

<b>Dr. Bilal Ahmad Mir</b> Fellow- International Society for Development & Sustainability (Japan) DBT-Energy Bioscience Overseas Fellow	
Designation & Affiliation	<b>Assistant Professor &amp; Coordinator</b> Department of Botany, North Campus, University of Kashmir, Delina, Baramulla, Jammu & Kashmir, PIN-193103, INDIA.
E-mail & Contact Numbers (Scopus Author ID & ORCID)	Email: meerbilal82@gmail.com; bilal.mir@uok.edu.in Cell: +91-7051623467 Scopus Author ID: 36497193200 ORCID: 0000-0003-1286-890X

**ACADEMIC PROFILE**

April, 2011

Ph. D (Botany); Guru Nanak Dev University, Amritsar, INDIA &amp; CSIR-Indian Institute of Integrative Medicine, Jammu, J&amp;K INDIA

**Thesis title:**Characterization of Genetic Variability in *Withania somnifera* L. (Dunal.) using Biochemical and Molecular Markers.

2006

M. Sc. Botany with 75%marks (Distinction), Savitribai Phule Pune University, Pune, INDIA.

2003

B. Sc. (Biology &amp; Chemistry), Amar Singh College, University of Kashmir, J&amp;K, INDIA.

1999

Senior Secondary, 12<sup>th</sup> (Chemistry, Physics & Biology), JKBOSE, J&K, INDIA.

1997

Secondary (10<sup>th</sup>), (Mathematics, G. Science, S. Studies, Urdu & English), JKBOSE, J&K, INDIA.**DETAILS OF EMPLOYMENT/POSITIONS HELD**

Details of Employment	Name of Organization	From	To	Nature of Work
Assistant Professor & Coordinator	Department of Botany, North Campus, University of Kashmir, Delina, Baramulla, J&K, INDIA	August 2023	Till date	Admin/Research & Teaching
Assistant Professor	Department of Botany, University of Kashmir, Srinagar, J&K INDIA	September 2022	August 2023	Research
Coordinator	Department of Botany, University of Kashmir (Kargil Campus)	November 2017	December 2020	Admin/Research/Teaching
Assistant Professor	Department of Botany, University of Kashmir (Kargil Campus)	March 2016	September 2022	Research & Teaching
DBT-Energy Bioscience Overseas Fellow	University of Kashmir, Hazratbal, Srinagar, J&K INDIA	February 2016	September 2020	Research
Senior Scientist	Food Lab Division, Vardan Envirolab, Haryana, India	November 2015	February 2016	Research
Freestanding Postdoctoral Fellow	University of Pretoria, South Africa	March 2014	November 2015	Research & Teaching
Vice Chancellor's Postdoctoral Fellow	University of Pretoria, South Africa	November 2012	February 2014	Research & Teaching
Postdoctoral Research Associate	Department of Botany, University of Delhi, New Delhi, India	March 2012	November 2012	Research
Assistant Professor (contractual)	University of Kashmir, Srinagar, J&K, India	January 2011	February 2012	Research & Teaching
Junior & Senior Research Fellow	CSIR-Institute of Integrative Medicine, Jammu, India	January 2007	November 2010	Research

**AWARDS/HONOURS/ FELLOWSHIPS**

- Young Scientist Award-2021 (Botany) by Society for Plant Research & Vegetos, INDIA.
- Best Presentation Award at National Conference on Recent Innovations, Trends and Challenges in Plant Science and Research (NCRITCPSR) held in Virudhunagar, Madurai, Tamil Nadu during March 25-26, 2022.
- Elected as Fellow International Society for Development & Sustainability (Japan) in 2021.
- Admitted as Member Royal Society of Biology (London, UK) on July 01, 2021.
- Prestigious Bio-energy Awards for Cutting Edge Research (B-ACER) Fellowship by Department of Biotechnology, Govt. of India and Indo-US Science and Technology Forum (IUSSTF) 2019.

