

**DR. RAJWALI KHAN**

**Designation:** Assistant Professor, Department of Livestock Management, Breeding and Genetics, The University of Agriculture Peshawar Pakistan, Cell No. 0092 300 901 8065; [rajwalikhan@aup.edu.pk](mailto:rajwalikhan@aup.edu.pk)



**Nationality:** Pakistani  
**Religion:** Islam  
**Marital status:** Married  
**Current post:** Assistant Professor BPS-19  
**Employer:** The University of Agriculture Peshawar-Pakistan  
 Village Choli Payan P.O Dag Distt: Peshawar

**Professional qualification:**

Degree	University	Passing Year	Major Field of Study
Ph. D	Northwest A & F University, Yangling, Shaanxi, China	2020	Animal Husbandry
<b>Thesis title:</b> Functional and regulatory analysis of TORCs in adipocyte proliferation and differentiation in Qinchuan beef cattle			
M. Sc (Hons) Gold Medal	The University of Agriculture Peshawar Pakistan	2010	Animal Husbandry
<b>Thesis title:</b> Effect of heavy metal and mineral contents in drinking water on buffalo milk production and quality in urban, peri-urban and rural dairy farms of Peshawar			
DVM	Sind Agriculture University, Tando Jam	2008	Animal Husbandry and Veterinary Sciences

**Working experience**

Designation	Department	From	To
Assistant Professor	Department of Livestock Management, Animal Breeding and Genetics, The University of Agriculture Peshawar	Sep 2017	Till date
Lecturer BPS-18	Department of Livestock Management, Animal Breeding and Genetics, The University of Agriculture Peshawar	June 2014	Sep 2017
Assistant Director (P&D)	Livestock & Dairy Development (Research Wing) Government of Khyber Pakhtunkhwa	Aug 2011	June 2014
Research Officer	Livestock Research and Development Station Surezai Peshawar	June 2009	July 2011
Veterinary (Research) Officer	Veterinary Research and Disease investigation Center Swat	Aug 2008	June 2009

- **Teaching**

**Undergraduate DVM/Fisheries/Animal Sciences course**

1. Dairy Herd Health (Med/Epi.511)
2. Beef Production (LM. 511)
3. Meat Hygiene and Public Health (Path. 601)

4. Meat and slaughter by product technology (APT-621)
5. Animal Breeding and Genetics-1 (LPRO-601)
6. Developmental biology
7. Molecular Biology
8. Mutton and Beef production

### **Post graduate M.Sc (Hons)/Ph. D**

1. Livestock Industry (LM)
2. Advances in Livestock Management (LM-712)
3. Animal Cytogenetics (ABG-712)
4. Advanced Animal Breeding and Genetics (ABG-711)
5. Advanced Sheep and Goat Production (LM)
6. Beef Production (LM 701)

- **Research**

#### **Student's research supervised**

DVM Internship	15
M. Sc (Hons)	15
Ph. D	(3 ongoing)

#### **Projects designed (2)**

1. Establishment of Drug Residues Determination Facility at Peshawar (Total cost Rs 60.00 million)
2. Research & Development in Fodder & Forages for Enhancement of Dairy Production in Khyber Pakhtunkhwa (Total cost of 20.00 million)

#### **Ongoing Projects (2)**

3. Optimization of efficient molecular technique for the meat sample speciation (**2.2 million Pakistan Science Foundation**)
4. Balkhi sheep mutton production and quality potential through testes-mediated gene transfer (TMGT) transgenesis (**6.3 million NRP-U-Higher Education Commission Pakistan**)

#### **Publications**

Total Publications	100+
Total IF	350+
Total Citations	1500+Google Scholar, i10 index 53 and h-index 24
	<a href="https://scholar.google.com/citations?user=3YaHo64AAAAJ&amp;hl=en">https://scholar.google.com/citations?user=3YaHo64AAAAJ&amp;hl=en</a>

#### **First and first equal contributing author**

1. Khan R, Li A, Raza SHA. Editorial: Genetic Regulation of Meat Quality Traits in Livestock Species. *Front Genet.* 2023 Jan 4;13:1092562. doi:10.3389/fgene.2022.1092562. PMID: 36685874; PMCID: PMC9845273.
2. Nurgulsim K, **Khan R**, Raza SHA, Ayari-Akkari A, Jeridi M, Ahmad I, Arain UM, Abd El-Aziz AH, Khan H, Zan L. Bioinformatics and genetic variants analysis of FGF10 gene promoter with their association at carcass quality and body measurement traits in Qinchuan beef cattle. *Anim*

