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ACADEMIC RECORD:

Certificate/ Degree	Passing Year	Major group/subjects	Board/University
Postdoc	2012	Allelopathy	Tokyo University of Agriculture & Technology, Japan
Postdoc	2009	Plant Pathology (Mycotoxins)	School of Agriculture, Food and Wine, Adelaide University Australia
PhD	2007	Botany (Plant Pathology)	Punjab University, Lahore
MSc	2000	Botany	Punjab University, Lahore
BSc	1997	Botany, Zoology, Geography, English	Punjab University, Lahore
HSSC	1995	Biology, Chemistry, Physics, English	FBI&SE, Islamabad
SSC	1993	General Science	FBI&SE, Islamabad

PUBLICATIONS WITH IMPACT FACTOR: (Impact Factor: 235.922; H-index = 32)

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1. Maham Fatima, Zill-e-Huma Aftab, Mujahid Manzoor, **Tehmina Anjum**, Waheed Akram, Ghulam Nabi, Muzamil Aftab, Najat A. Bokharu, Humaira Rizwana, and Guihua Li. 2025. Green Synthesis and characterization of TiO₂ nanoparticles from latex of *Calatropis procera* against dusky cotton bug. Scientific Reports. Accepted: (IF: 4.6)
2. Hina Ashraf, **Tehmina Anjum**, Irfan S. Ahmed, Rashid Ahmed, Zill-e-Huma Aftab and Humaira Rizwana. 2025. Phytofabricated silver nanoparticles unlock new potential in tomato plants by combating wilt infection and enhancing plant growth. Scientific Reports. Accepted: (IF: 4.6)
3. Imran Khan, Areeba Rehman, Waheed Akram, **Tehmina Anjum**, Nasim Ahmad Yasin, Zill-e-Huma Aftab, Bareera Munir, Waheed Ullah Khan and Guihua Li. 2025. Unlocking salinity stress resilience in Turnip (*Brassica rapa* subsp. *rapa*) plants using *Bacillus subtilis* Z-12 and *Bacillus aryabhatai* Z-48. Microorganisms. 13, 359 <https://doi.org/10.3390/microorganisms13020359> (IF: 4.1)
4. Zill-e-Huma Aftab, Faisal Shafiq Mirza, **Tehmina Anjum**, Humaira Rizwana, Waheed Akram, Muzamil Aftab, Muhammad Danish Ali, Guihua Li. 2025. Antifungal potential of biogenic zinc oxide nanoparticles for controlling Cercospora leaf spot in mung bean. Nanomaterials, 15, 143. <https://doi.org/10.3390/nano15020143> (IF: 4.4)
5. Waheed Akram, Shama Sharif, Areeba Rehman, **Tehmina Anjum**, Basharat Ali, Zill-e-Huma Aftab, Ayesha Shafqat, Laiba Afzal, Bareera Munir, Humaira Rizwana and Guihua Li. 2024. Exploring the potential of *Bacillus subtilis* IS1 and *B. amyloliquificiens* IS6 to manage salinity stress and Fusarium wilt disease in tomato plants by induced physiological responses. Microorganism. <https://doi.org/10.3390/microorganisms12102092> (IF: 4.1)

6. Zobia Waheed, Waheed Anwar, **Tehmina Anjum**, Muhammad Taqqi Abbas, Adnan Akhter, Abeer Hashem, Ajay Kumar and Elsayed Fathi Abd-Allah. 2024. Pyrolysed maize feedstock utilization in combination with *Trichoderma viride* against *Macrophomina phaseolina*. Scientific Reports. <https://doi.org/10.1038/s41598-024-70975-6> (IF: 4.6)
7. Muhammad Taqqi Abbas, **Tehmina Anjum**, Waheed Anwar, Muhammad Khurshid and Adnan Akhter. 2024. Characterization and induction of biochar induced *Capsicum annum* defense against bacterial wilt. Journal of Soil Science and Plant Nutrition. <https://doi.org/10.1007/s42729-024-01991-8> (IF: 3.9).
8. Muhammad Iqbal, Zill-e-Huma Aftab, **Tehmina Anjum**, Humaira Rizwana, Waheed Akram, Arusa Aftab, Zahoor Ahmad Sajid and Guihua Li. 2024. Nano-integrated plant tissue culture to increase the rate of callus induction, growth and curcuminoids production in *Curcuma longa*. Plants. 13 (1819) <https://doi.org/10.3390/plants13131819> (IF: 4).
9. Ghulam Nabi Ahmed, **Tehmina Anjum**, Zill-e-Huma Aftab, Waheed Akram and Guihua Li. 2024. TiO₂ nanoparticles: green synthesis and their role in lessening the damage of *Colletotrichum graminicola* in Sorghum. Food Science & Nutrition. 00: 1-3. DOI: 10.1002/fsn3.4297 (IF: 3.5)
10. Ahmad Hassan, Sumera Zaib and **Tehmina Anjum**. 2024. Evaluation of antifungal potentials of *Albizia kalkora* extract as a natural fungicide: In vitro and computational studies. Bioorganic Chemistry. 150 (107561) <https://doi.org/10.1016/j.bioorg.2024.107561> (IF: 4.5)
11. Waheed Akram, Sara Waqar, Sana Hanif, **Tehmina Anjum**, Zill-e-Huma Aftab, Guihua Li, Basharat Ali, Humaira Rizwana, Ali Hassan, Areeba Rehman, Bareera Munir and Muhammad Umer. 2024. Comparative effect of seed coating and biopriming of *Bacillus aryabhatai* Z-48 on seedling growth, growth promotion, and suppression of Fusarium wilt disease of tomato plants. Microorganism. 12(4):792 <https://doi.org/10.3390/microorganisms12040792> (IF: 4.1)
12. Muhammad Atif, **Tehmina Anjum**, Ahmad Ali Shahid, Ahmad Hassan and Waheed Akram. 2024. Inhibitory potential of *Syzygium aromaticum* against *Fusarium oxysporum* f. sp. lycopersici: In-vitro analysis and molecular docking studies. South African Journal of Botany. DOI:10.1016/j.sajb.2024.04.028 (IF: 2.7)
13. Umar Khalid, Zill-e-Huma Aftab, **Tehmina Anjum**, Najat A. Bokhari, Waheed Akram and Waheed Anwar. 2024. Harnessing the biocontrol potential of *Bradyrhizobium japonicum* FCBP-SB-406 to manage charcoal rot of soybean with increased yield response. Microorganisms. <https://doi.org/10.3390/microorganisms12020304> (IF: 4.1)
14. Ali Raza, Ali Hassan, Waheed Akram, **Tehmina Anjum**, Zill-e-Huma Aftab and Basharat Ali. 2024. Seed coating with the synthetic consortium of beneficial Bacillus microbes improves seedling growth and manages Fusarium wilt disease. Scientia Horticulturae. <https://doi.org/10.1016/j.scienta.2023.112645> (IF: 3.9).
15. Ali Hassan, Waheed Akram, Humaira Rizwana, Zill-e-Huma Aftab, Sana Hanif, **Tehmina Anjum**, Mona. S. Alwahibi. 2023. The imperative use of Bacillus consortium and quercetin contributes to suppress Fusarium wilt disease by direct antagonism and induce resistance. Microorganisms. (11(10), 2603). <https://doi.org/10.3390/microorganisms11102603> (IF: 4.1)
16. Tanzeela Batool, Zaheer H Shah, Hina Ashraf, Daoud Ali, Shamaila S., **Tehmina Anjum**, Shahzad Naseem and Saira Riaz. 2023. Solar energy driven photo catalytic action and antimicrobial activities of iron oxide nanoparticles. Journal of Sol Gel Science and Technology. <https://doi.org/10.1007/s10971-023-06210-x> (IF: 2.5)
17. Saman Shabir, Zill-e-Huma Aftab, **Tehmina Anjum**, Waheed Akram, Saddam Hussain, Hamza Rafiq, Li Guihua. 2023. Biological evaluation, GC-MS profiling and molecular docking studies of some essential oils against postharvest pathogens of maize. Arabian Journal of Chemistry. <https://doi.org/10.1016/j.arabjc.2023.105339> (IF: 5.3)
18. Waheed Anwar, Huma Amin, Hafiz Azhar Ali Khan, Adnan Akhtar, Uzma Bashir, **Tehmina Anjum**, Rabia Kalsoom, Muhammad Asim Javed and Karamat Ali Zohaib. 2023. Chitinase of *Trichoderma longibrachiatum* for control of *Aphis gossypii* in cotton plants. Scientific Reports. <https://doi.org/10.1038/s41598-023-39965-y> (IF: 4.6)
19. Hamza Rafiq; Zill-e-Huma Aftab; Waheed Akram; **Tehmina Anjum**; Faisal Shafiq Mirza; Zubaida Yousuf and Guihua Li. 2023. A biological evaluation and molecular docking insight

on green synthesized graphene oxide nanoparticles mediated growth promotion in mung bean. *Scientia Horticulturae*. <https://doi.org/10.1016/j.scienta.2023.112097> (IF: 3.9).

