects:

1. In depth genetic diversity and molecular epidemiology of newly emerging Bovine Leukemia virus (BLV) in dairy animals of Punjab and development of strategies to control disease in Pakistani herds.
2. Mapping an in-depth genetic diversity of infectious Bronchitis virus (IBV) in Pakistan and development of serotype-matched recombinant IBV vaccine.
3. Molecular approach to use Avian cytokines for the control of indigenous avian influenza H9N2 in commercial Poultry.
4. Molecular characterization of bovine pestivirus isolates from dairy animals of Pakistan and their use in diagnostic, biosecurity and biological development to control disease in Pakistani herds.
5. Defense Threat Reduction Agency, USA (2010-15). Spatial ecology and epidemiology of soil-borne human and animal bacterial pathogens and its public health significance in Pakistan.

Brief Academic/Research Summary:Publications: **39** research manuscripts/reviews with cumulative Impact Factor of **62.87**.postgraduate students: PhD [Supervised 2, Under-supervision n=**07**] M. Phil [**Supervised n=16**, Under-supervision n=**10**]**Selected Peer-reviewed Publications:**

1. Qurat-ul-Ain, **Arfan A**, Farhat N.A, Masood R and Muhammad, H. M (2022) Molecular characterization and phylogeny of bovine viral diarrhoea virus isolated from persistently infected exotic cattle in Punjab, Pakistan” Published in “Pakistan Journal of Agricultural Sciences” Vol. 59(4), 677-683: 2022

2. Qurat-ul-Ain, **Arfan A**, Farhat N.A, Masood R and Muhammad, H. M (2022) Sero-epidemiology and evaluation of first self-prepared bovine viral diarrhoea virus vaccine in cattle of Punjab, Pakistan” accepted for Publication in “Pakistan Journal of Zoology
3. Quart ul.A , **Arfan A**, Aftab A.A and Mamoona Ch. (2022). Viral Shedding Evaluation is Critical for Determining Efficacy of Avian Influenza (H9) Vaccines in Broiler Chickens. Pakistan J. Zool., pp 1-7, 2022.
4. Quart ul.A , **Arfan A**, Aftab A.A and Mamoona Ch. (2023)Transmissibility of H9 subtype of avian influenza virus in vaccinated and non-vaccinated broiler chicken exposed to experimentally challenged birds. Accepted in The Japs.
5. Jaspal, M. H., Badar, I. H., Usman Ghani, M., Ijaz, M., Yar, M. K., Manzoor, A., & **Ahmad, A.** (2022). Effect of Packaging Type and Aging on the Meat Quality Characteristics of Water Buffalo Bulls. *Animals*, 12(2), 130.
6. Ijaz, M., Ali, M. M., Awan, F., Ishaq, M., & **Ahmad, A.** (2022). FMD virus spillover from domestic livestock caused outbreak in captive wild ungulates: First report from Pakistan. *Acta Tropica*, 231, 106439.
7. Jaspal, M. H., Ijaz, M., Akhtar, M. J., Nasir, J., Ullah, S., Badar, I. H., & **Ahmad, A.** (2021). Effect of carcass electrical stimulation and suspension methods on meat quality characteristics of Longissimus lumborum of young buffalo (*Bubalus bubalis*) bulls. *Food Science of Animal Resources*, 41(1), 34.
8. R.M. Ramiz, **A. Ahmad**, A. Ghafoor, M.Avais, Qurat-ul-Ain, M. Zahid. Genotype detection and seroprevalence of Bovine Leukemia Virus along with associated risk factors in Exotic and local breeds of cattle in and around Lahore, Punjab, Pakistan. *Pakistan J. Zool.* Pp 1-4 2021
9. Siddiq, H. M. U., Ahmad, A., Anjum, A. A., Chaudhary, M., & Hussain, I. (2020). Fungal Load, Coliform and Aflatoxins in Wheat Flour of Lahore Metropolitan City. *Abasyn Journal of Life Sciences*, 3(2).
10. Nadeem, S. M., Aslam, A., Sheikh, A. A., Ahmad, A., & Anees, M. (2020). Molecular characterization and phylogeny of chicken anemia virus detected in broiler poultry flocks in Punjab, Pakistan. *Pakistan Journal of Zoology*, 52(1), 421.
11. Raza, Z. H., Nadeem, A., Javed, M., Hassan, F. U., Shehzad, W., Ahmad, A., ... & Ali, M. M. (2020). Polymorphic status and phylogenetic analysis of myostatin gene in pak-thoroughbred. *Genetika*, 52(3), 1281-1290.
12. Hammad-ur-Rehman, Ahmad A, Rabbani M, Tipu M. 2020. Comparison of analytical sensitivity and specificity of reverse transcription loop-mediated isothermal amplification (RT-LAMP) and reverse transcription polymerase chain reaction (RT-PCR) for detection of local Pestivirus A. *JAPS: Journal of Animal & Plant Sciences*. 30(1)
13. A.Raheem, A. Ahmad, M. Rabbani, A.Ghafoor, A.A. Anjum, M. Avais, Qurat-ul-Ain, R.M. Ramiz and H. Ur-Rehman. Determination of Seroprevalence and associated risk factors of Bovine Viral Diarrhoea Virus (BVDV) in Bovine population from southern Punjab, Pakistan, *JAPS*, 2020 March 25, DOI:10.36899/JAPS.2020.3.0064
14. Malik Z, Ahmad A, Anjum AA, Aslam A, Shabbir MZ, Ghafoor A, Muhammad J, Avais M, Ahmad N, Saleem MH, Rabbani M. In process quality control factors affecting the quality of locally prepared salmonella gallinarum antigen. *JAPS, Journal of Animal and Plant Sciences*. 2018 Apr 1; 28(2):656-9.
15. J. Muhammad, M. Rabbani, K. Muhammad, M. Wasim , K. Dewan , AA. Anjum , AA. Sheikh, A. Ahmad, F. Akhtar, M. Nisar, I. Khattak, B. M. Jayarao, G. S Kirimanjeswara 2017: Lipopolysaccharide gene based development and optimization of diagnostics for Francisella tularensis, *J Ani. Plant Sci*, 27(4):1116-1166
16. J. Muhammad, M. Rabbani , K. Muhammad , M. Wasim , A. Ahmad , AA Sheikh, F. Akhtar , A. Rasool , I. Khattak, T. Bashir, Z. Islam, M. Rasheed 2017: Physicochemical factors affecting persistence of Francisella tularensis in soil” *J Ani. Plant Sci*, 27(3):1047-1050

