

Dr. Ahmad Ali (HEC Approved Supervisor)

E-mail: draali@uswat.edu.pk; aali_swat@yahoo.com

Cell: 0092-334-5495028

CNIC: 15601-0972135-1

Address: Center for Plant Sciences and Biodiversity, Academic Block-C,
Main Campus, University of Swat, Charbagh Swat 19120, Pakistan



Professional & Research experience:

Research Interest:

- Developing strategies to improve crop production/yield in rainfed areas with focus on utilizing bio fertilizers / organic fertilizers
- Genetic analysis of quantitative traits related to grain yield and quality of cereals, resistance to biotic and abiotic stress by means of linkage maps and association mapping.
- Functional analysis of abiotic stress regulated genes.

Present Position:

- Associate Professor (Regular), Center for Plant Sciences and Biodiversity, University of Swat, Khyber Pakhtunkhwa (January 01, 2021 till date)
 - Assistant Professor (Regular), Center for Plant Sciences and Biodiversity, University of Swat, Khyber Pakhtunkhwa (July 01, 2014 till December 31, 2020)
 - Assistant Professor (IPFP), Center for Plant Sciences and Biodiversity, University of Swat, Khyber Pakhtunkhwa (September 20, 2013 till June 30, 2014)
 - Director, Research and Technological Development, University of Swat (December 2015, till March 2020)
 - In-Charge, Department of Environmental and Conservation Sciences, University of Swat (February 14, 2017 till June 20, 2018).
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Academic Background:

- **Ph. D Botany 2013** Utilization of the Triticeae Primary Gene Pool to Improve Drought Tolerance in Bread Wheat (*Triticum aestivum* L.)” from PMAS Arid Agriculture University Rawalpindi.
- **M. Phil Botany 2008** “Morphological and Physiological Studies of Ethnobotanically Important Grasses of Potohar Region” from PMAS Arid Agriculture University Rawalpindi
- **M.Sc. Botany 2002:** University of Peshawar, Pakistan
- **B.Sc (Che. Zoo. Bot.) 1999:** University of Peshawar, Pakistan
- **F.Sc. (Pre-Medical) 1997:** B.I.S.E Swat, Khyber Pakhtunkhwa, Pakistan
- **S.S.C (Matric) 1995:** B.I.S.E Swat, Khyber Pakhtunkhwa, Pakistan

Scholarships Availed:

- IRSIP Scholarship for Six Months to Cereal Research Centre, Foggia, Italy
- HEC Indigenous 5000 Fellowship for MS leading to PhD
- Merit scholarship at M.Phil level
- Travel Grant availed for presentation of research paper in CBB4 at Budapest Hungary (November, 2017) .

Research Project:

Completed awarded research project from Higher Education Commission (HEC) Pakistan. The title of the research project was “Molecular and physiological evaluation of stay green wheat genotypes for drought tolerance”.

Research Publications:

1. Rahman Ullah, **Ahmad Ali**, Zahid Ullah and Hassan Sher. (2025). Agro-morphological and grain-quality responses of barley accessions to zinc foliar application. *Pesquisa Agropecuária Brasileira*, 60, e03973. DOI: <https://doi.org/10.1590/S1678-3921.pab2025.v60.03973>.
2. Fazli Rahman, Zahid Ullah, Amir Sultan, **Ahmad Ali**, Hassan Sher & Mushtaq Ahmad. (2025). Palynological characterization and taxonomic delimitation of the genus *Salvia* L. in Pakistan. *Palynology*, <https://doi.org/10.1080/01916122.2025.2495223>
3. Fazli Rahman, Zahid Ullah, **Ahmad Ali**, Hassan Sher, Shah Zaman, Tijen Demiral Sert, Sadaf Kayani. (2025). Palynological Characterization and Taxonomic Delimitation of the Genus *Impatiens* L. in Pakistan: An LM and SEM Study. *Microscopy Research and Technique*, 0:1-16. <https://doi.org/10.1002/jemt.24843>
4. Kifayatullah Khan., Muhammad Younas., Muhammad Yaseen., **Hassan Sher.**, Afsheen Maryam., Sobhy M. Ibrahim., Adnan Adnan., Ahmad Ali., Muhammad Fawad., Akhtar Zeb Khan., Nasrullah Khan & Izaz Ali Shah. (2025). Heavy metals pollution in riverine sediments: Distribution, source, and environmental implications. *Environmental Monitoring and Assessment*, **197**, 225. <https://doi.org/10.1007/s10661-025-13623-4>
5. Naveed Alam, Zahid Ullah, Bilal Ahmad, **Ahmad Ali**, Kashmala Syed. (2024). Population growth poses a significant threat to forest ecosystems: A case study from the Hindukush-Himalayas of Pakistan. *Plos One*, 19(11):e0302192. <https://doi.org/10.1371/journal.pone.0302192>
6. Mohammad Ayaz, **Ahmad Ali**, Zahid Ullah, Hassan Sher. (2024). Exploring antioxidant potential and microsatellite based genetic diversity in different germplasm of *Aegilops tauschii*, *Genetic Resources and Crop Evolution*. <https://doi.org/10.1007/s10722-024-02272-0>
7. Mohammad Ayaz, **Ahmad Ali**, Zahid Ullah, Mushtaq Ahmad, Hassan Sher, Maria Hamayun and Sarwar Khwaja. (2024). Screening diverse *Aegilops tauschii* for osmotic stress tolerance through physio-biochemical and anatomical characterization. *Genetic Resources and Crop Evolution*. <https://doi.org/10.1007/s10722-024-02254-2>
8. Zahid Ullah, Amjad Khan, Amir Sultan, **Ahmad Ali**, & Abdul Samad Mumtaz. (2024). *Astragalus kanjuensis*, a new species of section *Aegacantha* (*Galegeae-Fabaceae*) from Swat, Pakistan. *Phytotaxa*, 671 (3) :211–230. <https://doi.org/10.11646/phytotaxa.671.3.1>
9. Ayaz Ali, Rahman Ullah, Saeed Anwar, **Ahmad Ali**, Zahid Ullah, Hassan Sher, Javed Iqbal, Banzeer Ahsan Abbasi, Dunia A. Al Farraj, Mohamed S. Elshikh, Muhammad Qasim & Rashid Iqbal. (2024). Morphological and genetic diversity of barley (*Hordeum vulgare* L.) germplasm. *Genetic Resources and Crop Evolution*, <https://doi.org/10.1007/s10722-024-02153-6>
10. Maaz Ahmad, Ahmad Ali, Mohammad Ajmal Ali, Mohammad Abul Farah, Zahid Ullah, Haidar Ali, Hassan Sher, Sayed M. Eldin, Shah Zaman and Iftikhar Ali. (2024). GC-MS characterization of *Polygonatum geminiflorum* depicted by antibacterial efficacy of the biosynthesized silver nanoparticles using its leaf extract. *Global NEST Journal*, 26(3): 0549. <https://doi.org/10.30955/gnj.005495>