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21. Faisal Shafiq Mirza; Zill-e-Huma Aftab; Muhammad Danish Ali; Arusa Aftab; **Tehmina Anjum**; Hamza Rafiq and Guihua Li. 2022. Green synthesis and application of GO nanoparticles to augment growth parameters and yield in mung bean (*Vigna radiate* L.). *Frontiers in Plant Science*. <https://doi.org/10.3389/fpls.2022.1040037>. (IF: 6.627)
22. Naila Farooq, Laraib Ather, Muhammad Shafiq, Muhammad Shah Nawaz-ul-Rehman, Muhammad Haseeb, **Tehmina Anjum**, Qamar Abbas, Mujahid Hussain, Numan Ali, Syed Agha Armaghan Asad Abbas, Sehrish Mushtaq, Muhammad Saleem Haider, Saleha Sadiq and Muhammad Adnan Shahid. 2022. Magnetofection approach for the transformation of okra using green iron nanoparticles. *Scientific Reports*. 12, 16568; <https://doi.org/10.1038/s41598-022-20569-x> (IF: 4.996)
23. Waheed Akram, Sabin Fatima, **Tehmina Anjum**, Basharat Ali and Guihua Li. 2022. Foliar application of leaf extracts of *Glycyrrhiza uralensis* increases growth and nutritional value of Chinese flowering cabbage plants under field conditions. *Journal of Food Quality*. (2.450)
24. **Tehmina Anjum**, Wajiha Irum, Mazhar Iqbal, Mateen Abbas, Waheed Akram and Guihua Li. 2022. Structure elucidation and toxicity analysis of the byproducts formed after biodegradation of aflatoxin B1 and B2 using extracts of *Mentha arvensis*. *Toxins*. 14(1), 24 <https://doi.org/10.3390/toxins14010024> (IF: 4.546)
25. Hina Ashraf, Tanzeela Batool, **Tehmina Anjum**, Ahmad Illyas, Guihua Li, Shahzad Naseem, and Saira Riaz. 2022. Antifungal potential of green synthesized magnetite nanoparticles (BC-Fe₃O₄ NPs) against wilt infection by ameliorating enzymatic activity and gene expression in *Solanum lycopersicum* L. *Frontiers in Microbiology*. doi: 10.3389/fmicb.2022.754292 (IF: 5.640)
26. Hina Ashraf, **Tehmina Anjum**, Saira Riaz, Tanzeela Batool, Shahzad Naseem and Guihua Li. 2022. Sustainable synthesis of microwave assisted IONPs by using *Spinacia Oleracea*: enhances resistance against fungal wilt infection by inducing ROS and modulating defense system in tomato plants. *Journal of Nanobiotechnology*. 20:8. <https://doi.org/10.1186/s12951-021-01204-9> (IF: 10.435)
27. Hina Ashraf, **Tehmina Anjum**, Saira Riaz, Irfan Ahmad, Joseph Irudayaraj, Sidra Javed, Uzma Qaiser and Shahzad Naseem. 2021. Inhibition mechanism of green-synthesized copper-oxide nanoparticles from *Cassia fistula* towards *Fusarium oxysporum* by boosting growth and defense responses in tomatoes. *Environmental Science: Nano*. <https://doi.org/10.1039/DOEN01281E> (IF: 9.473)
28. Waheed Akram, Aqeel Ahmad, Nasim Ahmad Yasin, **Tehmina Anjum**, Basharat Ali, Sabin Fatima, Shakeel Ahmed, Mario Juan Simirgiotis, Guihua Li. 2021. Mechanical strengthening and metabolic re-modulations are involved in protection against *Fusarium* wilt of tomato by *B. subtilis* IAGS174. *Journal of Plant Interactions*. 16(1): 411 – 421. <https://doi.org/10.1080/17429145.2021.1966107> (IF: 4.029)
29. Waheed Akram, Aqeel Ahmad, Sabin Fatima, **Tehmina Anjum**, Basharat Ali, Shakeel Ahmed, Mario Juan Simirgiotis, Hafiz Muhammad Khalid Abbas, Muhammad Aslam, Juxian Guo, Wenlong Luo, Mei Fu, Guihua Li. 2021. Foliar application of liquiritin protects Chinese flowering cabbage against cucumber mosaic virus and increases health-promoting compounds. *Journal of Plant Interactions*. 16(1): 377 – 384. <https://doi.org/10.1080/17429145.2021.1963867> (IF: 4.029)
30. Tahir Mahmood, Guihua Li, **Tehmina Anjum**, Waheed Akram. 2021. *Azospirillum lipoferum* strain AL-3 reduces early blight disease of potato and enhance yield. *Crop Protection*. <https://doi.org/10.1016/j.cropro.2020.105349> (IF: 3.473)
31. Naseem Hassan, Hina Ashraf, **Tehmina Anjum**, Waheed Akram. 2021. Phyto-synthesized silver nanoparticles using leaves extracts of *Morus alba* and *Aegle marmelos* inhibited

fusarium wilt and charcoal rot in tomato. International Journal of Agriculture and Biology. 25:165-172. DOI: 10.17957/IJAB/15.1652 (IF:0.822)

32. **Tehmina Anjum**, Wajiha Irum, Mazhar Iqbal, Abdul Ghaffar, Mateen Abbas. 2020. Identification of degradation products of aflatoxin B1 and B2 resulting after their biodegradation by aqueous extracts of *Acacia nilotica*. World Mycotoxin Journal. <https://doi.org/10.3920/WMJ2018.2411> (IF: 2.353)
33. Yongxin Tao, Xinhua Quan, Ibatsam Khokhar, **Tehmina Anjum**, Hanbing Song, Irum Mukhtar. 2020. First report of *Pseudopestalotiopsis theae* causing leaf spot of date palm (*Phoenix dactylifera*) in China. Plant Disease. 10.1590/s0100-83582020380100052 (IF: 4.438)
34. Guihua Li, Juxian Guo, Wenlong Luo, **Tehmina Anjum**, Waheed Akram, Aqeel Ahmad, Basharat Ali, Muhammad Adnan, Mei Fu. 2020. Development of high density genetic map by specific locus amplified fragment (SLAF) sequencing and identification of QTLs governing flowering and bolting time in Chinese Kale. International Journal of Agriculture and Biology. 24:511-516. DOI: 10.17957/IJAB/15.1466 (IF:0.822)
35. **Tehmina Anjum**, Rasheda Jabeen, Steve Adkins. 2020. Exploring Parthenium weed biotypes by chloroplast DNA barcode Analysis. Planta Daninha. 38:e020191623 10.1590/s0100-83582020380100052 (IF: 0.705)
36. Hina Ashraf, **Tehmina Anjum**, Saira Riaz and Shahzad Naseem. 2020. Microwave assisted green synthesis and characterization of silver nanoparticles using *Melia azedarach* for the management of Fusarium wilt in tomato. Frontiers in Microbiology. doi: <https://doi.org/10.3389/fmicb.2020.00238> (IF: 5.640)
37. Waheed Akram, Guihua Li, Aqeel Ahmad, **Tehmina Anjum**, Basharat Ali, Juxian Guo, Wenlong Luo, Tingquan Wu, Dasen Xie, and Fu Mei. 2020. *Pseudocercospora exilis* causing leaf spot disease on *Brassica rapa* subsp. parachinensis in China. Plant Disease. 104(6): 1861-1861. <https://doi.org/10.1094/PDIS-01-20-0165-PDN> (IF: 4.438)
38. Waheed Akram, Hina Aslam, Sajid Rasheed Ahmad, **Tehmina Anjum**, Nasim Ahmad Yasin, Waheed Ullah Khan, Aqeel Ahmad, Juxian Guo, Tingquan Wu, Wenlong Luo, Guihua Li. 2019. *Bacillus megaterium* strain A12 ameliorates salinity stress in tomato plants through multiple mechanisms. Journal of Plant Interactions. 14(1): 506 - 518. (IF: 2.992)
39. Waheed Akram, Guihua Li, Aqeel Ahmad, **Tehmina Anjum**, Basharat Ali, Juxian Guo, Wenlong Tingquan Wu, Dasen Xie, Qing Wang. 2019. *Alternaria brassicicola* causing leaf spot disease on Broccoli in China. Plant Disease. <https://doi.org/10.1094/PDIS-05-19-1013-PDN> (IF: 3.809)
40. Waheed Akram, Guihua Li, Aqeel Ahmad, **Tehmina Anjum**, Basharat Ali, Wenlong Luo, Juxian Guo, Dasen Xie, Qing Wang. 2019. Leaf spot disease caused by *Alternaria arborescens*, *A. tenuissima*, and *A. infectoria* on *Brassica rapa* L subsp. parachinensis in China. Plant Disease. <https://doi.org/10.1094/PDIS-05-19-0951-PDN> (IF: 3.809)
41. Huma Adrees, Muhammad Saleem Haider, **Tehmina Anjum**, Waheed Akram. 2019. Inducing systemic resistance in cotton plants against charcoal root rot pathogen using indigenous rhizospheric bacterial strains and chemical elicitors. Crop protection. 115: 75 - 83 (IF: 2.381)
42. Mohammad Javad Jafari, Waheed Akram, Yanju Pang, Aqeel Ahmad, Shakeel Ahmed, Nasim Ahmad Yasin, **Tehmina Anjum**, Basharat Ali, Xiangdong Hu, Xiaohua Li, Shuang Dong, Qian Cai, Matteo Ciprian, Monika Bielec, Sheng Hu, Fatemeh Sefidkon, Xuebo Hu. 2018. Genetic diversity and biogeography of *T. officinale* inferred from multi locus sequence typing approach. PLoS One. 13(9): e0203275. <https://doi.org/10.1371/journal.pone.0203275> (IF: 2.776)
43. Wajiha Iram, **Tehmina Anjum**, Rasheda Jabeen and Mateen Abbas. 2018. Isolation of stored maize mycoflora, identification of aflatoxigenic fungi and its inhibition using medicinal plant extracts. International Journal of Agriculture and Biology. 20: 2149 - 2160. (IF: 0.802)
44. Hina Aslam, Sajid Rasheed Ahmad, **Tehmina Anjum**, Waheed Akram. 2018. Native halotolerant plant growth promoting bacterial strains can ameliorate salinity stress on tomato plants under field conditions. International Journal of Agriculture and Biology. 20(2): 315 - 322. (IF: 0.802)

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49. Sana Hanif, **Tehmina Anjum**, Rahila Hafeez, Waheed Akram, Amna Ali and Farrukh Hassan. 2016. First report of *Alternaria mali* causing core rot of apple in Pakistan. *Plant Disease*. 100(8): 1784 (IF: 3.173)
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53. Waheed Akram, **Tehmina Anjum**, Basharat Ali. 2015. Co-cultivation of tomato with two Bacillus strains: Effects on growth and yield. *Journal of Animal and Plant Sciences*. 25(6): 1644 – 1651. (IF: 0.422)
54. Anam Yousaf, Abdul Qadir, **Tehmina Anjum**, Aqeel Ahmad. 2015. Transcriptional modulation of Squalene Synthase Genes in barley treated with PGPR. *Frontiers in Plant Science*. 6: 672; doi: 10.3389/fpls.2015.00672. (IF: 4.495)
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56. Waheed Akram, **Tehmina Anjum**, Basharat Ali, Aqeel Ahmad. 2015. Searching ISR determinant/s from *B. subtilis* IAGS174 against Fusarium wilt of tomato. *Biocontrol*. 60: 271-280. (IF: 1.767)
57. Shazia Shafique, Aqeel Ahmad, Sobiya Shafique, **Tehmina Anjum**, Waheed Akram and Zoobia Bashir. 2014. Determination of molecular and biochemical changes in cotton plants mediated by Mealy bug. *NJAS - Wageningen Journal of Life Sciences*. 70-71: 39-45. (IF: 1.143).
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63. Zoobia Bashir, Shazia Shafique, Aqeel Ahmad, **Tehmina Anjum**, Sobiya Shafique and Waheed Akram. 2013. Quantification of cellulose contents by transmission spectra of plant tissues. *Cellulose Chemistry and Technology*. 47(5-6): 509-513. (IF: 0.833)
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79. Arshad Javaid, Rukhsana Bajwa and **Tehmina Anjum**. 2006. Response of Black Gram [*Vigna mungo* (L.) Hepper] to *Bradyrhizobium japonicum* inoculation under different soil amendment system. Pakistan Journal of Botany. 38(3): 851 – 857. (IF: 0.106)
80. Rukhsana Bajwa, **Tehmina Anjum**, Sobiya Shafique and Shazia Shafique. 2006. Evaluation of antifungal activity of *Cicer arietinum* L. Pakistan Journal of Botany. 38(1): 175 – 184. (IF: 0.106)
81. Arshad Javaid and **Tehmina Anjum**. 2006. Control of *Parthenium hysterophorus* L. by aqueous extracts of allelopathic grasses. Pakistan Journal of Botany. 38(1): 139 – 145. (IF: 0.106)
82. **Tehmina Anjum** and Rukhsana Bajwa. 2005. A bioactive annuionone from sunflower leaves. Phytochemistry. 66(16): 1919-1921. (IF: 2.780)

PUBLICATIONS WITHOUT IMPACT FACTOR:

1. **Tehmina Anjum**, Ahmad Umair, Zill-e-Huma Aftab, Waheed Akram, Muhammad Shahid Saleem, Sumera Akram. 2024. Impact of Vital Urea (sulfur coated urea) and plain urea with sulfur on growth and yield of wheat. Journal Plantarum., 6(2): 79-87.
2. Aqib Saeed, Muhammad Taqqi Abbas, Hafiz Azhar Ali Khan, Waheed Anwar, Zain Mushtaq, **Tehmina Anjum**, Adnan Akhter. 2023. Impact of rice straw biochar in association with inorganic fertilizers and *Trichoderma harzianum* on charcoal rot (*Macrophomina phaseolina*) of maize. World Journal of Biology and Biotechnology. .org/10.33865/wjb.008.03.1142 8(3): 35 – 42.
3. Adnan Akhter, Waqas Bin Nisar, Muhammad Taqqi Abbas, Hafiz Azhar Ali Khan, Muhammad Khurshid, **Tehmina Anjum**, Aqib Saeed. 2022. Characterization and evaluation of antifungal potential of bacterial endophytes of rice against *Fusarium moniliforme* and *Rhizoctonia solani*. Agricultural Sciences Journal. 4(2): 13 – 27.
4. Shafiq ur Rehman, Wajeeha Afzal, **Tehmina Anjum**, Hassan Javed Choudhry, Sajid Rashid Ahmad and Mehmood Aslam. 2019. Screening and evaluation of indigenous halo-tolerant microbes for salt stress alleviation in celery (*Apium graveolens*). Soil and Environment. 38(1): 42 – 47.
5. Sabin Fatima and **Tehmina Anjum**. 2018. Activation of transcriptomic and histological defenses in tomato by rhizobacterial *Pseudomonas* isolates against Fusarium wilt. African-Asian Journal of Rural Development. 51(2): 58-78.
6. Sabin Fatima and **Tehmina Anjum**. 2017. Potential of rhizospheric *Pseudomonas* strains to manage Fusarium wilt of tomato. Journal of Agriculture and Research. 55(3): 525 – 536.
7. Anam Yousaf, Abdul Qadir, **Tehmina Anjum**, Rizwan Ishaq Khan, Declan Naughton and Ali Yousaf. 2017. Evaluation of bacterial strains for the induction of plant biochemicals, nutritional contents and isozymes in barley. Journal of Nutrition and Food Sciences 7: 623. doi: 10.4172/2155-9600.1000623
8. Sabin Fatima and **Tehmina Anjum**. 2016. Induction of systemic resistance in tomato by *Pseudomonas aeruginosa* PM12 against Fusarium wilt. Pakistan Journal of Biotechnology. 13(2): 117 – 124.
9. Anam Yousaf, Abdul Qadir, **Tehmina Anjum**, Aqeel Ahmad. 2016. Screening of staple food crops for their phytosterol and nutritional contents to determine their hyperlipidemia controlling potential. Journal of Food and Nutritional Disorders. 5:3 doi: http://dx.doi.org/10.4172/2324-9323.1000196.
10. **Tehmina Anjum**, Waheed Akram and Sabin Fatima. 2015. Potential of some rhizospheric bacterial strains to manage bacterial wilt of tomato. Pakistan Journal of Biotechnology. 12(1): 73 – 80.

11. Rabia Moeen, Waheed Akram and **Tehmina Anjum**. 2014. Biochemical and molecular basis of resistance in Sorghum against *Curvularia* leaf spot disease. *International Journal of Agriculture and Biology*. 16(5): 917 – 922.
12. Waheed Akram, **Tehmina Anjum** and Aqeel Ahmad. 2014. Basal susceptibility of tomato varieties against different isolates of *F. oxysporum* f. sp. *Lycopersici*. *International Journal of Agriculture and Biology*. 16(1):171-176.
13. Shazia Shafique, Waheed Akram, **Tehmina Anjum**, Aqeel Ahmad and Sobiya Shafique. 2014. Comparative studies on phytochemistry, antibacterial and antifungal properties of *Alstonia scholaris* and *Millettia pinnata*. *Australasian Plant Disease Notes* 9 (1): 1-5.
14. Zoobia Bashir, Aqeel Ahmad, Sobiya Shafique, **Tehmina Anjum**, Shazia Shafique, Waheed Akram. 2013. Hypersensitive response—A biophysical phenomenon of producers. *European Journal of Microbiology and Immunology*. 3(2):105-110.
15. **Tehmina Anjum**, Waheed Akram, Aqeel Ahmad, Mazhar Hussain, Hina Aslam and Sabin Fatimah. 2013. An insight into the basis of resistance in *Sorghum bicolor* against *Colletotrichum sublineolum*. *African Journal of Microbiology Research*. 7(15):1397-1408.
16. Asma Murtaza, Shazia Shafique, **Tehmina Anjum**, Sobiya Shafique. 2012. In vitro control of *Alternaria citri* using antifungal potentials of *Trichoderma* species. *African Journal of Biotechnology*. 11(42): 9985-9992.
17. Sabin Fatima, **Tehmina Anjum**, Rukhsana Bajwa and Ahmad Ali Shahid. 2012. Identification of indigenous Xanthomonas isolates through 16S rRNA gene amplification and SDS PAGE Analyses. *African Journal of Microbiology Research*. 6(15): 3651-3655.
18. Sabin Fatima, Rukhsana Bajwa, **Tehmina Anjum** and Zafar Saleem. 2012. Assessment of genetic diversity among different indigenous Xanthomonas isolates via RAPD and ISSR. *African Journal of Microbiology Research*. 6(9): 1947 - 1957.
19. Wajeeha Irum and **Tehmina Anjum**. 2012. Production enhancement of Cyclosporin 'A' by *Aspergillus terreus* through mutation. *African Journal of biotechnology*. 11(7): 1736 - 1743.
20. Waheed Akram and **Tehmina Anjum**. 2011. Use of bioagent and synthetic chemicals for induction of systemic resistance in tomato against diseases. *International Research Journal of Agricultural Science and Soil Science*. 1(8): 286 – 292.
21. Waheed Akram and **Tehmina Anjum**. 2011. Quantitative changes in defense system of tomato induced by two strains of Bacillus against Fusarium wilt. *Indian Journal of fundamental and applied life sciences*. 1(3): 7 – 13.
22. Arshad Javaid, **Tehmina Anjum** and Rukhsana Bajwa. 2006. Chemical control of noxious weed *Parthenium hysterophorus* L. *International Journal of Biology and Biotechnology*. 3(2): 387-390.
23. **Tehmina Anjum** and Rukhsana Bajwa. 2005. Importance of germination indices in interpretation of allelochemical effect on seed germination. *International Journal of Agriculture and Biology*. 7(3): 417-419.
24. **Tehmina Anjum**, Rukhsana Bajwa and Arshad Javaid. 2005. Biological control of *Parthenium* I: Effect of *Imperata cylindrica* on distribution, germination and seedling growth of *Parthenium hysterophorus* L. *International Journal of Agriculture and Biology*. 7(3): 448-450.
25. **Tehmina Anjum** and Arshad Javaid. 2005. Major diseases of citrus in Pakistan: A review. *International Journal of Biology and Biotechnology*. 2(4): 793-796.
26. Arshad Javaid and **Tehmina Anjum**. 2005. Wheat and rice diseases in Pakistan and their management: A review. *International Journal of Biology and Biotechnology*. 2(4): 785-792.
27. Arshad Javaid and **Tehmina Anjum**. 2005. *Parthenium hysterophorus*: A noxious alien weed. *Pakistan Journal of weed science and research*. 11(3-4): 171 - 177.
28. Arshad Javaid, Rukhsana Bajwa, Amna Javaid and **Tehmina Anjum**. 2005. Fungi associated with seeds of pulses collected from Lahore and their effect on seed germination. *Mycopath*. 3(1&2): 13-16.

29. Arshad Javaid, **Tehmina Anjum** and Rukhsana Bajwa. 2005. Biological control of *Parthenium* II: Allelopathic Effect of *Desmostachya bipinnata* on distribution, and early seedling growth of *Parthenium hysterophorus* L. International Journal of Biology and Biotechnology. 2(2): 459-463.
30. Rukhsana Bajwa, Sobiya Shafique, **Tehmina Anjum** and Shazia Shafique. 2004. Antifungal activity of allelopathic plant extracts IV: Growth response of *Drechslera hawaiiensis*, *Alternaria alternata* and *Fusarium moniliforme* to aqueous extract of *Parthenium hysterophorus*. International Journal of Agriculture and Biology, 6(3): 511-516.
31. Arshad Javaid, Rukhsana Bajwa and **Tehmina Anjum**. 2004. Tree Dieback in Punjab, Pakistan. Mycopath. 2(1): 1-5.
32. Rukhsana Bajwa, Irum Mukhtar and **Tehmina Anjum**. 2004. Invitro biological control of *Fusarium solani* – cause of wilt in *Debergia sissoo* Roxb. Mycopath. 2(1): 11-14.
33. Arshad Javaid, Rukhsana Bajwa and **Tehmina Anjum**. 2004. Identification of some more phenotypes of shisham (*Delbergia sissoo* Roxb.) and their response to dieback and wilt disease. Mycopath. 2(2): 55-59.
34. Ghazala Nasim, SH Iqbal, JH Mirza, Tariq Riaz, Sadia Butt, **Tehmina Anjum** and Asad Shabbir. 2004. A brief note of lichens from Swat district. Mycopath. 2(2): 79-82.
35. Arshad Javaid, **Tehmina Anjum** and Rukhsana Bajwa. 2002. EM and VAM technology in Pakistan. XII: Growth, nodulation and VA mycorrhizal response of *Phaseolus vulgaris* L. to long-term EM application. Pakistan Journal of Phytopathology. 14(1): 2-8.

MONOGRAPHS/BOOKS/CHAPTERS:

1. **Tehmina Anjum**. 2011. Sunflower allelochemicals as natural herbicide for weeds in wheat. VDM Publishing house Ltd. ISBN# 978-3-639-36335-7.
2. Sundus Tanseer and **Tehmina Anjum**. 2011. Cultivation medium optimization for Cyclosporin 'A' production. VDM Publishing house Ltd. ISBN# 978-3-639-37781-1.
3. Wajiha Irum and **Tehmina Anjum**. 2011. Production enhancement of Cyclosporin 'A' through mutation. VDM Publishing house Ltd. ISBN# 978-3-639-37043-0.
4. Sabin Fatima and **Tehmina Anjum**. 2012. Study of molecular polymorphism among different *Trichoderma* strains. VDM Publishing house Ltd. ISBN# 978-3-659-12556-0.
5. **Tehmina Anjum** and Wajiha Irum. 2016. Production of Cyclosporine A by submerged fermentation. In: Fungal Metabolites (ISBN: 978-3-319-19456-1 Online) Reference Series in Phytochemistry. Editors: Jean-Michel Merillon and Kishan Gopal Ramawat. doi: 10.1007/978-3-319-19456-1_4-1. Springer International Publishing Switzerland.
6. Zill-Huma Aftab, **Tehmina Anjum**, Waheed Akram, Muhammad Faisal Shafiq, Hamza Rafiq, (2024). Carbon-Based Nanoparticles: Graphene Oxide (GO)-Biotic Stress Minimizers in Plants. In: Khan, M., Chen, JT. (eds) Nanoparticles in Plant Biotic Stress Management. Springer, Singapore. https://doi.org/10.1007/978-981-97-0851-2_14.
7. **Tehmina Anjum**, Waheed Akram, Najat A Bokhari, Areeba Rehman, Shama Sharif, Humaira Rizwana, Bareera Munir (2024). Biological Pest Control and Sustainable Agroecosystems. In: Dr. Vijay Singh Meena and Dr. Ram Swaroop Bana (eds) Sustainable Agroecosystems - Principles and Practices IntechOpen. doi: 10.5772/intechopen.1006693
8. Areeba Rehman, Waheed Akram, **Tehmina Anjum**, Nasim Ahmad Yasin, and Zill e Huma Aftab. (2025). Elements that Control Plant Growth and Development include Light and Hydrogen Peroxide. In: Mohd Tanveer Alam Khan, Taiba Saeed, Aqeel Ahmad, Qazi Fariduddin, Mohammad Yusuf (eds) Hydrogen Peroxide Signaling Mechanisms and Crosstalk in Plant Development and Stress Responses. 1st Edition. CRC Press. Boca Raton. eBook ISBN9781032647692

PATENT:

1. Muhammad Umair; Zill-e-Huma Aftab; **Tehmina Anjum**; Waheed Akram and Areeba Rehman. Green synthesis of iron sulphide nanoparticles using *Malus pumila* peel extract for antifungal activity. Patent Application #: 669/2024. Filing date: 26/09/2024.