6. INSA Visiting Scientist Fellowship for the year 2017-2018.
7. Early Career Research Award by SERB, DST, GOI, New Delhi (2017).
8. Invited as Visiting Academic at The University of Queensland, Australia 2016.
9. Prestigious DBT-Energy Bioscience Overseas Fellowship (Re-entry fellowship) by Department of Biotechnology, Ministry of Science and Technology, GOI, New Delhi (2016).
10. Prestigious Freestanding Postdoctoral Fellowship, National Research Foundation (NRF), South Africa.
11. Dr. D.S. Kothari Postdoctoral Fellowship, University Grants Commission (UGC), New Delhi.
12. Vice-Chancellors Postdoctoral Fellowship at University of Pretoria, South Africa.
13. Research Associate, Department of Botany, University of Delhi, New Delhi.
14. Best poster presentation Award at 96<sup>th</sup> Indian Science Congress, Shilong, INDIA.
15. Travel Grant Award by IndiaBioscience for attending YIM 2019 as Young PI at Guwahati (6-10 March 2019).
16. International Travel grant award by DST in the category of Young Scientist for attending international conference on 'Sustainable Forest development in view of Climate Change (SFDCC 2016)' at Universiti Putra Malaysia, Malaysia.
17. Travel Grant Award by IndiaBioscience for attending YIM 2015 as Postdoctoral Fellow at Srinagar, J&K, INDIA from 27-31 March, 2015.
18. NRF international travel grant award for attending international conference on 'Bioenergy from Forests-2014' at Helsinki, Finland from 15-19 September, 2014.
19. DST and CSIR international travel grant awards for attending International Conference on Plant Molecular Biology & International Conference on Environment and Bioscience-ICEBS at St. Louis, Missouri, USA & Cairo, Egypt.

### EXTRAMURAL PROJECT GRANTS

S. No.	Title of the Project	Funding Agency (Cost in Lacs)	Role & Award Date	Duration & Status
1.	Studies on betalain biosynthesis in <i>Amaranthus tricolor</i> and characterization of amaranthin synthetase	Department of Biotechnology, Govt. of India ( <b>98.34</b> )	<b>Co-Principal Investigator</b>	3 Years Submitted
2.	Autotetraploid induction in critically endangered high value Himalayan medicinal plant <i>Podophyllum hexandrum</i> as a means of, preventing extinction, mitigate climate change(s), colonize new ecogeographical regions and genetic improvement	Department of Biotechnology, Ministry of Science & technology, Govt. of India ( <b>28.62</b> )	<b>Co-Principal Investigator</b> January 07, 2021	3 Years Ongoing
3.	Cloning and expression of thermophilic/hyperthermophilic lignocellulose digesting enzymes in plants for advanced biofuel production	Department of Biotechnology, Ministry of Science & technology, Govt. of India ( <b>32.5</b> )	<b>Principal Investigator</b> February 2016	5 Years Completed
4.	Isolation and functional analysis of oxidosqualene cyclase genes in <i>Withania somnifera</i> (BSR UGC start-up Grant)	University Grants Commission, Govt. of India, New Delhi ( <b>10.0</b> )	<b>Principal Investigator</b> March 2017	2 Years Completed
5.	Metabolic engineering of Withanolides biosynthesis pathway in Indian ginseng ( <i>Withania somnifera</i> ) for enhanced withanolide accumulation	SERB, DST, Govt. of India ( <b>43.3</b> )	<b>Principal Investigator</b> March 2017	3 Years Completed