11. Nasar Ali, Zahid Ullah, **Ahmad Ali**, Bushra, Zaheer Abbas And Aftab Ahmad Khan. (2024). Taxonomic studies of Cyperaceae (sedges) in Swat Pakistan: Using a multivariate approach. *Pakistan Journal of Botany*, 56(4): doi: [http://dx.doi.org/10.30848/PJB2024-4\(19\)](http://dx.doi.org/10.30848/PJB2024-4(19))
12. Bakht Naz, Aftab Afzal, Hina Ali, Nisar Ahmad, Hina Fazal, Riaz Ullah, Essam A. Ali, Mohammad Ali, Zahid Ullah, **Ahmad Ali**, and Shazia Dilbar . (2024). Melatonin-induced stress enhanced biomass and production of high-value secondary cell products in submerged adventitious root cultures of *Stevia rebaudiana* (Bert.). *ACS Omega*, 9, 5548–5562. <https://doi.org/10.1021/acsomega.3c07404>
13. Hazrat Sher, Asghar Ali, Hassan Sher, Rainer W Bussmann, Inayat Ur Rahman, Hameed Ullah, **Ahmad Ali** & Zahid Ullah. (2023). Sustainability and socio-economic impacts of plant resources utilization in Valley Lalku, District Swat, Pakistan. *Ethnobotany Research and Applications*, 26, 1-18.
14. Nisar Ahmad, Shujat Ali, Muhammad Abbas, Hina Fazal, Saddam Saqib, **Ahmad Ali**, Zahid Ullah, Shah Zaman, Laraib Sawati, Ahmad Zada and Sohail. (2023). Antimicrobial efficacy of *Mentha piperata*-derived biogenic zinc oxide nanoparticles against UTI-resistant pathogens. *Scientific Reports*, 13: 14972. | <https://doi.org/10.1038/s41598-023-41502-w>
15. Shazia Dilbar, Hassan Sher, **Ahmad Ali**, Zahid Ullah, Muhammad Shuaib, Muhammad Yaseen and Saraj Bahadur. (2023). Novel medicinal plants uses for the treatment of respiratory disorders- An overview from Madyan Swat, Pakistan. *Ethnobotany Research and Applications*, 26, 1-15.
16. Shazia Dilbar, Hassan Sher, Hina Ali, Riaz Ullah, **Ahmad Ali** and Zahid Ullah. 2023. Antibacterial efficacy of green synthesized silver nanoparticles using *Salvia nubicola* extract against *Ralstonia solanacearum*, the causal agent of vascular wilt of tomato. *ACS Omega*, <https://doi.org/10.1021/acsomega.3c03164>
17. Iftikhar Ali, Saeed Anwar, **Ahmad Ali**, Zahid Ullah, Dalal Nasser Binjawhar, Hassan Sher, Usama K. Abdel-Hameed, Muhammad Aamir Khan, Khawar Majeed and Mariusz Jaremko. (2023). Biochemical and phenological characterization of diverse wheats and their association with drought tolerance genes. *BMC Plant Biology*, 23: 326. <https://doi.org/10.1186/s12870-023-04278-9>
18. Sumbal Sumbal, **Ahmad Ali**, Dalal Nasser Binjawhar, Zahid Ullah, Sayed M. Eldin, Rashid Iqbal, Hassan Sher and Iftikhar Ali. (2023). Comparative effects of hydro priming and iron priming on germination and seedling morphophysiological attributes of stay green wheat. *ACS Omega*, <https://doi.org/10.1021/acsomega.3c02359>
19. Saeed Anwar, **Ahmad Ali**, Zahid Ullah, Dalal Nasser Binjawhar, Hassan Sher, Roshan Ali, Rashid Iqbal, Baber Ali and Iftikhar Ali. (2023). The impact of *Trichoderma harzianum* together with copper and boron on wheat yield. *ACS Agricultural Science & Technology*, <https://doi.org/10.1021/acsagascitech.3c00076>
20. Tehmina Bahar, Fasiha Qurashi, Muhammad Saleem Haider, Murad Ali Rahat, Fazal Akbar, Muhammad Israr, **Ahmad Ali**, Zahid Ullah, Fazal Ullah, Mohamed A. El-Sheikh, Ryan Casini and Hosam O. Elansary. (2023). Unveiling *Lathyrus aphaca* L. as a newly identified host for begomovirus infection: A comprehensive study. *Genes* 14, 1221. <https://doi.org/10.3390/genes14061221>

