

CURRICULUM VITAE

REHANA SARDAR

Assistant Professor of Botany, Emerson University, Multan, Pakistan.

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SCIENTIFIC ACCOUNTS:

- ✚ **Google Scholar ID:** <https://scholar.google.com/citations?hl=en&user=EuvCIs4AAAAJ>
- ✚ **Linkedin:** <https://www.linkedin.com/in/rehana-sardar-718470265/>
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- ✚ **Sciprofile:** <https://sciprofiles.com/profile/RehanaSardar>
- ✚ **SCOPUS ID:** <https://sciprofiles.com/profile/Rehanasardar>
- ✚ **Exaly:** <https://exaly.com/author/3076264/rehana-sardar>
- ✚ **ResearchID:** <https://www.researchid.co/rid82417>
- ✚ **SemanticScholar:** <https://www.semanticscholar.org/author/R.-Sardar/2128387439>
- ✚ **Wikidata:** https://www.wikidata.org/wiki/User:Rehana_sardar

HIGHLIGHTS

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|---|-----------|
| • Teaching / Research Experience | 5.5 Years |
| • Publications | 62 |
| • Impact Factor | 206.364 |
| • Citations | 686 |
| • <i>h</i> -index | 13 |
| • <i>i10</i> -index | 15 |
| • Manuscripts as Principal Author (First Author/ Corresponding Author) > 45 | |
| • Student Supervised | |
| MS/ M.Phil | 12 |
| M. Sc | 03 |
| BS | 17 |
| • Conferences & Workshops Participated | 15 |

ACADEMIC PROFILE

- **Ph.D. (Plant Sciences/ Botany)** Institute of Botany, University of the Punjab Lahore, Pakistan (23-09-2016~23-01-2022)
- **MS (Plant Sciences/Botany)** Institute of Botany, University of the Punjab, Lahore, Pakistan (15-09-2012~ 06-09-2014)
- **BS (Hons) Biology (Plant Sciences/Botany)** University of Education, Lahore, Punjab, Pakistan (25-08-2005~26-07-2009)

MAJOR FIELDS

- Stress physiology, Proteomics, Nanotechnology and Biotechnology
- Plant Production under Changing Climate Scenario
- Environmental Pollution and Phytoremediation
- Sustainability Issues in Environment, Development and Agriculture
- Bio – Nanotechnology / Green Synthesis of Nano-Particles i.e Green Synthesis and Characterization of Ag, Cu & Zn Nano-Particles and their Application

COURSES TAUGHT (POST AND UNDER-GRADUATE LEVEL)

- Advance Plant Physiology
- Biology-I
- Biology-II
- Cell Biology, Genetics & Evolution
- Diversity of Plants
- Fundamentals of Genetics & Evolution
- Genetics-1
- Introduction of Nanotechnology
- Mycology and Plant Pathology
- Plant Biochemistry-1
- Plant Ecology-1
- Salinity and Water Logging

RESEARCH/ TEACHING EXPERIENCE

- Working as Assistant Professor of Botany, Department of Biological and Environmental Sciences, Emerson University, Multan, Pakistan.
- Member of the Board of Studies, Emerson University, Multan, Pakistan
- Secretary of the Auction Committee, Emerson University, Multan, Pakistan
- Member of Academic Council board, Emerson University, Multan, Pakistan
- Focal Person, Anti-dengue Activity, Emerson University, Multan, Pakistan
- Worked as College Teacher Interns (CTI), Botany in Govt. Dyal Singh Graduate College, Lahore, Pakistan from 19-01- 2023 to 17-06-23.
- Worked as Teacher Assistant (Lecturer) at Suffa College of Commerce Okara, from 10-7-2008 to 15-2-2010.

- One-year experience in performing application of Nano-Fortified Fertilizers in the field trials of wheat crops during growing season of 2021-2022 by microbial biotechnologies, Lahore, Pakistan.
- Six-month research work in Proteomic Lab of School of Biological Sciences at the University of the Punjab, Lahore.

ACHIEVEMENT & AWARDS

- Merit scholarship during BS (Hons) Biology (2005-2009)
- Merit scholarships during MS Botany, 2014
- Achieved merit Laptop, 2011

ARTICLES PUBLISHED in REFEREED JOURNALS

Year 2025 (Impact Factor = 21.3)