CONFERENCES, SEMINARS & WORKSHOPS:

- Abstract published “Herbicidal activity of aqueous extracts of Sunflower against weeds of wheat”. In: Second National Conference of Biology, Government College University, Lahore. April 22-24, 2004. Biological society of Pakistan. pp:63.
- Participated in workshop on “Identification, Maintenance & Preservation of Microorganisms”, May 10-12, 2004 at Quaid-e-Azam University, Islamabad.
- Oral presentation “Allelopathic effect of two perennial grasses on *Parthenium* distribution”. In: HEC Symposium on "Awareness of *Parthenium* weed" on 6&7 August 2004. Department of Mycology & Plant Pathology, University of The Punjab, Lahore.
- Oral presentation “World of Oomycetes”. In: HEC Workshop on “Identification & Conservation of Micromycetes” on 23rd – 28th August 2004. First fungal culture Bank of Pakistan, University of The Punjab, Lahore.
- Lab Presentation “Capturing of Oomycetes”. In: HEC Workshop on “Identification & Conservation of Micromycetes” on 23rd – 28th August 2004. First fungal culture Bank of Pakistan, University of The Punjab, Lahore.
- Oral presentation “Origin & Evolution of Life on Earth”. In: HEC Training course on Geography for University/College teachers from 20th – 25th September 2004. Regional center HEC, Lahore.
- Abstracts published “Biological Control of *Parthenium*: Effect of *Imperata cylindrica* on Distribution, Germination and Seedling Growth of *Parthenium hysterophorus* L.” & “Effect of Organic Amendments and Soil Sterilization on Performance of EM in Wheat (*Triticum aestivum* L.)”. In: 4th International science conference, 6-9 October 2004. University of Azad Jammu & Kashmir. pp:1 & 8-9.
- Departmental representation in “National Curriculum Revision Committee Preliminary Meeting in Plant Protection from 7-9 Feb 2005 at HEC Regional Center Peshawar”.
- Lecture presentation “Spying Molecules: The Science of Allelopathy”. Khwarzimidic Science Society 28th February 2005. Institute of Biochemistry & Biotechnology, Punjab University.
- Abstracts published in WSSP abstracts 2005: “Effect of grasses on *Parthenium hysterophorus* L.” & “Allelopathic potential of sunflower (*Helianthus annuus* L.) as natural herbicides”. In 6th National Weed Science Conference, March 28th – 30th 2005. NWFP Agricultural University, Peshawar Pakistan. pp: 18 & 27.
- Oral presentation “Evaluation of antifungal activity of *Cicer arietinum* L.” and poster presentation “Growth Response of *Drechslera hawaiiensis*, *Alternaria alternata* and *Fusarium moniliforme* to Aqueous Extract of *Parthenium hysterophorus*”. In 2nd Asian Conference on Plant Pathology 25^h – 28th June 2005, National University Singapore. Abstract published in Abstracts & Program (ISBN: 981-05-3137-0) pp 20 and 100.
- Oral presentation “Plant Allelochemicals as biocontrol agents”. In: International symposium on biofertilizer and biocontrol technology, 25th – 27th July, 2005. University of the Punjab Lahore. pp: 18.
- Oral presentations “Allelopathic potential of *Helianthus annuus* L. (Sunflower) as natural herbicide” and “Biological Control of Parthenium I: Effect of *Imperata cylindrica* on Distribution, Germination and Seedling Growth of *Parthenium hysterophorus* L.” Poster presentation “Evaluation of antifungal activity of *Cicer arietinum*”. In: 4th World congress on allelopathy, 21st – 26th August 2005, Charles Sturt University, Wagga Wagga, Australia. Manuscripts published in Proceedings on pp 297-300; 486-489; 577-580.
- Abstracts published in Abstract book of 1st Kashmir International Science Conference, University of Azad Jammu & Kashmir, Muzaffarabad Pakistan. September 20th – 21st, 2005. “Response of Black Gram (*Vigna mungo* (L.) Hepper) to *Bradyrhizobium japonicum* inoculation

under different soil amendment systems” and “Correlation between plant growth and arbuscular mycorrhizal colonization in some rainy season grasses”. pp 17-19.

- Abstract published in Abstract book of 1st International Chemistry Conference on “Recent challenges in chemistry”, Department of Chemistry, Govt. College University Faisalabad, Pakistan, on November, 1-3, 2006. Oral presentation on “Allelopathy en routing natural pesticides: complexities, failures and successes”. pp 165.
- Oral presentation “Allelopathy: steering towards environment friendly herbicides”. In: International workshop on Allelopathy: Current trends and future applications, 18th – 21st March 2007. Department of Agronomy, University of Agriculture Faisalabad.
- Oral presentation “Bioactive terpenoid from *Helianthus annuus* L. against weeds in common wheat”. In: 21st Asian Pacific Weed Science Society Conference, 2 – 6 October 2007, University of Peradeniya, Srilanka. Manuscript published in Proceedings on pp 19-23.
- Organizer, Third International Conference on Plant Pathology and 7th Biennial Meeting of Pakistan Phytopathological Society, 19 – 21 November 2007 on Future Food Security, Department of Mycology & Plant Pathology, University of the Punjab, Lahore. Poster presented entitled “Biological control of *Helicoverpa armigera* through cry proteins of *Bacillus thuringiensis*’.
- Training workshop on use of autoclave on 7th December 2009, School of Agriculture., Food & Wine in University of Adelaide, Adelaide, Australia.
- Workshop on pulse and legume research by The Plant BioScience Cluster, on Friday 5th February 2010, ACPFG Seminar Room, Waite Campus, University of the Adelaide, Adelaide, Australia.
- Presented oral paper entitled “Allelochemicals: A Natural Source for Future Environment Friendly Herbicide Analogues” in the First International Conference on Organic Agriculture - Limitations and Future, October 11 –14, 2010. Ain Shams University, Cairo, Egypt.
- Presented oral paper entitled “A report of new bioactive Annuionone from sunflower leaves” in the First International Conference on Natural Product – Metabolomics a new frontier in natural product science, November 13 –16, 2011. Universiti Putra Malaysia, Putrajaya, Malaysia. Page # 55.
- Presented oral paper entitled “Effect of cultural extracts of *Trichoderma species* on *Alternaria citri*” in the 6th World Congress on Allelopathy – Allelopathy research for sustainable development- from theory to practice, December 15 –19, 2011. South China Agricultural University, Guangzhou, China. Page # 138.
- Seminar given on “My Allelopathy experience in Pakistan” in International Agro-Biological Resources and Allelopathy Lab, Tokyo University of Agriculture and Technology, Fuchu Campus, Tokyo, Japan, on 19th July 2012.
- Member technical committee of International Conference on future Bioengineering (ICFB) November 24-25, 2012 at Bangkok, Thailand. <http://icfb.org/com.htm>
- Member technical committee of 3rd International Conference on Agricultural & Animal Science. November 24-25, 2012 at Bangkok, Thailand. <http://www.cbees.org/caas/com.htm>.
- Poster presentation in XV International Congress of Molecular Plant – Microbe Interactions, Kyoto, Japan, July 30th – August 2nd, 2012.
- Paper published in Abstract book of International Conference on Applied Life Sciences (ICALS 2012) Turkey, September 10 – 12, 2012. Reference: Tehmina Anjum and Nosheen Akhtar. Antifungal Activity of Essential Oils Extracted From Clove, Cumin and Cinnamon Against Blue Mold Disease on Citrus Fruit. Pp 321 – 326.

- Poster presentation on “Physiological changes in tomato defence system induced by Bacillus strains against Fusarium wilt” in 5th Congress of European Microbiologists held in Leipzig, Germany, between 21 – 25, July, 2013. Pp 140.
- Participated as organizers in workshop on “Cotton Leaf Curl Disease: Diagnostics & Resistance”, organized by Institute of Agricultural Sciences, University of the Punjab, in collaboration with United States Department of Agriculture (USDA) and International Center for Agricultural Research in the Dry Areas (ICARDA) between August 26 – 28, 2013.
- Presented oral paper entitled “Detoxification of mycotoxins in maize samples using plant extracts” in the 5th Global Summit on Medicinal and Aromatic Plants, December 8 – 12, 2013. Universiti Teknologi Mara, Miri, Malaysia. Page # 155.
- Participated in one day seminar on “World Forest Day” on March 21, 2014 at Jallo Forest Park, Lahore, Organized by Punjab Forest Department.
- Participated in two-Day workshop on “Mixed Methods Research” on February 19 – 20, 2014. Organized by University of Lahore and Institute of Research Promotion Lahore.
- Organizer and poster presented on “Induction of systemic resistance in tomato against Fusarium wilt by Bacillus strains” in “International conference on stress biology and biotechnology – challenges and management”, In Institute of Agricultural Sciences, University of the Punjab, Lahore, Pakistan between May 21 – 23, 2014. Page # 84.
- Presented oral paper entitled “Cellular defence induction in tomato by Bacillus strains in Fusarium wilt” in the International conference on plant physiology 2014 “Enhancing strategic plant physiological research and technologies for sustainable resources”, August 26 – 28, 2014. Malaysian Society of Plant Physiology, Bali, Indonesia.
- Poster presented on “Control of post-harvest decay in citrus through plant essential oils” in 2nd International conference on Biotechnology on sustainable development organized by Institute of Industrial biotechnology, GC University, Lahore, Pakistan between, November 26 – 28, 2014. Page # 95.
- Participated in one day training workshop on “How to write an effective research article” held in Lahore institute of future education, The University of Lahore on 15th November 2015.
- Organizer and poster presented on “Potential of plant essential oils in management of postharvest decay in citrus” in 5th International conference of Phytopathological Society of Pakistan, In Institute of Agricultural Sciences, University of the Punjab, Lahore, Pakistan between November 23 – 25, 2015. Page # 163.
- Participated in one day seminar on “Literature review and plagiarism” held in Lahore institute of future education, The University of Lahore on 10th January 2016.
- Invited speaker in workshop on core techniques of Biotechnology held in Institute of Molecular Biology and Biotechnology, The University of Lahore between 15th – 19th February, 2016. Lecture was given on “Allelopathy – establishing a fact”.
- Participated in two days training workshop on “DNA fingerprinting – A tool to explore genetic diversity” held in Department of Microbiology and Molecular Genetics, University of the Punjab, Lahore during 25th and 26th May, 2016.
- Participated in Global Forum for Innovations in Agriculture (GFIA). 20th – 21st March, 2017 at Abu Dhabi Exhibition Centre Abu Dhabi UAE.
- Organizer 1st national agribusiness conference on “Green Punjab and CPEC”, In Institute of Agricultural Sciences, University of the Punjab, Lahore, Pakistan on 10th May, 2017.

