CURRICULUM VITAE



PROF. DR. MUHAMMAD IRFAN ANWAR

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CURRENT POSITIONS

- **Professor**
  Department of Pathobiology, Faculty of Veterinary Sciences, BZ University, Multan
- **Incharge-University Diagnostic Lab**
  Department of Pathobiology, Faculty of Veterinary Sciences, BZ University, Multan

PERSONAL INFORMATION

Father's Name:	Mian Mehmood Anwar
Date of birth:	23-03-1972
CNIC#	33100-3158036-7
Nationality:	Pakistani
Domicile:	Faisalabad (Punjab)
Marital Status:	Married
Field of Specialization:	Pathology (Diagnostics), Immunoparasitology
Total Impact Factor	>48

EDUCATION AND ACADEMIC RECORD

- **PhD Veterinary Parasitology** (2008) University of Agriculture Faisalabad, Pakistan
- **M.Sc (Hons.) Veterinary Pathology** (1997) University of Agriculture Faisalabad, Pakistan
- **D.V.M** (1995) University of Agriculture Faisalabad, Pakistan
- **Intermediate** (FSc-Premedical; BISE-Faisalabad) (1990)
- **Matriculation** (Science; BISE-Faisalabad) (1988)

AWARDS AND HONORS

1. **Quaid-e-Azam Gold Medal Award** in recognition of excellent performance in Livestock sector by Tehreek-e-Istehkam-e-Pakistan Council, Lahore, Pakistan
2. **Member, National Disease Control Committee, PPA** Pakistan.
3. **Life-long member**, Pakistan Veterinary Medical Council as Registered Veterinary Medical Practitioner
4. **Member,** Pakistan Veterinary Medical Council as Registered Veterinary Medical Faculty
5. **Certificate of Acknowledgement** for best services as **Master Trainer** in **PARA-VETS TRAINING PROGRAM** held from May 2016 to May-2017 organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan-Pakistan funded by IFAD-Assisted Southern Punjab Poverty Alleviation Project (SPPAP), Planning & Development Department, Government of the Punjab-Pakistan.

6. **Letter of Appreciation** from the Dean, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan in recognition of outstanding performance as Incharge-UDL.
7. **Certificate of Appreciation** as organizer in **World Egg Day** event held on 13th October, 2017 organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan-Pakistan.
8. **Certificate of appreciation** in recognition of excellent performance as member organizing Committee, 2nd International Conference on Zoonoses-2016 organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan from October 20-21, 2016.
9. **Letter of Admiration** for best efforts in **Inspection and Control of Meat Quality** to provide the healthy & quality approved meat to general population, assigned by District Coordination Officer, Faislabad dated 23-01-2009.
10. **Letter of Appreciation** for dedicated efforts during Holy Month of Ramazan for providing relief to the downtrodden consumers awarded by District Coordination Officer City District Government Faisalabad dated 12-09-2012.
11. **Letter of Appreciation** for best performance in managing Ramazan Bazar during the Holy Month, awarded by District Coordination Officer City District Government Faisalabad, on 29-09-2009.
12. **Certificate of Excellence**, on valuable contribution as organizer for One Day International Symposium on Brucellosis in One Health Perspective FVS-BZU, Multan.
13. **Shield of Honour** in Recognition of Excellent Services for Poultry Farmers by HIPRA Pakistan (Pvt) Limited.
14. University **Merit Scholarship** throughout study (DVM & MSc (Hons.)
15. **Distinction** in MSc (Hons.) Veterinary Pathology
16. **Awarded Research Associate ship** during Ph.D. studies from Faculty of Veterinary Science, University of Agriculture, Faisalabad (2005 - 2007).
17. **Member,** Pakistan Veterinary Medical Association
18. **Member,** UAF Alumni Association
19. **Member,** World Veterinary Poultry Association
20. **External Examiner,** Postgraduate Thesis and Viva voice Examinations, University of Agriculture, Faisalabad
21. **Member Editorial Board,** Pakistan Journal of Life and Social Sciences (HEC recognized 'Y' Category journal)
22. **Reviewer,** BMC Veterinary Research, an International Foreign Journal
23. **Reviewer,** World's Poultry Science Journal
24. **Reviewer**, Agricultural Research Journal
25. **Reviewer,** Pakistan Journal of life and Social Sciences
26. **Reviewer,** PLOS One
27. **Reviewer,** NRPU Project Proposals submitted to Higher Education Commission, Pakistan

PROFESSIONAL EXPERIENCE

- **Professor,** University Diagnostic Lab., Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan January 28, 2021 to date
- **Associate Professor**, University Diagnostic Lab., Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan April 05, 2016 to January 28, 2021.