17. 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 *J Ani. Plant Sci*, vol 26(6): 1628-1632.
18. A. Rasool, S. Akhtar¹, K. Muhammad, M. Rabbani, A. A. Anjum, J.Muhammad, A.Ahmad, A.A.Sheikh, F. Liaqat, F. Akhtar, R. Tahir). (2016): Comparative Evaluation Of Factors Affecting Hemagglutinatingactivity Of Avian Influenza (H9) Virus. *Turk J Vet Anim Sci* 40: 102-106
19. Shabbir MZ, Akram S, Hassan Z, Hanif K, Rabbani M, Muhammad J, Chaudhary MH, Abbas T, Ghori MT, Rashid H, Jamil T, Islam Z, Rasool H, Bano A, Ahmad A, Ali MA, Yaqub T, McVey W, Jayarao BM 2016: Evidence of *Coxiella burnetii* in Punjab province, Pakistan . *Acta Tropica*. 163: 61 – 69.DOI: 10.1016/j.actatropica.2016.07.017
20. Shabbir MZ, Akhtar S, Tang Y, Yaqub T, Ahmad A, Mustafa G, Alam MA, Santhakumar D, Nair V and Munir M 2016: Infectivity of wild bird-origin avian paramyxovirus serotype 1 and vaccine effectiveness in chickens. *Journal of General Virology*. 97 (12): 3161–3173 DOI: 10.1099/jgv.0.000618
21. Z. Shabbir, T. Jamil, M. Asad, A. Ali, A. Ahmad, M. Naeem, M. H. Chaudhary, M. Bilal, M.A. Ali, K. Muhammad, T. Yaqub, A. Bano, A.I. Mirza, M.A.B. Shabbir, W.R. McVey, K. Patel, S. Francesconi, B.M. Jayarao and M. Rabbani (2015) Prevalence and distribution of soil-borne zoonotic pathogens in Lahore district of Pakistan. *Frontiers in Microbiology* ISSN: 1664-302X , 6 (917): 1-9
22. A. Raza, A. Ahmad, M. Rabbani, A. Mahmood, M. Younus, Z. Ali and A. Ahad (2015) Optimization of quality control factors for indigenous *Mycoplasma gallisepticum* bacterin preparation and their impact on immunoprophylaxis in broilers. *PVJ*, ISSN 0253-8318 (PRINT) ISSN 2074-7764 (ONLINE)
23. A. Ahmad, M. Rabbani, K. Muhammad, M. Younus, M. Z. Shabbir, A. Ghafoor, A. A. Anjum, J. Nazir, M. K. Saleemi, J. Muhammad, A. A. Ali and A. Cepica. 2014: applications of antigen capture elisa and immunohistochemistry for detection of bovine viral diarrhoea persistent infection. *Journal of Animal and Plant Sciences*. 24(4): .1019-1025
24. Muhammad Kashif Saleemi, Muhammad Fayyaz Ul Hussan, Muhammad Zargham Khan, Ahrar Khan, Rao Zahid Abbas and Arfan Ahmad. Hemato-Biochemical Effects of Colistin Administered Intramuscularly in Growing Broiler Birds. *Pakistan Veterinary Journal*. 34(1): 78-81
25. Ahmad A, Rabbani M, Younus M, Zahid MN, Javed A, Ghafoor A (2014). Diagnostic approaches for detection of bovine viral diarrhoea virus persistent infection. *J. Inf. Mol. Biol*. 2 (4): 53 – 60
26. Muhammad Zubair Shabbir, Siamak Zohari, Tahir Yaqub, Jawad Nazir, Muhammad Abubakr Shabbir, Nadia Mukhtar, Muhammad Shafee, Muhammad Sajid, Muhammad Anees, Muhammad Abbas, Muhammad Tanveer Khan, Asad Amanat Ali, Aamir Ghafoor, Abdul Ahad, Aijaz ALI Channa, Aftab Ahmad Anjum, Nazeer Hussain, Arfan Ahmad, Mohsan Ullah Goraya, Zahid Iqbal, Sohail Ahmad Khan, Hassan bin Aslam, Kiran Zehra, Muhammad Umar Sohail, Waseem Yaqub Nisar Ahmad, Mikael Berg, and Muhammad Munir. 2013: Genetic diversity of Newcastle disease virus in Pakistan: a countrywide perspective. *Virology Journal*. 10:170-179
27. Ahmad A, Rabbani M, Shabbir MZ, Muhammad K, Yaqub T, Saleemi MK, Khalid RK, Shabbir MA, Alvi SY. 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 Jul 1;32(3).
28. Ahmad A, Rabbani M, Muhammad K, Shabbir MZ, Yaqub T, Munir K, Akhter F, Cepica A. Prevalence of bovine viral diarrhoea virus persistency in 12 Holstein cattle dairy herds of Charlottetown, Canada. *Pakistan Journal of Zoology*. 2011;43(2):255-61.
29. Ali H, Ahmed A, Ali AA, Atta MS, Hanna P, Cepica A. Detection, genotyping, and antigen distribution of bovine viral diarrhoea virus in archival formalin fixed paraffin embedded tissues. *Revue de Médecine Vétérinaire*. 2012;163(5):219-26.
30. Ahmad A, Rabbani M, Muhammad K, Shabbir MZ, Yaqub T, Munir K, Akhter F, Cepica A. Prevalence of bovine viral diarrhoea virus persistency in 12 Holstein cattle dairy herds of Charlottetown, Canada. *Pakistan Journal of Zoology*. 2011;43(2):255-61.