- Oral presentation in 1st international conference on emerging trends in earth and environmental sciences, organized by College of earth and environmental Sciences, University of the Punjab, Lahore between 9 – 10 March, 2017.
- Oral presentation on “Anti-aflatoxigenic effects of the selected plant extracts in maize samples” in 1st international conference on conventional and modern approaches in plant sciences. Department of Botany, University of the Punjab, Lahore on November 28 – 29, 2017.
- Organizer and presenter in international conference on solid state physics, at University of the Punjab, Lahore during December, 10 – 14, 2017.
- Participation in international seminar on prospects of agricultural research (current & future); organized by the Institute of Agricultural Sciences, University of the Punjab, Lahore on August 23, 2017.
- Participated in one day international seminar on kitchen gardening and seed distribution. Organized by the Institute of Agricultural Sciences, University of the Punjab, Lahore on September 21, 2017.
- Oral presentation on “Bio-degradation of Aflatoxin B1 and B2 in stored maize using plant extracts” in A conference on microbiology and molecular genetics. Department of Microbiology and Molecular Genetics, University of the Punjab, Lahore on February 7 – 9, 2018.
- Participated in one day international seminar on resource conservation for sustainable agriculture and food security. Organized by the Institute of Agricultural Sciences, University of the Punjab, Lahore on April 19, 2018.
- Presented oral paper entitled “Anti-aflatoxigenic activity of botanical extracts in maize samples” in the 8th International Conference on Asia Agriculture and Animal, July 26 – 28, 2018. National University of Singapore, Singapore.
- Participated in one day training Seminar on 3rd Kitchen Gardening and Seed Distribution. Organized by the Institute of Agricultural Sciences, University of the Punjab, Lahore on September 27th, 2018.
- Oral presentation on “Biodetoxification of Aflatoxins B1 and B2 in stored maize using phyto extracts” in 2nd International Conference on new trends in natural sciences II: Public health, food nutrition & safety. Organized by Department of Biotechnology & Zoology; Lahore College For Women University, Lahore on October 24 – 26th, 2018.
- Participated in one day training workshop on resource tunnel farming. Organized by the Institute of Agricultural Sciences, University of the Punjab, Lahore on November 13th, 2018.
- Oral presentation on “Anti-aflatoxigenic potential of indigenous plant extracts in maize” in 2nd International Conference on Plant Sciences. Organized by Department of Botany; Government College University, Lahore on December 5 – 7th, 2018.
- Oral presentation on “Use of indigenous Bacilli to induce systemic resistance in tomato against *Fusarium* wilt” in Humboldt Kolleg International Conference on Microbes for Sustainable Agriculture. Organized by Formans Christian College University, Lahore on March 25 – 28th, 2019.
- Oral presentation on “Detoxification of Aflatoxin B1 and B2 using plant phytochemicals” in International Conference of Punjab University 2019 on Recent innovations in molecular sciences. Organized by University of the Punjab, Lahore on November 6 – 8th, 2019.
- Presented oral paper entitled “Bio-detoxification potential of seed extract of *Trachyspermum ammi* against aflatoxins B1 and B2 in stored maize” in the 2019 International Conference on Agricultural and Food Science (3rd ICAFS), December 8 – 11, 2019. Kuala Lumpur, Malaysia.

- Oral presentation on “Utilization of bioactive phytochemicals in postharvest technology of horticultural crops” in International Horticulture Conference: Revolutionizing horticulture for secured future. Organized by Institute of Agricultural Sciences; University of the Punjab, Lahore on February 26 – 28th, 2020.
- Oral presentation on “Reducing input of pesticides through inducing resistance in crops” as Key Note Speaker in International Conference on Smart Plantation: An ultimate solution to climate change. Organized by Department of Botany; Lahore College For Women University, Lahore on March 2 – 4th, 2020.
- Oral presentation on “Reducing pesticide application in controlling soil borne fungal pathogens through induced systemic resistance” as Key Note Speaker in 2nd International Conference on “Emerging Trends in Earth and Environmental Sciences (ETEES 2020). Organized by Center of Earth and Environmental Sciences; University of the Punjab, Lahore on March 4 – 6th, 2020.
- Chief Organizer International Webinar on Mushrooms: as future diet. Organized by Department of Plant Pathology; Faculty of Agricultural Sciences; University of the Punjab, Lahore on 7th July 2021. Talked on SWOT analysis of mushroom farming in Pakistan.
- Chief Organizer International Webinar on Agricultural Nanotechnology: Influencing the future of farming sustainability. Organized by Department of Plant Pathology; Faculty of Agricultural Sciences; University of the Punjab, Lahore on 29th July 2021.
- Keynote speaker in International Conference on Solid State Physics University of the Punjab, Lahore on Agriculture Nanotechnology. March 2022.
- Keynote speaker in 1st International Conference on Sustainable Development Goals by Lahore College for Women University, Lahore on 30th March 2022. Title of the Talk: Exploiting sustainable sources for bio-active compounds in agriculture.
- Member organizing committee, 17th National Weed Science Conference on Food security through sustainable vegetation management by Weed Science Society of Pakistan on 27 – 28th October, 2022 at Faculty of Agricultural Sciences, University of the Punjab, Lahore.
- Participated in consultative session for the development of IPM program in rice and vegetables. Arranged by Directorate General Agriculture, Pest Warning and Quality Control of Pesticides, Punjab on 27th Oct, 2022.
- Participated and Session Chair, 8th International and 17th National Conference on Advances in Plant Science in the Era of Climate Change. Organized by Botanical society of Pakistan; Government College University Lahore and University of the Punjab, Lahore on 26 – 28, October, 2022.
- Participated as expert to assess the projects during “All Punjab Universities Innovation Expo-2022” at Faletti’s hotel. Lahore. Organized by Punjab higher Education Commission on 15th Nov. 2022.
- Participated and Session Chair, International Conference on Current and Innovative Trends in Applied Biosciences by Department of Biology, Lahore Garrison University, Lahore on 21 – 22 November, 2022.
- Participated in National Workshop on Experience Sharing from WAPRO and Meeting of the Sustainable Rice Working Group on 20th Dec. 2022 at Falletis Hotel, Lahore. Organized by Helvetas Swiss Inter-cooperation.
- Organizer 3rd International Chemistry Conference and its Role in Sciences by Department of Chemistry, University of Karachi, on 3 – 5 January 2023. Also delivered plenary lecture on “Finding opportunities for sustainable and environment safe agriculture”.

- Oral presenter at International Conference on Advances in Biological Sciences at the School of Biological Sciences, University of the Punjab, Lahore during 6 – 8th March 2023. Talk title: “Role of green nanotechnology in reducing the input of agro chemicals for crop protection”.
- Keynote speaker at 2nd International Conference on recent Approaches in Plant Sciences (RAPS-2023), held during 4 – 5 May 2023 at Department of Botany, University of Education, Lahore. Talk title: “Discovering antimicrobial potential of green synthesized nanoparticles for controlling soil borne diseases in tomato”.
- Organized/Participated in two days (June 7-8, 2023) workshop on “Outcome Based Education” in collaboration with Punjab Higher Education Commission Pakistan in Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab, Lahore.
- Oral presenter and Member National Organizing Committee at 8th International Conference of Pakistan Phytopathology Society on Sustainable agriculture & food security “A nexus of plant pathogens, climate change and water challenges” at Department of Plant Pathology, Islamia University Bahawalpur between 26 – 28 November, 2023. Talk title: Phytodetoxification of Aflatoxin B1 & B2 and structural elucidation of degraded products”.
- Oral presentation and session chair at 1st UMT International Conference on Life Sciences: Exploring the frontiers in biological research at Department of Biological Sciences, University of Management and Technology, Lahore between 13 – 14 December 2023. Talk title: “Nanoparticles based crop protection against soil borne pathogens for sustainable agriculture”.
- Session chair at Biology National Conference Program: Frontiers in applied biological sciences at Department of Biology, Lahore Garrison University Lahore Pakistan between 13 – 14 December 2023.
- Invited speak at Directorate General Pest Warning & Quality Control of pesticides Punjab Lahore on 20th December 2023. Talk title: Vegetable disease diagnostics and their management.
- Invited speaker at panel discussion at Punjab Higher Education Commission on World Education Day on 24th January 2024.
- Attended 6th region wise one-day training workshop for program evaluators of NAEAC on 14th Feb. 2024, at Faculty of Agricultural Sciences, University of the Punjab, Lahore.
- Keynote speaker at 2nd International Conference on Recent Innovations in Plant Sciences and Natural Products at Dept. of Botany, University of Okara during 15 – 16th February 2024. Talk title: Green chemistry – A frame work for a sustainable future of crop protection”.
- Organizer, 9th invention to innovation summit 2024, (27 – 28 Feb. 2024) in University of the Punjab.
- Keynote speaker at International Symposium on Nanobiology: Integrating Nanotechnology & Microbiology for Sustainable Future at Institute of Microbiology, Government College University Faisalabad between, 28 – 29th February 2024. Talk title: Green synthesized nanoparticles in reducing the usage of chemical pesticides.
- Attended one day capacity building workshop on controlling aflatoxin and pesticide residues in food crops especially chilli and rice, organized by Food and Agriculture Organization of the United Nations and Ministry of National Food Security and Research Pakistan on 19th August 2024.
- Oral presenter and session co-chair at International Parasitology Conference, PARACON 24: Tackling Food Security Challenges, at University of Veterinary and Animal Sciences, Lahore during 9 – 10th October 2024. Talk title: “Exploring potential of green synthesized nanoparticles to manage plant diseases with reduced application of synthetic pesticides”.

- Invited talk in 4th International Conference on Smart Plant Protection held at Institute of Plant Protection, Muhammad Nawaz Sharif University of Agriculture, Multan between October 30 – 31, 2024. Talk title: Green nanotechnology: A sustainable approach for plant disease management.
- Invited speaker in National Symposium on Current Pathological Issues at Department of Plant Pathology, University of Sargodha on 06 November 2024. Talk title: Empowering plant health: Research-driven sustainable disease management solutions beyond pesticides.
- Invited speaker at panel discussion on Natural Product Chemistry, organized by the University of Central Punjab in collaboration with NAPRECA, COMSTECH Pakistan, Uppsala University, Sweden on 28th November 2024.
- Invited speaker at Ripha College of Rehabilitation and Allied Sciences on 12th December 2024. Talk title: Basics of Green Nanotechnology.
- Invited speaker at the First International Conference in Mycology and Plant Pathology (SLAMPPCon 2025) organized by Sri Lanka Association for Mycology and Plant Pathology on 8th February 2025. Talk title: Biodetoxification of aflatoxins B1 & B2 in corn: structural insights into safe degradation products.
- Attended and chaired session at 3rd International Conference on Science, Technology and Innovation, 18 – 20th February 2025 at Kinnaird College for Women Lahore.
- Invited speaker at Department of Botany, Lahore College for Women University Lahore on 19th February 2025 on one day seminar on Entrepreneurial Botany: Opportunities and Challenges. Talk title: Navigating the opportunities and challenges of agri-preneurship.