- Biotechnol. 2022 Apr 21:1-10. doi: 10.1080/10495398.2022.2059667. **(First Equal Contributig Author) IF 2.9**
3. Guo H, **Khan R**, Abbas Raza SH, Suhail SM, Khan H, Khan SB, Abd El-Aziz AH, Zan L. RNA-Seq Reveals Function of Bta-miR-149-5p in the Regulation of Bovine Adipocyte Differentiation. *Animals*. 2021; 11(5):1207. <https://doi.org/10.3390/ani11051207>. **(First Equal Contributig Author) IF 3.2**
  4. Hongfang. G, **R. Khan**, S.H.A. Raza, K. Nurgulsim, S.M. Suhail, A. Rahman, I. Ahmed, A. Ijaz, I. Ahmad, Z. Linsen, Transcriptional regulation of adipogenic marker genes for the improvement of intramuscular fat in Qinchuan beef cattle, *Animal biotechnology*, (2020) 1-20. **(First Equal Contributig Author) IF 2.9**
  5. Raza S H A, Khan R, Gui L, Schreurs N M, Wang X, Mei C, Yang X, Gong C, Zan L. 2020. Bioinformatics analysis and genetic polymorphisms in genomic region of the bovine SH2B2 gene and their associations with molecular breeding for body size traits in qinchuan beef cattle. *Bioscience Reports*, 40 1–13 **(First Author) IF 2.535**
  6. **R. Khan**, S.H.A. Raza, H. Guo, W. Xiaoyu, W. Sen, S.M. Suhail, A. Rahman, I. Ullah, A.H. Abd El-Aziz, Z. Manzari, A. Alshawi, L. Zan, Genetic variants in the TORC2 gene promoter and their association with body measurement and carcass quality traits in Qinchuan cattle, *PloS one*, 15 (2020) e0227254. **(First Author) IF 2.776**.
  7. **Khan, R.**, Raza, S. H. A., Junjvlieke, Z., Wang, X., Wang, H., Cheng, G., . . . Zan, L. (2020). Bta-miR-149-5p inhibits proliferation and differentiation of bovine adipocytes through targeting CRTCs at both transcriptional and posttranscriptional levels. *J Cell Physiol*. <https://doi.org/10.1002/jcp.29513>. **(First Author) IF 6.384**
  8. Shijun, L., **Khan, R.**, Raza, S. H. A., Jieyun, H., Chugang, M., Kaster, N., . . . Linsen, Z. (2020). Function and characterization of the promoter region of perilipin 1 (PLIN1): Roles of E2F1, PLAG1, C/EBPbeta, and SMAD3 in bovine adipocytes. *Genomics*. doi:10.1016/j.ygeno.2020.01.012. **(First Author) IF 6.205**.
  9. Junjvlieke, Z., **Khan, R.**, Mei, C., Cheng, G., Wang, S., Raza, S. H. A., . . . Zan, L. (2019). Effect of ELOVL6 on the lipid metabolism of bovine adipocytes. *Genomics*. doi:10.1016/j.ygeno.2019.12.024. **(First Author) IF 6.205**.
  10. **Khan, R.**, Raza, S. H. A., Junjvlieke, Z., Wang, H., Cheng, G., Smith, S. B., . . . Zan, L. (2019). RNA-seq reveal role of bovine TORC2 in the regulation of adipogenesis. *Arch Biochem Biophys*, 680, 108236. doi:10.1016/j.abb.2019.108236 **(First Author) IF 3.60**.
  11. **Khan, R.**; Raza, S.H.A.; Schreurs, N.; Xiaoyu, W.; Hongbao, W.; Ullah, I.; Rahman, A.; Suhail, S.M.; Khan, S.; Linsen, Z. (2019). Bioinformatics analysis and transcriptional regulation of TORC1 gene through transcription factors NRF1 and Smad3 in bovine preadipocytes. *Genomics*. 10.1016/j.ygeno.2019.09.007, doi:10.1016/j.ygeno.2019.09.007 **(First Author) IF 6.205**.
  12. **Khan, R.**; Raza, S.H.A.; Junjvlieke, Z.; Wang, X.; Garcia, M.; Elnour, I.E.; Wang, H.; Zan, L. Function and Transcriptional Regulation of Bovine TORC2 Gene in Adipocytes: Roles of C/EBP gamma, XBP1, INSM1 and ZNF263. *International journal of molecular sciences* 2019, 20, doi:10.3390/ijms20184338 **(First Author) IF 4.556**.
  13. Raza, S.H.A.; **Khan, R.**; Schreurs, N.M.; Guo, H.; Gui, L.-S.; Mei, C.; Zan, L. Expression of the bovine KLF6 gene polymorphisms and their association with carcass and body measures in Qinchuan cattle (*Bos Taurus*). *Genomics* 2019, 10.1016/j.ygeno.2019.03.005, doi:10.1016/j.ygeno.2019.03.005 **(First Author) IF 6.205**
  14. **Khan, R.**; Guo, H.; Raza, S.H.A.; Rahman, A.; Ayaz, M.; Zan, L. (2018). Halal slaughtering, welfare, and empathy in farm animals: a review. *Tropical animal health and production*, 50, 1733-1738, doi:10.1007/s11250-018-1644-1 **(First Author) IF 1.08**
  15. Guo, H.; **Khan, R.**; Raza, S.H.A.; Ning, Y.; Wei, D.; Wu, S.; Hosseini, S.M.; Ullah, I.; Garcia, M.D.; Zan, L. (2018). KLF15 promotes transcription of KLF3 gene in bovine adipocytes. *Gene*, 659, 77-83, doi:10.1016/j.gene.2018.03.049 **(First Author) IF 2.984**.

