

## Research Publications:

1. Madhulika Singh, Jai Gopal Sharma and **Bhoopander Giri** (2023) Unraveling the synergistic potential of a mycorrhizal consortium in augmenting salinity stress tolerance in wheat by advancing physiological, metabolic, nutrient, and ultrastructural attributes. *Symbiosis* (Revision I) Springer IF: 2.5 (2022).
2. Priya, Bijender Singh, Jai Gopal Sharma and **Bhoopander Giri** (2023) Optimization of phytase production by *Penicillium oxalicum* in solid-state fermentation for potential as a feed additive. *Preparative Biochemistry & Biotechnology* (Revision) IF: 2.4 (2022).
3. Madhulika Singh, Jai Gopal Sharma and **Bhoopander Giri** (2023) Augmentative role of arbuscular mycorrhizal fungi, *Piriformospora indica*, and plant growth-promoting bacteria in mitigating salinity stress in Maize (*Zea mays* L.). *Journal of Plant Growth Regulation* (accepted) IF: 4.8 (2022).
4. Madhulika Singh, Jai Gopal Sharma and **Bhoopander Giri** (2023) Microbial inoculants improve growth in *Zea mays* L. under drought stress by up-regulating antioxidant, mineral acquisition and ultrastructure modulations. *Symbiosis* Springer IF: 2.5 (2022). <https://doi.org/10.1007/s13199-023-00945-5>.
5. Madhulika Singh, Jai Gopal Sharma and **Bhoopander Giri** (2023) Microbial inoculants alter resilience towards drought stress in wheat plants. *Plant Growth Regulation* (2023). <https://doi.org/10.1007/s10725-023-01059-0> IF: 4.2 (2022).
6. Minghui Tian, Cheng Feng, Xuelin Zhang, Frank S Gilliam, **Bhoopander Giri**, Yinglong Chen, Hui Zhang, Feina zha, Tianxue Liu, & Qinghua Yang (2023) Arbuscular mycorrhiza enhances maize grain yield and nitrogen uptake during the grainfilling stage with contrasting nitrogen status in two types of soils. *Plant Growth Regulation* <https://doi.org/10.1007/s10725-023-01053-6> IF: 4.2 (2022).
7. Priya, Virmani Ishita, Pragya, Ravi Kumar Goswami, Bijender Singh, Jai Gopal Sharma and **Bhoopander Giri** (2023) Role of microbial phytases in improving fish health. *Review in Aquaculture* 1-21. doi:[10.1111/raq.12790](https://doi.org/10.1111/raq.12790) IF: **10.618**.
8. Charu Kalra, Sargam Bharti, Sonal Bhatnagar, **Bhoopander Giri**, Reeta Kumari (2023) Arbuscular Mycorrhizal Fungi as Potential Agents in Augmenting Growth and Stress Tolerance in Plants. *Kavaka* 59(2): 52-64 DOI: 10.36460/Kavaka/59/2/2023/52-64.
9. Bhawna Saxena, Karuna Sharma, Rupam Kapoor, Qiang-Sheng Wu and **Bhoopander Giri** (2022) Insights into the molecular aspects of salt stress tolerance in mycorrhizal plants. *World J Microbiology and Biotechnol* Nov 1;38(12):253. doi: 10.1007/s11274-022-03440-z. PMID: 36316429. IF: 4.290
10. Wen-Ya Ma, Qiu-Yun Qin, Ying-Ning Zou, Kamil Kuca, **Bhoopander Giri**, Qiang-Sheng Wu, Abeer Hashem, Al-Bandari Fahad Al-Arjani, Khalid F. Almutairi, Elsayed Fathi Abd\_Allah and Yong-Jie Xu (2022) Arbuscular mycorrhiza induces low oxidative burst in drought-stressed walnut through activating antioxidant defense systems and heat shock transcription factor expression. *Frontiers in Plant Science* IF: 6.627 2022 Nov