### RESEARCH PUBLICATIONS

1. Jabeena khazir, Rakesh Kr Thakur, Sajad Ahmed, Sadhana Babbar, Shabir Ahmad Mir, Nusrat Shafi, Libert Brice Tonfack, Vijay Rani Rajpal, Tariq Maqbool, Bilal Ahmad Mir\* (2024). Repurposing of Plant based antiviral molecules for Covid-19 treatment. *Current Topics in Medicinal Chemistry*. (Accepted for Publication). **IF. 3.4.**
2. Manzoor Hussain, Irfan Sayed, Shashi Kiran, Tariq Maqbool, Jabeena Khazir, Mohd Ibrahim, Satwinderjeet Kaur, Bilal Ahmad Mir\*, Praveen Rahi. (2024). *Artemisia brevifolia* growing in Ladakh region shapes its rhizosphere microbiome at different altitudes. *Applied and Environmental Microbiology*. (Accepted for Publication). **IF. 5.005.**
3. Darius N Tchoutang, Libert Brice Tonfack, Bilal Ahmad Mir, Emmanuel N Foamouhoue, Emmanuel Youmbi (2023). Micropropagation from cotyledonary explants of grapefruit (*Citrus paradisi* Macf.) by indirect and direct organogenesis. *Cameroon J. Exp. Biol.* Vol. 17(02), 15-20.
4. Manzoor Hussain, Jabeena Khazir, Rakesh Kr Thakur, Mohammad Imtiyaj Khan, Praveen Rahi, VS Pragadheesh, Satwinderjeet Kaur, Vijay Rani Rajpal, Deepma Sehgal, Soom Nath Raina, Bilal Ahmad Mir\*. (2023). Traditional uses, phytochemistry, pharmacology, and toxicology of the genus *Artemisia* L. (Asteraceae): A high value medicinal plant. *Current Topics in Medicinal Chemistry*. 23: 2023. DOI: 10.2174/1568026623666230914104141. **IF. 3.4.**
5. Poonam Chowdhary, Mudassir Ahmad Bhat, Abdul Shakoor, Priya Badgal, Amarjit Singh Soodan, Bilal Ahmad Mir\* (2023). Phytoliths analysis in root, culm, leaf and synflorescence of *Rostraria cristata* (Poaceae). *Journal of Plant Research*. 136: 787–801 (DOI: 10.1007/s10265-023-01485-1). **IF. 2.8.**
6. Poonam Chowdhary, Mudassir Ahmad Bhat, Priya Badgal, Abdul Shakoor, Amarjit Singh Soodan, Bilal Ahmad Mir\* (2023). Phytolith profiles of *Lolium perenne* L. from the Kashmir Himalayas. *Brazilian Journal of Botany*. <https://doi.org/10.1007/s40415-023-00915-7>. **IF. 1.6.**
7. Tanzil Gaffar Malik, Lokesh Kumar Sahu, Mansi Gupta, Bilal Ahmad Mir, Triratnesh Gajbhiye, Rashmi Dubey, Andrea Clavijo McCormick, Sudhir Kumar Pandey (2023). Environmental factors affecting monoterpene emission factors from terrestrial vegetation. *Plants*. 12, 3146. DOI: <https://doi.org/10.3390/plants12173146>. **IF. 4.5.**