31. Shabbir MZ, Rabbani M, Ahmad A, Yaqub T, Muhammad K, urRehman Z. Detection of rabies virus from equines showing nervous signs. *Pakistan J. Zool.* 2011 Jun 1;43(3):608-11.
32. Shabbir MZ, Nazir MM, Maqbool A, Lateef M, Shabbir MA, Ahmad A, Rabbani M, Yaqub T, Sohail MU, Ijaz M. Seroprevalence of Neosporacanium and Brucella abortus in dairy cattle herds with high abortion rates. *Journal of Parasitology.* 2011 Aug;97(4):740-2.
33. Shabbir MZ, Rabbani M, Ahmad A, Ahmed A, Muhammad K, Anwar I. Comparative evaluation of clinical samples from naturally infected dogs for early detection of canine distemper virus. *Turkish Journal of Veterinary and Animal Sciences.* 2011 Feb 14;34(6):547-52.
34. Shabbir MZ, Rabbani M, Yaqub T, Ahmad A, Zia-ur-Rehman US. Comparative clinical epidemiology of toxocarosis in dogs and cats. *Pakistan Journal of Zoology.* 2010 Apr 1;42(2):129-33.
35. Shabbir MZ, Rabbani M, Muhammad K, Ahmad A, Anwar I, Yaqub T. Detection of Canine Distemper Virus from Lymphopenic Dogs by RT-PCR Amplification of Nucleoprotein Gene. *Pakistan J. Zool.* 2009;41(5):424-8.
36. Shabbir MZ, Rabbani M, Yaqub T, Ahmad A, Akhtar F, Muhammad K, Hussain M, Ahmad M. Trend in isolation and antimicrobial susceptibility of mastitis causing pathogens of Nili Ravi Buffalo. *Pakistan J. Zool. Suppl. Ser.. No.9*, pp. 273-279, 2009
37. Ahmad A, Rabbani M, Yaqoob T, Ahmad A, Shabbir MZ, Akhtar F. Status of IgG antibodies against *Mycoplasma gallisepticum* in non-vaccinated commercial poultry breeder flocks. *Int. J. Poult. Sci.* 2008 Jan 1;18(2-3):61-3.
38. Hussain M, Mehmood M, Ahmad A, Shabbir M, Yaqub T. Factors affecting hemagglutination activity of avian influenza virus subtype H5. *J Vet Anim Sci.* 2008;1:31-6
39. Shabbir MZ, Ghafoor AA, Ahmad AR, Anjum AA, Yaqub TA. Immunomodulatory effect of polyimmune(*Astragalusmembranaceous*) extract on humoral response of layer birds vaccinated against Newcastle disease virus. *Int. J. Agri. Biol.* 2008;10(5):585-7.
40. Ahmad A, Hanif A, Shahid A, Najeeb MI, Ahmad MD. Study of disease outbreak in layer flocks in and around Samundri area. *Pakistan Journal of Life and Social Sciences.* 2008;6:59-62
41. Shahid MA, Siddique M, Abubakar M, Arshed MJ, Asif M, Ahmad A. Status of oxytetracycline residues in chicken meat in Rawalpindi/Islamabad area of Pakistan. *Asian J. Poult. Sci.* 2007;1(1):8-15.
42. Khalid G, Muhammad K, Rabbani M, Ahmad A, Khan S.A. *Passive immunization against hydropericardium syndrome in chicken.* *Pakistan Journal of Science (Vol. 56, 1-2, 2004).*
43. Maqbool A, Hayat CS, Tanveer A, Ahmad I. Prevalence and ecology of *Lymnaea* snails in Punjab. *Iranian Journal of Veterinary Research.* 2003;4(2):132