MEMBERSHIPS / ADMINISTRATIVE RESPONSIBILITIES:

- Member editorial board of 'Mycenews', An official quarterly publication of First Fungal Culture Bank of Pakistan, University of The Punjab, Lahore. (2001 – 2008)
- Member, Board of Studies, Department of Plant Pathology, University of Sargodha. (2024 – till date)
- Member Editorial Board, Journal Advances of Nutrition Science and Technology (2023 – till date)
- Life member of Myco-phytopathological Society of Pakistan (MYCOPS)
- Life member and Counselor for Phytopathological society Pakistan for the year 2006-07.
- International Society of Ethno-biology (ISE), USA (Member from March 2012)
- Senior member (Member #: 100475) of Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES) since 2012.
- Chairperson Department of Plant Pathology, PU, December 2021 – December 2024
- Member, Publication charges sub-committee, PU, 2020 – till date
- Member Board of Faculty of Agricultural Sciences, PU, 2022 – till date
- Member, House allotment committee, PU, 2020 – till date
- Member, Committee to design and develop Quran Garden in PU, 2019
- Member Committee to deal administrative and financial matters of the University Club, 2019 – 2022
- Member, Board of studies in Botany, PU. 8.11.2023 – till date
- Member DTRC, Dept. of Plant Pathology, University of Okara
- Managing Editor, Agro-Pathology Bulletin, Dept. of Plant Pathology, PU, 2022 – till date
- Project evaluator, Punjab Agricultural Research Board
- Organization for women in science, Pakistan. Council member Punjab (Agriculture)
- Project evaluator, Punjab Higher Education Commission, 2022, 2023 Innovation Expo.
- Member, Departmental Research Evaluation Committee, Faculty of Agricultural Sciences PU, 2021 – till date.
- Member, Board of Studies in Agricultural Sciences, PU, 2020 – 2023.
- Convener, Academic Committee, Institute of Agricultural Sciences, PU, 2019 – 2021
- Member, DTRC of Institute of Agricultural Sciences, PU, 2019 – 2021
- Advisor, Punjab Public Commission, 2022 – till date
- Member, DDPC, Institute of Agricultural Sciences, PU, 2019 - 2021

- Member, Board of Faculty of Life Sciences, PU, 2006-2009 and 2016-2020
- Member, Asian Federation of Biotechnology (AFOB), Pakistan
- Incharge, Seminar Committee, Institute of Agricultural Sciences, PU, 2011 - 2021
- Member, Departmental Disciplinary Committee, Institute of Agricultural Sciences, PU, 2013 – 2021
- Member, Departmental Purchase Committee, Dept. of Mycology & Plant Pathology, 2005 - 2008
- Member, Departmental Purchase Committee, Institute of Agricultural Sciences, PU, 2014 – 2021
- Life member and conferences organizer by Pakistan Phytopathological Society. 2004 – till date
- HEC Approved Supervisor, 2007 – 2023
- Member, Admission Committee, Institute of Agricultural Sciences, PU, 2013 – 2021
- Member, Disciplinary Committee, Faculty of Agricultural Sciences, PU, 2020 – 2024
- Member, Technical review Committee for 9th Invention to innovation Summit 2024 (27 – 28 Feb. 2024) in University of the Punjab.
- Member, Judges Panel (Research projects/Ideas/Expo) for 9th Invention to innovation Summit 2024 (27 – 28 Feb. 2024) in University of the Punjab.
- Team leader of the Integrated Pest Management Working Group of Sustainable Rice Platform SRP. 2024.

EXPERIENCE:

Research:

- Worked as a postgraduate student in Botany department of Punjab University, Lahore from Jan. 2002 – May 2006.

Thesis Title: Phenolic Allelochemicals of Sunflower as Natural Herbicides for Weed Management in Wheat.

Supervisor: Prof. Dr. Rukhsana Bajwa
Ex-Chairperson
Institute of Mycology & Plant Pathology
University of The Punjab

Place of Work: Fungal Biotechnology Lab.
Botany Department
University of The Punjab

- Four months training (15 Oct 03 – 15 Feb 04) in Jodrell laboratory, Royal Botanic Gardens, Kew, UK, relating purification and characterization of phytochemicals using HPLC, LC-MS and NMR techniques.
- Worked as Research Officer on HEC 3-year project entitled 'Phenolic allelochemicals of Sunflower as natural herbicide for weed management in wheat' (March 2004 – 07).
- HEC (Higher Education Commission) approved PhD supervisor since September, 2007.

Research Projects:

- Principal investigator in one year (2008-09) project entitled "Production enhancement of Cyclosporin 'A' by *Aspergillus terreus*". Grant = 1,00,000/Rs by PU.
- Principal investigator in one year (2009-10) project entitled "exploring new fungal sources for the production of Cyclosporin A". Grant = 1,25,000/Rs by PU.
- Principal investigator in one year (2010-2011) project entitled "In vitro Control of *Alternaria citri* using antifungal potentials of *Trichoderma* species". Grant = 1,50,000/Rs by PU.
- Strengthening of Fungal Biotechnology Lab in Institute of Agricultural Sciences, University of the Punjab. (2011 - 2012). Grant = 0.772 Million Rs by PU.
- Principal investigator in one year (2011-2012) project entitled "Use of extracts from local medicinal trees to control *Alternaria* leaf spot of tomato". Grant = 1,50,000/Rs by PU.

- Principal investigator in one year (2013-2014) project entitled “Management of bacterial wilt of tomato by using native PGPR bacterial strains”. Grant = 1,50,000/Rs by PU.
- Principal investigator in one year (2014-2015) project entitled “Elucidation of biochemical, histological and molecular basis of resistance in tomato against Fusarium wilt”. Grant = 1,50,000/Rs by PU.
- Principal investigator in one year (2015-2016) project entitled “Exogenous application of phytohormones to suppress Fusarium wilt of tomato”. Grant = 1,50,000/Rs by PU.
- Principal investigator in one year (2017-2018) project entitled “Exploring potential of phenolic acids to induce resistance in *Solanum melongena* L. against *Alternaria alternata* causing leaf spot disease”. Grant = 1,50,000/Rs by PU.
- Principal investigator in one year (2019-2020) project entitled “Identification of potential elicitors from indigenous plant growth promoting bacteria to induce resistance in tomato against Fusarium wilt”. Grant = 2,50,000/Rs by PU.
- Principal investigator in one year (2020-2021) project entitled “Developing antifungal edible coating carrying bioactive components of essential oils to increase shelf life of citrus”. Grant = 2,50,000/Rs by PU.
- Principal investigator in one year (2021-2022) project entitled “Potential of Green Synthesized Silver Nanoparticles in Reducing Disease Incidence of Selected Soil Borne Fungi”. Grant = 4,80,000/Rs by PU.
- Principal investigator in one year (2022-2023) project entitled “Formulation of chitosan based edible coating with antifungal essential oil to increase shelf life of stored maize at room temperature”. Grant = 3,00,000/Rs by PU.
- Principal investigator in one year (2023-2024) project entitled “Evaluating seasonal fungal contamination in stored silage at SoulTech dairy”. Grant = 4,00,000/Rs by SoulTech Pakistan.
- Principal investigator in one year (Jan – Dec, 2024) project entitled “Exploring the role of Hydrogen Peroxide in managing soil-borne diseases and enhancing plant health. Grant = 5,00,000/Rs by Vital Agri Nutrients (VAN) Pvt (Ltd).
- Principal investigator in one year (2024-2025) project entitled “Green synthesis of titanium, iron and graphene nanoparticles and their potential to increase agricultural yield by reducing biotic stress”. Grant = 3,00,000/Rs by PU.
- Principal investigator in one year (2024-2025) project entitled “Estimation of the glycemic index for multigrain and sugar free flours from VIRSA”. Grant = 5,50,000/Rs by VIRSA.
- Principal investigator in one year (2024-2025) project entitled “Isolation and identification of fungal contaminants in silage, along with the production of various mycotoxins and their subsequent biodegradation”. Grant = 10,01,000/Rs by SoulTech Pakistan.

Previous Teaching Experience:

- Taught Biology to HSSC classes as an honorary teacher in Gov. Islamia Girls Degree College Hafizabad, Pakistan from 1st Jan.- 29th Feb. 2000.
- Worked as a science teacher and acting head in Aga Khan School System, Hafizabad for one year (from 2nd March 2000-7th March 2001).
- Assistance in practicals of Mycology and Plant Pathology of B.Sc. (Hons), M.Sc. and M.Phil, from September 2002 – February 2003, in Botany Department – Punjab University, Lahore.

Job record:

POSITION	DATE		LEVEL OF TEACHING	COURSES TAKEN
	From	To		
Lecturer (on contract) Department of Mycology &	1 st March 2002	26 th Nov. 2004		1. Plant disease physiology

Plant Pathology PU			Teaching and research of B.Sc. (Hons), M.Sc. (Hons) and Ph.D. classes.	<ol style="list-style-type: none"> 2. Research methods and techniques 3. Plant pathology 4. Lower fungi 5. Biochemistry 6. Forestry and range management 7. Introduction to urban agriculture
Lecturer BPS 17 (confirmed) Department of Mycology & Plant Pathology PU	27 th Nov. 2004	31 st Jan. 2008		
Lecturer BPS 19 Department of Mycology & Plant Pathology PU	1 st Feb, 2008	15 th June, 2008		
Assistant professor (Tenure Track System) Institute of Agricultural Sciences, PU	16 th June, 2008	28 th Jan. 2018		
Professor Department of Plant Pathology, PU	28 th Jan. 2018	To date		

Research Supervised:

BS Hons. Internship as supervisor:

- Sadia Butt (2006), BS Hons Internship report. Biological control of *Helicoverpa armigera* through Cry proteins of *Bacillus thuringiensis*.
- Maryium Yunus (2006), BS Hons Internship report. Biological control of *Tribolium castaneum* through Cry proteins of *Bacillus thuringiensis*
- Rabia Aziz (2008), BS Hons Internship report. Fungi toxic activity of selected chemicals against *Fusarium moniliforme*.
- Tahir Mehmood (2008), BS Hons Internship report. Occurrence of pathogenic fungi in stored grains of rice and fungicidal effect on seed borne fungi.
- Mahwish Saeed (2008), BS Hons Internship report. Evaluation of different hybrids of vegetables on the basis of yield, horticultural characters & disease incidence.
- Faiza Ijaz (2008), BS Hons Internship report. Selection for wilt resistance in chickpea caused by *Fusarium oxysporum* F. sp. *Ciceris*
- Amna Jillani (2009), BS Hons Internship report. In vitro callogenesis, somatic embryogenesis and organogenesis in sugarcane varieties.
- Shehzadi Noor-e-Sehar (2009), BS Hons Internship report. Tissue culturing of AGB-RED potato variety to control the PVY virus.
- Sana Abbas (2018), BS Hons Internship report. Isolation, purification and identification of different rice mycoflora varieties.
- Ghazala Rauf (2018). BS Hons Internship report. Isolation and identification of fungal cultures from soil samples.
- Hafiza Sibgha Yaqoob (2018). BS Hons Internship report. Biocontrol of *Fusarium solani* through *T. harzianum*, *T. viridae* and natural biocontrol agents (neem extract and cinnamon extract).
- Muhammad Taqqi Butt (2020). BS Hons Internship report. Evaluation of wheat advance lines against stripe rust.
- Muhammad Sohail (2020). BS Hons Internship report. Identification of resistant source against stripe rust of wheat.
- Usama Akbar (2021). BS Hons Internship report. Screening of rice genotypes for salinity tolerance gene (Saltol).

