

PUBLICATIONS:

Impact factor Journals

1. Ullah N, Sheikh Z, **Khan MS**, Alotaibi SB, Saddam (2026). Treatment of real municipal wastewater in a sponge anaerobic baffled reactor with cultivation-based microbial characterization. *Water Sci Technol* wst2026271. <https://doi.org/10.2166/wst.2026.271>
2. Zia Ullah, Zeshan Sheikh, Waheed Miran, **Mohammad Sayyar Khan**, Nadeem Ullah, Hongzhi Ma (2025). Effect of anodic effluent recirculation and microalgal inoculum concentration on the performance of photosynthetic microbial fuel cells for brewery wastewater treatment. *Environmental Technology & Innovation*. Volume 40, 2025, 104457, ISSN 2352-1864, <https://doi.org/10.1016/j.eti.2025.104457>.
3. Syed Jehangir Shah, Somaira Bibi, Safira Attacha, Syed Tanveer Shah, Noreen Asim, Waqas Ahmad, **Khan, Mohammad Sayyar**, Jamal Aftab, Naz Ishrat, Ibrahim Muhammad (2025) Isolation and molecular characterization of plant growth-promoting rhizobacteria for biocontrol of Fusarium head blight in wheat. *Cereal Research Communications*. <https://doi.org/10.1007/s42976-025-00735-3>
4. Jamal U, Munir I, Iqbal A, **Khan MS**, Arif M (2025). Identification and characterization of plant-growth-promoting bacterial endophytes from different parts of *Phoenix dactylifera*. *Pak. J. Bot.*, 57(5): DOI: [http://dx.doi.org/10.30848/PJB2025-5\(11\)](http://dx.doi.org/10.30848/PJB2025-5(11))
5. Gao J, **Khan MS**, Sun Y, Xue J, Du Y, Yang C, Chebotar VK, Tikunov VS, Rubanov IN, Chen X, Zhang X (2022). Characterization of an Endophytic Antagonistic Bacterial Strain *Bacillus halotolerans* LBG-1-13 with Multiple Plant Growth-Promoting Traits, Stress Tolerance, and Its Effects on Lily Growth. *BioMed Research International*. Volume 2022, Article ID 5960004. <https://doi.org/10.1155/2022/5960004>
6. **Khan MS***, Gao J, Zhang M, Xue J, Zhang X (2022). *Pseudomonas aeruginosa* Ld-08 isolated from *Lilium davidii* exhibits antifungal and growth-promoting properties. *Plos One*. 17(6): e0269640. <https://doi.org/10.1371/journal.pone.0269640>
7. Ullah M, **Khan MS**, Jan A, Shah SUA, Iqbal N, Munir I (2022). Biolistic transformation of sugarcane (*Saccharum officinarum* L.) with the *Oryza sativa* L. H⁺-PPase gene for improved salt stress tolerance. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*. 50 (4): 12854.[doi.10.15835/nbha50412854](https://doi.org/10.15835/nbha50412854)
8. Moe TS, Zhang M, Xue J, Thida M, Liu Y, **Khan MS**, Du Y, Zhang X (2022). In vitro antioxidant, antihyperglycemic and antiglycation properties of bulbs, flower buds and flowers extracts of *Lilium* species and their chemometric profiling. *Jordan Journal of Biological Sciences*. 15 (4): 579-592. <https://doi.org/10.54319/jjbs/150406>
9. Shah D, **Khan MS**, Aziz S, Ali H, and Pecoraro L* (2021). Molecular and biochemical characterization, antimicrobial activity, stress tolerance, and plant growth-promoting effect of endophytic bacteria isolated from wheat varieties. *Microorganisms*. 10, 21. <https://doi.org/10.3390/microorganisms10010021>
10. **Khan MS**, Gao J, Munir I, Zhang M, Liu Y, Moe TS, Xue J*, Zhang X* (2021). Characterization of Endophytic Fungi, *Acremonium* sp., from *Lilium davidii* and Analysis

of Its Antifungal and Plant Growth-Promoting Effects. BioMed Research International. Vol 2021, 9930210, 14 pages.