1. Sajid, M., Ahmed, S., **Sardar, R.**, & Yasin, N. A. (2025). Polyethylene Glycol Mitigates Cadmium Toxicity in *Raphanus sativus* L. by Regulating Enzymatic and Nonenzymatic Antioxidant Defence Mechanisms. *Journal of Soil Science and Plant Nutrition*, 1-15. (IF: 3.1).
2. Ejaz, R., Ahmed, S., **Sardar, R.**, Zulfiqar, A., Yasin, N. A., & Hussaan, M. (2025). 28-homobrassinolide supplementation modulates the physiological mechanism and yield in *Phaseolus vulgaris* L. under sodium fluoride stress. *International Journal of Phytoremediation*, 1-16. (IF: 3.1).
3. **Sardar, R.**, Akram, W., & Yasin, N. A. (2025). Mitigating strategies using nanotechnologies in the soil system. In *Nano-bioinoculants* (pp. 337-356). Academic Press.
4. Sajid, M., Ahmed, S., **Sardar, R.**, Safdar, M. N., & Yasin, N. A. (2025). Evaluation of antioxidant and morphophysiological alterations in polyethylene glycol primed *Raphanus sativus* L. under sodium fluoride stress. *International Journal of Phytoremediation*, 1-15. (IF: 3.1).
5. Fatima, S., Khan, W. U., **Sardar, R.**, Munir, B., Rehman, A., Akram, W., ... & Yasin, N. A. (2025). Synergistic application of *Bacillus subtilis* IAGS174 and thiamine to mitigate salinity and lead stress in *Helianthus annuus*. *PeerJ*, 13, e19527. (IF: 2.4).
6. Sajid, M., Ahmed, S., **Sardar, R.**, & Yasin, N. A. (2025). Insight into polyethylene glycol-mediated physiochemical, nutritional, and antioxidative defense modulations in salt-stressed *Raphanus sativus* L. *Physiology and Molecular Biology of Plants*, 31(4), 659-674. (IF: 3.3).

7. Sajid, M., Ahmed, S., **Sardar, R.**, Ali, A., & Yasin, N. A. (2025). Role of polyethylene glycol to alleviate lead stress in *Raphanus sativus*. *PeerJ*, 13, e18147. (IF: 2.4).
8. Ahmed, S., Razzaq, I., **Sardar, R.**, Ahmad, M. N., Aziz, T., Shami, A., & Lin, L. (2025). Food security through triacontanol priming: Mitigating chromium stress and boosting yield in *Raphanus sativus* L. *Italian Journal of Food Science/Rivista Italiana di Scienza degli Alimenti*, 37(2). (IF: 3.3).
9. Ahmed, S., Magsood, S., **Sardar, R.**, Ahmad, N. M., Amjad, M., & Mumtaz, A. (2025). Seed priming with 28-Homobrassinolide enhances growth and physiochemical characteristics of radish under sodium fluoride stress. *Fluoride*, 58(8), 1-17. (IF: 0.6).
10. Haroon M, Khan WU, Munir B, Ahmad SR, Rehman A, Akram W, Munir A, **Sardar R.** & Yasin, N. A. (2025). Seed priming with alpha-tocopherol alleviates microplastic stress in *Brassica rapa* through modulations in morphological, physiological and biochemical attributes. *Chemosphere*, 371, 144060.

Year 2024 (Impact Factor = 39.5)

11. Ahmed, S., Akram, A., **Sardar, R.**, Yasin, N. A., Fatima, M., Jabbar, M., & Lackner, M. (2024). Protective Role of Triacontanol (Myricyl Alcohol) Towards the Nutrients Uptake and Growth in *Brassica rapa* L. Under Cadmium Stress. *Agronomy*, 14(12), 2916. (IF 3.4)
12. Mudassar, S., Ahmed, S., **Sardar, R.**, Yasin, N. A., Jabbar, M., & Lackner, M. (2024). Exogenously Applied Triacontanol Mitigates Cadmium Toxicity in *Vigna radiata* L. by Optimizing Growth, Nutritional Orchestration, and Metal Accumulation. *Toxics*, 12(12), 911. (IF: 4.1).
13. Ahmed, S., Qasim, M., **Sardar, R.**, Yasin, N. A., & Umar, I. (2024). Multidimensional role of selenium nanoparticles to promote growth and resilience dynamics of *Phaseolus vulgaris* against sodium fluoride stress. *International Journal of Phytoremediation*, 1-18. (IF: (IF: 3.1).
14. Fatima, M., Maqbool, A., **Sardar, R.**, Maqsood, M. F., & Zulfiqar, U. (2024). Nano-Selenium: a green promising approach against abiotic stresses in plants. *Journal of Soil Science and Plant Nutrition*, 24(3), 6000-6023. (IF:3.4).
15. Ahmed, S., Fatima, M., **Sardar, R.**, & Yasin, N. A. (2024). Application of Nano Selenium Alleviates Cd-induced Growth Inhibition and Enhances Biochemical

Responses and the Yield of *Solanum melongena* L. *Journal of Soil Science and Plant Nutrition*, 1-22. (IF:3.4).