21. **Ahmad Ali**, Zahid Ullah, Hassan Sher, Zaigham Abbas, and Awais Rasheed. (2023). Water stress effects on stay green and chlorophyll fluorescence with focus on yield characteristics of diverse bread wheats. *Planta*, 257(6), 104. DOI: [10.1007/s00425-023-04140-0](https://doi.org/10.1007/s00425-023-04140-0)
22. Shahid Hussain, Hassan Sher, Zahid Ullah, Mohamed Soliman Elshikh, Dunia A Al Farraj, **Ahmad Ali** and Arshad Mehmood Abbasi. (2023). Traditional uses of wild edible mushrooms among the local communities of Swat, Pakistan. *Foods* 2023, 12, 1705. <https://doi.org/10.3390/foods12081705>.
23. Shazia Dilbar, Hassan Sher, Ahmad Ali, Zahid Ullah and **Ahmad Ali**. (2023). Biological synthesis of Ag-nanoparticles using *Stachys parviflora* and its inhibitory potential against *Xanthomonas campestris*. *South African Journal of Botany*, 157, 409-422.
24. Shazia Dilbar, Hassan Sher, Dalal Nasser Binjawhar, **Ahmad Ali** and Iftikhar Ali. (2023). A novel based synthesis of silver/silver chloride nanoparticles from *Stachys emodi* efficiently controls *Erwinia carotovora*, the causal agent of blackleg and soft rot of potato. *Molecules*, 28, 2500. <https://doi.org/10.3390/molecules28062500>
25. Naveed Alam, Eve Bohnett, Muhammad Zafar, Hassan Sher, Bilal Ahmad, Mohamed Fawzy Ramadan, Mushtaq Ahmad, Zahid Ullah, **Ahmad Ali**, Shujaul Mulk Khan, and Kashmala Syed. (2023). Impact of anthropogenic threats on species diversity: A case study of the Sub-Himalayan tropical dry deciduous forests of Pakistan. *Sustainability*, 15, 2829. <https://doi.org/10.3390/su15032829>
26. Shifa Bibi, Zahid Ullah, **Ahmad Ali**, Naveed Alam, Rahman Ali Khan and Nasar Ali. (2022). Systematic significance of leaf epidermal features in Brassicaceae of Swat, Pakistan. (*Kashmir Journal of Science* 1(1): 31-42).
27. Ahmad Zada, **Ahmad Ali**, Dalal Nasser Binjawhar, Usama K. Abdel-Hameed, Azhar Hussain Shah, Shahid Maqsood Gill, Irtiza Hussain, Zaigham Abbas, Zahid Ullah, Hassan Sher and Iftikhar Ali. (2022). Molecular and physiological evaluation of bread wheat (*Triticum aestivum* L.) genotypes for stay green under drought stress. *Genes*, 13, 2261. <https://doi.org/10.3390/genes13122261>
28. Irfanul Haq, Dalal Nasser Binjawhar, Zahid Ullah, **Ahmad Ali**, Hassan Sher, and Iftikhar Ali. (2022). Wild vicia species possess a drought tolerance system for faba bean improvement. *Genes*, 13, 1877. <https://doi.org/10.3390/genes13101877>
29. Ajab Khan, **Ahmad Ali**, Zahid Ullah, Iftikhar Ali, Prashant Kaushik, Mohammed Nasser Alyemeni, Awais Rasheed and Hassan Sher. (2022). Exploiting the drought tolerance of wild *Elymus* species for bread wheat improvement. *Frontiers in Plant Science*, 13, 982844. DOI: 10.3389/fpls.2022.982844
30. Maaz Ahmad, **Ahmad Ali**, Zahid Ullah, Mohammad Ali, Hassan Sher, Mohammad Zahoor, & Iftikhar Ali. (2022). Biosynthesized silver nanoparticles using *Polygonatum geminiflorum* efficiently controls Fusarium wilt disease of tomato. *Frontiers in Bioengineering and Biotechnology*, 1679. DOI: 10.3389/fbioe.2022.988607
31. Sidra Khan, Gulfam Bibi, Shazia Dilbar, Aneela Iqbal, Maaz Ahmad, **Ahmad Ali**, Zahid Ullah, Mariusz Jaremko, Javed Iqbal, Mohammad Ali, Ihtishamul Haq, Iftikhar Ali. (2022). Biosynthesis and characterization of iron oxide nanoparticles from *Mentha spicata* and screening its combating

