

DR. GHULAM BILAL

ANIMAL SCIENTIST

Rawalpindi, Punjab, Pakistan | +92-333-9926030 | ghulam.bilal@mail.mcgill.ca

<https://www.linkedin.com/in/dr-ghulam-bilal/>

SUMMARY

Dedicated academic professional with extensive experience in veterinary sciences and animal breeding. Holds a Ph.D. in Animal Breeding and Genetics from PMAS-Arid Agriculture University, Rawalpindi, recognized with multiple awards including the McGill International Doctoral Award. Demonstrated expertise in project management, evidenced by successful completion of various research projects and participation in international conferences like the ADSA-CSAS-ASAS Joint Annual Meeting. Proven track record in academic administration and leadership, serving as a member of academic councils and boards. Skilled in facilitating seminars, workshops, and training programs, enhancing educational and research initiatives. Committed to continuous learning, evidenced by participation in professional training courses and workshops, including those organized by prestigious institutions like McGill University and the Pakistan Council for Science and Technology.

SKILLS

- Project Management
- Research and Analysis
- Academic Administration
- Leadership and Team Management
- Data Interpretation and Presentation
- Scientific Writing and Publication
- Training and Development
- Collaborative Networking
- Strategic Planning
- Event Coordination
- Technical Expertise in Animal Breeding and Genetics
- Evaluation and Assessment Techniques
- Digital Marketing Strategies
- Public Procurement Procedures
- Monitoring and Evaluation Techniques
- Statistical Analysis
- Genomic Selection Methods
- Livestock Improvement Strategies
- Genetic Parameter Estimation
- Seminar and Workshop Facilitation
- MoU Negotiation and Collaboration
- Policy Advocacy
- Quality Enhancement Initiatives
- Stakeholder Engagement
- Academic Advising
- Grant Writing and Fundraising
- Online Learning Platforms
- Curriculum Development
- Genetics Research Methods
- Livestock Breeding Programs

PROFESSIONAL QUALIFICATION

PhD in Animal Science (Quantitative Genetics)

- McGill University, Montreal, Quebec, Canada

2008-2012

M.Sc. (Hons.) in Animal Breeding and Genetics

- University of Agriculture, Faisalabad, Pakistan

2004-2007

B.Sc. (Hons.) in Animal Husbandry

- University of Agriculture, Faisalabad, Pakistan

2000-2004

WORK EXPERIENCE

Central Project Director

June 08, 2021 - Present

National Centre for Livestock Breeding Genetic and Genomics (NCLBG&G), PMAS-Arid Agriculture University, Rawalpindi, Pakistan

- **Strategic Planning and Implementation**
 - Develop and execute strategic plans for advancing livestock breeding and genomics research.
 - Coordinate interdisciplinary teams to ensure alignment with project objectives and timelines, optimizing resources for maximum efficiency.
- **Stakeholder Engagement and Collaboration**
 - Foster partnerships with government agencies, research institutions, and industry stakeholders to promote knowledge exchange and collaboration.
 - Facilitate workshops and seminars to disseminate research findings and solicit feedback, enhancing project relevance and impact.

Central Project Director (Additional Charge)

February 08, 2021 - June 07, 2021

National Centre for Livestock Breeding Genetic and Genomics, PMAS-Arid Agriculture University, Rawalpindi, Pakistan

- **Project Oversight and Management**
 - Direct the planning, execution, and monitoring of projects related to livestock breeding and genomics, ensuring adherence to timelines and budgetary constraints.
 - Implement robust project management practices to optimize resource allocation and mitigate risks, fostering a culture of accountability and excellence.
- **Team Leadership and Coordination**
 - Provide guidance and support to project teams, fostering a collaborative work environment conducive to innovation and knowledge sharing.
 - Coordinate with internal and external stakeholders to align project objectives with institutional goals, driving synergies and maximizing impact.

Scientific Director/Director-II

November 19, 2018 - June 07, 2021

National Centre for Livestock Breeding Genetics and Genomics, PMAS-Arid Agriculture University, Rawalpindi, Pakistan

• Research Strategy Development

- Formulate and implement strategic research plans to advance knowledge in livestock breeding, genetics, and genomics, aligning with institutional objectives and industry trends.
- Lead multidisciplinary research teams in designing experiments, analyzing data, and disseminating findings through publications and presentations.

• Institutional Leadership and Advocacy

- Provide visionary leadership to drive institutional growth and excellence in livestock research, fostering a culture of innovation and continuous improvement.
- Advocate for the center's mission and objectives through engagement with stakeholders, policymakers, and industry partners, promoting collaboration and resource mobilization.