16. Khalid F, Rasheed Y, Asif K, Ashraf H, Maqsood MF, Shahbaz M, Zulfiqar U, **Sardar R**, Haider FU (2024). Plant Biostimulants: Mechanisms and Applications for Enhancing Plant Resilience to Abiotic Stresses. *Journal of Soil Science and Plant Nutrition*. Sep 24:1-50. (IF:3.4).
17. Shah, A. A., Altaf, M. A., & **Sardar, R.** (2024). Recent physiological and molecular approaches of abiotic stress tolerance in plants. *Brazilian Journal of Botany*, 47(3), 681-682. (IF: 1.5).
18. Ahmed, S., Ashraf, S., Yasin, N. A., **Sardar, R.**, Al-Ashkar, I., Abdelhamid, M. T., & Sabagh, A. E. (2024). Exogenously applied nano-zinc oxide mitigates cadmium stress in *Zea mays* L. through modulation of physiochemical activities and nutrients homeostasis. *International Journal of Phytoremediation*, 1-16. (IF: 3.5).
19. Rehman, B., Zulfiqar, A., Attia, H., Sardar, R., Saleh, M.A., Alamer, K.H., Alsudays, I.M. and Mehmood, F., (2024). Seed Priming with Potassium Nitrate Can Enhance Salt Stress Tolerance in Maize. *Phyton (0031-9457)*, 93(8). (IF: 1.3).
20. Ahmad, A., Akram, W., **Sardar, R.**, & Yasin, N. A. (2024). Interactive effects of plant growth-promoting microbes and nanoparticles on the physiology, growth, and yield of crops. *Frontiers in Plant Science*, 15, 1338470. (IF: 5.6).
21. Hussain, S., Ahmed, S., Akram, W., Ahmad, A., Yasin, N.A., Fu, M., Li, G. and Sardar, R., (2024). The potential of selenium to induce salt stress tolerance in *Brassica rapa*: Evaluation of biochemical, physiological and molecular phenomenon. *Plant Stress*, 1;11:100331. (IF: 5).
22. Ahmed, S., Ashraf, R., & Sardar, R. (2024). Impact of exogenous applications of salicylic acid on growth and physiochemical attributes of *Trigonella foenum-graecum* L. grown under sodium fluoride stress. *Fluoride*, 57(6), 1-14. (IF: 1.72).
23. Ahmed, S., Fatima, A., Sardar, R., Ahmad, M., & Ahmad, M. N. (2024). Glutathione mitigates sodium fluoride toxicity in pea seedlings: morphophysiological responses and biochemical analysis. *Fluoride*, 57(5), 1-13. (IF: 1.72).
24. Ahmed, S., Hashmi, M., & Sardar, R. (2024). Seed priming with 28-homo brassinolide attenuates sodium fluoride induced phyto-toxicity in *Pisum sativum* L. *Fluoride*, 57(5), 1-14. (IF: 1.72).

Year 2023 (Impact Factor = 65.157)

25. Zulfiqar a, kiani r, saleh ma, alsudays im, al-robai sa, alamer kh, **Sardar R**, ashraf k, mehmood f, uz zaman q. Proteomic alterations in various plant tissues of maize under induced chromium stress. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*. 2023 Nov 17;51(4):13323. (IF: 1.249).
26. Khalid F, Asif K, Rasheed Y, Ashraf H, Maqsood MF, Rana S, Zulfiqar U, Naz N, Shahbaz M, **Sardar R**, Riaz Z. Nano priming for boosting growth and resilience in crops under abiotic stresses. *Biocatalysis and Agricultural Biotechnology*. 2023 Oct 1;53:102892. (IF: 4).
27. Khan, M.; Ahmed, S.; Yasin, N.A.; **Sardar, R.**; Hussaan, M.; Gaafar, A.-R.Z.; Haider, F.U. 28-Homobrassinolide Primed Seed Improved Lead Stress Tolerance in *Brassica rapa* L. through Modulation of Physio-Biochemical Attributes and Nutrient Uptake. *Plants* **2023**, 12, 3528. (IF: 4.5).
28. Javeed, A., Ahmed, S., & **Sardar, R.** (2023). Alleviation of salinity stress in zinc oxide nanoparticle-treated *Lagenaria siceraria* L. by modulation of physiochemical attributes, enzymatic and non-enzymatic antioxidative system. *Functional Plant Biology*, 50(11), 941-954. (IF: 2.812).
29. Hussain, S., Ahmed, S.; Akram, W., **Sardar, R.**, Yasin, NA. Selenium-Priming Mediated Growth and Yield improvement of Turnip under Saline Conditions. *International Journal of Phytoremediation*. (IF: 4.003).
30. Aslam, M. A., Ahmed, S., Saleem, M., **Sardar, R.**, Shah, A. A., Siddiqui, M. H., & Shabbir, Z. (2023). Mitigation of chromium-induced phytotoxicity in 28-homobrassinolide treated *Trigonella corniculata* L. by modulation of oxidative biomarkers and antioxidant system. *Ecotoxicology and Environmental Safety*, 263, 115354. (IF: 6.8).
31. Ahmed, S., Umer, I., **Sardar, R.** (2023). Glutathione alleviates chromium stress and promotes *Pisum sativum* L. growth by improving nutrient orchestration, proline and physiochemical attributes. *Journal of Soil Science and Plant Nutrition*. (IF: 3.900).
32. Hussain, S., Ahmed, S., Yasin, N. A., Akram, W., **Sardar, R.**, Ahmad, A., & Li, G. (2023). In vitro and in silico study of salt stress resilience in *Brassica rapa* through selenium seed priming. *South African Journal of Botany*, 160, 504-515. (IF: 3.11).
33. Umar, I., Ahmed, S., Yasin, N. A., Wahid, A., Alamri, S., Hamid, Y., & **Sardar, R.** (2023). Role of exogenously applied triacontanol in amelioration of chromium stress in *Pisum sativum* by enhanced nutrition orchestration, growth and proline content. *South African Journal of Botany*, 162, 96-107. (IF: 3.11).