- **Deputy District Livestock Officer** (Poultry), Poultry Research Institute, Livestock and Dairy Development Department, Punjab from October 12, 2010 to April 04, 2016.
- **Veterinary Officer** (Animal Health), Livestock and Dairy Development Department, Punjab from May 30, 1998 to October 11, 2010.
- **Lecturer** in the Department of Physiology and Pharmacology, Faculty of Veterinary Sciences, University of Agriculture, Faisalabad from December 14, 1996 to April 05, 1997.

ADMINISTRATIVE EXPERIENCE

- **Chairman**, Department of Pathobiology, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan (15-11-2018 to 01-01-2023)
- **Director**, Livestock Farms, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan (11.01.2017 to 25-02-2021)
- **Chairman,** Department of Livestock and Poultry Production (22.06.2017 to 30.08.2017)
- **Incharge,** University Diagnostic Lab., Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan (03.05.2016 to date)
- **Assisted Chairman**-Department of Pathobiology, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan
- **Member**, **Synopsis Scrutiny Committee,** Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan (06-10-2015 to date)
- **Convener, Board of studies, Department of Pathobiology,** Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan
- **Member, Board of Faculty,** Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan
- **Convener, Departmental Purchase Committee,** Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan
- **Convener, Internship Committee,** Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan
- **Convener,** Price Fixation Committee for the sale of Animal Products and By-products, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan
- **Member,** Farm Vigilance Committee, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan
- **Member,** Examination Vigilance Committee, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan
- **Member**, Doctoral and MPhil supervising committee, Bahauddin Zakariya University, Multan
- **Member,** Environmental Health and Safety Committee (

RESEARCH GRANTS

1. Sero-prevalence of Major respiratory diseases in rural poultry in and around Multan (Funded by Directorate of Research, BZ University, Multan) **(PI).**
2. Evaluation of indigenous yeast derived β-glucans as native immunomodulators and antibiotic alternatives against enteric pathogens in industrial broilers: A wise approach towards the control of antimicrobial resistance (Funded by HEC worth Rs. 3.44 Millions) **(PI).**

3. Ameliorative Potential of Mannan-oligosaccharides (MOS) Against Coccidiosis and Mycotoxins in Commercial Poultry Birds (Funded by PSF-NSLP worth 1.92 Millions) **(PI)**.
4. Cross-Sectional survey and prevalence of Liver fluke, Haemonchus and Trichostrongylus infections among nomadic animals in Cholistan desert (shortlisted by ALP) **(PI)**.
5. Isolation, identification and evaluation of indigenous probiotics against enteric pathogens of commercial broilers: Import substitute from indigenous resources. (Funded by Directorate of Research, BZ University, Multan) **(PI).**
6. Sero- and molecular epidemiological studies on Brucella species circulating in ruminant and human populations of Southern Punjab, Pakistan: A One Health Perspective (Funded to ALP worth Rs. 3.993 Million) (**Co-PI)**.

PROFESSIONAL TRAININGS/WORKSHOPS ORGANIZED

1. **Organizer**, One Day International Workshop on Food and Water Borne Zoonoses in One Health Perspective organized by Department of Pathobiology, Faculty of Veterinary Sciences, BZU-Multan, Pakistan (September 20, 2022).
2. **Organizer,** 3rd National Training Course on Diagnosis of Poultry Diseases through Modern Diagnostic Techniques at Department of Pathobiology, Faculty of Veterinary Sciences, BZU-Multan, Pakistan (February 08-09, 2022).
3. **Organizer**, One Day International Symposium on Brucellosis in One Health Perspective organized by Department of Pathobiology, Faculty of Veterinary Sciences, BZU-Multan, Pakistan (October 26, 2021).
4. **Organizer**, **FVS Sports Gala** organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan (March19-21, 2019).
5. **Organizer**, 4th National one day workshop on **Developing/Updating Training Modules of DVM Internship Program** organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan (February 14, 2019).
6. **Organizer**, **World Egg Day** at Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan (October 12, 2018).
7. **Member Organizing Team,** Duniya Kisan Dost Mela held at Bahauddin Zakariya University, Multan (March 30 to April 01, 2018)
8. **Organizer**, 3rd National workshop on **Developing/Updating Training Modules of DVM Internship Program** organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan (January 25, 2018).
9. **Organizer**, **World Egg Day** at Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan (October 13, 2017).
10. **Organizer**, **3rd National workshop on Developing/Upadting Training Modules of DVM Internship Program** organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan (January 19, 2017).
11. **Organizer**, **2nd International Conference on Zoonoses-2016** organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan (October 20-21, 2016).
12. **Organizer**, One Day Workshop on "**Intellectual Property Rights and Patent Drafting**" a joint venture of Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan,