8. Manzoor Hussain, Sajad Ahmed, Mohd Ibrahim, Jabeena Khazir, Sheikh Showkat Ahmad, Rakesh Kr Thakur, Renu Bhardwaj, Sumit Gandhi, Latif Ahmad Peer, Satwinderjeet Kaur, Bilal Ahmad Mir\* (2023). Phenolic content, antioxidant and allelopathic potential of *Artemisia brevifolia* wall ex dc across the elevations of Western Himalayan region of Ladakh. *South African Journal of Botany*. 157. 508-519. **IF. 3.2.**
9. Sajad Ahmed, Rekha Chauhan, Alim Junaid, Vijay Lakshmi Jamwal, Jitendra Thakur, Bilal Ahmad Mir, SumitG. Gandhi\* (2023). Transcriptome Analysis and Differential Expression in *Arabidopsis thaliana* in response to rohitukine (a chromone alkaloid) treatment. *Functional & Integrative Genomics*. 23. Article No. 35 (DOI: <https://doi.org/10.1007/s10142-023-00961-0>). **IF. 3.674.**
10. Palak Bakshi, Pooja Sharma, Rekha Chouhan, Bilal Ahmad Mir, Sumit G. Gandhi, Renu Bhardwaj, Pravej Alam & Parvaiz Ahmad (2023). Interactive effect of 24-epibrassinolide and plant growth promoting rhizobacteria inoculation restores photosynthetic attributes in *Brassica juncea* L. under chlorpyrifos toxicity. *Environmental Pollution*. 320, 120760. (DOI: <https://doi.org/10.1016/j.envpol.2022.120760>). **IF. 9.988.**
11. Vijay Rani Rajpal, Suman Sharma, Deepmala Sehgal, Prashansa Sharma, Nikita Wadhwa, Priyanka Dhakate, Atika Chandra, Rakesh Kr Thakur, Sohini Deb, Satyawada Rama Rao, Bilal Ahmad Mir, Soom Nath Raina. (2023). Comprehending the dynamism of B chromosomes in their journey towards becoming unselfish. *Frontiers in Cell & Developmental Biology*. 10: 1072716. (DOI: 10.3389/fcell.2022.1072716). **IF. 6.08.**
12. Diptaraj Chaudhari, Shashi Kiran, Ashish Choudhary, Kris Silveira, Nitin Narwade, Dhiraj Dhotre, Jabeena Khazir, Bilal Ahmad Mir, Yogesh S Shouche & Praveen Rahi (2022). Prokaryotic communities adapted to microhabitats on the Indian lotus (*Nelumbo nucifera*) growing in the high-altitude urban Dal Lake. *International Microbiology*. (DOI: <https://doi.org/10.1007/s10123-022-00297-y>). **IF. 3.1.**
13. Nandita Nataraj, Manzoor Hussain, Mohd Ibrahim, Alexander E. Hausmann, Srinivas Rao, Satwinderjeet Kaur, Jabeena Khazir, Bilal Ahmad Mir\*, Shannon B Olsson\* (2022). Effect of altitude on volatile organic and phenolic compounds of *Artemisia brevifolia* wall ex dc. from the Western Himalayas. *Frontiers in Ecology and Evolution*. 10. 864728. (ISSN: 2296-701X). **IF. 4.49**
14. Shabir Ahmad Mir, Mohammed Alaidarous, Bader Alshehri, Bilal Ahmad Mir, Abdul Aziz Bin Dukhyil, Saeed Banawas, Ahmad Firoz, Suliman A. Alsagaby, Yahya Awaji Madkhali, Sadaf Jahan, Faizan Kashoo, Danish Iqbal, Showkat Ahmad Ganaie, Ranjay Kumar Choudhary, Kamal Shaker Albenasi, Asma Naseem. (2022). Identification of Mycobacterial RNA Polymerase Inhibitors from the Main Phytochemicals of *Nigella sativa*: An *in-silico* Study. *International Journal of Pharmacology*. 18(5), 1015-1025. (DOI: 10.3923/ijp.2022.1015.1025). **IF. 0.751**
15. Palak Bakshi, Rekha Chouhan, Pooja Sharma, Bilal Ahmad Mir, Sumit Gandhi, MARCO LANDI, Bingsong Zheng, Anket Sharma, Renu Bhardwaj (2021). Amelioration of Chlorpyrifos-induced toxicity in *Brassica juncea* L. by combination of 24-epibrassinolide and plant-growth-promoting-rhizobacteria. *Biomolecules*. 11, 877. (<https://doi.org/10.3390/biom11060877>). **IF. 6.064**
16. Jabeena Khazir, Tariq Maqbool, Bilal Ahmad Mir\* (2021). A review on Remdesivir: A broad-spectrum antiviral molecule for possible SARS-CoV-2 treatment. *Mini-Reviews in Medicinal Chemistry*. 21. 2544-2555. DOI: 10.2174/1389557521666210217093004. **IF. 3.8**