34. Ahmad, M., Ahmed, S., Yasin, N. A., Wahid, A., & **Sardar, R.** (2023). Exogenous application of glutathione enhanced growth, nutritional orchestration and physiochemical characteristics of *Brassica oleracea* L. under lead stress. *Physiology and Molecular Biology of Plants*, 1-14. (IF: 3.5).
35. Ahmed, S., Mudasar, S., **Sardar, R.**, & Yasin, NA. (2023). 28-Homo-Brassinolide Confers Cadmium Tolerance in *Vigna radiate* L. through Modulating Minerals Uptake, Antioxidant System and Gas Exchange attributes. *Journal of Plant Growth Regulation*. (IF: 4.640).
36. Yasin, N. A., Khan, T. A., Ali, A., Ahmed, M., & **Sardar, R.** (2023). Environmental extremes threatening food crops. *Frontiers in Plant Science*, 14. (IF: 6.627).
37. Ahmed, S., Khan, M., & **Sardar, R.** (2023). Glutathione primed seed improved lead-stress tolerance in *Brassica rapa* L. through modulation of physio-biochemical attributes and nutrient uptake. *International Journal of Phytoremediation*, 1-11. (IF: 4.003).
38. Ahmed, S.; Amjad, M.; **Sardar, R.**; Siddiqui, M.H.; Irfan, M. (2023). Seed priming with triacontanol alleviates lead stress in *phaseolus vulgaris* L. (common bean) through improving nutritional orchestration and morpho-physiological characteristics. *Plants* 2023, 12, 1672. <https://doi.org/10.3390/plants1208167> (IF: 4.658).
39. Ahmed, S., & **Sardar, R.** (2023). Improvement in growth and physiochemical attributes of *Raphanus sativus* L. through exogenous application of 28-Homobrassinolide under nickel stress. *Scientia Horticulturae*, 311, 111791. (IF: 4.332).
40. Ahmed, S., Ahmad, M., **Sardar, R.**, & Ismail, M. A. (2023). Triacontanol priming as a smart strategy to attenuate lead toxicity in *Brassica oleracea* L. *International Journal of Phytoremediation*, 25(9), 1173-1188. 1-8. (IF: 4.003).

Year 2022 (Impact Factor = 80.407)

41. Gillani, S.F.A., Zhuang, Z., Rasheed, A., Haq, I.U., Abbasi, A., Ahmed, S., Wang, Y., Khan, M.T., **Sardar, R.** and Peng, Y., 2022. Brassinosteroids induced drought resistance of contrasting drought-responsive genotypes of maize at physiological and transcriptomic levels. *Frontiers in Plant Science*, 13, p.961680. *Frontiers in Plant Science*, 13. (IF: 6.627).