Associate Professor Dept of Animal Breeding and Genetics

March 30, 2022 - Present

Faculty of Veterinary and Animal Sciences, PMAS-Arid Agriculture University, Rawalpindi, Pakistan

• Teaching and Curriculum Development

- Develop and deliver undergraduate and graduate courses in animal breeding and genetics, utilizing innovative pedagogical methods to enhance student learning outcomes.
- Collaborate with colleagues to review and revise curriculum content, ensuring alignment with industry standards and emerging research trends.

• Research Supervision and Mentorship

- Supervise research projects undertaken by graduate students, providing guidance on experimental design, data analysis, and manuscript preparation.
- Mentor junior faculty members and research staff, fostering their professional development and facilitating their integration into the academic community.

Assistant Professor Dept of Animal Breeding and Genetics

December 14, 2012 - March 29, 2022

Faculty of Veterinary and Animal Sciences, PMAS-Arid Agriculture University, Rawalpindi, Pakistan

• Instruction and Curriculum Development

- Deliver engaging and informative lectures, seminars, and practical sessions to undergraduate and postgraduate students in animal breeding and genetics.
- Contribute to the development and enhancement of the department's curriculum, integrating current research findings and best practices into course content.

• Research and Scholarly Activities

- Conduct innovative research in the field of animal breeding and genetics, publishing findings in peer-reviewed journals and presenting at national and international conferences.
- Secure research grants and funding to support ongoing projects, collaborating with colleagues and students to explore new avenues of inquiry and knowledge dissemination.

Graduate Student Assistant Dept of Animal Science

September 2008 - December 2008

McGill University, Montreal, Quebec, Canada

January 2011 - July 2011

• Research Support and Data Analysis

- Assisted faculty members and senior researchers in conducting experiments, collecting data, and analyzing results in the field of animal science.
- Contributed to literature reviews, data interpretation, and manuscript preparation, supporting the advancement of research projects.

• Administrative Assistance

- Provided administrative support to departmental staff, including organizing meetings, maintaining records, and coordinating logistics for research activities and events.
- Assisted in the preparation of grant proposals, budgets, and project reports, ensuring compliance with funding agency requirements and deadlines.

Lecturer in Animal Breeding & Genetics

June 2007 - August 2008

University College of Veterinary & Animal Sciences,

The Islamic University of Bahawalpur, Pakistan

• Course Instruction and Delivery

- Conducted lectures, tutorials, and laboratory sessions for undergraduate students in the field of animal breeding and genetics, ensuring clarity and relevance of content.
- Developed course materials, including lecture slides, assignments, and assessments, to facilitate student learning and engagement.

• Student Guidance and Mentorship

- Provided academic guidance and support to students, including advising on course selection, career pathways, and research opportunities.
- Mentored students in conducting research projects, guiding them through experimental design, data analysis, and presentation of findings.

Research Fellow

January 2005 - June 2005

Project: "Development of milk recording and genetic evaluation models in Sahiwal cattle"

Department of Animal Breeding and Genetics, University of Agriculture, Faisalabad, Pakistan

- Assisted in the implementation of research activities as part of the Agriculture Linkages Program (ALP), focusing on the development of milk recording and genetic evaluation models in Sahiwal cattle.

COURSES TAUGHT

Postgraduate Courses:

1. Advanced Concepts in Genetics
2. Population and Quantitative Genetics
3. Biometrical Techniques in Animal Breeding
4. Biometrical Genetics
5. Statistical Genetics and R programming
6. Population Genetics

Undergraduate Courses (DVM, BS Poultry Science, BS Animal Science):

1. Introductory Population Genetics
2. Animal Breeding and Genetics-I
3. Animal Breeding and Genetics-II
4. Introduction to Animal Breeding and Genetics
5. Principles of Genetics & Population Genetics
6. Animal Breeding Plans and Policies
7. Population Genetics

POSTGRADUATE STUDENTS SUPERVISED

As Major Supervisor:

- **Jalal Akbar Baig (2023)**
 - M.Phil in Animal Breeding & Genetics
 - Thesis: "Estimation of Genetic Parameters for Milk Yield and Milk Composition Traits in Sahiwal Cattle"
 - Department: Animal Breeding and Genetics, PMAS-Arid Agriculture University Rawalpindi.
- **Hafiz M. Bilal Akhter (2023)**
 - M.Phil in Animal Breeding & Genetics
 - Thesis: "Characterization of Salt Range sheep breed in arid region of Punjab"
 - Department: Animal Breeding and Genetics, PMAS-Arid Agriculture University Rawalpindi.
- **Iqtidar Ali (16-Arid-5827) (2019)**
 - M.Phil in Animal Breeding & Genetics
 - Thesis: "Factors affecting beef production traits in Dhanni cattle"
 - Department: Animal Breeding and Genetics, PMAS-Arid Agriculture University Rawalpindi.
- **Syed Hassan Ali Shah (AS-552122) (2018)**
 - M.Sc.(Hons) in Livestock Management
 - Thesis: "Comparative study of economic traits of Nili Ravi Buffaloes in District Jhelum and Okara of The Punjab"
 - Department: Agricultural Sciences, Allama Iqbal Open University, Islamabad.