potential against *Phytophthora infestans*. *Frontiers in Plant Science*. DOI: 10.3389/fpls.2022.1001499

32. Iftikhar Ali, Ajab Khan, **Ahmad Ali**, Zahid Ullah, Li, Yunzhou, Naveed Khan, Asif Khan, Abdel Rahman Mohammad Al-Tawaha, Hassan Sher. (2022). Iron and zinc micronutrients and soil inoculation of *Trichoderma harzianum* enhance wheat grain quality and yield. *Frontiers in Plant Science*. 13, 960948. DOI: 10.3389/fpls.2022.960948
33. Ali, I., Salah, K. B. H., Sher, H., Ali, H., Ullah, Z., **Ali, Ahmad.**, Alam, N., Shah, S. A., Iqbal, J., Ilyas, M., Al-Quwaie, D. A. H., Khan, A.A., Mahmood, T. (2022). Drought stress enhances the efficiency of floral dip method of Agrobacterium-mediated transformation in *Arabidopsis thaliana*. *Brazilian Journal of Biology*, 2024, vol. 84, e259326
34. Muhammad, Arif, Rahim Ullah, Maaz Ahmad, **Ahmad Ali**, Zahid Ullah, Mohammad Ali, Fakhria A. Al-Joufi, Muhammad Zahoor, and Hassan Sher. (2022). Green synthesis of silver nanoparticles using *Euphorbia wallichii* leaf extract: its antibacterial action against citrus canker causal agent and antioxidant potential. *Molecules* 27, no. 11: 3525. <https://doi.org/10.3390/molecules27113525>
35. Iftikhar Ali, Hassan Sher, **Ahmad Ali**, Shahid Hussain, Zahid Ullah. (2022). Simplified floral dip transformation method of *Arabidopsis thaliana*. *Journal of Microbiological Methods*, 195, 106461.
36. Iftikhar, Ali, Hassan Sher, Zahid Ullah, **Ahmad Ali**, Javed Iqbal, Wei-Cai Yang. (2022). The poly(A) polymerase PAPS1 mediates pollen maturation by regulating sperm cell differentiation in plants. *Plant Direct*, 6(5), e397. <https://doi.org/10.1002/pld3.3978of8>.
37. Saddiq Ur Rahman, Zahid Ullah, **Ahmad Ali**, Muhammad Abdul Aziz, Naveed Alam, **Hassan Sher.**, Iftikhar Ali. (2022). Traditional knowledge of medicinal flora among tribal communities of Buner Pakistan. *Phytomedicine Plus*, 100277.
38. Hazrat Sher, **Ahmad Ali**, Zahid Ullah and Hassan Sher. (2022). Alleviation of poverty through sustainable management and market promotion of medicinal and aromatic plants in Swat, Pakistan. *Ethnobotany Research and Applications* 23:1-16.
39. Saddiq Ur Rahman, Zahid Ullah, **Ahmad Ali**, Mushtaq Ahmad, Hassan Sher, Zabta Khan Shinwari, and Abdul Nazir. (2022). Ethnoecological knowledge of wild fodder plant resources of district Buner Pakistan. *Pakistan Journal of Botany*, 54, 2: 645-652.
40. Aqsa Tariq, Ghulam Mujtaba Shah, Ahmad Zada, **Ahmad Ali**, Amir Zaman Shah, and Iqra Fatima. (2021). Phytochemical analysis and in-vitro anti-bacterial and anti-fungal activity of *Verbascum arianthum* (Benth). *Pure and Applied Biology*, 10(3), 797-806.
41. Ahmad Zada, **Ahmad Ali**, Zahid Ullah, Hassan Sher, Azhar Hussain Shah, Imran Khan, Amir Zaman Shah. (2020). Improvement of osmotic stress tolerance in wheat by seed priming. *International Journal of Biosciences*, 17(5): 133-142.
42. **Ahmad Ali**, Zahid Ullah, Naveed Alam, S.M. Saqlan Naqvi, Muhammad Jamil, Hadi Bux, and Hassan Sher. (2020). Genetic analysis of wheat grains using digital imaging and their relationship to enhance grain weight. *Scientia Agricola*, 77(6): 1-10. DOI: <http://dx.doi.org/10.1590/1678-992X-2019-0069>.
43. Fakiha Afzal, Huihui Li, Alvina Gul, Abid Subhani, **Ahmad Ali**, Abdul Mujeeb-Kazi, Francis Ogbonnaya, Richard Trethowan, Xianchun Xia, Zhonghu He and Awais Rasheed. (2019).