42. Ramzan, M., Ayub, F., Shah, A.A., Naz, G., Shah, A.N., Malik, A., **Sardar, R.**, Telesiński, A., Kalaji, H.M., Dessoky, E.S. and Abd Elgawad, H., (2022). Synergistic Effect of Zinc Oxide Nanoparticles and *Moringa oleifera* Leaf Extract Alleviates Cadmium Toxicity in *Linum usitatissimum*: Antioxidants and Physiochemical Studies. *Frontiers in Plant Science*, 13. (IF: 6.627).
43. Khan, M.T., Ahmed, S., **Sardar, R.**, Shareef, M., Abbasi, A., Mohiuddin, M., Ercisli, S., Fiaz, S., Marc, R.A., Attia, K. and Khan, N., (2022). Impression of foliar-applied folic acid on coriander (*Coriandrum sativum* L.) to regulate aerial growth, biochemical activity, and essential oil profiling under drought stress. *Frontiers in Plant Science*, 13, p.1005710. *Frontiers in Plant Science*, 13. (IF: 6.627).
44. Zulfiqar, A., Naseer, S., Saleem, A., Ahmed, S., & **Sardar, R.** (2022). Genetic diversity studies for grain iron and zinc content analysis for Elite rice (*Oryza sativa* L.) genotype by using SSR markers. *Journal of Food Composition and Analysis*, 104816. (IF: 4.52).
45. **Sardar, R.**, Ahmed, S., Yasin, N. A & Li, G (2022). Alleviation of cadmium phytotoxicity in triacontanol treated *Coriandrum sativum* L. by modulation of physiochemical attributes, oxidative stress biomarkers and antioxidative system. *Chemosphere* (IF: 8.943).
46. **Sardar, R.**, Ahmed, S., Shah, A. A., & Yasin, N. A. (2022). Selenium nanoparticles reduced cadmium uptake, regulated nutritional homeostasis and antioxidative system in *Coriandrum sativum* L. grown in cadmium toxic conditions. *Chemosphere*, 287, 132332. (IF: 8.943).
47. **Sardar, R.**, Ahmed, S., & Yasin, N. A. (2022). Titanium dioxide nanoparticles mitigate cadmium toxicity in *Coriandrum sativum* L. through modulating antioxidant system, stress markers and reducing cadmium uptake. *Environmental Pollution*, 292, 118373 (IF: 9.988).
48. **Sardar, R.**, Zulfiqar, A., Ahmad, S., et al., (2021). Proteomic Changes in Various Plant Tissues Associated with Chromium Stress in Sunflower. *Saudi Journal of Biological Sciences*. (IF: 4.052).
49. Javad, S., Shah, A. A., Ramzan, M., **Sardar, R.**, Javed, T., AlHuqail, A. A., H.M., Chaudhry, O., Yasin, N.A., Ahmed, S., & Hussain, I. (2022). Hydrogen sulphide alleviates cadmium stress in *Trigonella foenum graecum* by modulating antioxidant enzymes and polyamine content. *Plant Biology*, 24(4), 618-626. (IF: 5.26).

50. **Sardar, R.**, Ahmed, S., & Yasin, N. A. (2021). Role of exogenously applied putrescine in amelioration of cadmium stress in *Coriandrum sativum* L. by modulating antioxidant system. *International Journal of Phytoremediation*, 1-8. (IF: 4.003).
51. Ahmed, S., Kausar, S., Jabeen, F., Ansari, M., Bukhari, S., Hussain, S., **Sadar, R.**, Ahmad, M.N. and Sajid, M., 2022. Salicylic acid alleviates the adverse effects of sodium fluoride stress by improving growth and biochemical attributes in *Capsicum annuum* L. *Fluoride*, 55(3), pp.221-246. *Fluoride*. (IF: 1.224).
52. Zulfiqar, A., Mushtaq, I., Ahmed, S., Ali, M., Saleem, A., **Sadar, R.**, & Ahmad, M. N. (2022). Fluoride resistant bacteria alleviate fluoride stress in *triticum aestivum* L. through modulating gas exchange characteristics and enhanced plant growth. *Fluoride*, 55(3), 280-294. (IF: 1.224).66.814
53. Zulfiqar, A., Fatima, R., Ahmed, S., Saleem, A., **Sadar, R.**, Ahmad, M. N., & Yasin, N. A. (2023). Mechanistic insights into the interaction of fluoride resistant bacteria with wheat roots toward enhancing plant productivity by alleviating fluoride stress. *Fluoride*, 56(3). (IF: 1.224).
54. Ahmed, S., Ahmad, M., Ansari, M., **Sadar, R.**, Ahmad, M.N., Umar, I., Bukhari, S., Zadid, S.R. and Khan, M.T., 2023. Growth and yield responses of *Lactuca sativa* L. to different concentration of sodium fluoride. *Fluoride*, 56(2), pp.133-142. (IF: 1.224).
55. Ahmed, S., Umar, I., Jabeen, F., Ansari, M., Bukhari, S., Ahmad, M.N., **Sadar, R.**, Ahmad, M., Khan, M.T. and Zadid, S.R., 2023. Sodium fluoride induced changes in the growth and yield of *Spinacia oleracea* L. *Fluoride*, 56(2), pp.123-132. (IF: 1.224).
56. Ahmed, S., Mudassar, S., Ansari, M., Jabeen, F., **Sadar, R.**, Bukhari, S., Ahmad, M.N., Kamran, A., Amjad, M., Khan, M. and Haziq, M.A., 2023. Evaluation of sodium fluoride induced stress on growth and yield of *Lycoersicon esculentum* L. *Fluoride*, 56(2). (IF: 1.224).
57. Ahmed, S., Qasim, M., Ansari, M., Babar, S., **Sadar, R.**, Ahmad, M.N., Bukhari, S., Ismail, M.A., Zia, A. and Arif, M., 2023. Evaluation of restorative effect of salicylic acid on *Abelmoschus esculentus* L. yield and biomass attributes for attenuating fluoride toxicity. 56. *Fluoride*. (IF: 1.224).
58. Ahmed, S., Fatima, M., Ansari, M., Baba, S., **Sadar, R.**, Ahmad, M.N., Haider, A., Ismail, M.A. and Zaman, N., 2023. Evaluation of the curative effects of zinc oxide

nanoparticles on *Solanum melongena* L. under fluoride stress. 56. *Fluoride*. (IF: 1.224).