- Hafiza Hamima Elahi Peerzada (2021). BS Hons Internship report. Evaluation of seed-borne mycofloral association, germination and vigor of commercial varieties of rice.
- Amna Younas (2022). BS Hons Internship report. Extraction of Magnetic iron oxide nanoparticles from watermelon peels and their antimicrobial efficacy.
- Zainab Shabbir (2022). BS Hons Internship report. DNA fingerprinting of rice lines using trait linked SSR markers.
- Mehwish Batool (2022). BS Hons Internship report. Extraction of Magnetic iron oxide nanoparticles from watermelon peels and their antimicrobial efficacy.
- Mah Noor Shahid (2023). BS Hons Internship report. Effect of Sulfur coated urea vs plain urea on growth and yield of wheat.
- Abeera Amjad (2023). BS Hons Internship report. Effect of soil amendment (Humic acid) on growth and yield of wheat.
- Isha Tabassum (2024). BS Hons Internship report. ScU at early and late growth stages of wheat compared with urea and sulfur.
- Sufyan Ali (2024). BS Hons Internship report. Impact of timing and composition in fertilization: ScU versus equivalent sulfur and nitrogen rates.

BS Hons. Internship as co-supervisor:

- Tehmina Tufail (2013). BS Hons. Internship report. Molecular evaluation of triple gene transgenic cotton.
- Samar Batool (2013). BS Hons. Internship report. Red Rot Toxin purification and RNA extraction from sugarcane.
- Muhammad Riaz (2014). BS Hons. Internship report. Distribution of powdery mildew in urban and suburban areas of Lahore.
- Habiba Shahid (2020). BS Hons. Internship report. Important molecular techniques in microbiology.

B.Sc thesis as co-supervisor:

- Asma Jabeen (2016), B.S. Thesis. Effect of Phenolic acids to control leaf spot disease on *Solanum melongena* L. caused by *Alternaria alternata*.
- Tanzeela Ali (2016), B.S. Thesis. Induced resistance activated by phytohormones a mechanism of control of *Fusarium oxysporum* in *Lagenaria siceraria*.
- Sana Rashid (2016), B.S. Thesis. Biochemical defence mechanism induced in chilli crop varieties with varying susceptibility against *Alternaria alternata* disease.
- Ayesha Iftikhar (2016), B.S. Thesis. Screening and characterization of Rhizobacteria with potential application in biocontrol of chilli fungal diseases.
- Farzana Aftab (2016), B.S. Thesis. Biocontrol efficacy of plant growth promoting Rhizobacteria and induction of systemic resistance in chilli crop against Fusarium wilt.

MS Hons. thesis as supervisor:

- Hafiz Muhammad Riaz (2008), MS Hons thesis. Bio-chemical analysis in dieback resistant and susceptible phenotypes of *Dalbergia sissoo*.
- Wajiha Irum (2009), MS Hons thesis. Production enhancement of Cyclosporin 'A' from *Aspergillus terreus* through mutation.
- Sundus Tanseer (2009), MS Hons thesis. Modification of C and N sources for enhanced production of Cyclosporin 'A' by *Aspergillus terreus*.
- Asma Azam (2010), MS Hons thesis. Exploring new fungal sources for cyclosporine 'A' production.
- Amna Mukhtar, (2010), MS Hons thesis. Biocontrol potential of *Trichoderma* species against *Curvularia lunata*.

- Asma Murtaza, (2010), MS Hons thesis. Invitro control of *Alternaria citri* using antifungal potentials of *Trichoderma* species.
- Muhammad Shehbaz Umer, (2011). MS Hons. Thesis. Use of medicinal trees for the control of tomato wilt.
- Rabia Moeen, MS Hons. (2012). Detection of resistance and susceptibility in different varieties of sorghum against root rot pathogen.
- Amna Tahir, MS Hons. (2015). Biosafety studies and detection of viral particles in insect resistant transgenic plants.
- Rabia Ashraf, MS Hons. (2015). Evaluation and biosafety studies of glyphosate tolerant transgenic cotton plants.
- Marium Munir, MS Hons. (2016). Molecular techniques to confirm SiRNA based construct in cotton variety.
- Maria Khan, MS Hons. (2016). Molecular analysis and field evaluation of transgenic cotton for its resistance against chewing insects.
- Muhammad Kamran Nasrullah Rehan, MS Hons. (2018). Growth promotion and biocontrol of tomato Fusarium wilt by plant growth promoting rhizobacteria and arbuscular mycorrhizal fungi.
- Naseem Hassan, MS Hons. (2019). Green synthesis of antifungal silver nanoparticles using plant extracts and investigating their potential against soil borne fungi.
- Muhammad Arsalan Aslam, MS Hons. (2019). Exploring potential of essential oils extracted from *Aegle marmelos* L. Correa, *Tectona grandis* L.f. and *Pittosporum tobira* (Thunb.) W. T. Aiton for postharvest decay control in strawberries.
- Shabnum Batool, MS Hons. (2020). Use of edible coatings enriched with essential oils to reduce fungal decay in stored strawberry.
- Madiha Zahoor, MS Hons. (2020). Incorporation of plant bioactive components in edible coatings to reduce postharvest fungal decay in oranges.
- Maham Shakoor, MS Hons. (2020). Improving orange fruit stability against fungal decay by edible coatings as a carrier of bioactive essential oils.
- Hamza Rafiq, MS Hons. (2022). Antimicrobial efficacy of green synthesized zinc oxide, silver and graphene oxide nanoparticles from seed extract of *Trachyspermum ammi* against cercospora leaf spot of mungbean.
- Saman Shabir, MS Hons. (2022). Efficacy assessment of some plant essential oils against fungal pathogen of corn seeds in storage.
- Ghulam Nabi, MS Hons. (2023) Management of red rot of sorghum through pomegranate peel extract mediated synthesized nanoparticles of Fe₃O₄, Fe₂S, GO and TiO₂.
- Shama Sharif, MS Hons. (2023). Suppression of charcoal root rot of *Vigna radiata* using Ag and KCl nanoparticles synthesized using *Psidium guajava*.
- Usman Khalid, MS Hons. (2023) Biodegradation of Fumonisin using *Trichoderma* species and green synthesized silver oxide nanoparticles.
- Fakhra Naseem, MS Hons. (2024). Green synthesis and molecular docking insights of carbon nanotubes from coconut shells for management of *Alternaria* leaf spot/blight in *Zea mays* caused by *Colletotrichum graminicola*.
- Kainat Kiran, MS Hons. (2024). Green synthesis and molecular docking insights of carbon nanotubes from almond shells for management of early blight in *Solanum melongena*.
- Muhammad Usman Chaudhry, MS Hons. (2024). Encapsulation of orange peel based carbon nano tubes with Mancozeb for management of leaf spot in Bottle gourd.

MS Hons. thesis as co-supervisor:

- Ayesha Majeed, M.Sc. Hons. (2014), Cloning and optimization of protein expression of Chitinase 2a gene of Barley.

- Misbah Abbas, M.Sc. Hons. (2017), Influence of some antagonistic bacteria against early blight (*Alternaria solani*) of tomato (*Lycopersicon esculentum*) in laboratory & field conditions.
- Sumbal Latif, M.Sc. Hons. Horticulture (2020), Postharvest quality management in cut gladiolus as affected by different chemicals to extend the vase life.

PhD thesis as supervisor:

- Nosheen Akhtar, PhD (2015) Use of plant essential oils for the control of fungal deterioration in citrus during storage.
- Wajiha Irum, PhD (2015) Detoxification of Mycotoxins isolated from storage fungi of maize using extracts of local medicinal plants.
- Waheed Akram, PhD (2015). Studies on efficacy and mechanisms of Bacillus strains to induce systemic resistance in tomato against *Fusarium* wilt.
- Rasheda Jabeen, PhD (2017). Molecular characterization of Parthenium weed (*Parthenium hysterophorus* L.) from Australia and Pakistan using various molecular marker techniques.
- Sabeen Fatima, PhD scholar (2017). Management of Fusarium wilt in tomato using non-pathogenic indigenous Pseudomonas strains.
- Huma Adrees, PhD scholar (2021). Role of bio-antagonists and chemical elicitors to manage charcoal root rot of cotton.
- Tahir Mahmood, PhD scholar (2021). Management of early blight of potato through inducing systemic resistance using plant growth promoting rhizobacteria (PGPR).
- Hina Ashraf, PhD scholar. (2023) Green synthesis of metal/metal oxide nanoparticles and their efficacy against *Fusarium oxysporum* causing tomato wilt.
- Muhammad Atif, PhD scholar. (2024) Effect of antifungal compounds from indigenous plants on structural and metabolic gene(s) of *Fusarium oxysporum* f. sp. *Lycopersici*.

PhD thesis as Co-supervisor:

- Anum Yousaf, PhD scholar (2018). Modulation of phytosterol contents of food commodities under environmental dynamics to control hyperlipidemia.
- Hina Aslam, PhD scholar (2019). Use of halotolerant rhizospheric bacteria for conferring resistance to salt stress in tomato plants.

On-going Research Supervision:

PhD thesis as supervisor:

- Romana Shehzadi, PhD scholar. Mycosynthesis of metallic nanoparticles for the management of soil borne plant pathogenic fungi.
- Ayesha Nisar. PhD scholar. Bactosynthesis of metallic nanoparticles their characterization and effect on growth physiology and disease control of Mungbean.
- Maryum Munir, PhD scholar. Biodiversity of Begomovirus associated Alphasatellites and their potential role in virus satellite disease complexes.
- Maroof Siddique, PhD scholar. Evaluation of micronutrients and antagonistic bacterial coated NPK for the management of charcoal rot of sunflower (*Helianthus annus* L.)

SCHOLARSHIPS/AWARDS:

- PhD merit scholarship holder, from Punjab University, for the year 2001.
- Charles Wallace Trust (British council) visiting fellowship to UK for the year 2003-04.
- E.L. Rice Award for the best student presentation in 4th World Congress on Allelopathy, Charles Sturt University, Wagga Wagga, Australia 21st-26th August 2005.
- Performance evaluation awards by the Punjab University, Lahore at 37% professional rating on Dec 2005; 58% rating on Dec 2007; 45% rating on Sept 2008 and 44% rating on July 2009.

- Incentive award on publications for the year 2005, 2006, 2007, 2008 and 2009 by University of the Punjab, Pakistan.
- Best teacher award 2005-06. Department of Mycology and Plant Pathology, University of the Punjab, Pakistan.
- Endeavour research fellowship 2009, Australia. Worked in School of agriculture, food and wine, Adelaide University Australia on 'Characterization of mycotoxins from *Pyrenophora teres* in the development of net blotch disease of barley' from 1st Dec 2009 – 1st March 2010.
- Research productivity award 2011 & 2012 (Category F) by Pakistan Council of Science & Technology.
- Matsumae Research Fellowship 2011-2012, Japan. Completed 6 months post doc project entitled "Mode of action of Cyanamide – A known plant allelochemical", in International Agro-Biological Resources and Allelopathy Lab, Tokyo University of Agriculture and Technology, Fuchu Campus, Tokyo, Japan from July 2012 – December 2012.
- Women Super Achiever Award. 2023. Hawks Youth Vision HYV Foundation.

