Curriculam Vitae

AYSHA KIRAN

Personal Data

Date of Birth: 23-10-1979
Nationality: Pakistani
Marital Status: Married (Three sons)
Postal Address: Department of Botany, University of Agriculture, Faisalabad, Pakistan
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Academic Qualification

Doctor of Philosophy (Dr. rer. nat.) **2009-2014**

Subject: Natural sciences Grade obtained (Very Good)

Justus Liebig University, Institute for Plant Breeding, Giessen, Germany

Master of Philosophy (M. Phil) *(18 years)* **2005-2007**

Subject: Biotechnology Marks obtained (85%)

Quaid-i-Azam University Islamabad, NIBGE Campus, Faisalabad, Pakistan

Master (M. Sc.) *(16 years)* **2002-2004**

Subject: Botany Marks Obtained (78%)

University of Arid Agriculture, Rawalpindi, Pakistan

Scientific Career

Position	Period of Employment	Employer	City & Country	Activities
Associate Professor	12/2023 to date	Department of Botany, University of Agriculture Faisalabad	Faisalabad, Pakistan	Teaching and Research
Assistant Professor	09/2015 to 12/2023	Department of Botany, University of Agriculture Faisalabad	Faisalabad, Pakistan	Teaching and Research
Research Associate	10/2009 to 07/2013	Institute for Agronomy and Plant Breeding, Justus Liebig University, Giessen	Giessen, Germany	Research
Research Officer	03/2008 to 08/2008	Pakistan council of Scientific and Industrial Research (PCSIR)	Lahore, Pakistan	Research
Research Associate	08/2006 to 02/2008	National Institute for Biotechnology and genetic Engineer (NIBGE)	Faisalabad, Pakistan	Research

Research Publications (ORCID link: https://orcid.org/0000-0003-1995-347X)

Research Articles

1. Wakeel, Abdul, Abdul Qadeer, Zunaira Bano, Muhammad Rizwan Shahid, Muhammad Rizwan, **Aysha Kiran**, Muhammad Sanaullah et al. (2025) Managing Fertilizer Rates and Tillage Depth to Improve Nitrogen Use Efficiency and Soil Health. *Journal of Soil Science and Plant Nutrition* 1-11.
2. Rehman, Hafeez ur, Zeeshan Ahmad, **Aysha Kiran**, Abdul Wakeel, Hesham F. Alharby, Ali Majrashi, Amnah M. Alamri, and Basmah M. Alharbi. (2025) "Genotype to Soil Zinc Interaction; Influence of Zinc Application Time on its Plant Dynamics and Biofortification Potential. *Journal of Soil Science and Plant Nutrition*. 1-14.
3. Ahmed, Fayyaz, Samina Tanwir, Jam Nazeer Ahmad, **Aysha Kiran**, and Faiz Ahmad Joyia (2025). Benzothiadiazole maintains redox balance and promotes defense against Sitobion avenae (F.) in wheat by fine-tuning the antioxidant system, secondary metabolism, and osmolyte accumulation. *Turkish Journal of Botany* 49: 2 80-101.
4. Noor, Mehwish, **Aysha Kiran***, Muhammad Shahbaz, Muhammad Sanaullah, and Abdul Wakeel. (2024) Root system architecture associated zinc variability in wheat (*Triticum aestivum* L.). *Scientific Reports* 14:1781.
5. Zaman, Zahra, Rubab Iqbal, Abdul Jabbar, Nageen Zahra, Bilal Saleem, **Aysha Kiran,** Saman Maqbool, Awais Rasheed, Muhammad Kashif Naeem, and Muhammad Ramzan Khan. (2024) Genetic signature controlling root system architecture in diverse spring wheat germplasm. *Physiologia Plantarum* 176:e14183.
6. Sultana, Rashida, **Aysha Kiran*,** Muhammad Sanaullah, and Abdul Wakeel. (2023) Exploring the linkage between root system architecture and grain iron content in wheat (*Triticum aestivum* L.)." *Frontiers in Sustainable Food Systems* 7:1156728. *(PhD research publication)*
7. Jay Delves, Jason E.J. Lewis, Niaz Ali, Saeed A. Asad, Sudipto Chatterjee, Peter D. Crittenden, Matthew Jones, **Aysha Kiran,** Bishnu Prasad Pandey, David Reay, Subodh Sharma, Dendup Tshering, Gothamie Weerakoon, Netty van Dijk, Mark A. Sutton, Patricia A. Wolseley and Christopher J. Ellis (2023) Lichens as spatially transferable bioindicators for monitoring nitrogen pollution." *Environmental Pollution* 328 121575.
8. Sadia, Haleema, Muhammad Shahbaz, **Aysha Kiran,** and Muhammad Farrukh Saleem. "Interactive effect of salicylic acid and ascorbic acid on gaseous exchange and mineral nutrients of chicory (*Cichorium intybus* L.) under saline conditions. (2023) *Pak. J. Bot* 55:1999-2012.
9. Bushra, **Aysha Kiran*,** A., M. Ahmad, T. Shahzad, and M. Sanaullah. (2023) Mitigation of drought stress in wheat through exogenous application of proline. *Journal of Animal & Plant Sciences* 33:6
10. **Kiran, Aysha**, Qumqum Noshad, Muhammad Ajaib, Ahmad Naeem Shahzad, Sana Pervez, Irfana Lalarukh, Muhammad Faheem Siddiqui and Abdul Wakeel. (2023) Maize root architecture response to phosphorus availability in rooting medium." *Pak. J. Bot* 56: 3.
11. Ishfaq, Muhammad, **Aysha Kiran,** Abdul Wakeel, Muhammad Tayyab, and Xuexian Li. (2023) Foliar-applied potassium triggers soil potassium uptake by improving growth and photosynthetic activity of wheat and maize." *Journal of Plant Nutrition* 46:2691-2706.
12. Mujahid, Nazoora, Muhammad Shahbaz, **Aysha Kiran,** and Muhammad Ashfaq Wahid. (2023) Modulations Induced by seed priming of strigolactone (GR24) in morpho-physiological and biochemical attributes of ajwain (*Trachyspermum ammi* L.) under salt stress." *Journal of Plant Growth Regulation* 42:2893-2906.
13. Ishfaq, Muhammad, **Aysha Kiran,** Hafeez ur Rehman, Muhammad Farooq, Naseem Hassan Ijaz, Faisal Nadeem, Imran Azeem, Xuexian Li, and Abdul Wakeel. (2022) "Foliar nutrition:

Potential and challenges under multifaceted agriculture." *Environmental and Experimental Botany* 200:104909.

14. Ishfaq, Muhammad, Abdul Wakeel, Muhammad Nadeem Shahzad, **Aysha Kiran,** and Xuexian Li. (2021) "Severity of zinc and iron malnutrition linked to low intake through a staple crop: a case study in east-central Pakistan." *Environmental Geochemistry and Health* 43, 4219-4233.
15. **Kiran, Aysha*,** Abdul Wakeel, Rashida Sultana, Ayesha Khalid, Rafia Mubaraka, Ahmad Naeem Shahzad, Shaista Jabeen Khan, and Mehwish Noor. (2021) Concentration and localization of Fe and Zn in wheat grain as affected by its application to soil and foliage." *Bulletin of Environmental Contamination and Toxicology* 106 852-858.
16. Qumqum Noshad, Muhammad Ajaib, **Aysha Kiran,** Muhammad Ishtiaq, Tanveer Bashir and Muhammad Faheem Siddiqui (2021) Study on genetic diversity of *Cuscuta reflexa* Roxb. and few members of convolvulaceae on the basis of RAPD and SDS-PAGE. *Pakistan Journal of Botany.* 53:959-965.
17. Noshad, QumQum, Muhammad Ajaib and **Aysha Kiran** (2020) Comparative Investigation of Palynological Characters Of *Cuscuta Reflexa* And Few Members Of Convolvulaceae. *The Journal of Animal and Plant Sciences.* 30:1215-1223.
18. Mubarak, Muhammad Umair, Cheema, Sardar Alam, Mahmud, A., **Aysha Kiran** and Abdul Wakeel (2020) Use of Poultry-mortality compost biofortify the food crops with essential trace elements. *International Journal of Agriculture and Biology* 23:295-301
19. **Aysha Kiran***, Abdul Wakeel, Rod Snowdon and Wolfgang Friedt. (2019): Genetic dissection of root architectural traits by QTL and genome wide association mapping in rapeseed (*Brassica napus* L.). *Plant Breeding.* 138(2), 184-192
20. Shahzad, Ahmad Naeem, Muhammad Rizwan, Asghar, M. G., Qureshi, M. K., Bukhari, S.A.H., **Aysha Kiran,** Abdul Wakeel, 2019. Early maturing Bt cotton requires more potassium fertilizer under water deficiency to augment seed-cotton yield but not lint quality. *Scientific Reports*. 9: 73-78.
21. Wang, Y., Ghouri, F., **Aysha Kiran**, Shahid, M.Q., Wen, G. and Nie, F. (2019). Identification of SSR Markers and Putative Genes Associated with Chlorogenic Acid in *Vaccinium uliginosum* through Transcriptome Analysis. *International Journal of Agriculture and Biology* 22: 827-834
22. Tariq, M., Afzal, M. A., Muhammad, D., Ahmad, S., Shahzad, A. N., **Aysha Kiran,** and Wakeel, A*. (2018): "Relationship of Tissue Potassium Content with Yield and Fiber Quality Components of Bt Cotton as Influenced by Potassium Application Methods." *Field Crops Research.* 229:37–43
23. Ishfaq, Muhammad, **Aysha Kiran*,** Khaliq, A., Cheema, S. A., Alaraidh, I A., Hirotsu, H. and Wakeel. A*. (2018): Zinc Biofortified Wheat Cultivar Lessens Grain Cadmium Accumulation under Cadmium Contaminated Conditions. *International Journal of Agriculture & Biology.* 20: 2842–2846
24. Wakeel, Abdul, Arif, Shazia, Bashir, Muhammad A., Ahmad, Z., Rehman, H., **Aysha Kiran**, Ibrahim, S. and Khan, Muhammad Ramzan (2018): Perspectives of folate biofortification of cereal grains. *Journal of Plant Nutrition.* 41(18):2507-2524