16. Raza, S.H.A.; Gui, L.; **Khan, R.**; Schreurs, N.M.; Wang, X.; Wu, S.; Mei, C.; Wang, L.; Ma, X.; Wei, D., et al. Association between FASN gene polymorphisms ultrasound carcass traits and intramuscular fat in Qinchuan cattle. *Gene* 2018, 645, 55-59, doi:10.1016/j.gene.2017.12.034 **(First Author) IF 2.984**
17. Rajwali Khan, Ghufanullah, Sajjad Ahmad, Bahkt Daraz Khan, M. Iqbal, Pervez, Kamran Farid, and Hayazuddin. 2012. Effect of commercially available milk replacer on calf's performance. *Pakistan Journal of Nutrition* 11 (12): 1190-1193 **(Main & Corresponding Author).**
18. Rajwali Khan, Muhammad Subhan Qureshi, Anila Mushtaq, Ghufanullah and Ahmad Naveed. 2012. Effect of Quality and Frequency of Drinking Water on Productivity and Fertility of Dairy Buffaloes. *J Anim Plant Sci*, 22(2 Supp.): 96-101 **IF 0.75.**
19. Rajwali Khan, Farhan Anwar Khan, Kamran Farid, Izhar Khan and Muhammad Tariq. 2009. Prevalence of Infectious Bursal Disease in Broiler in District Peshawar. *J. Agri. Bio. Sci* 4 (1) 1-5 ISSN 1990-6145 **(Main Author)**

### Corresponding author

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21. Hongfang G, Khan R, El-Mansi AA. Bioinformatics Analysis of miR-181a and Its Role in Adipogenesis, Obesity, and Lipid Metabolism through Review of Literature. *Mol Biotechnol.* 2023 Sep 29. doi: 10.1007/s12033-023-00894-w. Epub ahead of print. PMID: 37773313.
22. Ullah A, Khan R, Suhail SM, Ahmad I, Anwar Khan F, Subhan Qureshi M, Khan NA, Ayari-Akkari A, Ahmed DAEM. Bioinformatics analysis and the association of polymorphisms within the caprine *GDF9* gene promoter with economically useful traits in Damani goats. *Anim Biotechnol.* 2022 Dec 28:1-12. doi: 10.1080/10495398.2022.2154676. Epub ahead of print. PMID: 36576034.
23. Shifa U, Khan R, Suhail SM, Ahmad I, Rahman A, Akkari AA, Yassin HM. The efficiency of boric acid as an alternative to NaCl for the preservation of cattle hides. *Trop Anim Health Prod.* 2023 May 26;55(3):228. doi: 10.1007/s11250-023-03631-2. PMID: 37233849.
24. Ayaz M, Khan R, Khan S, Suhail SM, Khan K, Ahmad I, Wahab A, Ayari-Akkari A, Othman G. Effect of dietary inclusion of mealworm frass on growth, hematology, and serum biochemistry of sheep. *Trop Anim Health Prod.* 2023 Mar 7;55(2):106. doi: 10.1007/s11250-023-03518-2. PMID: 36881277.
25. Zhao X, Khan R, Hongfang G, Abbas Raza SH, Ayari-Akkari A, Othman G, Alshammari AM, Aloufi BH, Alabbosh KF, Alshammari WB, Linsen Z. Genetic variants of TORC1 gene promoter and their association with carcass quality and body measurement traits in Qinchuan beef cattle. *Anim Biotechnol.* 2022 Aug 2:1-9. doi: 10.1080/10495398.2022.2105226. Epub ahead of print. PMID: 35916659.
26. Ayaz, Suhail SM, Ahmad, Zeb MT, **Khan R**, Ijaz A, Ahmad, Riaz MH, Ali F, Khan K, Khan A. Detection of A2A2 genotype of beta casein protein (CSN2) gene in local, exotic and cross bred cattle in Pakistan. *Anim Biotechnol.* 2022 Mar 2:1-12. doi: 10.1080/10495398.2022.2031204. Epub ahead of print. PMID: 35235484 **IF 2.4**
27. Kamran Khan, Sarzamin Khan, **Rajwali Khan**, Asad Sultan, Nazir Ahmad Khan, Naseer Ahmad. 2016. Growth performance and meat quality of rabbits under different feeding regimes. *Tropical Animal Health and Production.* 48 (6) 1:8 DOI 10.1007/s11250-016-1140-4 **IF 1.33**
28. Muhammad Ubaidullah Qureshi, Muhammad Subhan Qureshi, Rajwali Khan, Syed Muhammad Sohail, Abdur Rahman, Kamran Farid and Asim Ijaz Relationship of blood metabolites with reproductive cyclicity in dairy cows. 2016. *Indian Journal Animal Research.* 50 (3): 338-348 **IF 0.42**