17. Deepak Singh, Bilal Ahmad Mir\*, Sadhana Babbar, Shashi B Babbar, (2021). Cost-effective *in vitro* multiplication and phenolic profile of an important medicinal orchid, *Satyrium nepalense* D. Don. *Journal of Biologically Active Products from Nature*. 11(2), 162-182. (DOI: 10.1080/22311866.2021.1911681). **IF. 1.2**
18. Latif Ahmad Peer, Mohd Yaqub Bhat, Nusrat Ahmad, Bilal Ahmad Mir\* (2021). Floral induction pathways: decision making and determination in plants to flower-A comprehensive review. *Journal of Applied Biology and Biotechnology*. 9(2), 7-17.
19. Mudassir Ahmad Bhat, Sheikh Abdul Shakoor, Poonam Chowdhary, Priya Badgal, Bilal Ahmad Mir, Amarjit Singh Soodan (2021). Taxonomic description and annotation of *Catapodium rigidum* (L.) C.E Hubbard (Poaceae: pooideae, Poaeae, Parapholiinae) from Kashmir Himalayas, India. *Vegetos*. 34(3), 692-699. DOI: 10.1007/s42535-021-00223-z. ISSN: 0970-4078. **IF. 0.5**
20. Deepak Singh, Shashi B Babbar, Bilal Ahmad Mir\* (2020). Studies on Pellitorine production and antioxidant activity of explant specific Calli of *Anacyclus pyrethrum*. *Journal of Biologically Active Products from Nature*. 10(3), 183-191. **IF. 1.2**
21. Jabeena Khazir, Bilal Ahmad Mir\*, Meeshu Pandita, Lynne Pilcher, Darren Riley, Gousia Chashoo (2020) Design and synthesis of sulphonyl acetamide analogues of quinazoline as anticancer agents. *Medicinal Chemistry Research*. 29(5), 916-925. **IF. 2.35.**
22. Jabeena Khazir, Bilal Ahmad Mir, Gousia Chashoo, Tariq Maqbool, Darren Riley, Lynne Pilcher (2020) Design, synthesis, and anticancer evaluation of acetamide and hydrazine analogues of pyrimidine. *Journal of Heterocyclic Chemistry*. 57(3), 1306-1318. **IF. 2.04**
23. Jabeena Khazir, Bilal Ahmad Mir, Gousia Chashoo, Lynne Pilcher, Darren Riley (2020) Synthesis and Anticancer Activity of *N-9*- and *N-7*-Substituted 1, 2, 3 Triazole Analogues of 2, 6 Di-Substituted Purine. *Medicinal Chemistry Research*. 29(1), 33-45. **IF. 2.35.**
24. Saloni Malik, Bilal Ahmad Mir, Hemant K. Singh, Manju Chaudhary, Soom N. Raina, Shashi B. Babbar. (2018). DNA Barcodes distinguish *Withania somnifera* and *Withania ashwagandha*. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*, 88(4), 1413-1424. **IF. 0.9**
25. Niraj Tripathi, Divya Srivastava, Bilal Ahmad Mir, Sumit Govil, Maryam Vahedi, Prakash S Bisen. (2018). Metabolic and Biotechnological Approaches to determine therapeutic potential of *Withania somnifera* (L) Dunal: A review. *Phytomedicine* 50, 127-136. DOI: 10.1016/j.phymed.2017.08.020. **IF. 7.9**
26. Pierre Popice Kenmogne NUEMSI, Libert Brice TONFACK, Judith Mbogne TABOULA, Bilal Ahmad MIR, Moise Roger Baleba MBANGA, Godswill Ntsomboh NTSEFONG, Carine Nono TEMEGNE, Emmanuel YOUMBI. (2018). Cultivation systems using vegetation cover improves the sustainable production and nutritional quality of New Rice for Africa in the Tropics. *Rice Sciences* 25(5), 286-292. **IF. 4.412**
27. Bilal Ahmad Mir, Eshchar Mizrach, Alexander A Myburg, Don A. Cowan. (2017). *In planta* expression of hyperthermophilic enzymes as a strategy for accelerated lignocellulosic digestion. *Nature Scientific Reports*. 7; 11462. **IF. 4.996**
28. Bilal Ahmad Mir (2017). The role of YIM in shaping my independent scientific career. *India Bioscience (Journey of YI)*. Nov 01, 2017. <https://indiabioscience.org/columns/journey-of-a-yi/the-role-of-yim-in-shaping-my-independent-scientific-career>