Genome-wide analyses reveal footprints of divergent selection and drought adaptive traits in synthetic-derived wheats. *G3: Genes, Genomes, Genetics*, 9; 1957-1973.

44. Tariq Alam, Raja Asad Ali Khan, **Ahmad Ali**, Hassan Sher, Zahid Ullah and Mohammad Ali. (2019). Biogenic synthesis of iron oxide nanoparticles via *Skimmia laureola* and their antibacterial efficacy against bacterial wilt pathogen *Ralstonia solanacearum*. *Materials Science & Engineering C*, 98: 101-108.
45. Fakiha Afzal, **Ahmad Ali**, Zahid Ullah, Hassan Sher, Alvina Gul, Abdul Mujeeb-Kazi and Muhammad Arshad. (2018). Terminal drought stress adaptability in synthetic-derived bread wheat is explained by alleles of major adaptability genes and superior phenology, *International Journal of Agriculture and Biology*, 20(7): 1623-1631. doi: 10.17957/IJAB/15.0680.
46. **Ahmad Ali**, Anna Maria Mastrangelo, Pasquale De Vita, Giovanni Laido, Daniale Marone, Muhammad Arshad, S.M. Saqlan Naqvi, Hassan Sher, Awais Rasheed, Abdul Mujeeb-Kazi. (2017). Screening drought adaptive phenological traits in conventional and synthetic derived bread wheat germplasm and its implications for association mapping. *Cereal Research Communications*, 45(SI): 1–112.
47. Hidayat Ullah, Habib Ahmad, Armghan Shahzad, **Ahmad Ali**, Ghulam Muhammad Ali. (2016). Evaluation of allelic variation for HMW glutenin subunits through SDS-PAGE in diverse bread wheats *International Journal of Biosciences* 9(1): 203-214.
48. Khola Rafique, Chaudhary Abdul Rauf, Alvina Gul, Hadi Bux, **Ahmad Ali**, Rabia Asma Memon, Sumaira Farrakh, Abdul Mujeeb-Kazi. (2017). Evaluation of D-genome synthetic hexaploid wheats and advanced derivatives for powdery mildew resistance. *Pakistan Journal of Botany* 49(2): 735-743.
49. Alvina Gul, Awais Rasheed, Fakiha Afzal, Abdul Aziz Napar, **Ahmad Ali**, Muhammad Jamil, Maria Khalid, Hadi Bux, Abdul Mujeeb-Kazi. (2015). Characterization of synthetic hexaploids derived from same *Aegilops tauschii* accessions and different durum cultivars. *Cytologia* 80(4): 427–440.
50. **Ahmad Ali**, Muhammad Arshad, S.M. Saqlan Naqvi, Awais Rasheed, Hassan Sher, Alvina Gul Kazi, Abdul Mujeeb-Kazi. (2015). Comparative assessment of synthetic derived and conventional bread wheat advanced lines under osmotic stress and implications for molecular analysis. *Plant Molecular Biology Reporter*, 33(6): 1907-1917.
51. Hassan Sher, Ali Aldosari, **Ahmad Ali**, Hugo J de Boer. (2015). Indigenous knowledge of folk medicines among tribal minorities in Khyber Pakhtunkhwa, northwestern Pakistan. *Journal of Ethnopharmacology*. 166: 157-167.
52. Alvina Gul Kazi, Awais Rasheed, Hadi Bux, Abdul Aziz Napar, **Ahmad Ali**, Abdul Mujeeb-Kazi. (2015). Cytological, phenological and molecular characterization of B(S)-genome synthetic hexaploids (2n=6x=42; AABBSS). *Cereal Research Communication* 43(2): 179-188.
53. Muhammad Ilyas, Tariq Mahmood, **Ahmad Ali**, Muhammad Babar, Abdul Mujeeb-Kazi, Awais Rasheed. (2015). Characterization of D genome diversity for tolerance to boron toxicity in synthetic hexaploid wheat and in silico analysis of candidate genes. *Acta Physiologiae Plantarum* 37(2):17. Doi 10.1007/s11738-014-1765-8.