11. **Bhoopander Giri**, Renuka Rawat, Geeta Saxena, Preet Manchanda, Qiang-Sheng Wu and Anuradha Sharma (2022) Effect of *Rhizoglyphus fasciculatum* and *Paecilomyces lilacinus* in the biocontrol of root-knot nematode, *Meloidogyne incognita* in *Capsicum annum L*, *Communicative and Integrative Biology* 515(1): 75-87. ISSN 19420889.
12. Harsh Pant, Vishesh Kumar, **Bhoopander Giri**, Qiang-Sheng Wu, Vijaya Lobo, Ishwer Singh, Anuradha Sharma (2022) Potential roles of phytochemicals in combating severe acute respiratory syndrome Corona virus infection. *Plant Science Today* Vol 9(2):427-437. IF 0.9
13. Hui-Qian Cheng, **Bhoopander Giri**, Qiang-Sheng Wu, Ying-Ning Zou and Kamil Kuča (2022) Arbuscular mycorrhizal fungi mitigate drought stress in citrus by modulating root microenvironment. *Archives of Agronomy and Soil Science* 68(9):1217-1228 ISSN 03650340. IF (2020): 3.092. DOI: 10.1080/03650340.2021.1878497
14. Lulu Meng, A. K. Srivastava, Kamil Kuča, **Bhoopander Giri**, Mohammed Mahabubur Rahman and Qiang-Sheng Wu (2021) Interaction between Earthworms and Arbuscular Mycorrhizal Fungi in Plants. *Phyton-International Journal of Experimental Botany* 90 (3): 687-699. ISSN 0031-9457 Tech Science Press (Scopus Indexed) IF (2020): 1.039
15. Lu-Lu Meng, Rui-Cheng Liu, Liu Yang, Ying-Ning Zou, Anoop Kumar Srivastava, Kamil Kuča, Abeer Hashem, Elsayed Fathi Abd\_Allah, **Bhoopander Giri** and Qiang-Sheng Wu (2021) The Change in Fatty Acids and Sugars Reveals the Association between Trifoliolate Orange and Endophytic Fungi. *Journal of Fungi* 2021,7,716. Impact Factor (IF) (2020): 5.816
16. Ying-Ning Zou, Hui-Hui Wu, **Bhoopander Giri**, Qiang-Sheng Wu, Kamil Kuča (2019) Mycorrhizal symbiosis down-regulates or not change root aquaporin expression in trifoliolate orange under drought stress. *Plant Physiology and Biochemistry* 144: 192-199 ISSN 09819428. Elsevier (Scopus Indexed) IF (2020): 4.270
17. Rashmi Dwivedi, **Bhoopander Giri** and Kamlesh Shukla (2017) Efficient synthesis of plant-mediated silver nanoparticles and their screening for antimicrobial activity. *Plant Science Today*: 4(3): 143-150. ISSN 23481900 IF 0.9 (Scopus indexed).
18. **Bhoopander Giri** (2017) Mycorrhizal dependency and growth response of *Gliricidia sepium* (Jacq.) Kunth ex Walp. under saline conditions. *Plant Science Today*: 4(4): 154-160. ISSN 23481900 IF 0.9 (Scopus indexed).
19. Heikham Evelin, **Bhoopander Giri** and R Kapoor (2013) Ultrastructural evidence for AMF mediated salt stress mitigation in *Trigonella foenum-graecum*. *Mycorrhiza* 23(1):71-86 ISSN: 0940-6360, Springer (Scopus Indexed) IF (2020): 3.387
20. Shantanu Mandal, Heikham Evelin, **Bhoopander Giri**, VP Singh and Rupam Kapoor (2013) Arbuscular mycorrhiza enhances the production of stevioside and rebaudioside-A in *Stevia rebaudiana* via nutritional and non-nutritional mechanisms. *Applied Soil Ecology* 72: 187-194. ISSN: 0929-1393 Elsevier (Scopus Indexed) IF (2020): 4.046