Pakistan and PASTIC-Pakistan Science Foundation held at FVS, BZU, Multan (May 11, 2016).

PROFESSIONAL TRAININGS/WORKSHOPS ATTENDED/COMPLETED

International Training Courses/Certifications

1. **Certificate of Excellence**, on valuable contribution as organizer for One Day International Symposium on Brucellosis in One Health Perspective, organized by Department of Pathobiology, Faculty of Veterinary Sciences, BZU-Multan, Pakistan (October 26, 2021).
2. **Attended a Meeting** at **Central Veterinary Research Laboratory** CVRL with Scientific Director and Section Heads of CVRL at United Arab Emirates to seek opportunities for collaborative activities between FVS-BZU and CVRL, UAE **(March 11, 2020)**
3. **Certificate of Participation** for attending **Two-Day International Training Workshop on Scientific Paper and Patent Writing** organized by The Islamic World Educational, Scientific and Cultural Organization (ICESCO) Kingdom of Morocco, Rabat, 14-15 December 2020.
4. **Certificate of Attendance** for **Reliable and rapid antimicrobial resistance identification of appropriate therapy organized** by SelectSience, Science House, Church Farm Business Park, Coroston, UK, 10th December 2020.
5. **Certificate of Achievement** for **Standard precautions: Environmental cleaning & disinfection** by World Heatlh Organization, 16th December 2020.
6. **Certificate of Completion** for **Vaccine Vial Monitors (VVM)** by United Nations Children's Fund (UNICEF), 16th December 2020.
7. Certificate of Completion of Training Program on **Controlling Disease Outbreaks of Especially Dangerous Pathogens by Strengthening One Health Strategies in Pakistan** organized by The Centre for Agriculture and Food security and Preparedness, **University of Tennessee, USA** from October 7-14, 2019 at Bali, Indonesia.
8. Certificate of Completion of Training Program on **Advance Agriculture Biorisk Training** organized by The Centre for Agriculture and Food security and Preparedness, **University of Tennessee, USA** from September 2-5, 2018 at Jakarta, Indonesia.
9. Certificate of Completion of Training Program on **Isolating Emerging Infectious Pathogens During Disease Outbreaks** organized by The Centre for Agriculture and Food security and Preparedness, **University of Tennessee, USA** from January 8-11, 2018 at Bangkok, Thailand.
10. Certificate of Achievement for successful completion of **Professional Development Course on Livestock Production for sustainable Livelihoods** organized by Asian Institute of Technology, Thailand from January 17-28, 2011.
11. **Certificate of Participation** in **International Poultry Expo**, held on September 27-29, 2018 at Expo Center Lahore, organized by Pakistan Poultry Association.
12. **Certificate of Participation** in **International Livestock, Dairy & Poultry Congress**, Aiwan-e-Iqbal Complex, Lahore, Pakistan (March 19-20, 2018).
13. **Certificate of Participation** in **International Poultry Expo**, held on 24-26 August, 2017 at Expo Center Lahore, organized by Pakistan Poultry Association.

14. **Certificate of Participation** in **2nd International Conference on Zoonoses** dated 20-21, 2016 organized by Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan, Pakistan in collaboration with Higher Education Commission, Govt. of Pakistan.