59. Ahmed, S., Qasim, M., Ansari, M., Babar, S., Bukhari, S., Ahmad, M.N., Ismail, M.A., Arif, M. and Zia, A., 2023. Salicylic acid mitigates fluoride stress in *Abelmoschus esculentus* L. through enhanced growth and biochemical attributes. 56. *Fluoride*. (IF: 1.224).

60. Bukhari S, Ahmed S, Azhar A, **Sardar R**, Hassan S, Ahmad MN, (2022). Environmental fluoride exposure and its toxic effects on plants: A review. *Fluoride*. (IF: 1.224).

61. Bukhari S, Ahmed S, Ali Z, **Sardar R**, Hassan S, Ahmad MN, (2022). Fluoride contamination in foods and drinking water: A review on its toxic effects and mitigation strategies. *Fluoride*. (IF: 1.224).

Year 2021 (Impact Factor = 0.00)

62. **Sardar, R.**, Ahmed, S., & Yasin, N. A. (2021). Seed priming with karrikinolide improves growth and physiochemical features of *Coriandrum sativum* L. under cadmium stress. *Environmental Advances*, 5, 100082. (IF: 0.00).

Poster Presentation

- Poster presentation in 1st conference on Environment and Sustainable Development at G.C University, Lahore Pakistan. December 12-13, 2014.

Abstracts in Proceedings

- Participated as Organizer in 1st International Conference on Biodiversity, Sustainability, and Natural History (ICBSN), held on 12-13, 2025, The Department of Biological and Environmental Sciences at Emerson University Multan.
- Participated as distinguished speaker in Two-day international conference, Techno-Molecules 2025, held on April 29–30, 2025, The Department of Biosciences and Technology at Emerson University, Multan.
- Presentation in International Horticulture Conference (IHC). Institute of Agricultural Sciences, University of the Punjab. 26-28 Feb, 2020. **Sardar, R.**, Ahmed, S., & Yasin, N. A. (2020). Seed priming with selenium improves growth of *Coriandrum sativum* L. through modulation of photosynthetic and antioxidative System.

- Presentation in Emerging trends in earth and environmental sciences (ETEES). College of earth and environmental sciences. University of the Punjab. 04-06 March, 2020. **Sardar, R.**, Ahmed, S., & Yasin, N. A. (2020). Seed priming with triacontanol improves growth of *Coriandrum sativum* L. through modulation of photosynthetic and antioxidative system.
- Presentation in Emerging trends in earth and environmental sciences (ETEES). College of earth and environmental sciences. University of the Punjab. 16-18 November, 2021. **Sardar, R.**, Ahmed, S., & Yasin, N. A. (2021). Seed priming with selenium nanoparticles ameliorate cadmium stress in *Coriandrum sativum* L. through modulation of physiochemical attributes and antioxidant system.
- Presentation in 1st International Conference on Recent Approaches in Plant Sciences (RAPS), Department of Botany University of Education, Township, Lahore, Pakistan (March 30-31 2022). Zinc Oxide Nanoparticles Mitigates Fluoride Stress in *Solanum melongena* L. Through Improve Growth, Photosynthetic Pigment and Yield.
- Presentation in 1st International Conference on Recent Approaches in Plant Sciences (RAPS), Department of Botany University of Education, Township, Lahore, Pakistan (March 30-31 2022). Assessment of restorative effect of salicylic acid on growth and biochemical attributes of *Abelmoschus esculentus* L. for attenuating fluoride toxicity.
- Participated in 2nd international conference on plant sciences (ICPS-2018) at GC University Lahore.
- Participated in 1st International Conference Environment and Sustainability Development held at Sustainability Development Study Center, GC University Lahore during March 16 to 17, 2014.

WEBINAR ATTENDED

- Webinar, Plastic free July, College of Earth and Environmental Sciences University of The Punjab, Lahore Pakistan, 21st, 22nd and 23rd July, 2025.
- Participated in International Webinar on “Role of Youth in Global Biodiversity Conservation” held at Horticultural Society GC University Lahore on 21st May, 2021.
- Participated in 1st International Symposium on “Current Trends and Future Perspectives in Botanical Research, 2020” November 10, 2020.
- Participated in One Day International Webinar “Role of Biodiversity Information in Global Biodiversity Information Facility (GBIF)” held at Department of Botany GC University, Lahore 18th May, 2021.