54. Hassan Sher, Ali Aldosari, **Ahmad Ali**, Hugo J de Boer. (2014). Economic benefits of high value medicinal plants to Pakistani communities: an analysis of current practice and potential. *Journal of Ethnobiology and Ethnomedicine* 10: 1-16.
55. Sammer Fatima, Muhammad Arshad, Sunbal Khalil Chaudhari, **Ahmad Ali**, Muhammad Shoaib Amjad, Rehana Kausar. (2014). Utilization of synthetics for drought tolerance in bread wheat (*Triticum aestivum* L.). *International Journal of Biosciences* 5(1): 104-112.
56. **Ahmad Ali**, Muhammad Arshad, S.M. Saqlan Naqvi, Awais Rasheed, Manzoor Ahmad, Hassan Sher, Sammer Fatima, Alvina Gul Kazi, Abdul Mujeeb-Kazi. (2014). Exploitation of synthetic derived wheats through osmotic stress responses for drought tolerance improvement. *Acta Physiologiae Plantarum* 36(9): 2453-2465.
57. Misbah Safdar, Hadi Bux, Alvina Gul Kazi, Abdul Wajid Channa, **Ahmad Ali**, Zahid Akram,, Abdul Mujeeb-Kazi. (2013). Molecular evaluation of D-genome based double haploid mapping population of wheat using SSR Primers. *Pakistan Journal of Biotechnology* 10(2): 27–35.
58. Rabia Amir, Nasir M Minhas, Alvina Gul Kazi, Sumaira Farrakh, **Ahmad Ali**, Hadi Bux, Abdul Mujeeb-Kazi. (2014). Phenotypic and genotypic characterization of wheat landraces of Pakistan. *Emirates Journal of Food and Agriculture* 26(2): 157-163.
59. Madiha Sadiq, Rehana Asghar, Rahmatullah Qureshi, **Ahmad Ali**. (2013). Study of polypeptides induced by drought stress in some local varieties of barley from Pakistan. *Pakistan Journal of Botany* 45(4): 1251-1254.
60. Madeeha Khalid, Tariq Mahmood, Awais Rasheed, Alvina Gul Kazi, **Ahmad Ali**, Abdul Mujeeb-kazi. (2013). *Glu-D^T1* allelic variation in synthetic hexaploid wheats derived from durum cultivar ‘Decoy’ × *Aegilops tauschii* accessional crosses. *Pakistan Journal of Botany* 45(SI): 409-414.
61. **Ahmad Ali**, Muhammad Arshad, Anna Maria Mastrangelo, Pasquale de Vita, Alvina Gul Kazi, Abdul Mujeeb-kazi. (2013). Comparative assessment of glutenin composition and its relationship with grain quality traits in bread wheat and synthetic derivatives. *Pakistan Journal of Botany* 45(SI): 289-296.
62. **Ahmad Ali**, Zeshan Ali, Umar M. Quraishi, Alvina Gul Kazi, Riffat N. Malik, Hassan Sher, Abdul Mujeeb-Kazi. 2014. Integrating physiological and genetic approaches for improving drought tolerance in crops. In. *Emerging Technologies and Management of Crop Stress Tolerance: A Sustainable Approach*. Elsevier Inc. 2:315–345. doi.org/10.1016/B978-0-12-800875-1.00014-4; ISBN: 9780128008751 (**Book chapter**).
63. Zeshan Ali, Barkat Ali, Ashiq Mohammad, Mushtaq Ahmad, Ijaz Ahmad, Abdul Aziz Napar, Alvina Gul Kazi, **Ahmad Ali**, **Shamim-ul-Sibtain** Shah, Abdul Mujeeb-Kazi. 2013. Combating water scarcity for global food security. In: *Agriculture in 21st century*. (ed) Amir Raza. NOVA New York Press (ISBN: 978-1-62948-026-8) (**Book chapter**).
64. Zahid Ullah, Usman Ali, Shawkat Ali, Ahmad Ali, Naveed Alam, Hassan Sher. 2021. Medicinal flora and cultural values of Arkot-Biakand valley Hindu Kush region Swat, Pakistan, *Ethnobiology of Mountain Communities in Asia* pp 327-380. (**Book chapter**).
65. Abdul Salam, **Ahmad Ali**, Muhammad Siddique Afridi, Shahab Ali, Ullah, Z. (2022). Agrobiodiversity: Effect of drought stress on the eco-physiology and morphology of wheat. In *Biodiversity, Conservation and Sustainability in Asia* (pp. 597-618). Springer, Cham. (**Book chapter**).