21. Heikham Evelin, **Bhoopander Giri** and R Kapoor (2012) Contribution of *Glomus intraradices* inoculation on nutrient acquisition and mitigation of ionic imbalance in NaCl stressed *Trigonella foenum-graecum*. *Mycorrhiza* 22 (3): 203 -217. ISSN: 0940-6360, Springer (Scopus Indexed) IF (2020): 3.387
22. Heikham Evelin, R Kapoor and **Bhoopander Giri** (2009) Arbuscular mycorrhiza in alleviation of salt stress: A review (an invited review). *Annals of Botany* 104: 1263-1280 ISSN 0305-7364 Oxford press, UK. (Scopus Indexed) IF (2020): 4.357
23. **Bhoopander Giri**, R Kapoor and KG Mukerji (2007) Improved tolerance of *Acacia nilotica* to salt stress by arbuscular mycorrhiza, *Glomus fasciculatum* may be partly related to elevated K: Na ratios in root and shoot tissues. *Microbial Ecology* 54 (4): 753-760 ISSN: 0095-3628 Springer (Scopus Indexed). IF (2020): 4.552
24. **Bhoopander Giri**, R Kapoor and KG Mukerji (2005) Effect of the arbuscular mycorrhizae *Glomus macrocarpum* and *Glomus fasciculatum* on the growth and nutrient content of *Cassia siamea* in a semi-arid Indian wasteland soil. *New Forests* 27:1-11 ISSN: 0169-4286, Springer (Scopus Indexed) IF (2020): 2.560
25. **Bhoopander Giri** and KG Mukerji (2004) Mycorrhizal inoculant alleviates salinity stress in *Sesbania aegyptiaca* and *S. grandiflora* under field conditions: Evidence for improved magnesium and decreased sodium uptake. *Mycorrhiza* 14 (5): 307-312 ISSN: 0940-6360 Springer (Scopus Indexed) IF (2020): 3.387
26. **Bhoopander Giri**, R Kapoor and KG Mukerji (2004) Preinoculation with arbuscular mycorrhizae helps *Acacia auriculiformis* in a degraded Indian wasteland soil. *Communications in Soil Science and Plant Analysis* 35: 193-204 ISSN 0010-3624 Taylor & Francis (Scopus Indexed) IF (2020): 1.327
27. Rupam Kapoor, **Bhoopander Giri** and KG Mukerji (2004) Improved growth and essential oil yield and quality in *Foeniculum vulgare* mill on mycorrhizal inoculation supplemented with P-fertilizer. *Bioresource Technology* 93 (3): 307-311 ISSN: 0960-8524 Elsevier (Scopus Indexed). IF (2020): 9.642
28. **Bhoopander Giri**, Rupam Kapoor and KG Mukerji (2003) Influence of arbuscular mycorrhizal fungi and salinity on growth, biomass, and mineral nutrition of *Acacia auriculiformis*. *Biology and Fertility of Soils* 38: 170-175 ISSN: 0178-2762 Springer (Scopus Indexed) IF (2020): 6.432
29. R K Saxena, W S Davidson, A Sheoran, and **Bhoopander Giri** (2003) Purification and characterization of an alkaline thermostable lipase from *Aspergillus carneus*. *Process Biochemistry* 39: 339-345 ISSN: 1359-5113 Elsevier (Scopus Indexed) IF (2020):3.757
30. R K Saxena, A Sheoran, **Bhoopander Giri** and W S Davidson (2003) Purification strategies for microbial lipases. *Journal of Microbiological Methods* ISSN: 0167-7012, 52: 1-18, Elsevier (Scopus Indexed) IF (2020): 2.363
31. M A Rahim, R K Saxena, A Sheoran, **Bhoopander Giri** and R Gupta (2003) A novel