- Participated in International Webinar on “Legumes as a source of Energy and Nutraceuticals” held at Department of Botany GC University Lahore on 5th April, 2021.
- Participated in Webinar on Malaria; Vector Biology and Control Department of Botany GC University Lahore.

EDITORIAL MEMBERSHIP:

1. BMC Plant Biology
2. Frontiers in Agronomy
3. Guest Editor; Brazilian Journal of Botany

SPECIAL ISSUE

Journal: *Brazilian Journal of Botany*

(Closed and completed)

Title: Recent Physiological and Molecular Approaches of Abiotic Stress Tolerance in Plants.

Link: <https://link.springer.com/collections/ddbdjcicef>

POTENTIAL REVIEWER OF THE INTERNATIONAL JOURNALS

Research Journals Reviewed > 36

Research Articles Reviewed >140

1. ACS Omega
2. Acta Physiologiae Plantarum
3. Advances in Agriculture. Hindawi (Top reviewers on Publons (manuscripts reviewed in last 12 months till 20-8-22))
4. BMC Plant Biology
5. Biotechnology Journal
6. Chemosphere
7. Cogent Food & Agriculture
8. Crop Protection
9. Discover Plants
10. Environment International
11. Environmental and Experimental Botany
12. Environmental Contamination and Toxicology
13. Environmental Pollution
14. Environmental Science and Pollution Research
15. Flavour and Fragrance Journal
16. Frontiers in Agronomy
17. Frontiers in Plant Science
18. IET Nanobiotechnology
19. International Journal of Agronomy
20. International Journal of Food Processing and Preservation

21. *iScience*
22. Journal of Agricultural Sciences and Engineering
23. Journal of Environmental Management
24. Journal of Food Quality
25. Journal of Plant Sciences
26. Journal of Trace Elements in Medicine and Biology
27. Molecular Biology Reports
28. New Zealand Journal of Crop & Horticultural Science
29. PeerJ
30. Phyton
31. Plant Biosystems
32. Plant Cell Reports
33. Plant Growth Regulation
34. Scientia Horticulturae
35. Scientific Report
36. Silicon
37. South African Journal of Botany

HUMAN RESOURCE DEVELOPMENT (STUDENTS SUPERVISED)

🚩 Co-Chair Session: Stress Physiology, **9th International & 18th National Conference of Plant Scientists (INCPS 2024)** at the Institute of Botany, BZ University Multan

🚩 **Viva Voce examination of BS Botany, BZU, Multan**

Student name: Arooj Qamar: BSBE-20-04; Session: 2020-2024

Supervisor name: Prof. Dr. Zafar Ullah Zafar

🚩 **Viva Voce examination of M. Phil Botany, Woman University, Multan (31-07-2025)**

Sr. #	Roll No.	Student Name	Research title
Supervisor name: Dr. Adeela Haroon, Chairperson			
1.	MBOT-F23-15	Sadia Muzaffar	Ethnobotanical Diversity and Phylogenetic Characterization of Selected Mushrooms of Muzaffargarh, Pakistan
2.	MBOT-F23-26	Aimen Naeem	Systematics and Ethnobotanical Diversity of Macro-fungi of South Punjab, Pakistan
Supervisor name: Ms. Uzma Ishaq			
3.	MBOT-F23-07	Aliza Sana	Investigating the therapeutic potential of FIP-fve from <i>Ganoderma sinense</i> in modulating p38 MAPK pathway for ovarian cancer treatment
4.	MBOT-F23-13	Madeeha Areej	Unravelling the antiallergic potential of Ricin B-like-Lectin from <i>Leucoagaricus</i> sp.: A computational study for molecular interactions

5.	MBOT-F23-16	Ayesha Ashfaq	<i>In-silico</i> exploration of insecticidal potential of FB-type lectin from <i>Boletus edulis</i> Fr. and its binding affinity to GlcNAc and GalNac
6.	MBOT-F23-17	Umm-E-Aiman Farooq	Computational insights into therapeutic potential of <i>Lentinus arcularius</i> (Batsch.) Zmitr. -derived FIP5 in auto-immune disorders

BS Students

S/N	Student Name	Thesis Title	Session
1	Misbah Aish	Impact of Potassium Chloride on Growth of Chromium Exposed <i>Trigonella Foenum graecum</i> L.	2023- 2025
2	Touqeer Zahra	Seed Priming with Chitosan Improves the Growth and Physiological Attributes of <i>Triticum aestivum</i> L. Under Cadmium Stress	2023-2025
3	Samreen	Kinetin Mitigates Lead Toxicity in <i>Brassica rapa</i> L. Through Modulating Growth and Seed Germination	2023-2025
4	Sadia Saman	Potential of Caffeic Acid to Improve Growth and Photosynthetic Efficiency in <i>Triticum aestivum</i> L. Cultivated in Lead-Polluted Soils	2023-2025
5	Kainat Abid	Evaluating the Ameliorative Effects of Potassium Chloride on <i>Coriandrum sativum</i> Seed Germination and Growth under Salinity Stress Conditions	2023-2025
6	Nimra Majeed	Impact of Seed Priming with Kinetin on Germination and Growth in <i>Spinacia oleracea</i> under Lead Stress	2021-2025