66. Sadia Zafar, Javed Iqbal, Banzeer Ahsan Abbasi, Inam Mehdi Khan, Rehman Iqbal, Shoaib Khan, Shumaila Ijaz, Zakir Ullah, Ghulam Murtaza, Rashid Iqbal, Hassan Sher, Zahid Ullah and Ahmad Ali. (2024). Future Perspectives for Forage breeding for Sustainable Agriculture. In book: Forage Crops in the Omics Era; Publisher: Springer.
67. Sadia Zafar, Javed Iqbal, Banzeer Ahsan Abbasi, Hadiqa Afzal, Shoaib Khan, Shumaila Ijaz, Zakir Ullah, Ghulam Murtaza, Rashid Iqbal, Hassan Sher, Zahid Ullah and Ahmad Ali. (2024). Recent Advancements in Breeding and Genomics of Minor Grass Species. In book: Forage Crops in the Omics Era; Publisher: Springer.
68. Zakir Ullah, Javed Iqbal, Banzeer Ahsan Abbasi, Shumaila Ijaz, Mamoon Munir, Shobana Sampath, Hassan Sher, Zahid Ullah, Ahmad Ali and Tariq Mahmood. (2024). Applications of Nanoparticles in Biofortification of Crops: Amplifying Nutritional Quality. In book: Crop Biofortification: Biotechnological Approaches for Achieving Nutritional Security under Changing Climate; Publisher: Wiley.
69. Shumaila Ijaz, Javed Iqbal, Banzeer Ahsan Abbasi, Zakir Ullah, Siraj Uddin, Farishta Zarshan, Habib Ali, Hassan Sher, Zahid Ullah and Ahmad Ali, Sobia Kanwal and Tariq Mahmood. (2024). Bioactive Phytochemicals from Ginger (*Zingiber officinale*) by-products. (2024). In book: Bioactive Phytochemicals in By-products from Leaf, Stem, Root and Tuber Vegetables; Publisher: Springer.
70. Zakir Ullah, Javed Iqbal, Banzeer Ahsan Abbasi, Shumaila Ijaz, Rooma Waqar, Mamoon Munir, Shobana Sampath, Hassan Sher, Zahid Ullah, Ahmad Ali and Tariq Mahmood. (2024). Bioactive phytochemicals from Cabbage (*Brassica oleracea*) by-products. (2024). In book: Bioactive Phytochemicals in By-products from Leaf, Stem, Root and Tuber Vegetables; Publisher: Springer
71. Zakir Ullah, Javed Iqbal, Banzeer Ahsan Abbasi, Shumaila Ijaz, Tabassum Yaseen, Rooma Waqar, Sobia Kanwal, Hassan Sher, Zahid Ullah, **Ahmad Ali**, and Tariq Mahmood. (2024). The Green Revolution: Promoting Environmental Stewardship and Plant Growth. In *Environment, Climate, Plant and Vegetation Growth*. Cham: Springer Nature Switzerland. pp. 425-469. DOI: 10.1007/978-3-031-69417-2_15.
72. Salma Noreen, Javed Iqbal, Banzeer Ahsan Abbasi, Shumaila Ijaz, Zakir Ullah, Zahid Ullah, Ahmad Ali, Ghulam Murtaza, Rashid Iqbal, Rooma Waqar and Wiwiek Harsonowati. (2024). Exploring Beneficial Elements in the Soil Environment: Fluorine and Iodine Perspectives. (2024). In book: Beneficial elements for remediation of heavy metals in polluted soil. Elsevier, pp, 161-196. ISBN 9780443265228; <https://doi.org/10.1016/B978-0-443-26522-8.00006-4>.
(<https://www.sciencedirect.com/science/article/pii/B9780443265228000064>)

PUBLISHED ARTICLES IN ANNUAL WHEAT NEWSLETTER

Editor: J. Raupp, Kansas State University, Manhattan, Kansas, USA.

- **Ali Ahmad**, Arshad M, Napar AA, Kazi AG, Mujeeb-Kazi A. 2013. Comparative assessment of high-molecular-weight glutenin composition and their relationship with grain quality traits in bread wheat and synthetic derivatives. 59: 72-75.
- **Ali Ahmad**, Arshad M, Napar AA, Kazi AG, Mujeeb-Kazi A. 2013. Comparative assessment of low molecular weight glutenin composition and their relationship with grain quality traits in bread wheat and synthetic derivatives. 59: 76-79.
- Arif S, Afzal Q, Ahmed M, Hasnain A, Arif S, **Ali Ahmad**, Shafqat N, Kazi AG, Mujeeb-Kazi A. 2013. The relationship among pasting parameters in the presence of water-unextractable pentosan. 59: 84-85.

- Arif S, Afzal Q, Ahmed M, Hasnain A, Arif S, Bux H, Napar AA, Shafqat N, **Ali Ahmad**, Kazi AG, Mujeeb-Kazi A. 2013. (rm) The effect of water-unextractable pentosans on peak viscosity and time to reach peak viscosity of hard wheat flours. 59: 97-98.
- Arif S, Afzal Q, Ahmed M, Hasnain A, Arif S, **Ali Ahmad**, Shafqat N, Kazi AG, Mujeeb-Kazi A. 2013. Effects of water-unextractable pentosans on breakdown and setback viscosities of hard wheat flours. 59: 100-102.
- Arif S, Afzal Q, Iqbal M, Ahmad M, Hasnain A, Kazi AG, **Ali Ahmad**, Mujeeb-Kazi A. 2014. Dough properties of flours obtained from different wheat varieties. 2014. 60: 61-64.
- **Ali Ahmad**, Arshad M, Rasheed A, Napar AA, Sher H, Ali R, Kazi AG, Mujeeb-Kazi A. 2014. Association analysis of agronomic traits in diverse wheat germplasm grown under water deficit conditions. 60: 51-53.