Abstracts Published:

- HammadurRehman, **Arfan Ahmad**, Masood Rabbani, Muhammad YasinTipu, Aamir Ghafoor. “Geographical distribution of bovine viral diarrhoea virus (BVDV) antibody in bovine serum samples collected from seventeen districts of central Punjab, Pakistan”. Proceedings of IX Asian Buffalo Congress-2018 “Climate Resilient Buffalo Production for Sustainable Livelihood”, Feb. 1-4,2018, ICAR-Central Institute for Research on Buffaloes, Hisar, Haryana, India. p.157
- Abdul Raheem, **Arfan Ahmad**, AamirGhafoor, Aneela ZameerDurrani and Hammad Ur Rehman. “Determination of seroprevalence and associated risk factors of bovine viral diarrhoea virus (BVDV) in bovine population from southern Punjab, Pakistan”. Proceedings of IX Asian Buffalo Congress-2018 “Climate Resilient Buffalo Production for Sustainable Livelihood”, Feb. 1-4,2018, ICAR-Central Institute for Research on Buffaloes, Hisar, Haryana, India. p.157.
- M.U.S. Khan, **A. Ahmad**, M. Rabbani, Muti-ur-Rehman Khan, A. Ghafoor, A.A. Ajnum , M. Avais and Hammad-ur-Rehman. Detection of bovine viral diarrhoea virus and bacterial contaminants in commercial bovine semen in Pakistan. Proceedings of IX Asian Buffalo Congress-2018 “Climate