29. Mudeer Gul, Iftikhar Ahmad, **Rajwali Khan**, Syed Muhammad Sohail, Sohail Akhtar, Abdur Rahman, Asim Ijaz and Ali Gohar. 2016. Effect of Different Feeding Times on the Performance of Cross Bred Dairy Cattle during Summer Stress. *Iranian Journal of Applied Animal Science*. 2 (6):327-334.
30. Hayaz Uddin, Abdur Rehman, Rajwali Khan, Din Muhammad and Kamran Fareed, Khurshaid Anwar, Sibghat Ullah and Zubair Ali. 2013. Effect of Cotton Seed Cake on Cattle Milk Yield and Composition at Livestock Research and Development Station Surezai, Peshawar. *Pakistan Journal of Nutrition* 12 (5): 468-475
31. Zia ur Rehman, K. B Mirbahar, Rajwali khan, Ahmad Naveed, Pervez Shah and Kamran Fareed. 2012. Environmental Effect on Chemical Quality of Kundhi Buffalo Bull Semen. *Life Sci. Int. J.*, 6 (2): 2501-2506.
32. Zia ur Rehman, K. B Mirbahar, Rajwali khan, Kamran Fareed, Pervez Shah and Din Muhammad. 2012. Effect of Environmental Temperature on Physical Quality of Kundi Buffalo Bull Semen. *Life Sci. Int. J.*, 6 (2): 2554-2559
33. Muhammad Usman Ghani, Din Muhammad, Rajwali Khan, Zia Ur Rehman, Naila Chand, Muhammad Rizwan, Kamran Farid and Abdul Hafeez. 2012. Effect of Liquorice (*Glycyrrhiza Glabra*) Root Extract as Immunostimulant Anticoccidial And Growth Promotant In Broiler Chicks. *Life Sci. Int. J.*, 6 (2): 2534-2545.
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35. Zafar Khan, Asad Sultan, Rajwali Khan, Sarzamin Khan, Imranullah and Kamran Farid 2016. Concentrations of Heavy Metals and Minerals in Poultry Eggs Produced in Khyber Pakhtunkhwa. *Meat Science and Veterinary Public Health*. 1(1):1-7
36. Inamullah Khan, Muhammad Subhan Qureshi, Rajwali Khan, Syed Muhammad Sohail, Ijaz Ahmad and Muhammad Shoaib.2016. Sero-Prevalence and Risk Factors for Bovine brucellosis in Cattle and Human in District Swat, Pakistan. *Meat Science and Veterinary Public Health*. 1(1):1-12

#### **Co-author**

37. Khan MM, Suhail SM, Majid HA, Ahmad I, Sadique U, Khan R, Ahmad I, Ijaz A, Khan K, Ali F, Khan MS, El-Mansi AA. Morphometric and molecular characterization of Surguli goat through CO1 gene in district Kohat. *Anim Biotechnol*. 2023 Dec 23:1-10. doi: 10.1080/10495398.2023.2290528. Epub ahead of print. PMID: 38142270.
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39. Ali S, Nabi F, Awais M, Fareed SK, Hussain J, Adeola AC, Khan R, Ahmed N, Quan G. Genetic Diversity Relationship in Azakheli Buffalo Inferred from mtDNA and *MC1R* Sequences Comparison. *Biomed Res Int*. 2022 Dec 13;2022:5770562. doi: 10.1155/2022/5770562. PMID: 36601617; PMCID: PMC9806686.
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41. Wang X, Liang C, Li A, Cheng G, Long F, Khan R, Wang J, Zhang Y, Wu S, Wang Y, Qiu J, Mei C, Yang W, Zan L. RNA-Seq and lipidomics reveal different adipogenic processes between