Member, Supervisory Committee

- **Andelib Qayyum (2023)**
 - M.Phil in Animal Breeding & Genetics
 - Thesis: "Characterization of Dhanni cattle in Potohar region of Punjab"
 - Department: Animal Breeding and Genetics, PMAS-Arid Agriculture University Rawalpindi.
- **Rana M. Shabbir (2023)**
 - M.Phil in Animal Breeding & Genetics
 - Thesis: "Genetic perspective of dancing gait in Nachi goat breed"
 - Department: Animal Breeding and Genetics, PMAS-Arid Agriculture University Rawalpindi.
- **Raja Danish Muner (16-Arid-5829) (2023)**
 - PhD in Animal Breeding & Genetics
 - Thesis: "Emancipating phenotypic and genotypic variations among Punjab goat breeds using SNP chip"
 - Department: Animal Breeding and Genetics, PMAS-Arid Agriculture University Rawalpindi.
- **Muhammad Abdul Rahman (06-ARID-65) (2019)**
 - PhD in Economics
 - Thesis: "The impact of climate change on dairy production for Pakistan using Ricardian approach"
 - Department: Economics, PMAS-Arid Agriculture University Rawalpindi.
- **Faiza Farooq (13-Arid-3120) (2019)**
 - M.Phil in Biochemistry
 - Thesis: "Functional characterization of TM6SF2 gene under steatotic phenotypes"
 - Department: University Institute of Biochemistry and Biotechnology, PMAS-Arid Agriculture University Rawalpindi.
- **Nouman Wahid (11-Arid-982) (2019)**
 - M.Phil in Animal Breeding & Genetics
 - Thesis: "Status of A1/A2 type milk protein among Pakistani milch animals"
 - Department: Animal Breeding and Genetics, PMAS-Arid Agriculture University Rawalpindi.

RESEARCH PUBLICATIONS

Peer-Reviewed Conference/Meeting Abstracts: Total No. is 30. Selected three publications are given as under:-

1. **G. Bilal**, Jalal Akber, Andelib Qayyum and H. M. Waheed. 2022. The effect of temperature humidity index (THI) on the performance of livestock species. International Conference on "Climate Change: Impacts & Solutions" organized by Institute of Soil and Environmental Sciences, University of Agriculture Faisalabad during November 07-09, 2022, Abstract 78, Abstract Book page 93.
2. **G. Bilal** and H. M. Waheed. 2022. Policy brief on climate smart livestock breeding in Pakistan. 1st International Conference on "Climate Resilient Agriculture for Sustainable Development & Food Security (ICRA-SD & FS-2022)" organized by Department of Agriculture Sciences, Allama Iqbal Open University, Islamabad during September 5-7, 2022, Abstract 41, Abstract Book page 47.
3. Mustafa, H., Ullah, M., Akhtar, M., **Bilal, G.**, & Farooq, M. K. 2022. Signatures of Positive Selection in Sahiwal and Cholistani Cattle Breeds. Accepted for oral presentation at the International Congress on Domestic Animal Breeding Genetics and Husbandry held at Samsun, Turkey during October 03-05, 2022, Abstract 154.

Peer-Reviewed Journal Publications: Total No. is 24. Selected ten publications are given as under:-

1. J. A. Baig, **G. Bilal**, M. Moaen-ud-din, M. Ulhaq, H. M. Waheed, M. S. Khan, A. Qayyum, F. Ahad, K. Farooq, M. S. Anwar, T. Israr, M. Akhtar, A. Manan, M. I. Qamar, M. I. Gorski, A. Rehman, M. Irfan, F. Ahmed, B. Haider. 2023. Estimates of Heritabilities of Milk Fat and Milk Protein and Their Correlations with Milk Yield in Sahiwal Cattle of Punjab Pakistan. *Tropical Anim. Sci. J.* 46(4):403-409.
2. Muner, R.D., M. Moaen-ud-Din, **G. Bilal**, H. M. Waheed, M. S. Khan, M. J. Asad & Z. H. Kuthu. 2021. Exploring genetic diversity and population structure of Punjab goat breeds using Illumina 50 K SNP bead chip. *Trop. Anim. Health Prod.* 53, 368 <https://doi.org/10.1007/s11250-021-02825-w>.
3. **Bilal, G.**, R. I. Cue and J. F. Hayes. 2016. Genetic and phenotypic associations of type traits and body condition score with dry matter intake, milk yield and number of breedings in first lactation Canadian Holstein Cows. *Can. J. Anim. Sci.* 96(3): 434-447.