MS/ M. Phil Students

S/N	Student Name	Thesis Title	Session
1.	Sana Ashraf	Assessing the Potential of Zinc Oxide Nanoparticles for Mitigating Cadmium Toxicity in Corn (<i>Zea mays</i> L.)	2022-2023
2.	Zainab Islam	Alleviation of Lead Toxicity Using Seed Priming with Selenium in Cucumber (<i>Cucumis sativus</i> L.)	2022-2023
3.	Mariam Fatima	Restorative Effects of Biosynthesized Selenium Nanoparticles on Growth and Yield of Brinjal (<i>Solanum melongena</i> L.) under Cadmium Toxicity	2022-2023
4.	Mawara Khan	Seed Priming with some antioxidants Alleviates lead stress in Turnip	2021-2022
5.	Sameen Khan	Interactive effect of Glutathione and 28-Homobrassinolide Seed priming mitigates Nickel Toxicity in Radish	2021-2022
6.	Saba Mudassar	Improvement of Growth and Biomass in <i>Vigna radiata</i> L. through Seed Priming with Antioxidants Under Cadmium Stress	2021-2022
7.	Minahil Amjad	Interactive Effect of Triaccontanol and Glutathione Mitigate the Lead Induced Phytotoxicity in <i>Phaseolus vulgaris</i> L.	2021-2022
8.	Ismat Umar	Alleviation of Chromium stress in Pea Using Some Phytoprotectants	2021-2022

9.	Maria Ahmad	Mitigation of Lead Stress in Broccoli Using Some Phytostimulators	2021-2022
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M.Sc. Students

S/N	Student Name	Thesis Title	Session
1.	Aleeza Akram	Mitigation of Cadmium Stress by Triacantanol in Turnip	2022-2023
2.	Iqra Razzaq	Triacantanol Modulates Chromium Stress in Radish (<i>Raphanus sativus</i> L.) by Altering Some Physiochemical Attributes	2022-2023
3.	Mehtab Qasim	Effect of Selenium nanoparticles on growth and yield of <i>Phaseolus vulgaris</i> L. under Salt stress	2022-2023
4.	Saba Maqsood	Seed Priming with Brassinolide Improves Seed Germination and Growth of Radish under Sodium Fluoride Stress.	2021-2022
5.	Muhammad Shajahan	Influence of Nano Fortified urea on some Biochemical Attributes and Growth of Wheat.	2021-2022
6.	Maria Akhter	Seed priming effect on growth and some biochemical parameters under salt stress on coriander	2021-2022
7.	Areej	Glutathione influence on some physiological attributes of pea under salinity stress	2021-2022

BS Students

S/N	Student Name	Thesis Title	Session
1	Rimsha Ashraf	Mitigation sodium fluoride stress in fenugreek by seed priming with Salicylic acid	2021-2022
2	Muqadas Hashmi	Seed priming attenuates deleterious effects induced by sodium fluoride stress in pea	2021-2022

RESEARCH COLLABORATION

-  Dr. Nasim Ahmad Yasin, Associate Professor/ Chairman, Department of Horticulture, PU Lahore.
-  Prof. Dr. Shakil Ahmed. Department of Botany, University of the Punjab.
-  Prof. Dr. Aamir Ali. University of Sargodha, Pakistan.
-  Dr. Anis Ali Shah. University of Education, Lahore.
-  Prof. Dr. Guihua Li. Guangdong Academy of Agricultural Sciences.
-  Dr. Ghulam Hassan Abbasi. The Islamia University of Bahawalpur, Pakistan.
-  Dr. Muhammad Akbar. Department of Botany, University of Gujrat.

Member of the Asian Council of Science Editors (ACSE)

TRAININGS & CERTIFICATES

- 1) Certified Microsoft Office Specialist (2018)
- 2) Certified English Course, British Education & Training System (2017)

DISSERTATION TITLES

Ph. D. Thesis

Effects of seed priming with phytoprotectants on cadmium stress alleviation in *Coriandrum sativum* L.

MS Thesis

Proteomic changes in various plant tissues associated with chromium stress in sunflower.

Information Technology Skills

- Statistical software's (Statistic 8.1, 10, XLSTAT)
- SPSS
- Rstudio
- Origin
- Minitab 14
- Word Processing (MS Word, Power point, Excel)