- bovine perirenal and intramuscular adipocytes. *Adipocyte*. 2022 Dec;11(1):448-462. doi: 10.1080/21623945.2022.2106051. PMID: 35941812; PMCID: PMC9367662.
42. Shoaib M, Rashid MI, Akbar H, Sheikh AA, Farooqi SH, Ayari-Akkari A, Yassin HM, Khan R. Molecular epidemiology and characterization of *Babesia bovis* in cattle of Khyber Pakhtunkhwa province, Pakistan. *Trop Anim Health Prod*. 2022 Oct 8;54(6):337. doi: 10.1007/s11250-022-03346-w. PMID: 36208348.
  43. Hengwei Y, Raza SHA, Wang S, Khan R, Ayari-Akkari A, El Moneim Ahmed DA, Ahmad I, Shaoib M, Abd El-Aziz AH, Rahman SU, Jahejo AR, Zan L. The growth curve determination and economic trait correlation for Qinchuan bull population. *Anim Biotechnol*. 2022 Aug 18:1-8. doi: 10.1080/10495398.2022.2111309. Epub ahead of print. PMID: 35980325.
  44. Ma, Boyan, Chunmei Zhang, Sayed Haidar Abbas Raza, Baochun Yang, Bandar Hamad Aloufi, Ahmed Mohajja Alshammari, Qwait AlGabbani, Rajwali Khan, Shengzhen Hou, and Linsheng Gui. "Effects of Dietary Non-Fibrous Carbohydrate (NFC) to Neutral Detergent Fiber (NDF) Ratio Change on Rumen Bacterial Community and Ruminal Fermentation Parameters in Chinese Black Tibetan Sheep (*Ovis aries*)." *Small Ruminant Research* (2022): 106793.
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  50. Sayed Haidar Abbas Raza, **Rajwali Khan**, Gong Cheng, Feng Long, Sun Bing, Nicola M. Schreurs, Sameer D. Pant, Wenzhen Zhang, Anning Li, Linsen Zan. RNA-Seq Reveals the potential molecular mechanisms of Bovine *KLF6* gene in the Regulation of Adipogenesis. *International Journal of Biological Macromolecules*. <https://doi.org/10.1016/j.ijbiomac.2021.11.202> (SCI) **IF 6.95**.
  51. Raza SHA, **Khan R**, Pant SD, Shah MA, Quan G, Feng L, Cheng G, Gui LS, Zan L. Genetic variation in the *OPN* gene affects milk composition in Chinese Holstein cows. *Anim Biotechnol*. 2021 Nov 15:1-7. doi: 10.1080/10495398.2021.2001343. Epub ahead of print. PMID: 34779705. **IF 2.4**
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55. Raza, S.H.A., Hassanin, A.A., Dhshan, A.I.M., Abdelnour, S.A., Khan, R., Mei, C. and Zan, L., 2021. In silico genomic and proteomic analyses of three heat shock proteins (HSP70, HSP90- $\alpha$ , and HSP90- $\beta$ ) in even-toed ungulates. *Electronic Journal of Biotechnology* 53, 61-70.
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57. Raza SHA, Khan R, Pant SD, Shah MA, Quan G, Feng L, Cheng G, Gui LS, Zan L. Genetic variation in the *OPN* gene affects milk composition in Chinese Holstein cows. *Anim Biotechnol*. 2021 Nov 15;1-7. doi: 10.1080/10495398.2021.2001343.
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93. Performance, Immune, and Carcass Characteristics of Broiler Chickens as Affected by Thyme and Licorice or Enzyme Supplemented Diets. 2017. Majid Kalantar<sup>1</sup>, Seyed Mahdi Hosseini, Liguang Yang, Sayed Haidar Abbas Raza, Linsheng Gui, Mostafa Rezaie, Mahdi Khojastekey, Dawei Wei, **Rajwali Khan**, Sulthattin Yasar, Shahid Faraz Syed, Allah Bux Kachiwal, Mohamed Elkhairy, Qijing Lei, Rameez Raja Kaleri, Ayman Hassan Abd El-Aziz. *Open Journal of Animal Sciences*. 7, 105-109.
94. Comparison of Weight Gain, Milk Production, and Milk Composition of Iranian Mamasani Goat and its Cross with Saanen. Seyed Mahdi Hosseini, Li Guo Yang, Sayed Haidar Abbas Raza, **Rajwali Khan**, Majid Kalantar, Shahid Faraz Syed, Mohib Ullah Kakar and Robina Manzoor. *J Vet Sci Ani Husb* 5(2): 203.