4. **Bilal, G.,** R. I. Cue, A. F. Mustafa and J. F. Hayes. 2014. Genetic parameters of individual fatty acids in milk of Canadian Holsteins. *J Dairy Sci.* 97:1150–1156.
5. Moaen-ud-Din, M. and **G. Bilal.** 2016. Genomic selection of Nili-Ravi buffalo: A choice for buffalo breeders. *Buffalo Bulletin* 35(4):605-615.
6. Moaen-ud-Din, M. and **G. Bilal.** 2015. Sequence diversity and molecular evolutionary rates between buffalo and cattle. *J. Anim. Breed. Genet.* 132(1):74-84.
7. Moaen-ud-Din, M., **G. Bilal** and M.S. Khan. 2014. Short communication: Potential of Genomic selection in Sahiwal cattle. *Pak. J. Agri. Sci.* 51(3): 695-700.
8. **Bilal, G.,** R. I. Cue, A. F. Mustafa and J. F. Hayes. 2012. Estimates of heritabilities and genetic correlations among milk fatty acid unsaturation indices in Canadian Holsteins. *J Dairy Sci.* 95:7367-7371.
9. **Bilal, G.,** M. S. Khan, I. R. Bajwa and M. Shafiq. 2008. Genetic control of test-day milk yield in Sahiwal cattle. *Pakistan Vet. J.* 28: 21-24.
10. M. S. Khan, **G. Bilal,** I. R. Bajwa, Z. Rehman and S. Ahmad. 2008. Estimation of breeding values of Sahiwal cattle using test day milk yields. *Pakistan Vet. J.* 28: 131-135.

Popular Article

Title: "**Per Animal Productivity Matters for Food Security**"

Publisher: **The Daily Destination Islamabad, Pakistan**

Date: September 22, 2023

Volume: VI, Issue No. 125, Page 4

RESEARCH PROJECTS

Total Funds: 17.27 Million PKR

1. Development of genetic evaluation model for Dhanni cattle as potential beef cattle in Potohar region of Punjab

- o Funding: Pakistan Science Foundation, Islamabad, Pakistan
- o Amount: 3.10 million PKR
- o Duration: 3 years
- o Role: Principal Investigator (Completed)

2. Development of breeding objective for desirable milk protein quality of dairy animals

- o Funding: Higher Education Commission (HEC), Islamabad, Pakistan
- o Amount: 3.27 million PKR
- o Duration: 2 years
- o Role: Principal Investigator (Completed)

3. Development of breed identification markers for Pakistani dairy cattle breeds

- o Funding: Pakistan Science Foundation, Islamabad, Pakistan
- o Amount: 4.42 million PKR
- o Duration: 3 years
- o Role: Co-Principal Investigator (Completed)

4. Molecular quantification and breeding of heritage chickens (Asil) for better feed efficiency

- o Funding: Pakistan Science Foundation, Islamabad, Pakistan
- o Amount: 6.48 million PKR
- o Duration: 3 years
- o Role: Team Member (Ongoing)

DEVELOPMENT PROJECT

Total Funds: 756.519 Million PKR

Establishment of National Centre for Livestock Breeding, Genetics and Genomics at Pir Mehr Ali Shah Arid Agriculture University Rawalpindi (NCLBG&G)

- Funding: Planning Commission of Pakistan through HEC
- Amount: 756.519 million PKR
- Duration: 3 years
- Role: Resource Person [approved on 29.03.2018 in CDWP meeting at Planning Commission of Pakistan and is ongoing]

OTHER ADMINISTRATIVE RESPONSIBILITIES

1. Secretary, Scientific Committee of NCLBG&G

- o Duration: November 19, 2018, to September 21, 2021 (2 years, 10 months)

2. Chairperson, Scientific Committee of NCLBG&G

- o Duration: September 22, 2021, to present (2 years, 3 months)

3. Secretary, Investment Committee for Endowment Fund of NCLBG&G

- o Duration: February 18, 2019, to June 07, 2021 (2 years, 3 months)

4. Secretary, Endowment Fund Management Committee of NCLBG&G

- o Duration: June 08, 2021, to present (2 years, 7 months)

5. Chairperson, Technical Award Committee of Endowment Fund of NCLBG&G

- o Duration: June 08, 2021, to present (2 years, 7 months)

6. Secretary, Department of Animal Breeding and Genetics

- o Duration: October 2018 to February 2020 (1 year, 5 months)