Resilient Buffalo Production for Sustainable Livelihood”, Feb. 1-4,2018, ICAR-Central Institute for Research on Buffaloes, Hisar, Haryana, India. p.62

- Quratul Ain, **Arfan Ahmad**, Muhammad Nawaz, Mamoona Chaudhry, Muhammad Avais, AqeelJaved, Hammad Ur Rehman. Study on the effects of antibiotics and vaccine administration on tissue tropism and shedding pattern of local isolate of *salmonella enterica* serovarenenteritidis in commercial broiler chicken. Proceedings of OHC 2017 One Health International Conference held in UVAS Lahore, Pakistan: 13-15 Nov, 2017.
- **Arfan Ahmad**, Aamir Ghafoor, Hammad ur Rehman, Fareeha Akhtar. Retrospective study on Lab Samples for Diagnosis of Fecal and Blood Parasite of Small Ruminants in Pakistan. p. 22. Iran J Parasitol. ISSN :1735-7020, Vol. 12, Supplementary Issue, No. 1, 2017. Proceedings of PARACON 2017 International Parasitology Conference "Recent Advances and Emerging Issues in Parasitology" held in UVAS Lahore, Pakistan: 25-26 Oct, 2017..

Book Published:

- Ahmad, A., M. Rabbani, K. Muhammad, (2011). Comparison of diagnostic approaches for the detection of Bovine Viral Diarrhea persistency in dairy herds. Lambert Academic Press (LAP), Germany (ISBN-NR: 978-3-8465-2927-0).

Trainings, Workshops, Conferences And Symposiums:

- Two days refresher training on biorisk management organized by Association of Biorisk Management in collaboration with Health Security Partner, USA dated Jan 13-14, 2022
- Training course on diagnosis and control of Lumpy Skin Disease held at National Veterinary Laboratory, Islamabad on March 16-17, 2022
- Five Day Virtual training Training on Biorisk Management organized by Association of Biorisk Management by Association of Biorisk Management in collaboration with Health Security Partner, USA on Jan 18-22, 2021
- Attended 4 day Virtual Training on Safe and Secure Sample collection and Transportation by Association of Biorisk Management in collaboration with Health Security Partner, USA, Oct 28-31 2021
- Attended 3 days’ workshop on Establishing Zoonosis Control Committees for Integrated Surveillance Detection and Reporting of High Risk Pathogens in Punjab, organized by Association of Biorisk Management in collaboration with Health Security Partner, USA on Nov 25-27, 2021
- Attended 2 days congress entitled” International Buffalo congress”(IBC-2019) organized by University of Veterinary and Animal Sciences on Feb 18-19, 2019
- Attended two days’ workshop on Advanced level biosafety organized by Faculty of Veterinary Science, University of Veterinary and Animal Sciences dated Nov 26-27, 2018
- Attended 5 days Assessor Training Course on ISO/IEC 17025:2017, organized by Pakistan National Accreditation Council (PNAC), Ministry of Science & Technology, GOP, Islamabad on June 24-28, 2019
- Participated in 2 days Training Workshop on “Analytical Model Building and Proposal / Project Development” held on 28th- 29th December, 2017 Organized by Department of Statistics and Computer Science, University of Veterinary and Animal Sciences, Lahore, Pakistan.
- Participated in 1 day National Workshop on “Basics Tools in Bioinformatics” held on 29th November, 2017 Organized by Institute of Industrial Biotechnology, GC University Lahore, Pakistan.
- Participated in 2 days National Workshop on “Handling and Restraining of Migratory Birds with Tick Identification” From November, 22-23, 2017 Organized by Department of Clinical Medicine and Surgery, University of Veterinary and Animal Sciences, Lahore, Pakistan.