95. Effect of Urea Treated Groundnut Shells on Feed Intake, Digestibility, Nitrogen Retention and Economic Value in Growing Rabbits. 2017. Muhammad Tahir Khan, Muhammad Idrees Khan, Sayed Haider Abbas Raza, Muhammad Adnan, **Rajwali Khan**, Seyed Mahdi Hosseini, Shahid Faraz Syed, Shahzada Khurram Adrian shah, Muhammad Atif Khan, Abrar Ahmad. *Int J Poul Fish Sci* .1(1):1-7.
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97. Kamran Farid, Altaf Ur Rahman, Ahmad Naveed, Muhammad Iqbal, **Rajwali Khan** and Shakir Khan. 2014. Effect of Different Levels of Probiotic in Aflatoxin B1 Contaminated Feed on Feed Intake, Feed Conversion Ratio and Growth in Broilers. *J. Anim. Health.Produc.*22 (1)
98. Hayaz Uddin, Hamid Ullah Khan, Muhammad Ilyas Khan, **Rajwali Khan** and Ahmad Naveed. 2014. Productive and Reproductive Performance of Achai Cattle Maintained At Livestock Research & Development Station Surezai Peshawar, Pakistan, *J.Anim.Health.Produc.*22 (1)13-19.
99. Hayaz Uddin, Hamid Ullah Khan, Imtiaz Ali Shah, Ahmad Naveed, Sajid Khan, Rajwali Khan, Muhammad Irshad, Khurshaid Anwer, Hamayun khan. 2014. Study of Phenotypic & Morphometric Characteristics of Achai Cattle at Livestock Research and Development Station Surezai Peshawar. *J.Anim.Health.Produc.*22 (1)37-45.
100. Muhammad Shahid, Naveed Sabir, Ishtiaq Ahmed, Rajwali Khan, Muhammad Irshad, Muhammad Rizwan3 and Sajjad Ahmed. 2011. Diagnosis of subclinical mastitis in bovine Using conventional methods and Electronic detector. *J. Agri. Bio. Sci.* 6 (11) 18-22. ISSN 1990-6145.
101. Zahid Ur Rehman, Din Muhammad, Rajwali Khan, M. Iqbal, Pervez and Ghani Ur Rehman. 2010. Biochemical, Hematological role of feed added milk thistle (*Silybum Marianum*) in broiler. *Life Sci. Int. J.* 4 (2): 1776-1780. ISSN 1992-1705.

#### **iv. Abstract Publication**

- i. Bakht Daraz Khan, Muhammad Subhan Qureshi, Rajwali khan, Sohail Akhtar, Muhammad Iqbal and Nazir Ahmad. 2011. Changes in Milk Fat Percentage with Advancement in Pregnancy and Lactation. Proceedings of International Workshop on Dairy Science Park, Nov 21-23, 2011, Agricultural University Peshawar, Pakistan FT-62.
- ii. Rajwali Khan and Muhammad Subhan Qureshi. 2011. Effect of heavy metal and mineral contents in drinking water on buffalo milk production and quality in urban, peri urban and rural dairy farms of Peshawar. Proceedings of national seminar and workshop on environmental toxicology and health march 8-9, 2011 University of veterinary and animal sciences Lahore. Pakistan.
- iii. Rajwali Khan, M. Subhan Qureshi, Sarzamin Khan, Muhammad Jamal Khan and Rasool Khan. 2010. Drinking water affects heavy metals profiles of milk produced in peri urban dairy farms in Peshawar. Proceedings of 13th National Health Symposium on Impact of Water Quality and Sanitation on Public Health October 27-28, 2009” at Aga Khan University Karachi-Pakistan. (NS2009) Poster presentation
- iv. Ikramullah Khan, Muhammad Subhan Qureshi, Sohail Akhtar, Ijaz Ali, Ghufanullah and Rajwali Khan. 2015. Effect of thermal stress on physiological and reproductive parameters in bos indicus, cross-bred and bos taurus dairy cows a preliminary study. Proc 3<sup>rd</sup> International Workshop Dairy Science Park, Nov 16-18, 2015

#### **Books Published**

1. **Qureshi, M.S. and Rajwali Khan**, 2011. Heavy Metals in Drinking Water of Dairy Buffaloes. VDM Verlag, Germany. ISBN: 978-3-639-32799-1.

2. **Bakht Daraz Khan, Rajwali Khan and Muhammad Subhan Qureshi**, 2013. Effect of Breed, Physiological States & Storage Condition on Milk Fat. Lambert Academic Publishers Germany. ISBN: 978-3-659-41786-3

### **Thesis evaluated as External Examiner**

Total eight (09) Thesis, (04) students of M. Sc (Hons) Livestock Management, (05) student of Animal Nutrition and (1) in department of Poultry Science, Faculty of AH & VS, The University of Agricultural University Peshawar has been evaluated as external examiner in their external viva voice examinations.