7. Secretary, Department of Livestock Production and Management

- o Duration: June 2015 to September 2018 (3 years, 3 months)

TECHNICAL SERVICES OUTSIDE THE UNIVERSITY

1. Consultative Dialogue on Prospects of Developing Indigenous Breeds for sustainable poultry production in Pakistan (November 15, 2023).
2. Online meeting of International Material Transfer Agreement Committee (August 08, 2023).
3. Member of inspection team for registration of breeding services offered by Prime Genetics (September 22, 2022).
4. External examiner for thesis evaluation of Mr. Sohaib Khan (July 26, 2022).
5. External examiner for thesis evaluation of Ms. Fatima Shaheen (January 12, 2022).
6. Member of inspection team for registration of breeding services offered by TROJAN SIREs, HALLA SIREs, SUPER SAHIWAL SIREs, and ALHAIWAN SIREs (August 25-26, 2021).
7. Technical expert in a meeting chaired by Chairman Livestock Breeding Services Authority Punjab (January 7, 2021).
8. Member of inspection team for registration of breeding services offered by Centre of Excellence for Bovine Genetics (November 13, 2020).
9. External Examiner for evaluation of thesis of Fazeela Zaka (October 2020).
10. Member of inspection team for registration of PTP/Genetic Evaluation Program of Sahiwal cattle (September 17, 2020).

SERVICES AND ACTIVITIES FOR NCLBG&G PROJECT

1. Lead showcasing of NCLBG&G achievements at VC Forum 2023.
2. Participated in Projector Directors meeting at Planning Commission of Pakistan.
3. Attended National Steering Committee and Scientific Committee meetings.
4. Participated in SIAB meetings.
5. Conducted progress reviews and training sessions at Sub-Centers.
6. Visited Sub-Centers for research/development progress reviews and inaugurations.
7. Participated in Groundbreaking Ceremony of NCLBG&G component.
8. Member/Convener of recruitment committee(s).
9. Development and supervision of herd testing service for Sahiwal cattle.
10. Preparation of work plans, cash plans, and progress reports.
11. Coordinated quarterly and monthly progress reports of the project.
12. Updated consolidated physical and financial progress of the project on PMES.
13. Contributed to the development and approval of PC-1 for NCLBG&G project.
14. Served as Secretary, Chairperson, and Member of various committees within NCLBG&G.
15. Management Committee member of NCLBG&G at PMAS-Arid Agriculture University Rawalpindi.

SERVICES FOR FACULTY OF VETERINARY AND ANIMAL SCIENCES

1. Member of Academic Council at PMAS-AAUR.
2. Member of Faculty Board of FV&AS.
3. Member of Evaluation/Scrutiny Committee for Ihsas Undergraduate Scholarship Program for DVM Students (2020).
4. Member of Internship Evaluation Committee for Final Semester DVM students (2020).
5. Member of Finance Committee for the celebration of FV&AS-AAUR's permanent accreditation with PVMC (February 07, 2023).
6. Internship supervisor for Mr. Ali Hassan and Muhammad Rafae Gohar (DVM 10th Semester students) during 2023.

SERVICES FOR DEPARTMENT OF ANIMAL BREEDING AND GENETICS

1. Member of Department Board of Studies of DABG.
2. Secretary of Department Board of Studies of DABG until February 2020.
3. Contribution to the development/updating of postgraduate courses for M.Phil and PhD programs in ABG.
4. Contribution to obtaining NOC for M.Phil & PhD Program from HEC for DABG.
5. Assistance in research data analyses of postgraduate students.
6. Focal person of DABG for preparation of Self-Assessment Reports of offered degree programs from April 27, 2022, to date.

TECHNICAL SERVICES OUTSIDE THE UNIVERSITY

1. Consultative Dialogue on Prospects of Developing Indigenous Breeds for sustainable poultry production in Pakistan (November 15, 2023).
2. Online meeting of International Material Transfer Agreement Committee (August 08, 2023).
3. Member of inspection team for registration of breeding services offered by Prime Genetics (September 22, 2022).
4. External examiner for thesis evaluation of Mr. Sohaib Khan (July 26, 2022).
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6. Member of inspection team for registration of breeding services offered by TROJAN SIREs, HALLA SIREs, SUPER SAHIWAL SIREs, and ALHAIWAN SIREs (August 25-26, 2021).
7. Technical expert in a meeting chaired by Chairman Livestock Breeding Services Authority Punjab (January 7, 2021).
8. Member of inspection team for registration of breeding services offered by Centre of Excellence for Bovine Genetics (November 13, 2020).
9. External Examiner for evaluation of thesis of Fazeela Zaka (October 2020).
10. Member of inspection team for registration of PTP/Genetic Evaluation Program of Sahiwal cattle (September 17, 2020).