National Training Courses/Certifications

1. **Certificate of Completion** of 02-Days refresher Training on Biorisk Management at Department of Pathobiology, BZU, Multan by Association for Biorisk Management in collaboration with Health Security Partners (August 23-24, 2023)
2. **Certificate of Completion** of 2-day workshop on Personnel Reliability organized by Pakistan Biological Safety Association at PC Hotel Karachi on 9th and 10th November 2022.
3. **Deliver a Lecture** in a **Technical Symposium of National Disease Control Committee (NDCC)** organized by Paksitan Poultry Association (PPA), 25th May 2021 and 6th November 2021.
4. **Certificates of Appreciation** for oral presentation in Two days **Virtual One Health International Conference** organized by College of Veterinary and Animal Sciences, Jhang (November 25-26, 2020).
5. **Deliver a Lecture** in a **Technical Symposium of National Disease Control Committee (NDCC)** organized by Paksitan Poultry Association (PPA), 30th November 2020.
6. **Certificate of Participation** in **One Day Symposium on Nanomedicine: Current Scenario and Future Perspective** as **Co-chair Technical Section** organized by Institute of Pharmacy, Physiology and Pharmacology, on August 6, 2019 at University of Agriculture Faisalabad.
7. **Certificate of Participation** in **International Poultry Expo-2019** organized by Pakistan Poultry Association on 13-15th September 2019 at Lahore Expo Center.
8. **Certificate of Completion** of **Training Course on Diagnosis of Viral Diseases** organized by Nuclear Institute for Agriculture and Biology, Faisalabad, Pakistan held from September 19-21, 2017.
9. **Certificate of Participation** in National Workshop, "**Organic Food and Health: Avenues of Innovation and Entrepreneurship**" organized by Pakistan Council for Science and Technology on August 29, 2016 at University of Management and technology, Lahore, Pakistan.
10. **Certificate of Participation** in Joint Pakistan-U.S. Workshop on **Strengthening & Sustaining a Network of Public & Animal Health Clinical Laboratories in Pakistan** held on September 27-29, 2016 at Pakistan Academy of Sciences, Islamabad, Pakistan.
11. **Certificate of Participation** in **International Seminar on Poultry Diseases** organized by University of Agriculture, Faisalabad in Collaboration with World Veterinary Poultry Ass ociation, Pakistan Branch (December 14-15, 2015).
12. **Certificate of Participation of National Training Course on Diagnosis of Poultry Diseases through Modern Diagnostic Techniques** organized by University of Agriculture, Faisalabad in Collaboration with World Veterinary Poultry Association, Pakistan Branch (April 03-04, 2014)
13. **Certificate of Completion for Training Workshop** on **Modern Veterinary Clinical Practices & Developments in Treatment Protocols** held on August 31st, 2014 organized by Department of Clinical Medicine and Surgery, University of Agriculture, Faisalabad, Pakistan & Livestock and Dairy Development Department, Faisalabad.

14. **Certificate of Completion** of three days course on **New Accounting Model** from Department of the Auditor-General of Pakistan, Audit & Accounts Training Institute, Lahore from 07.01.2013 to 09.01.2013 at Faisalabad.
15. **Certificate of Participation** in **Two Days Training Workshop on Punjab Employment Efficiency, Discipline & Accountability Act, 2006 for Officers** held at Punjab Institute of Management and Professional Development from 28-11-2012 to 29-11-2012.
16. **Certificate of Completion** of **Computer Training Course** held at Computer Centre, Information Technology Department Faisalabad from 03.03.2012 to 05.04.2012.
17. **Certificate of Completion** for two days **Training Workshop** on **Environment Controlled Housing** organized by Department of Poultry Sciences, Faculty of Animal Husbandry, University of Agriculture, Faisalabad-Pakistan from May 5-6, 2011.
18. **Certificate of attendance** for three days **Training on Media Management and Livestock Extension Services** organized by Livestock and dairy development Department, Govt. of Punjab and National Rural Support Program, Islamabad from October 13-15, 2010.
19. **Certificate of Completion** for 2 Day **Inter-Personal Communication (IPC) & Facilitation Skills Workshop for Avian Influenza Prevention and Control** at Margala Hotel Islamabad, Pakistan held on 26-27 June, 2009.
20. **Certificate of Participation** in workshop on **Poultry Health** organized by Department of Veterinary Microbiology, University of Agriculture, Faisalabad held on 15th December, 1998.
21. **Certificate of Completion** for course on **Poultry Health** organized by Division of Education & Extension, University of Agriculture, Faisalabad from 01.10.1996 to 14.10.1996.
22. **Certificate of Participation** in Educational Course for **Poultry Farming** held at Office of Project Director Poultry Production Faisalabad organized by Poultry Research Institute, Rawalpindi from 25.03.1995 to 09.04.1995.
23. **Certificate of Completion** of **Horse Riding Course** from Division of Extension & Education, University of Agriculture, Faisalabad from 20.04.1992 to 20.05.1992.
24. Certificate "National Cadet Corps (NCC)" Director, National Cadet Corps & Women Guards (1979-1981).