11. **Khan MS***, Shah SUA, Ullah M, Ahmad MZ, Ahmad W, Jan A (2021). Genetic Engineering of sugarcane with the rice tonoplast H⁺-PPase (*OVP2*) gene to improve sucrose content and salt tolerance. Pakistan Journal of Botany. 53(3): 813-821.
12. Ullah I, **Khan MS***, Khan SS, Ahmad W, Zheng L, Shah SUA, Ullah M, Iqbal A (2021). Identification and characterization of thermophilic amylase producing bacterial isolates from the brick kiln soil. Saudi Journal of Biological Sciences, 28(1):970-979.
13. **Khan MS***, Ahmad W, Ahmad MZ, Ullah Z, Jan A (2021). Transformation of the OSC3H52 gene promoter in tissue culture of sugarcane. The J. Anim. Plant Sci. 31(1).
14. Faiza Tawab, Iqbal Munir, Zeeshan Nasim, **Mohammad Sayyar Khan**, Saleha Tawab, Adnan Nasim, Aqib Iqbal, Mian Afaq Ahmad, Waqar Ali, Raheel Munir, Maria Munir, Noreen Asim (2020). Identification and characterization of a novel multi-stress responsive gene in Arabidopsis. Plos One. 15(12):e0244030.
15. Jun-lian Gao, Yu-chen Sun, Jing Xue, Pengbo Sun, Hui Yan, **Mohammad Sayyar Khan**, Li-wei Wang, Xiuhai Zhang, Jian-guang Sun (2020) *Variovorax beijingensis* sp. nov., a novel plant-associated bacterial species with plant growth-promoting potential isolated from different geographic regions of Beijing, China. Systematic and Applied Microbiology. 43(6):126135.
16. Shuai Tong; Li-wei Wang; Yu-chen Sun; **Mohammad Sayyar Khan**; Jun-lian Gao; Jian-guang Sun (2020). *Paenibacillus apii* sp. nov., a novel nifH genes-harboring species isolated from the rhizospheres of vegetable plants grown in different regions of northern China. International Journal of Systematic and Evolutionary Microbiology. 70(10):5531-5538.
17. **Mohammad Sayyar Khan**, Junlian Gao, Mingfang Zhang, Xuqing Chen, The Su Moe, Yunpeng Du, Fengping Yang, Jing Xue, Xiuhai Zhang (2020). Isolation and characterization of plant growth-promoting endophytic bacteria *Bacillus stratosphericus* LW-03 from *Lilium wardii*. 3 Biotech **10**, 305. <https://doi.org/10.1007/s13205-020-02294-2>
18. **Khan MS**, Gao J, Chen X, Zhang M, Yang F, Du Y, Moe TS, Munir I, Xue J*, Zhang X (2020) The Endophytic Bacteria *Bacillus velezensis* L1e-9, Isolated from *Lilium leucanthum* Harbors Antifungal Activity and Plant Growth-Promoting Effects. J. Microbiol. Biotechnol. 30(0): 1–13
19. **Khan MS**, Gao J, Chen X, Zhang M, Yang F, Du Y, Moe TS, Munir I, Xue J*, Zhang X (2020) Isolation and characterization of plant growth-promoting endophytic bacteria *Paenibacillus polymyxa*, SK1 from *Lilium lancifolium*. BioMed Research International. <https://doi.org/10.1155/2020/8650957>
20. Yue H, Ren J, Liu Y, Zhang M, Moe TS, **Khan MS**, Du Y*, Zhang X (2020) Evaluating the genetic relationship of *Lilium* species/cultivars based on target region amplification polymorphism (TRAP). Genetic Resources and Crop Evolution. 67:503-513. <http://doi.org/10.1007/s10722-019-00880-9>.