PROFESSIONAL TRAININGS RECEIVED

- **Monitoring & Evaluation Techniques**
 - Organized by PPMI, Islamabad | Date: July 19-21, 2023
- **Fundamentals of Digital Marketing**
 - Online Certificate Program by Google Digital Garage | Date: July 24, 2022
- **Orientation Session on Project Management Software Solution**
 - Organized by HEC, Islamabad | Date: February 28, 2022
- **Project Directors Training**
 - Batch 1 of two-week special training course
 - Organized by PPMI, Islamabad | Date: January 17-28, 2022
- **International Training Workshop on Genomic Selection**
 - Organized by Laboratories of Animal Breeding and Genetics, PMAS-Arid Agriculture University Rawalpindi | Date: March 8-9, 2017
- **Workshop on Micro-Teaching: Becoming a Reflective Teacher**
 - Organized by Faculty Development Academy, CIIT, Islamabad | Date: January 30 to February 03, 2017
- **Certificate Program in Public Procurement**
 - Offered by South Asia Regional Procurement Services, The World Bank
- **National Workshop on Country-Domestic Animal Genetic Resources Information System (C-DAGRIS) Training in Pakistan**
 - Organized by University of Agriculture Faisalabad, Pakistan | Date: November 15-17, 2012
- **Macdonald Innovations for Teaching Improvement (MITI) Graduate Teaching Workshop**
 - McGill University, Montreal, Quebec, Canada | Date: December 3 and 5, 2008
- **Workshop on Application of Statistics in Agriculture Research**
 - Organized by Learning Innovation Division, Higher Education Commission
 - Held at The Islamia University of Bahawalpur | Date: April 08-10, 2008
- **HEC-BC JHEL Program II National Workshop on Genetic Resources and Molecular Techniques in Livestock Production**
 - Organized by University of Agriculture, Faisalabad, Pakistan | Date: March 20-22, 2008
- **EU Asia Link Project Short Course on Livestock Ecology, Sustainable Land Use and Livestock Systems**
 - Organized by University of Agriculture, Faisalabad, Pakistan | Date: January 12-24, 2004

PARTICIPATION AS INVITED SPEAKER/RESOURCE PERSON

- **National Seminar on Agriculture/Food Security**
 - Location: Jinnah Convention Centre Islamabad | Date: July 10, 2023
- **Hands-on Scientific Training: "Animal Genetic Resources, Strategies for Improved Use and Conservation"**
 - University of Poonch Rawalakot, AJK | Date: May 02-06, 2023
- **Hands-on Scientific Training: "Animal Genetic Resources, Strategies for Improved Use and Conservation"**
 - Lasbela University of Agriculture, Water and Marine Sciences, Uthal Balochistan | Date: March 13-17, 2023
- **Animal Breeding Training Program: "Use of WOMBAT for Estimation of Genetic Parameters and Breeding Values"**
 - Organized by NCLBG&G Sub Center at CUVAS-Bahawalpur | Date: September 05-11, 2022
- **Vet. Professionals Training: "Animal Performance Recording, Data Collection and Analysis for Genetic Improvement"**
 - University of Agriculture Faisalabad | Date: July 22, 2022
- **ABG Faculty/Researcher Training: "Genetic Prediction in Livestock Breeding"**
 - PMAS-AAUR | Date: March 14-18, 2022
- **Para-vet Staff Training: "Effective Data Acquisition for Genetic Improvement of Livestock"**
 - PMAS-AAUR | Date: January 10-14, 2022
- **Professional Training: "R Programming and Genomic Analysis"**
 - University of Agriculture Peshawar, KPK | Date: December 02-03, 2021
- **Farmer Training: "Integrating Genetic Improvement in Livestock Production for Improving Productivity and Profitability"**
 - Cholistan University of Veterinary and Animal Science, Bahawalpur | Date: October 11-15, 2021
- **Veterinary Professionals Training: "Genetics Related to Health and Fertility for Profitable Livestock Production"**
 - PMAS-AAUR | Date: August 30 to September 03, 2021
- **ABG Professionals Training: "Phenotypic Characterization of Livestock Breeds of Pakistan"**
 - PMAS-AAUR | Date: June 21-25, 2021
- **Seminar: "Improving Sahiwal Genetics-Pedigree and Performance Recording"**
 - Sahiwal Cattle Breeder Society at Watto Farm, Khanewal | Date: March 06, 2021
- **Seminar: "Application of Genomics for Livestock Improvement in Pakistan"**
 - Directorate of Advanced Studies PMAS-AAUR | Date: February 25, 2021
- **International Conference: "Omics for Animal Sciences: Opportunities and Challenges"**
 - UVAS, Lahore | Date: February 20-21, 2018
- **Capacity Building Training: "Conservation, Propagation and Development of Dhanni, Lohani & Dajal Breeds of Cattle in Punjab"**
 - BLPRI, Attock | Date: May 24, 2017
- **National Seminar: "Development of Dual Purpose Chicken Breed for Rural Poultry Sector of Pakistan"**
 - NARC, Islamabad | Date: May 15, 2017