RESEARCH EXPERIENCE

PhD Thesis Research

Field trials of gametocytes vaccine (Local Isolate) and its comparative efficacy with imported vaccine against coccidiosis in poultry

MSc (Hons.) Thesis Research

Pathological effect of formaline (formaldehyde) fed to the male Japanese quails (*Coturnix coturnix* Japonica)

PUBLICATIONS

Impact Factor Papers

Sr. No.	Manuscript Details	IF
1.	Awais, M. M., Khadim, G., Akhtar, M., **Anwar, M. I.,** Shirwany, A. S. A. K., Raza, A., ... & Bhatti, M. S. (2024). A study on the epidemiology of brucellosis in bovine population of peri-urban and rural areas of district Multan, southern Punjab, Pakistan. BMC Veterinary Research, 20(1), 39.	**2.30**
2.	Shirwany, A. S. A. K., Awais, M. M., **Anwar, M. I.,** Hameed, M. R., Akhtar, M., Ijaz, N., ... & Chaudhry, M. (2024). Seroepidemiology and associated risk factors of brucellosis in small ruminants of district Khanewal, Pakistan. *Journal of Advanced Veterinary and Animal Research*, *11*(1), 9.	**1.50**
3.	Awais, M. M., Khadim, B., Akhtar, M., Anwar, M. I., Khadim, G., Shirwany, A. S. A. K., ... & Bhatti, M. S. (2024). Epidemiology of Brucellosis in Small Ruminants of Rural and Peri-Urban Areas of Multan, Pakistan. *Canadian Journal of Infectious Diseases and Medical Microbiology*, *2024*(1), 8898827.	**2.60**
4.	Awais, M. M., Zahoor, S., Akhtar, M., **Anwar, M. I.,** Shirwany, A. S. A. K., Ali, M. A., Bhatti, M, S., & Razzaq, A. (2023). Prevalence of antibodies to Toxocara canis and its associated risk factors in socio-economically deprived nomadic communities of Pakistan. Zoonoses and Public Health, 70(7), 616-626.	**2.95**
5.	Awais, M. M., Ihsan-Ul-Haq, H., Akhtar, M., **Anwar, M. I.,** Shirwany, A. S. A. K., Razzaq, A., & Sibtain Bhatti, M. (2023). Copro-ELISA-based prevalence and risk determinants of giardiasis in cattle and sheep populations raised by socio-economically deprived urban nomadic communities located in and around Multan, Punjab-Pakistan. Biological Rhythm Research, 54(3), 291-306.	**1.36**
6.	**Anwar M I**, Tahir M A, Awais M M, Raza A, Akhtar M, Muhammad F, Hameed M R, and Ijaz N. 2023. Purification, Characterization and protective effects of indigenous yeast derived β-glucans against salmonellosis in broilers. Pakistan Veterinary Journal. http://dx.doi.org/10.29261/pakvetj/2023.013	**1.803**
7.	Navid, M. T., Awais, M. M., **Anwar, M. I.,** & Akhtar, M. (2022). Seroprevalence of Avian Influenza Viruses in Asymptomatic Backyard Poultry Birds in District Multan, Pakistan. *Pakistan Journal of Zoology*, 1-7.	**0.68**
8.	Awais, M.M., Mehtab, U., **Anwar, M.I**., Hameed, M.R., Akhtar, M., Raza, A., Aisha, R., Muhammad, F., Saleemi, M.K. and Fayyaz, A. (2022). Mitigation potential of individual and combined dietary supplementation of local Bentonite Clay and Distillery Sludge against Ochratoxin-A induced toxicity in broilers. BMC Veterinary Research, 18(1), 1-12.	**2.741**
9.	Akhtar B, Muhammad F, Sharif A, **Anwar MI**. 2021. Mechanistic insights of snake venom disintegrins in cancer treatment. European Journal of Pharmacology. 899:174022 https://doi.org/10.1016/j.ejphar.2021.174022	**3.263**