FIELDS OF INTEREST:

- Agriculture
- Plant pathology
- Plant growth promoting bacteria
- Biodegradation of mycotoxins
- Integrated pest management
- Phytochemistry
- Plant disease physiology
- Mycology
- Allelopathy
- Nanotechnology and its application in plant pathology

Attainments as Chairperson Department of Plant pathology (Dec 2021 – Dec 2024)

1. Chief Organizer International Webinar on Mushrooms: as future diet. Organized by Department of Plant Pathology; Faculty of Agricultural Sciences; University of the Punjab, Lahore on 7th July 2021. Talked on SWOT analysis of mushroom farming in Pakistan.
2. Chief Organizer International Webinar on Agricultural Nanotechnology: Influencing the future of farming sustainability. Organized by Department of Plant Pathology; Faculty of Agricultural Sciences; University of the Punjab, Lahore on 29th July 2021.
3. Participated in training program for farmers on production technology for wheat at Faculty of Agricultural Sciences, University of the Punjab. November 18th, 2021.
4. First reunion of Alumni, Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab. December 07, 2021.
5. Walk in interviews scheduled of Agriculture officers and Field Assistants by HBL for Sahiwal Division at Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab on Thursday, 24th Feb, 2022.
6. Written test and interviews against vacant Territory Manager positions (Male) at Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab on 16th March, 2022. Activity conducted by Mr. Muhammad Rafiq Bhatti, National Sales Manager – SPT FMC.
7. Hosted study tour of the Department of Plant Pathology, College of Agriculture, University of Sargodha, Sargodha. 16th March, 2022. Group led by Dr. Yasir Iftikhar, Assistant Professor, UOS.

8. Patron in Chief of National Seminar on Tunnel Farming. Organized by Department of Plant Pathology; Faculty of Agricultural Sciences; University of the Punjab, Lahore on 19th May 2022. Speakers: Dr. Sajid Iqbal Sandhu and Dr. Nasir Subhani, Associate Professor, DPP, PU.
9. Hosted study tour of the Department of Plant Pathology, Arid Agriculture University Rawalpindi. 31st May, 2022. Group led by Dr. M. Inam-ul-Haq, Professor, PMAS- Arid Agriculture Uni. Rawalpindi.
10. Written test at Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab on 8th June, 2022, for recruitment process of Assistant Territory Manager (Male). Activity conducted by Mr. Usman Malik, Assistant Development Manager – Evyol Group.
11. Hosted study tour of the Department of Botany, Minhaj University Lahore. 9th July, 2022. Group led by Dr. Sundus Akhtar, Assistant Professor, Minhaj University Lahore.
12. Organized DPP Technospark 2022. Career counselling / Fund raising event for flood victims on 10th December, 2022. Trainer: Dr. Mudassar Azam ICET PU, Lahore.
13. Walk-in interviews for Female Human Resources of Agri Graduates (External Communication and Media officer + Sustainability officer) for Galaxy Rice Pakistan on 29th Dec. 2022 in the Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab.
14. Start of the biannual official newsletter (Agro-Pathology Bulletin) of the department of Plant Pathology, University of the Punjab.
15. Organized Faculty-Wise Training Workshop on “How to Prepare Self-Assessment Report (SAR)” for QEC Focal Persons of University of the Punjab, Lahore in Faculty of Agricultural Sciences, PU on 26th Jan. 2023. Resource person: Dr. Saima Siddiqui Director Quality Enhancement Cell University of the Punjab
16. Organized visit of students of the Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab to Pakistan Horti Expo 2023 on 29th January 2023.
17. Recruitment drive at Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab on 31st Jan, 2023 for fresh agri graduates. Activity conducted by Mr. Bilal Ahmed Khan, Team leader HR, Evyol group.
18. LMS training in Department of Plant Pathology; Faculty of Agricultural Sciences; University of the Punjab, Lahore on 1st February, 2023 in collaboration with Information Technology Centre, University of the Punjab, Lahore.
19. Chief Organizer Seminar on Challenges & Opportunities in Agriculture Sector of Pakistan. Organized by Department of Plant Pathology; Faculty of Agricultural Sciences; University of the Punjab, Lahore on 6 February 2023. Speaker: Mr. Ahmad Umair, CEO Vital Agri Nutrients.
20. Memorandum of understanding (MoU) signed between the University of Haripur, KPK and the University of the Punjab, Lahore on 23 Feb. 2023. Focal person from PU; Prof. Dr. Tehmina Anjum
21. Organized Annual dinner and second alumni reunion of the Department of Plant pathology on 03rd March 2023. Occasion graced by Mr. Tariq Mehmood, Punjab Agricultural Marketing Regulatory Authority.
22. Ground breaking ceremony of the new Academic Block of the Department of Plant Pathology by Vice Chancellor, University of the Punjab. 9th March 2023.
23. NAEAC (National Agricultural Education Agricultural Council) on-site accreditation visit of the Department of Plant Pathology; Faculty of Agricultural Sciences on 17th March 2023.

24. Hands-on training workshop on Data Science with MS-Excel on 20th March 2023 in Department of Plant Pathology; Faculty of Agricultural Sciences. Resource person Dr. Amna Javaid; Professor DPP, FAS.
25. Organized two days (June 7-8, 2023) workshop on “Outcome Based Education” in collaboration with Punjab Higher Education Commission Pakistan; in Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab, Lahore.
26. Hosted study tour of the Department of Plant Pathology, Muhammad Nawaz Sharif University of Agriculture Multan. 8th June, 2023. Group led by Dr. Muhammad Arslan Khan, Lecturer, MNSUA.
27. Organized two day workshop (July 11 - 12, 2023) on “Spying Bioactive Molecules” in Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab, Lahore.
28. Organized one day awareness seminar (July 25th, 2023) on “Patent Filing and Registration” in Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab, Lahore. Resource person Ms. Shakra Khurshid, Senior Examiner of Patents, IPO Regional Office Lahore.
29. Start of M.Sc. Hons. Agriculture (Plant Pathology) Replica/self-supporting from Fall 2023 after permission from authorities of Punjab University via letter number D.No.5434ACAD.
30. Start of Doctor of Philosophy (PhD) Plant Pathology at University of the Punjab, Lahore after receiving No Objection Certificate (NOC) from HEC with order number D.D/2023/QAD-NOC/HEC/UOP-Lahore/799 dated 2nd August 2023.
31. Organized one day seminar on Cotton Leaf Curl Virus, History, Recombination and Transmission on 25th September 2023 in Department of Plant Pathology, University of the Punjab. Key speakers: Dr. Judith K. Brown, Regents Professor Plant Science and Dr. M. Javed Iqbal, Research Professional University of Arizona.
32. Organized two day training workshop on “Data Sciences with R – From basics to advanced techniques” on 27 – 28 September 2023 in Department of Plant Pathology, University of the Punjab. Resource person: Dr. Mufssra Naz, Assistant Professor, Dept. of Software Engineering, Punjab University.
33. Celebrated World Fungus & World Mushroom Day on 9th October 2023 in Department of Plant Pathology, University of the Punjab. Invited speakers and their talks were Dr. Yasar Saleem Principal Scientific Officer PCSIR Lahore: Remarkable value of fungi for the production of industrial bio- products; Dr. Fathia Mubeen, DCS-Soil & Environmental Biotechnology Division NIBGE Faisalabad: Fungal biopesticides, need of time for sustainable agriculture; Mr. Rehan Qadeer, CEO O'Mushrooms: Mushroom Cultivation: value addition technology, export opportunities and potential in Pakistan.
34. Organized roundtable discussion on “Revival of our commitments with Pakistan” on 17th October 2023 at Faculty of Agricultural Sciences, University of the Punjab. Guests were Engr. Waheed Khawaja, Founder President Fiker-e-Iqbal Forum; Mr. Anwar Mahmood Khan, Air Vice Marshal (R); Mr. M. A. Hijazi, Ex Senior Faculty Member PU & Corporate Trainer. SVP-FIF; Mr. Masroor Akhtar Qureshi, Joint Director Mechanical (Retd) Pakistan Railway and Dr. Nadeem Ishaq Khan, Specialist Tazkia and Iqbaliat. VP-FIF.
35. Organized two day training workshop on “Investigation of Nanostructures for Green Revolution” on 25 – 26 October 2023 in Department of Plant Pathology, University of the Punjab. Resource person: Dr. Muzamil Aftab, Head of the Department of Physics, Shah Hussain College Lahore.
36. Organized one day training workshop on “Smart Agriculture Transformations” on 2nd November 2023 in Department of Plant Pathology, University of the Punjab in collaboration with Green Circle. Resource persons: Dr. M. Akram Qazi, Director Soil & Water Testing Laboratory; Dr. Javed Ahmed, Director Wheat Punjab AARI; Dr. Sajid Iqbal, National Agriculture Expert; Dr. Shehzad Basra, Professor & Advisor Virsa Forms; CEO Agri Tourism Mr. Tariq Tanveer. Sponsors: Bank Alfalah, Fertiscience and DTL.

37. Hosted study tour of the students of BS Biotechnology and BS Zoology of Lahore Garrison University Lahore. 15th November, 2023. Group led by Dr. Fouzia Qamar, Associate Professor; Dr. Sumera Mazhar, Associate Professor and Dr. Uzma Rafee, Assistant Professor LGU Lahore.
38. Organized one day awareness seminar on “innovations for higher productivity and quality” in collaboration with National Productivity Organization (NPO) at Department of Plant Pathology, University of the Punjab on 30th January 2024. Guest speaker: Mr. Azhar Khan, Deputy Manager NPO.
39. Organized 6th region wise one-day training workshop for program evaluators of NAEAC on 14th Feb. 2024, at Faculty of Agricultural Sciences, University of the Punjab, Lahore.
40. Constitution of Research Advisory Board of the Department of the Plant Pathology, University of the Punjab encompassing experts from major agro industry and government sector. First meeting was held on 20th February 2024.
41. Start of paid internships for B.Sc. Hons students of the Department of the Plant Pathology, University of the Punjab. 80% students were sent on paid internship in 2024.
42. Organized two day workshop on “From Molecules to Molecular Docking” on 23 – 24 April 2024 in Department of Plant Pathology, University of the Punjab. Resource person: Dr. Waheed Akram, Assistant Professor, DPP, Punjab University.
43. Organized one day seminar on “Environment Sustainability and Agriculture” on 27th May 2024. Guest speakers: Prof. Dr. Faiza Sharif, Director Sustainable Development Study Centre GCU Lahore and Prof. Dr. Aisha Saleem, Khan from Department of Biological Sciences, Formans Christian College Lahore.
44. Organized one week training course on “Unlocking cellular secrets: A training course on analysis and molecular docking” on 08 – 12 July 2024 in Department of Plant Pathology, University of the Punjab. Resource person: Dr. Waheed Akram, Assistant Professor, DPP, Punjab University.
45. Organized two day workshop (2 sessions) on “NanoTech Essentials” on 21 – 22 and 23 – 24 October 2024 in Department of Plant Pathology, University of the Punjab. Resource person: Mr. Danish Ali Silesian University of Technology, Gliwice, Poland.
46. Organized invited talk of Dr. Nornasuha Binti Yusoff; School of Agricultural Science and Biotechnology; Faculty of Bioresources and Food Industry; Universiti Sultan Zainal Abidin Terengganu, Malaysia on her research related to Allelopathy on October 25th 2024.
47. Signed MoU with Vital Agri Nutrients (VAN) on 16th November 2024, regarding Student Financial Support program at DPP, PU.
48. Organized one day seminar on civic education in collaboration with Punjab Higher Education Commission PHEC at Dept. of Plant Pathology, University of the Punjab, Lahore on 16th December 2024. Expert Panel: Director training PHEC, Dr. Asif Munir; Former Chairperson Social Work Department Pu, Prof. Dr. Syeda Mahnaz Hassan and Executive Director Centre for Peace & Secular Studies Ms. Saeeda Diep.