PARTICIPATION IN SEMINARS, WORKSHOPS, CONFERENCES, WEBINARS, AND SYMPOSIUMS

- **Seminar on "Epigenetics and Animal Nutrition"**
 - Organizer: Department of Livestock Production and Management, PMAS-Arid Agriculture University Rawalpindi | Date: December 21, 2023
- **Workshop: "Genomic Medicine and Recessive Disorders"**
 - Organizers: University of Lausanne, Switzerland; Pakistan Science Foundation | Date: November 21, 2023
- **International Seminar on "Gut Health Management for Poultry towards One Health"**
 - Organizer: Department of Livestock Production and Management, PMAS-AAUR | Date: December 26, 2022
- **Seminar on "Future Scenario of Livestock Breeding in Punjab"**
 - Organizer: Directorate of Livestock Production Research Institute, Bahadur Nagar Okara | Date: December 17, 2022
- **World Science Day Commemoration**
 - Organizers: UNESCO, COMSTEC, COMSATS, PAS, ECOSF, PSF
 - Theme: Importance of Basic Sciences for Sustainable Development
 - Venue: COMSTEC, Islamabad | Date: November 16, 2022
- **International Hybrid Seminar on Clinical and Genetic Architecture of Congenital Hypogonadotropic Hypogonadism**
 - Organizer: UIBB, PMAS-AAUR | Date: July 27, 2022
- **Seminar on "Importance of Conducting Surveys for Effective Self-Assessment Reports"**
 - Organizer: Directorate of Quality Enhancement Cell, PMAS-AAUR | Date: June 03, 2022
- **National Workshop on Genetic Improvement of Livestock Breeds for Milk and Meat**
 - Organizers: Livestock and Dairy Development Board; Pakistan Agriculture Research Council | Date: January 06, 2021
- **Pakistan Agriculture Webinar: "Genetic Improvement of Dairy Cattle-American and Pakistani Experiences"**
 - Organizer: PMAS-AAUR | Date: August 08, 2020
- **Online International Symposium: "Camel as the Animal of the Future"**
 - Organizer: Virtual University of Pakistan | Date: June 22, 2020
- **Launch Conference: "National Academy of Higher Education (NAHE)"**
 - Venue: HEC Islamabad | Date: June 12, 2019
- **International Workshop on "Goat Breeding and Marketing in Genomics Era"**
 - Organizer: Laboratories of Animal Breeding and Genetics, PMAS-AAUR | Date: March 6-7, 2017
- **National Workshop on "Organic Food and Health: Avenues of Innovation and Entrepreneurship"**
 - Organizer: PCST, Islamabad | Date: June 02, 2016
- **International Seminar on "Improvement and Development of the Korean Livestock Industry by Saemaul Undong & Quarantine and Inspection of Animal Products"**
 - Organizer: FV&AS, PMAS-AAUR | Date: February 25, 2016
- **Consultative Workshop on "Goat Breeding in Pakistan"**
 - Organizer: Laboratories of Animal Breeding and Genetics, PMAS-AAUR | Date: December 17, 2015
- **Workshop on "Breeding and Genetics"**
 - Venue: University of Veterinary and Animal Sciences, Lahore, Pakistan | Date: October 07, 2013

INTERNATIONAL CONFERENCES:

- **2012 ADSA-CSAS-ASAS Joint Annual Meeting**
 - Location: Phoenix, Arizona, USA
 - Date: July 15-19, 2012
- **2009 ADSA-CSAS-ASAS Joint Annual Meeting**
 - Location: Montreal, Quebec, Canada
 - Date: July 12-16, 2009