10.	Anwar M, F Muhammad, B Akhtar, **MI Anwar**, R Ahmad, A Aleem. 2021. Outer Membrane Protein-Coated Nanoparticles as Antibacterial Vaccine Candidates. International Journal of Peptide Research and Therapeutics. https://doi.org/10.1007/s10989-021-10201-3	**1.500**
11.	Raza A, S Bashir, R Pothula, H Abdelgaffar, R Tabassum, **MI Anwar**, MM Awais, M Akhtar and JL Jurat-Fuentes. 2021. Expression and functional characterization in yeast of an endoglucanase from Bacillus sonorensis BD92 and its impact as feed additive in commercial broilers. International Journal of Biological Macromolecules. 176: 364-375.	**5.162**
12.	Mumtaz S, M Akhtar, MM Awais and **MI Anwar**. 2021. Evaluation of immunomodulatory, growth promoting and protective effects of *Ficus religiosa* against coccidiosis in broilers. Pakistan Journal of Agricultural Sciences. 58: 219-228.	**0.612**
13.	Ullah, M. I., Akhtar, M., **Anwar, M. I.,** Awais, M. M., Khaliq, K., & Ijaz, N. (2021). Ameliorating effects of different extracts of culinary mushroom species on the production performance of healthy and Eimeria infected commercial broiler birds. International Journal of Agriculture and Biology. 26(1): 39-44.	**0.820**
14.	**Anwar MI**, MM Awais, M Akhtar, MT Navid and F Muhammad. 2019. Nutritional and immunological effects of nano-particles in commercial poultry birds. World's Poultry Science Journal, 75(2): 261-277.	**1.364**
15.	Awais MM, MA Jamal, M Akhtar, MR Hameed, **MI Anwar** and MI Ullah, 2019. Immunomodulatory and ameliorative effects of Lactobacillus and Saccharomyces based probiotics on pathological effects of Eimeriasis in broilers. Microbial Pathogenesis, 126: 101-108.	**2.332**
16.	Ullah MI, M Akhtar, **MM Awais**, MI Anwar and K Khaliq, 2018. Immunological and anti-*Eimeria* effects of hot water and methanolic extracts of *Pleurotus sajor-caju* in broiler. Kafkas Universitesi Veteriner Fakultesi Dergisi, 24(6): 893-898.	**0.393**
17.	Noreen N, F Muhammad, B Akhtar, F Azam, **MI Anwar**, 2018. Is Cannabidiol (CBD) a promising substance for new drug development? A review of its potential therapeutic applications, Critical Reviews™ in Eukaryotic Gene Expression 28(1):73-86.	**1.64**
18.	Ullah MZ, MM Awais, M Akhtar, **MI Anwar**, MT Navid, I khan and A Razzaq. 2018. Seroprevalence, associated risk factors and hematological impacts of toxoplasmosis in small ruminants of Multan, Punjab-Pakistan. Tropical Biomedicine 35(4): 1028-1040.	**0.719**
19.	Navid MT, UI Farooq, AI Latif, MM Awais, **MI Anwar**, M Akhtar and AB Zahur, 2018. Prevalence of foot and mouth disease virus in apparently healthy buffaloes brought to Islamabad slaughterhouse in Pakistan. Tropical Biomedicine, 35: 1-7.	**0.719**
20.	Awais MM, M Akhtar, **MI Anwar** and K Khaliq, 2018. Evaluation of *Saccharum officinarum* L. bagasse-derived polysaccharides as native immunomodulatory and anticoccidial agents in broilers. Veterinary Parasitology, 249: 74-81.	**2.356**
21.	Akhtar M, M Humayun, Z Iqbal, MM Awais and **MI Anwar.** 2018.	**0.449**