- and quick plate assay for acetamidase producer and process optimization for its production by *Aspergillus candidus*. **Process Biochemistry** ISSN: 1359-5113 38: 861-866, Elsevier Science UK. Scopus Indexed. IF (2020): 3.757
32. Rupam Kapoor, **Bhoopander Giri** and KG Mukerji (2002) *Glomus macrocarpum*: a potential bioinoculant to improve essential oil quality and concentration in Dill (*Anethum graveolens*) and Carum (*Trachyspermum amni* (Linn.) Sprague). **World Journal of Microbiology and Biotechnology** 18: 459-463, ISSN: 0959-3993 Springer (Scopus Indexed). IF (2020): 3.312
  33. Rupam Kapoor, **Bhoopander Giri** and KG Mukerji (2002) Mycorrhization of coriander (*Coriandrum sativum* L.) to enhance the concentration and quality of essential oil. **Journal of the Science of Food and Agriculture** 82: 339-342, ISSN: 0022-5142 John Wiley & Sons (Society of Chemical Industry, UK) (Scopus Indexed) Impact Factor (IF) (2020): 3.638
  34. Rupam Kapoor, **Bhoopander Giri** and KG Mukerji (2001) Effect of VAM inoculation on growth responses and essential oil of *Anethium graveolens* L. **Plant Physiology Reports** (previous Indian J Plant Physiol.) 6: 77-80, ISSN: 0974-0252, Springer (Scopus Indexed).
  35. **Bhoopander Giri**, R Kapoor and KG Mukerji (2000) *Sesbania aegyptiaca* (Pers) seedling response to VA mycorrhization in two types of soil. **Phytomorphology** 50: 327-332. ISSN. 0031-9449 International Phytomorphological Society, India.
  36. **Bhoopander Giri** and K G Mukerji (1999) Improved Growth and Productivity of *Sesbania grandiflora* (Pers) under Salinity Stress through Mycorrhizal Technology. **J Phytol Res** 12(1-2): 35-38. ISSN 0970-5767, Peer Reviewed, Refereed, UGC CARE indexed.

#### **Publications in Edited Books:**

37. BP Chamola, **Bhoopander Giri** and KG Mukerji (1999) Vesicular arbuscular mycorrhiza: biofertilizer for future. In: From Ethno-mycology to Fungal Biotechnology, JSingh and RK Aneja (eds) Plenum Publishing Corporation, New York, ISBN 978-1- 4613-7182-3 pp. 225-234.
38. **Bhoopander Giri** and BP Chamola (1999) Vesicular arbuscular mycorrhizal fungi under salinity and drought stress. In: Advances in Microbial Biotechnology, JP Tewari, TN Lakhanpal, J Singh, R Gupta, and BP Chamola (eds). APH Publishing Corporation, New Delhi, ISBN: 8176482048, 9788176482042, pp. 421-430.
39. **Bhoopander Giri**, BP Chamola, Neelu and KG Mukerji (2000) Vesicular arbuscular mycorrhizal fungal association under stress conditions. In: Glimpses in Botany, KG Mukerji, BP Chamola and AK Sharma (eds) APH Publishing Corporation, New Delhi ISBN: 9788176482042 pp. 407-420.
40. **Bhoopander Giri**, R Kapoor and KG Mukerji (2001) VAM/VA mycorrhizal technology in establishment of plants under salinity stress conditions. In: Techniques in Mycorrhizal