COLLABORATION MEETINGS, MOUS, AND VISITS

1. Meeting with Deputy Secretary (Technical) and DG (Production) L&DD Department, Lahore, Punjab Pakistan - October 03, 2023
2. MoU signing meeting with Chairman of The Juristic Foundation, Islamabad - December 14, 2022
3. Collaboration meeting with Vice Chancellor CUVAS-Bahawalpur and Chairman of The Juristic Foundation, Islamabad - October 13-14, 2022
4. Meeting with President and Director (Technical) of Sahiwal Cattle Breeder Society for smooth running of SPU component - July 21, 2022
5. Collaboration meeting with Department of Animal Science Iowa State University USA for foreign training - July 19, 2022
6. Consortium on Livestock Genomics meeting for budget allocation - June 09, 2022
7. Meeting with Chief Research Officer, Buffalo Research Institute, Pattuki, Qasur - June 09, 2022
8. Meeting with Vice Chancellor-CUVAS Bahawalpur for R&D targets - June 03, 2022
9. Consortium on Livestock Genomics meeting for PC-I development - May 27, 2022
10. Meeting with Livestock breeder and Managing Director Scion Genetics, Karachi - May 16, 2022
11. Collaboration meeting with Department of Animal Science Iowa State University USA for foreign training and MoU signing - March 17, 2022
12. Meeting with Dr. Gregor Gorjanc from CTLGH/Roslin/SRUC-Scotland - December 07, 2021
13. Meeting with President and Director (Technical) of Sahiwal Cattle Breeder Society - October 26, 2021
14. Meeting with DG(Production) L&DD Department at Bahawalpur South Punjab - October 13, 2021
15. MoU signing ceremony with Livestock and Dairy Development (L&DD) Department Punjab - April 30, 2020
16. MoU signing ceremony with Punjab Livestock and Dairy Development Board - April 30, 2020
17. Meeting with Secretary L&DD Punjab Mr. Nadeem Irshad Kayani - February 06, 2020
18. Meeting with Registrar Punjab Livestock Breeding Services Authority (LBSA) - November 18, 2019
19. Visit to Livestock Improvement Corporation (LIC) and DairyNZ, New Zealand for MoU signing - July 14-22, 2019
20. MoU signing ceremony with CAAS-ILRI Joint Laboratory on Livestock and Forage Genetic Resources (JLLFGR), Beijing China - April 10, 2019
21. MoU signing ceremony with Sahiwal Cattle Breeders Society - January 14, 2019

HONOURS AND AWARDS

- **Research Productivity Award:**
 - Presented by Pakistan Council for Science and Technology (PCST, Islamabad, Pakistan) for the Year 2014-2015.
- **Most Productive Scientist Recognition:**
 - Acknowledged by Pakistan Council for Science and Technology (PCST), Islamabad, Pakistan, as the most productive scientist of PMAS-Arid Agriculture University, Rawalpindi during 2014-15.

ACADEMIC ACHIEVEMENTS

- **GREAT Award (Graduate Research Enhancement and Travel):**
 - Received from McGill University, Canada for oral presentation of research paper at Joint Annual Meeting in Phoenix, Arizona, USA, July 2012.
- **Provost Graduate Fellowship:**
 - Awarded by McGill University, Montreal, Canada in 2008.
- **McGill International Doctoral Award (MIDA):**
 - Granted by McGill University, Montreal, Quebec, Canada from September 2008 to August 2012.
- **PhD Scholarship in Animal Breeding and Genetics:**
 - Awarded by PMAS-Arid Agriculture University, Rawalpindi, Pakistan under the Faculty Development Program from September 2008 to August 2012 for the project titled "Establishment of Faculty of Veterinary and Animal Science at PMAS-Arid Agriculture University, Rawalpindi".
- **University Merit Scholarship:**
 - Received from the University of Agriculture, Faisalabad, Pakistan during 2004 to 2007.
- **Internal Merit Scholarship:**
 - Granted by the University of Agriculture, Faisalabad during 2001 to 2004.

MEMBERSHIP OF LEARNED SOCIETIES

1. **The Genetics Society of America (GSA):**
 - Member, Rockville, MD, USA (2023-2024).
2. **American Dairy Science Association (ADSA):**
 - Professional Member, Champaign, IL, USA (2014).
3. **Asian Council of Science Editors (ACSE):**
 - Member, Dubai, UAE (2021).
4. **Pakistan Veterinary Medical Council (PVMC):**
 - Lifelong Registered Animal Husbandry Graduate (RAHG), Islamabad, Pakistan (since December 2012).
5. **Pakistan Veterinary Medical Council (PVMC):**
 - Registered Teaching Faculty (up to 2026), Islamabad, Pakistan.
6. **McGill Alumni Association (MAA):**
 - Member, Montreal, Quebec, Canada.
7. **Topical Advisory Panel - Animals Journal:**
 - Member, [Animals Journal](#).
8. **Journal of Agriculture and Crops:**
 - Editorial Board Member, [Journal of Agriculture and Crops](#).
9. **Journal of Animal and Plant Sciences:**
 - Editorial Board Member, [Journal of Animal and Plant Sciences](#).
10. **Journal of Agriculture and Livestock Farming:**
 - Editorial Board Member, [Journal of Agriculture and Livestock Farming](#).

LANGUAGES

- **English (fluent)**
- **Urdu (Native)**
- **Punjabi (Native)**
- **French (Basic)**