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- Participated in 2 days National Workshop on “Role of Migratory Birds in Disease Dissemination” From November, 15-16, 2017 Organized by Department of Clinical Medicine and Surgery, University of Veterinary and Animal Sciences, Lahore, Pakistan.
 - “Diagnosis of Viral Diseases” held on September 19-21, 2017 organized by Nuclear Institute of agriculture and biology (NIAB) Faisalabad.
 - Paper titled "Recent Advances and Emerging Issues in Parasitology" presented in International Parasitology Conference PARACON 2017 held in UVAS Lahore, Pakistan: 25-26 Oct, 2017.
 - Paper titled “Study on the effects of antibiotics and vaccine administration on tissue tropism and shedding pattern of local isolate of *salmonella enterica* serovar enteritidis in commercial broiler chicken” presented in One Health International Conference OHC 2017 held in UVAS Lahore, Pakistan: 13-15 Nov, 2017
 - Participated as resource person in “Lab Assisted Disease Diagnostic Techniques” From December, 26 2016 to January 06, 2017 Organized by University Diagnostic Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan
 - “Lab Assisted Disease Diagnostic Techniques” from December, 26 2016 to January 06, 2017 organized by University Diagnostic Lab, UVAS, Lahore
 - Participated as Participant in Hands on practical training on tools used for next generation sequencing based microbiome and sequencing data analysis From Dec, 14-15, 2016 Organized by Quality Operations Laboratory, University of Veterinary and Animal Sciences, Lahore, Pakistan.
 - Participated as Participant in International Workshop on Regional Trans-boundary, Animal Disease Workshop (ITAD). The USDA Foreign Agriculture Service and the City University of Hong Kong From Sep, 26-30, 2016 Held in Hong Kong, China
 - Participated as resource person in Molecular based testing of Microbial contaminants in Bull’s Semen From June, 02-06, 2016 Organized by University Diagnostic Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan
 - Participated as resource person in Lab Assisted Disease Diagnostic Techniques From June, 02-03, 2016 Organized by University Diagnostic Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan.
 - Participated as resource person in Lab Assisted Disease Diagnostic Techniques From May 31-June 01, 2016 Organized by University Diagnostic Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan.
 - Participated as resource person in Molecular based testing of Microbial contaminants in Bull’s Semen From May 30-June 01, 2016 Organized by University Diagnostic Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan.
 - Participated as resource person in Molecular and Microbiological Lab Techniques From May 24-June 06, 2016 Organized by University Diagnostic Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan.
 - Participated as resource person in Lab Assisted Disease Diagnostic Techniques From Dec, 7-18, 2015 Organized by University Diagnostic Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan
 - Participated as resource person in International Workshop on Master Trainer Program for Laboratory From Sep, 7-11, 2015 Organized in University of Veterinary and Animal Sciences, Lahore, Pakistan.
 - Participated as resource person in One week Workshop on Basic Laboratory Techniques From Aug, 03-07, 2015 Organized by University Diagnostic Lab & Department of Microbiology, University of Veterinary and Animal Sciences, Lahore, Pakistan.
 - Participated in National Workshop on Controlling Biorisk in Lab as Participant on May, 11-13, 2015 organized by Department of Microbiology, University of Veterinary and Animal Sciences, Lahore, Pakistan Bacteriology Department, Institute of Public Health, Lahore.
 - Participated as resource person in 3 days Training Course on Diagnosis of Viral Disease From May, 04-06, 2015 Organized by Nuclear Institute for Agriculture and Biology (NIAB) Faisalabad, Pakistan.