- Studies, KG Mukerji, C Manorachari and BP Chamola (eds) Kluwer Academic Publishers ISBN 978-94-017-3209-3, The Netherlands, pp. 313-327.
41. R Kapoor, **Bhoopander Giri** and KG Mukerji (2001) Soil factors in relation to distribution and occurrence of vesicular arbuscular mycorrhiza. In: Techniques in Mycorrhizal Studies, KG Mukerji, C Manorachari and BP Chamola (eds) Kluwer Academic Publishers, ISBN 978-94-017-3209-3 The Netherlands pp. 51-85.
  42. **Bhoopander Giri**, P H Giang, R Kumari and A Varma (2004) Microbial Diversity in Soils. In: Microorganisms in Soils: Roles in Genesis and Functions, Soil Biology Series vol. 3: 15-40, F Buscot and A Varma (eds) Springer Varleg, Germany. ISBN: 978-3-540-22220-0 (Print)
  43. **Bhoopander Giri**, M Suchdev, P H Giang, R Kumari, R Olemuler and A Varma (2004) Mycorrhizosphere: Strategies and Functions. In: Microorganisms in Soils: Roles in Genesis and Functions, Soil Biology Series vol. 3: 213-252, F Buscot and A Varma (eds) Springer Varleg, Germany. ISBN: 978-3-540-22220-0 (Print)
  44. **Bhoopander Giri** and KG Mukerji (2004) Ecology and distribution of vesicular arbuscular mycorrhizal fungi. In: Plant Diversity in India, JS Dargan and TA Sarma (eds) Published by BSMPS, Dehra dun, ISBN 10: 8121103002, India, pp. 397-426.
  45. Rupam Kapoor, Haikhem Evelin, P Mathur and **Bhoopander Giri** (2013) Arbuscular mycorrhiza: approaches for abiotic stress tolerance in crop plants for sustainable agriculture" In: Plant Acclimation to Environmental Stress, N Tuteja and SS Gill (eds) pp 359-401, Springer Science, New York, ISBN 978-1-4614-5000-9 USA.
  46. **Bhoopander Giri** and Bhawna Saxena (2014) Mycorrhizal associations in plants, Institute of Life Long Learning, University of Delhi, Delhi, pp. 1-33.
  47. Ishwar Singh and **Bhoopander Giri** (2017) **Arbuscular mycorrhiza-mediated control of plant pathogens**. In: Mycorrhiza - Nutrient Uptake, Biocontrol, Ecorestoration, Varma A, Prasad R and Tuteja N (eds) Springer International Publishing AG, a part of Springer Nature, pp. 131-160 ISBN: 978-3-319-68866-4.
  48. Priyanka Srivastava, Bhawna Saxena and **Bhoopander Giri** (2017) **Arbuscular mycorrhizal fungi: green approach/technology for sustainable agriculture and environment**. In: Mycorrhiza - Nutrient Uptake, Biocontrol, Ecorestoration, Varma A, Prasad R and Tuteja N (eds) Springer International Publishing AG, a part of Springer Nature, pp 355-376, ISBN: 978-3-319-68866-4.
  49. Kamlesh Shukla, **Bhoopander Giri** and R. V. Shukla (2017) **Occurrence and Distribution of Mushrooms in Semi-evergreen Sal (*Shorea robusta*) Forest Chhattisgarh, Central India**. In: Developments in Fungal Biology and Applied Mycology, Satyanarayana T et al. (eds.) pp 501-523, Springer Nature Singapore Pte Ltd ISBN 978-981-10-4767-1.
  50. **Bhoopander Giri** and Bhawna Saxena (2017) **Response of arbuscular mycorrhizal fungi to global climate change and their role in terrestrial ecosystem C and N cycling**.

In: Mycorrhiza - Function, Diversity, State of the Art. Varma A, Prasad R, Tuteja N (eds.) pp 305-327, Springer nature, Cham ISBN: 978-3-319-53063-5

51. Bhawna Saxena and **Bhoopander Giri** (2017) **Arbuscular mycorrhizal association improves secondary metabolite production in medicinal and aromatic plants: a sustainable approach.** In: Microbes and Sustainable Agriculture (Prasad R and Kumar N eds.) pp 1-31, I K International Publishing, New Delhi ISBN 978938590948-1.
52. Bhawna Saxena, Kamlesh Shukla and **Bhoopander Giri** (2017) **Arbuscular Mycorrhizal Fungi and Tolerance of Salt Stress in Plants.** In: Arbuscular Mycorrhizas and Stress Tolerance of Plants (Wu Qiang-Sheng ed.) pp 67-98, Springer Nature Singapore, ISBN 978-981-10-4114-3
53. Haishui Yang, Michelle Schroeder-Moreno, **Bhoopander Giri**, and Hu Shuijin (2018) **Arbuscular Mycorrhizal Fungi and Their Responses to Nutrient Enrichment.** In:

Root Biology, Giri B et al. (eds.), Springer International Publishing AG, a part of Springer Nature, Soil Biology 52, pp 429-450 ISBN 978-3-319-75909-8.

54. Priyanka Srivastava, Wu Qiang-Sheng and Bhoopander Giri (2019) **Salinity: An Overview**. In: Giri B and Varma A (eds), Microorganisms in Saline Environments: Strategies and Functions, Springer Nature, Switzerland AG, pp 3-18 ISBN 978-3-030-18974-7
55. Priyanka Srivastava, Manju Balhara and Bhoopander Giri (2020) **Soil Health in India: Past History and Future Perspective**. In: Giri B and Varma A (eds), Soil Health, Springer Nature, Switzerland AG, pp 3-18 ISBN 978-3-030-18974-7.