ABSTRACTS / CONFERENCES:

- Participated in Social Work Program during the session 1998-1999 at Government Degree College Matta, Swat.
- Successfully completed the Participant Teacher's Course of the *Intel® Teach to the Future Program* from 27th April to 4th May, 2004.
- Participated in International Conference from 25th to 27th April, 2007.
- Attended HEC-Bahria Workshop from 7th to 8th Nov. 2007.
- Participated in 6th International Bhurban Conference on Applied Sciences and Technology (IBCAST), held during January 19-22, 2009.
- Participated in SLUBGH Symposium from 27th to 29th March, 2009.
- Participated in International conference on "Advances in Agriculture; Prospects and Potentials of Natural Resources in Food Security" at Rawalakot, University of Azad Jammu and Kashmir. 11-13th Aug. 2009.
- Participated in 2nd Workshop on Bioinformatics at Muhammad Ali Jinnah University, Islamabad held on July 25, 2011.
- Participated in COST Action FA 0905 titled "Mineral Improved Crop Production for Healthy Food and Feed" from November 23-26, 2011 at Venice Italy.
- Participated in 12th National and 3rd International conference of Botany" at Quaid-i-Azam University, Islamabad. 1-3 Sep. 2012.
- **Ali, A., M. Arshad, S.M.S. Naqvi, A. M. Mastrangelo, P. de Vita and A. Mujeeb-Kazi.** Analysis of genetic structure in a collection of synthetic derived and conventional bread wheat germplasm and association mapping for drought related traits. In. Deutsche Botanikertagung 2013 at Tübingen University, Germany. Sep 30th-Oct 04th, 2013.
- Member of the organizing committee for "International Day for Biological Diversity; May 22, 2014" organized by Centre for Plant Sciences and Biodiversity, University of Swat.
- Focal Person / Member of the organizing committee in 2nd International Conference titled "Conservation of medicinal and aromatic plants for improving the livelihood of mountain communities through industrial linages" organized by CPS&B, University of Swat in Collaboration with HEC from September 03-05, 2018.
- Ahmad Zada, **Ahmad Ali**, Shahzada AzizUllah Khan, Zahid Ullah and Hassan Sher. Improvement of osmotic stress tolerance in wheat by seed priming. In. "15th National and 6th International conference of Botany" at Quetta Pakistan. During May 9-11, 2017.
- Participated and presented scientific talk in 4th Conference of Cereal Biotechnology and Breeding Conference (CBB4) from November 6 – 9, 2017 at Budapest, Hungary.

- Member of the organizing committee for “International Day for Biological Diversity; May 24, 2017” organized by Centre for Plant Sciences and Biodiversity, University of Swat.
- Participated in International Seminar titled “Crop wild relatives genetic resources of Pakistan and their utilization” at National Agriculture Research Center (NARC), Islamabad on November 14, 2018.
- Participated in three day workshop of master trainers titled “PhD Supervisors Capacity Building Program” held at HEC Regional Centre, Peshawar from November 28-30, 2018.
- Participated in online training workshop on “Genebank Information Management System at Pakistan’s National Genebank using GRIN-Global (GG)” held on March 29th, 2022.
- Focal Person / Member of the organizing committee in 5th International Conference titled “Advances In Biosciences: Bridging The Gap Between Research And Sustainable Development Goals” organized by CPS&B, University of Swat in Collaboration with Biological Society of Pakistan, Higher Education Commission of Pakistan and Pakistan Science Foundation during May 24-26, 2022.
- Participated in “International SUMMIT on Higher Education and Workforce Development in 21-st Century” from November 30 to December 02, 2022” organized by Higher Education System Strengthening Activity (HESSA) –USAID.
- Participated in 2-days Workshop on “Advancing Leadership Capacities of Deans” from October 26-27, 2022 organized by Higher Education System Strengthening Activity (HESSA) –USAID.
- Participated in 2-days training on “Establishing Effective Biosafety and Biosecurity Management Systems at Institutional Level” from September 07-08, 2023 organized by Association for Biorisk Management-Pakistan in collaboration with Health Security Partners.
- Participated in 5-day training on “Integrated Strategic Planning” from December 04-08, 2023 organized by USAID’s Higher Education System Strengthening Activity (HESSA).
- Successfully completed an extended technical training program on advancing leadership capacities of Deans” from October 2022 through February 2024, organized by USAID’s Higher Education System Strengthening Activity (HESSA).
- Participated in “International SUMMIT on Shaping the Future of Higher Education in Pakistan” from June 10-12, 2024” held at NUTECH (National University of Technology) Islamabad, and, organized by Higher Education System Strengthening Activity (HESSA) –USAID.
- Participated in 2nd International Conference and Expo of Plant Sciences titled “Plant Biodiversity and Food Security in the Wake of Climate Change: from November 19 – 21, 2024 Jointly organized by PMAS-Arid Agriculture University, Rawalpindi, Pakistan and Himalayan Hemp and Herbal Products (Pvt.) Ltd.

Professional & Research experience:

- Successfully completed 23rd Master Trainers-Faculty Professional Development Program (MT-FPDP) at HEC, Islamabad from November 10 to December 31, 2014.
- Proficient in basic techniques of Botany/Molecular Biology/Biotechnology like Stress Physiology, Chlorophyll fluorescence, DNA/RNA Extraction, PCR, cDNA cloning, RT-PCR, Gradient PCR, Protein Expression, SDS-PAGE, Agarose Gel Electrophoresis, QTL Mapping, Association Mapping, Marker Assisted Selection, Genomic Selection.

- Proficient in using different bioinformatics tools like Primer 3, Graphical Codon Usage Analysis, BLAST, CLUSTAL W, NEB CUTTER, and RESTRICTION MAPPER etc.