Book

1. **Aysha Kiran (**2014) Genetic and phenotypic analysis of complex seed and root traits in oilseed rape (*Brassica napus* L.) ISBN: 978-3-8359-6257-6. VVB Laufersweiler verlag Germany
2. Aziz, Tariq, Abdul Wakeel, Muhammad Arif Watto, Muhammad Sanaullah, M. Aamer Maqsood and **Aysha Kiran.** 2021. Nitrogen assessment Pakistan as a case study.1st Ed. Academic Press. Elsevier, UK.

Book Chapters

1. Wakeel Abdul, **Aysha Kiran,** M. Rizwan Shahid, Zunaira Bano and M. H. Zia. 2021. Trends in nitrogen use and development in Pakistan. In. T. Aziz, A. Wakeel, M. A. Watto,

M. Sanaullah, M. A. Maqsood, A. Kiran (eds.), Nitrogen assessment: Pakistan as a case study. Elsevier, UK. pp 73-97 ISBN: 978-0-12-824417-3

2. Babar, Usman, Usama Arshad, Muhammad Tehseen Azhar, Rana Muhammad Atif, Abdulaziz Abdullah Alsahli, Ibrahim A. Alaraidh, **Aysha Kiran**, Iqrar Ahmad Rana, and Gyuhwa Chung. 2019. In. F. Shah, Z. Khan, A. Iqbal, M. Turan and M. Olgun (Eds.),Wheat in the Era of Genomics and Transgenics. Recent Advances in Grain Crops Research. IntechOpen.
3. Sardar Alam Cheema, Hafeez ur Rehman, **Aysha Kiran**, Khurram Bashir, Abdul Wakeel, 2018. Progress and Prospects for Micro-Nutrient Bio-fortification in Rice/Wheat. In. Hossain, M. A., T. Kamiya, D. J. Burrit, L. P. Tran, T. Fujiwara. Plant Micro-Nutrient Use Efficiency: Molecular and Genomic Perspectives in Crop Plants. Elsevier, USA.

Research Projects

Research Project	Funding Agency	Status/ Amount/ duration	Position
Screening the physiological response of lichens species to nitrogen pollution at three different sites of Himalaya in Pakistan	United Kingdom Research and Innovation (UKRI)	2021-2024 In progress / 49, 666 GBP	**Team Leader at UAF**
Global Challenges Research Fund (GCRF) South Asian Nitrogen Hub Work Package 2.1b "Genetic solutions for improving nitrogen use efficiency"	United Kingdom Research and Innovation/ GCRF	2019 – 2024/ ~19M £ (Pakistan Part ~0.4 M £) / In progress	**Co-PI**
Iron biofortification of grain wheat (*Triticum aestivum* L.) through genetic engineering	King Saud University, Riyadh, Saudi Arabia	Completed/ (2000 $) / 2017-2019	**Member In MoU**

Master / PhD student supervision

	Completed	In Progress
M. Phil. Students as main supervisor	> 100	18
PhD students as main supervisor	5	3
PhD student member supervisory committee	3	1
PhD student member exam evaluation committee	> 25	13