21. **Khan MS***, Ullah M, Ahmad W, Shah SUA (2020) The use of modern technologies to combat stripe rust disease in wheat. *Rom Biotechnol Lett.* 2020; 25(1): 1281-1288.
22. Liu Y, Huang J, Moe TS, Khan MS, Xue J, Zhang X, Du Y* (2019) The complete chloroplast genome sequence of *Lilium speciosum* Var. *gloriosoides*, and important breeding parent. *Journal of Mitochondrial DNA Part B Resources.* 5: 71-72.
23. Gao J*, Xue J, Yan H, Tong S, Khan MS, Wang L, Mao X, Zhang X, Sun J (2019) *Pantoea endophytica* sp. nov., novel endophytic bacteria isolated from maize planting in different geographic regions of northern China. *Systematic and Applied Microbiology.* <https://doi.org/10.1016/j.syapm.2019.06.001>
24. Gul, S., R. Uddin, N.U. Khan*, S.U. Khan, S. Ali, N. Ali, M.S. Khan, M. Ibrahim, R. Goher, M. Saeed and D. Hussain. 2019. Heterotic response and combining ability analysis in F1 diallel populations of *Brassica napus* L. *Pak. J. Bot.*, 51(6): DOI: [http://dx.doi.org/10.30848/PJB2019-6\(36\)](http://dx.doi.org/10.30848/PJB2019-6(36))
25. **Khan MS***, Ahmad H, Ullah M, Ahmad MZ, Munir I (2019) Allelopathic assessment for the environmental biosafety of the transgenic oilseed rape lines harboring the antifungal synthetic chitinase (NIC) gene. *Pakistan Journal of Botany.* 51 (4).
26. Gul S, Uddin R, Khan NU*, **Khan MS**, Khan SU, Goher R (2018) Heterotic and genetic effects in intra-specific populations of *Brassica napus* L. *Pakistan Journal of Botany.* 50(5): 1951-1963.
27. **Khan MS***, Sadaat SU, Jan A, Munir I (2017) Impact of transgenic *Brassica napus* harboring the antifungal synthetic chitinase (NiC) gene on rhizosphere microbial diversity and enzyme activities. *Frontiers in Plant Science.* | doi: 10.3389/fpls.2017.01307
28. **Khan MS***, Khan MA, Ahmad D (2016) Assessing utilization and environmental risks of important genes in plant abiotic stress tolerance. *Frontiers in Plant Science.* 7:792
29. Munir I*, Hussan W, **Khan MS**, Farhatullah, Mian AA, Iqbal A, Munir R (2016) Production of transgenic *Brassica juncea* with the synthetic chitinase gene (NiC) conferring resistance to *Alternaria brassicicola*. *Pakistan Journal of Botany.* 48 (5), 2063-2070
30. **Khan MS***, Ahmad D, Khan MA (2015) Utilization of genes encoding osmoprotectants in transgenic plants for enhanced abiotic stress tolerance. *Electronic Journal of Biotechnology* 18: 257–266.
31. **Khan MS***, Ahmad D, Khan MA (2015) Trends in genetic engineering of plants with (Na⁺/H⁺) antiporters for salt stress tolerance. *Biotechnology and Biotechnological Equipment.* <http://dx.doi.org/10.1080/13102818.2015.1060868>.
32. **Khan MS*** (2011) The role of DREB transcription factors in abiotic stress tolerance of plants. *Biotechnology and Biotechnological Equipment* 25: 2433-2442.
33. **Khan MS*** (2011) Role of sodium and hydrogen (Na⁺/H⁺) antiporters in salt tolerance of plants: Present and future challenges. *African Journal of Biotechnology* 10: 13693-13704.

34. **Khan MS**, Yu X, Kikuchi A, Asahina M*, Watanabe KN (2009) Genetic engineering of glycine betaine biosynthesis to enhance abiotic stress tolerance in plants. *Plant Biotechnology* 26: 125-134.