29. Shannon B Olsson, Pradeep K Bhardwaj ....., Bilal Ahmad Mir..., R. Uma Shaankar (2017). New Frontiers for Chemical Ecology: Reaffirming a commitment to the Goteborg resolution. *Journal of Chemical Ecology*. 43(1), 2-3. DOI: 10.1007/s10886-016-0813-9. **IF. 2.793**
30. Tabi Mbi Kingsley, Tonfack Libert Brice, Ntsomboh Ntsefong Godswill, Bilal Ahmad Mir, Ngando Ebongue Georges Frank, Ngaha Dieudonne, Njembele Celestine, Kato Samuel Namuene, and Youmbi Emmanuel. (2016). Mature zygotic embryo rescue improves in vitro germination and seedling production in high value oil palm (*Elaeis guineensis* Jacq.) cultivars. *Industrial Crops and Products*, Vol. 94, 445-453. **IF. 6.45**
31. Jabeena Khazir, Bilal Ahmad Mir, Lynne A. Pilcher, Darren L. Riley, Gousia Chashoo, Md. Ataul Islam, Ajit K Saxena, H. M Sampath Kumar. (2016). Design and synthesis of ring C opened analogues of  $\alpha$ -santonin as potential anticancer agents. *Medicinal Chemistry Research*. Vol. 25: 2030-2041. **IF. 2.35**
32. Bilal Ahmad Mir, Shabir A Mir, Jabeena Khazir, Libert B Tonfack, Don A. Cowan, Dhiraj Vyas, Sushma Koul (2015). Cold stress affects antioxidative response and accumulation of medicinally important withanolides in *Withania somnifera*. *Industrial Crops and Products* Vol. 74, 1008-1016. **IF. 6.45**
33. Jabeena Khazir, Darren L. Riley, Gousia Chashoo, Bilal Ahmad Mir, Dave Liles, Ataul Islam, Shashank K. Singh, Ram A Vishwakarma, Lynne A. Pilcher. (2015). Design, synthesis and anticancer activity of Micheal-type thiol adducts of  $\alpha$ -santonin analogue with exocyclic methylene. *European Journal of Medicinal Chemistry*. Vol. 101, 769-779. **IF. 7.1**
34. Bilal Ahmad Mir, Ritesh Mewalal, Eshchar Mizrachi, Alexander A Myburg, Don A. Cowan. (2014). Recombinant hyperthermophilic enzyme expression in plants: a novel approach for lignocellulose digestion. *Trends in Biotechnology* Vol. 32 (5), 281-289. **IF. 21.942**
35. Bilal Ahmad Mir\*, Jabeena Khazir, Khalid R Hakeem, Arun Kumar, Sushma Koul. (2014). Withanolides array of *Withania ashwagandha* sp. novo populations from India. *Industrial crops and Products*. Vol. 59, 9-13. **IF. 6.45**
36. Bilal Ahmad Mir\*, SA Mir, Sushma Koul. (2014). In vitro propagation and withaferin A production in *Withania ashwagandha*: a rare medicinal plant of India. *Physiology and Molecular Biology of Plants* Vol. 20(3), 357-364. **IF. 3.023**
37. Jabeena Khazir, Bilal Ahmad Mir\*, Lynne Pilcher, Darren Riley. (2014). Role of plants in anticancer drug discovery. *Phytochemistry letters* Vol. 7, 173-181. **IF. 1.873**
38. Bilal Ahmad Mir\*, Jabeena Khazir, Khalid R Rehman, Sushma Koul, Don A Cowan. (2014). Enhanced production of withaferin A in shoot cultures of *Withania somnifera* (L) Dunal. *Journal of Plant Biochemistry and Biotechnology* Vol. 23(4), 430-434. (DOI: 10.1007/s13562-014-0264-8). **IF. 1.525**
39. Jabeena Khazir, Darren L. Riley, Lynne A. Pilcher, Pieter De-Maayer, Bilal Ahmad Mir\*. (2014). Anticancer agents from diverse natural sources. *Natural Product Communications*. Vol. 9 (11), 1655-1669. **IF. 1.496**
40. Bilal Ahmad Mir\*, Sushma Koul and A. S. Soodan. (2013). Reproductive biology of *Withania ashwagandha* (Solanaceae) sp. novo. *Industrial Crops and Products* Vol. 45, 442-446. **IF. 6.45**
41. Khalid Hakeem, Bilal Ahmad Mir, Irfan Quereshi, Altaf Ahmad, Mohammad Iqbal. (2013). Physiological studies and proteomic analysis for differentially expressed proteins and their possible role in the root of N-efficient rice (*Oryza sativa* L.). *Molecular Breeding* Vol. 32, 785-798. **IF. 3.297**
42. Jabeena Khazir, Bilal Ahmad Mir\*, Shabir A Mir, Don Cowan. (2013). Natural products as lead compounds in drug discovery. *Journal of Asian Natural Products Research* Vol. 15(7), 764-788. **IF. 1.569**
43. Gowhar A Wani, Bilal Ahmad Mir, Manzoor A Shah. (2013). Evaluation of diversity in pea (*Pisum sativum* L.) genotypes using agro-morphological characters and RAPD analysis. *International Journal of Current Research and Reviews* Vol. 5, 17-25.
44. Tanvir H Dar, Ranuka Agrawal, Bilal A Mir, G.H. Dar. (2013). Polyploidy: a tool that plants use to survive climate change. *Journal of Experimental Biology and Agricultural Sciences*. 1(1), 13-15. **IF. 0.5**
45. Bilal Ahmad Mir\* Jabeena Khazir, Nisar A. Mir, Tanvir-ul Hasan and Sushma Koul. (2012). Botanical, chemical and pharmacological review of *Withania somnifera* (Indian ginseng): an ayurvedic medicinal plant. *Indian Journal of Drugs and Diseases*. Vol. 1(6), 147-160. **IF. 0.43**
46. Bilal Ahmad Mir\*, Sushma Koul, Arun Kumar, Sushant Sharma, M. K. Kaul and A. S. Soodan. (2012). Reproductive behaviour and breeding system of wild and cultivated types of *Withania somnifera* (L.) Dunal. *Journal of Medicinal Plants Research* Vol. 6 (5), 754-762. **IF. 0.5**
47. Arun Kumar, Bilal Ahmad Mir, Deepmala Sehgal, Sushma Koul, T. H. Dar, Maharaj K. Kaul, Soom N. Raina and G. N. Qazi. (2011). Utility of multidisciplinary approach for genome diagnostics of cultivated and wild germplasm resources of medicinal *Withania somnifera*, and status of new species, *W. ashwagandha*, in the cultivated taxon. *Plant Systematics and Evolution*. Vol. 291: 141-151. **IF. 1.644**
48. Bilal Ahmad Mir, Arun Kumar, Sushma Koul, M. K. Kaul, S. N. Raina and A. S. Soodan. (2011). Assessment and Characterization of genetic diversity in *Withania somnifera* (L.) Dunal using RAPD and AFLP markers. *African Journal of Biotechnology*. Vol. 10(66), 14746-14756. **IF. 0.5**
49. Bilal Ahmad Mir, Sushma Koul, Arun Kumar, M. K. Kaul, A. S. Soodan and S. N. Raina. (2010). Intraspecific Variation in the Internal Transcribed Spacer (ITS) Regions of rDNA in *Withania somnifera* (L.) Dunal. *Indian J. Biotechnology* Vol. 9(3), 325-328. **IF. 0.325**
50. M K Koul, Arun Kumar, Ashok Ahuja, Bilal A Mir, K A Suri and G N Qazi. (2009). Production dynamics of withaferin A in *Withania somnifera* (L.) Dunal complex. *Natural Product Research*, Vol. 23 (14), 1304-1311. **IF. 2.488**
51. Bilal Ahmad Mir, G. Ram, J. P. Sharma, A. K. Shahi, M. K. Kaul, A.S. Soodan and Sushma Koul. (2009). Response of *Mentha longifolia* var. *incana* (L.) Hudson [RRL (J) ML4] to bioinoculants under Subtropical conditions of Jammu. *Journal of Medicinal and Aromatic Plant Sciences*, Vol. 31, 215-218. **IF. 0.63**