### **Laboratory skill**

1. Expertise in molecular biology techniques (DNA/RNA/protein)
2. Sequencing
3. Genotyping
4. PCR including qRT-PCR and semi-qRT-PCR Optimization and reaction
5. DNA, RNA, and Protein Extraction and Quality Control (Spectrophotometer and Nanodrop)
6. Protein Quantification
7. Bioinformatics databases (NCBI, ENSEMBL, UCSC and other bioinformatics software)
8. Primer designing
9. Agarose and SDS-Polyacrylamide gel electrophoresis
10. Microscopy (light and Fluorescence)
11. Atomic absorption spectrophotometry
12. Refractometry
13. Cell fractionation
14. Blotting techniques (Western Blot)
15. Gene Cloning
16. Plasmid preparations and characterization by RE digests
17. Cell culture (Handling, maintenance, growth, transformation, transfection, differentiation, and preservation of different types of mammalian cells in cell culture room).
18. Use of restriction enzymes
19. Growth of competent cells
20. Media preparation
21. Ultrasonography with a high-frequency linear probe for the measurement of meat quality traits in live animals
22. ELIZA
23. Centrifugation
24. DNA-Protein interaction (Electrophoretic Mobility Shift Assay)

### **Workshops and Seminars Participation**

1. Presented paper in “6th International conference on Beef Cattle Improvement and Industrialization in China, December 2023” Northwest A&F University, China
2. Presented paper in “5th International Conference on Beef Cattle Improvement and Industrialization in China, 2019” Northwest A&F University, China
3. Presented paper in “4th International conference on Beef Cattle Improvement and Industrialization in China, 2017” Northwest A&F University, China
4. Presented paper in International Workshop on Dairy Science Park, Nov 21-23, 2011, Agricultural University Peshawar, Pakistan.
5. Presented Paper in “13th National Health Symposium on Impact of Water Quality and Sanitation on Public Health October 27-28, 2009” at Aga Khan University Karachi-Pakistan.

6. Presented paper in Seminar and Workshop on “Environmental Toxicology and Health” March 8-9 2011 at University of Veterinary and Animal Sciences Lahore-Pakistan.
7. Participated in “National Seminar on Bird Flu Surveillance, Prevention and Control May 07, 2008” Directorate of Veterinary Research Institute Peshawar Pakistan.
8. Attended International Workshop on Dairy Science Park, Nov 18-20, 2013, Agricultural University Peshawar, Pakistan.
9. Participated in Consultative Workshop on Development of Pakistan Meat Value Chain on May 5th to 6th, Islamabad organized by Agribusiness Support fund USAID.
10. Participated in 3<sup>rd</sup> international workshop on dairy science 16-18 October, 2015, The University of Agriculture Peshawar Pakistan

### **Trainings short courses.**

1. Successfully completed “Artificial Insemination Training Course” with Grade “A” organized by Animal Husbandry in Service Training Institute (AHITI) Peshawar Pakistan with financial support of European Union funded project SLSP (Strengthening of Livestock Services Program) from 05.03.2007 to 17.03.2007
2. One Day Training on “Silage making” organized by Animal Husbandry in Service Training Institute (AHITI) Peshawar Pakistan.
3. One Month training course on “Poultry farming” organized by Veterinary Research Institute Peshawar from 26.03.2007 to 24.04.2007
4. Training course on “Planning and management of Rural Development Projects” (from Akhtar Hameed Khan National Centre for Rural Development Ministry of Professional and Technical Training Govt. of Pakistan from 17<sup>th</sup> to 21<sup>st</sup> September 2011.
5. Successfully attended training on “Project Formulation” organized by Pakistan Science Foundation at The University of Agriculture Peshawar Pakistan from February 8-9, 2012
6. Successfully completed “One-week computer training course in Office Automation for Offices” organized by Government of Khyber Pakhtunkhwa, Establishment Department at Staff Training Institute Peshawar from 04.11.2013 to 08.11.2013
7. Training on “Monitoring & Evaluation Techniques of Projects” by Human Resource Development UNDP RAHA Pakistan 30<sup>th</sup> December to 1<sup>st</sup> January 2014.
8. Two days Training course on “Projection Techniques for employment and planning organized by Government of Pakistan Ministry of Education, Training and Standards in higher education Islamabad, at Directorate of Manpower Institute from 16<sup>th</sup> to 17<sup>th</sup> January 2014.
9. Training on “Project Preparation/PC-I to PC-V, Monitoring and Evaluation techniques and development of Key performance indicators” organized by Pakistan Planning and Management Institute Islamabad from 10<sup>th</sup> to 14<sup>th</sup> February 2014.
10. Successfully attended one day training workshop on “Hazardous Effects of Drug residues and adulteration in food commodities and Dairy Products” organized by Directorate of Livestock Research and Development Khyber Pakhtunkhwa Peshawar Pakistan
11. Attended five days training course on “Development of Livestock and Dairy Sector” organized by Pakistan Academy for Rural Development Peshawar from 20-24, October, 2014.
12. Successfully completed one-week training on “Carcass Grading and Meat Cuts Standardization” organized by The Agribusiness Project (TAP), at University of Veterinary and Animal Sciences, Lahore from 25<sup>th</sup> -29<sup>th</sup> of May, 2015.
13. Successfully completed One-week training of the trainees (TOTs) on “International Livestock Emergency Guidelines and Standards (LEGS) organized by FAO and USAID at Islamabad from 10<sup>th</sup> to 16<sup>th</sup> January 2016.
14. Successfully trained Veterinary Officer and Lecturers in “Livestock Emergency Guidelines and Standards (LEGS)” training as a trainer from 10<sup>th</sup> to 12<sup>th</sup> August 2016, funded by FAO.