- Participated as resource person in Three days National Workshop on Molecular Diagnostics From June, 23-25,2015 Organized by UDL,IBBT & QOL , University of Veterinary and Animal Sciences, Lahore, Pakistan.
- Participated as resource person in One Day Workshop on Practical Aspects of Poultry Health Management Feb, 04,2015 Organized by University Diagnostic Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan.
- Participated as resource person in workshop on Laboratory Animal Handling From Jan, 28-30,2015 Organized at Postgraduate Medical Institute/ Ameer-ud-Din Medical College Lahore, Pakistan.
- Participated as resource person in National Training course on Diagnosis of Poultry Diseases through Modern Diagnostic Techniques” organized by Department of Pathology, University of Agriculture, Faisalabad in collaboration with World Veterinary Poultry Association (WVPA-Pakistan Branch) on 03-04 April, 2014.
- Participated in National Workshop on Newcastle disease prevention and control in Pakistan as resource person on 5th Nov. 2012 organized by Institute of biochemistry and biotechnology, University of Veterinary and Animal Sciences, Lahore, Pakistan.
- Eighteen days training from Sept. 22, 2012 to Oct. 10, 2012 on advanced molecular diagnostics of Avian Mycoplasmosis at Avian Research and Connecticut Veterinary Medical Diagnostic Labs, Department of Pathobiology, University of Connecticut, USA.
- Participate as resource person in two days training workshops on Application of bioinformatics in understanding the nature of microbes. 1st to 2nd August 2012 by UDL and QOL, UVAS, Lahore
- One year research study on “Comparison of diagnostic approached for the detection of Bovine viral diarrheapersistency in dairy herds” at Department of Pathology and Microbiology, Altantic Veterinary College, University of Prince Edward Island, Canada. January 2009 to December 2009.
- One day training session on “Internal auditing of ISO 17025; 2005” by QMS 9000, held at U.V.A.S, Lahore on 12 Dec, 2006.
- One week workshop on “Practical Veterinary epidemiology” by Institute of Continuing Education and Extension, UVAS, Lahore on November 4 – 11, 2006
- 6th annual National training course on Modern Techniques in Biotechnology,5-9 May,2008 at National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad.
- Teacher Orientation Program for 15 days held at University of Veterinary and Animal sciences Lahore from March 12, 2007 to March 28, 2007.
- Six days training workshop on “Laboratory diagnosis of important diseases.” held at National Veterinary Laboratories Islamabad.
- 6 days Workshop on “Cultivation and maintenance of BHK-21 Cell line” by Institute of Continuing Education and Extension, UVAS, Lahore from May 16, 2005 to May21, 2005

Training Courses (Participation):

- Organizer of Training on NEW ISO-17025:2017 Standard organized by University Diagnostic Lab, UVAS, Lahore on August 18, 2020
- Facilitator in Poultry Science conference at International Poultry congress organized by Pakistan Poultry Association and University of Veterinary & Animal Sciences, Lahore dated September, 27-29, 2018
- Participated in 5 days Assessor Training Course on “ISO 17025:2017” held on January 15-19, 2018 Organized by Pakistan National Accreditation Council (PNAC), Ministry of Science and Technology, Islamabad.
- Participated in 3 days Training Course on “Diagnosis of Viral Disease” held on September, 19-21, 2017 Organized by Nuclear Institute for Agriculture and Biology (NIAB) Faisalabad, Pakistan.

Conferences (Oral Presentation):

- Secretary of Three days training course on diagnostic and surveillance technique organized by Veterinary Academy on January 5-7, 2022
- Laboratory Biosafety, Equipment and Waste Disposal for Lab Assistants of L & DD, Punjab (Secretary Organizing committee) organized at Institute of Microbiology, UVAS, Lahore on 13-15 Oct, 2020
- Facilitator as secretary of Abstract review and poster presentation committee Poultry Science conference at International Poultry Expo Organized by Pakistan Poultry Association and University of Veterinary & Animal Sciences, Lahore dated September, 13-15, 2019
- Facilitator as secretary of Abstract review and poster presentation committee in Poultry Science conference at International Poultry congress Organized by Pakistan Poultry Association and University of Veterinary & Animal Sciences, Lahore on Sep. 27-28, 2018
- Participated in 3 days One Health International Conference (OHC 2017) From November, 13-15, 2017 Organized by College of Veterinary and Animal Science, Jhang - Pakistan (Sub Campus) UVAS, Lahore.
- Participated in 2 days International Parasitology Conference on Recent Advances and Emerging Issues in Parasitology From October, 25-26, 2017 Organized by Department of Parasitology, University of Veterinary and Animal Sciences, Lahore, Pakistan.

Internal/External Collaboration:

- Over the years, developed collaboration with various national and international institutes across the globe to execute multidisciplinary research projects. A few of these include the Pennsylvania State University USA (Dr. Bhushan M. Jayarao, University of Georgia, USA (Dr. Eric T. Harvill).