	Evaluation of biological response modifying and immunotherapeutic activities of barley derived arabinoxylans against coccidiosis in commercial broilers. Turkish Journal of Veterinary and Animal Sciences. 42: 55-64.	
22.	Ullah MI, M Akhtar, MM Awais, **MI Anwar** and K Khaliq, 2018. Evaluation of immunostimulatory and immunotherapeutic effects of tropical mushroom (*Lentinus edodes*) against eimeriasis in chicken. Tropical Animal Health and Production, 50: 97-104.	**0.912**
23.	Khaliq K, M Akhtar, MM Awais and **MI Anwar**, 2017. Evaluation of immunotherapeutic effects of *Aloe vera* polysaccharides against coccidiosis in chicken. Kafkas Universitesi Veteriner Fakultesi Dergisi, 23(06): 895-901.	**0.432**
24.	Rizwan HM, M Akhtar, Z Iqbal, MM Awais and **MI Anwar**, 2017. Evaluation of *Avena sativa* derived arabinoxylans as native biological response modifiers in broilers. International Journal of Agriculture and Biology, 19(04): 834-840.	**0.758**
25.	**Anwar MI**, F Muhammad, MM Awais and M Akhtar, 2017. A review of β-glucans as a growth promoter and antibiotic alternative against enteric pathogens in poultry. World's Poultry Science Journal, 73: 651-661.	**0.974**
26.	Raza A, F Muhammad, DP de Sousa, T Khaliq, B Aslam, L Andrade, S Bashir, **MI Anwar**, M Shahid, and M Qamar, 2016. In vitro and in vivo toxicological evaluations of methyl ferulate, methyl p-coumarate, and pulegone 1, 2-epoxide. Pharmaceutical Biology, 54(3):523-9.	**1.546**
27.	Raza A, F Muhammad, S Bashir, B Aslam, **MI Anwar** and MU Naseer, 2016. In-vitro and in-vivo anthelmintic potential of different medicinal plants against *Ascaridia galli* infection in poultry birds. World's Poultry Science Journal, 72: 115-124.	**0.974**
28.	Akhtar M, **MM Awais**, MI Anwar, S Ehtisham-ul-Haque, A Nasir, MK Saleemi and K Ashraf, 2015. The effect of infection with mixed *Eimeria* species on hematology and immune responses following Newcastle disease and Infectious bursal disease booster vaccination in broilers. Veterinary Quarterly, 15(01): 21-26.	**1.047**
29.	Raza A, F Muhammad, S Bashir, **MI Anwar**, MM Awais, M Akhtar, B Aslam, T Khaliq and MU Naseer, 2015. Antiviral activity of different medicinal plants and their role as an immune booster against Newcastle disease virus in poultry birds. World's Poultry Science Journal, 71(3): 523-532.	**0.974**
30.	Waheed M, F Muhammad, I Javed, M Akhtar, MK Saleemi, T Khaliq, MM Awais, **MI Anwar**, 2015. Dermatoprotective effects of some plant extracts (genus Ficus) against experimentally induced toxicological insults in rabbits. Toxicology and Industrial Health, 31: 982-989.	**1.688**
31.	Kaleem QM, M Akhtar, MM Awais, M Saleem, M Zafar, Z Iqbal, F Muhammad and **MI Anwar,** 2014. Studies on *Emblica officinalis* derived tannins for its immunostimulatory and protective activities against coccidiosis in industrial broiler chickens. The Scientific World Journal, 2014: 378473.	**1.219**
32.	Muhammad F, MM Awais, M Akhtar and **MI Anwar**, 2013. Quantitative Structure activity relationship and risk analysis of some pesticides in cattle milk. Iranian Journal of Environmental Health Science & Engineering, 10: 4.	**1.012**

33.	Awais MM, M Akhtar, Z Iqbal, F Muhammad, **MI Anwar**, 2012. Seasonal prevalence of coccidiosis in industrial broiler chickens in Faisalabad, Punjab-Pakistan. Tropical Animal Health and Production, 44: 323-328.	**1.09**
34.	Akhtar M, **MI Anwar**, Z Iqbal, F Muhammad, MM Awais, AU Haq and E Hiszczynska-Sawicka, 2012. Immunological evaluation of two local isolates of *Eimeria tenella* gametocytes against coccidiosis in poultry. Pakistan Veterinary Journal, 32: 77-80.	**0.813**
35.	Akhtar M, A Hai, MM Awais, Z Iqbal, F Muhammad, AU Haq and **MI Anwar**, 2012. Immunostimulatory and protective effects of *Aloe vera a*gainst coccidiosis in industrial broiler chickens. Veterinary Parasitology, 186: 170-177.	**2.381**
36.	Muhammad F, M Akhtar, IJ Hassan, ZU Rehman, MM Awais, MK Saleemi and **MI Anwar**, 2012. Quantitative Structure activity relationship and risk analysis of some pesticides in cattle milk. Pakistan Veterinary Journal, 32: 589-592.	**0.813**
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