Local/International non-impact factor Journals

1. Jehan, K., **Sayyar Khan, M***, Iqbal, N., Ullah, M., Malik, S., & Muhammad Khan, A. (2024). In vitro characterization and analysis of rice varieties against various levels of salt stress. *Journal of Microbiology, Biotechnology and Food Sciences*, e11179. <https://doi.org/10.55251/jmbfs.1117>.
2. Mazhar Ullah, **Mohammad Sayyar Khan***, Asad Jan (2021). Effects of carbon sources and synthetic growth regulators on the tissue culture of sugarcane. *SJA*. 38 (1):312-321.
3. Ayesha Gul, **Mohammad Sayyar Khan***, Mazhar Ullah and Iqbal Munir (2021). Polyethylene glycol (PEG) mediated in vitro characterization of sugarcane (CP-77/400) calli and regenerated plantlets. *Sarhad Journal of Agriculture*. 38 (1): 01-10.
4. Hussain MM, Jan A, **Khan MS** (2020). *Agrobacterium* mediated transformation of *OsTZF8* gene in *Oryza sativa* for drought stress tolerance. *Sarhad Journal of Agriculture*, 36(2): 702-713.
5. Jawad SM, Zahid M, Shah M, Ashfaq MZ, Hayat A, **Khan MS***, Salman S (2020) Bioaccumulation of selected heavy metals in various organs of Sher Mahi (*Clupisoma naziri*) collected from local market of Peshawar. *Pure. Appl. Biol*. 9(4):2225-2232.
6. Nida Jan, **Mohammad Sayyar Khan***, Mazhar Ullah, Waqar Ahmad, Sayed Usman Ali Shah and Sahibzada Muhammad Jawad (2019) Antimicrobial activity and subsequent phytochemical analysis of different extracts of *Tamarix aphylla* (L.) Karst. (Athel tamarisk). *International Journal of Biology and Biotechnology*. 16 (2): 375-384.
7. Shah S, Hussain M, Jalal A, **Khan MS**, Shah T, Ilyas M and Uzair M (2018). Nitrogen and sulfur rates and timing effects on phenology, biomass yield and economics of wheat. *Sarhad Journal of Agriculture*. 34(3): 671-679.
8. Khan I, **Khan MS***, Ullah M, Khan I, Ahmad W, Shah SUA (2018) Antimicrobial effects of different solvent extracted samples of leaves and roots of *Verbascum thapsus* L.(common mullein). *International Journal of Biology and Biotechnology*. 15 (4): 667-676.
9. Gul S, **Khan MS***, Ullah M, Ahmad W, Shah SUA, Khushal M (2017) Physiological and biochemical assessment of sugarcane calli (cp 77/400) against various level of salinity stress. *International Journal of Biology and Biotechnology*. 14 (2): 179-185
10. **Khan MS***, Shah SJ, Ullah M (2016) Assessment of salinity stress and the protective effects of glycine betaine on local wheat varieties. *ARPJ Journal of Agricultural and Biological Science*. Vol. 11, No. 9

11. **Khan MS***, Mehtab U, Ullah M and Adnan M (2016) *In vitro* and greenhouse response of different wheat lines against salinity stress. International Journal of Biology and Biotechnology. 13(3)
12. Ullah M, Khan H, **Khan MS***, Ahmad K and Jan A (2016) *In vitro* plant regeneration of sugarcane (*Saccharum officinarum* L.); the influence of variety, explant, explant position and growth regulators. ARPN Journal of Agricultural and Biological Science. 11(7)
13. **Khan MS***, Ahmad D, Adnan M, Khan MA (2014) The effect of somaclonal variation on salt tolerance and glycoalkaloid content of potato tubers. Australian Journal of Crop Science 8(12): 1597-1604.
14. **Khan MS***, Munir I, Khan I (2013) The potential of unintended effects in potato glycoalkaloids. African Journal of Biotechnology 12: 754-766.
15. **Khan MS*** (2011) Future challenges in environmental risk assessment of transgenic plants with abiotic stress tolerance. Biotechnology and Molecular Biology Reviews 6: 199-213.
16. **Khan MS***, Ahmad D, Durrani IS, Swati ZA, Hussain M (2004) Prevalence of different begomoviruses infecting chillies in NWFP and Punjab. Sarhad Journal of Agriculture 20: 30-33.
17. Ahmad D, **Khan MS**, Durrani IS, Swati ZA, Hussain M (2004) RNAi based resistance against tomato leaf curl virus. Sarhad Journal of Agriculture 20: 22-25.

BOOKS/BOOKS CHAPTERS

1. Mohammad Sayyar Khan and Irba Zulfiqar (March 6th 2023). Microbial mitigation of drought stress in plants: Adaptations to climate change: In. Abiotic Stress in Plants - Adaptations to Climate Change, Dr. Manuel T. T. Oliveira and Prof. Anabela Afonso A. Fernandes Silva, IntechOpen, DOI: 10.5772/intechopen.109669.
2. Mohammad Sayyar Khan and Mudassar Nawaz Khan (October 23rd 2019). Understanding Plant Responses to Drought and Salt Stresses: Advances and Challenges in “Omics” Approaches, Transgenic Crops - Emerging Trends and Future Perspectives, Muhammad Sarwar Khan and Kauser Abdulla Malik, IntechOpen, DOI: 10.5772/intechopen.81041.