### **Membership in Professional bodies**

1. Registered Member of the Pakistan Veterinary Medical Council as a Veterinary Medical Practitioner
2. Member of Pakistan Veterinary Medical Association
3. Technical and Editorial member of the organizing committee of international workshops on Dairy Science Park organized in 2011, 2013 and 2015.
4. Member of the Agriculture University Teacher Association
5. Member of Agriculture University Teacher Foundation

### **Editor and reviewer services**

The editorial and reviewer services may be verified from the web of science (Publons) <https://publons.com/researcher/1706409/rajwali-khan/>

### **Editorial services in the following journals**

1. Frontiers in Genetics
2. Frontiers in Veterinary Science
3. Animal Health and Production
4. Meat Science and Public Health
5. Sarhad Journal of Agriculture

### **Peer Review services to the following journals (112 for 44 journals)**

#### **Nos of Papers in Journal/Name of the Journal**

1. Adipocyte (1)
2. Animals (10)
3. Annals of Animal Science.(1)
4. Biochemical genetics.(1)
5. Biomolecules.(3)
6. Bioscience reports.(9)
7. BMC microbiology(1)
8. BMC veterinary research(2)
9. Cells.(4)
10. Clinical interventions in aging(1)
11. Communications biology.(1)
12. Cytokine.(1)
13. Czech Journal of Animal Science.(1)
14. Diabetes, metabolic syndrome and obesity.(2)
15. Food science & nutrition.(1)
16. Frontiers in animal science.(1)
17. Frontiers in cell and developmental biology.(1)
18. Frontiers in endocrinology.(1)
19. Frontiers in genetics.(2)
20. Frontiers in oncology.(1)
21. Frontiers in pharmacology.(1)
22. Frontiers in veterinary science.(3)
23. Gene reports.(1)
24. Gene.(2)
25. Genes.(1)
26. Heliyon.(2)

27. Indian Journal of Animal Research.(2)
28. International journal of agricultural science and food technology.(1)
29. International journal of biological macromolecules.(1)
30. International journal of biological macromolecules.(2)
31. International journal of biological sciences(1)
32. International journal of molecular sciences.(2)
33. Italian journal of animal science :(1)
34. Journal of applied animal research.(4)
35. Journal of cellular physiology.(3)
36. Journal of dairying foods & home sciences.(1)
37. Molecular and cellular probes(1)
38. Nutrients.(3)
39. Pharmaceutics.(1)
40. Reproduction in domestic animals.(1)
41. Sarhad journal of agriculture.(4)
42. Saudi journal of biological sciences.(1)
43. Tropical animal health and production.(27)
44. Veterinary medicine and science.(1)

### **Computer literacy**

1. Microsoft Office all versions
2. Internet browsing
3. SPSS 10-20
4. Graphpad Prism all versions

### **Distinctions**

1. Secured first position in M. Sc (Hons) at Faculty level and awarded Gold Medal with Distinction certificate by Governor KP/Chancellor, The University of Agriculture Peshawar
2. First Position in the interview examination conducted by Public Service Commission for the Post of Research Officer (BPS 17) in 2009.

### **Scholarships and Awards**

1. The Presidential award (Certificate and Cash Prize) Outstanding student Scholarship, Northwest Agricultural and Forestry University, China in 2019.
2. Nominated for the award of “Excellent International Student in China-2019” by the Northwest A&F University, to The China Scholar Council (CSC).
3. PhD Scholarship, China Scholarship Council, P.R China
4. Best Performance Award, Awarded by Special Advisor to Chief Minister and Additional Secretary to Government of Khyber Pakhtunkhwa, Agriculture, Livestock, Fisheries and Cooperative Department in the occasion of “3rd Annual Review meeting of Directorate General (Research) Livestock and Dairy Development Department at VR&DIC balogram Swat”.
5. Shield of Appreciations for best performance as a member of technical and editorial organizing committee of “3<sup>rd</sup> International Workshop on Dairy Science Park 2015, 16-18<sup>th</sup> November, By Vice Chancellor, The University of Agriculture Peshawar.

### **Other activities**

1. Member board of studies
2. Focal person for procurement of laboratory equipment and consumables

3. Expert member for breeding policy formulation for the Department of Livestock and Dairy Development (Research Wing) Government of Khyber Pakhtunkhwa Peshawar
4. Expert member for KP Public Service Commission for the recruitment of Veterinary Officer in Livestock and Dairy Development (Research Wing) Government of Khyber Pakhtunkhwa Peshawar and Wild Life department