#### PUBLICATIONS COMMUNICATED

52. Aaqib Mir, Latif Ahmad Peer, Bilal Ahmad Mir\* (2024) Medicinal plants of the Himalayan Tral region of Kashmir, India: An ethnobotanical study of their diversity, use patterns, and health implications. *Vegetos*.
53. Bilal Ahmad Mir\* (2024). Prospects, opportunities and challenges of biofuel research in Western Himalayan states of India. *Industrial Crops and Products*.

54. Ntsomboh Ntsefong Godswill, Ngando Ebongue Georges Frank, Bilal Ahmad Mir, Tonfack Libert Brice (2024). Sustainable Production of Upland Rice by Direct-Seeding with Living Vegetation Cover Relative to Pedoclimatic Variations. *Agroecology and Sustainable Food Systems*. (Under Review).
55. Bilal Ahmad Mir\* & Jabeena Khazir (2024). Development and *in vitro* regeneration of high withanolide accumulating hybrids of *Withania somnifera*. *PCTOC*.
56. Kusum Dhakar, Bilal Ahmad Mir\*, Praveen Rahi, Yogesh Shreepad Shouche and Dhiraj Paul. (2024). Life within Rocks: An Overview of Lithic Microbial Communities.

#### BOOKS IN PIPELINE

1. Bilal Ahmad Mir (2023). Recent advances in lignocellulosic biofuel production using plant biotechnology. *Springer International Publishing* (book proposal accepted for publication).
2. Bilal Ahmad Mir (2023). Withanolides from *Withania somnifera* (Indian ginseng): Chemistry, Biosynthesis and Biological activities. *Springer International Publishing* (book proposal accepted for publication).

#### BOOK CHAPTERS

1. Roohi Sharma, Deepak Kumar, Parkirti, Nahida Rehman Mir, Manu Sharma, Amandeep Singh, Bilal Ahmad Mir, Puja Ohri, Renu Bhardwaj & Nitika Kapoor (2024). Siderophores and their Action against Metalloid Toxicity. *In: Nitika K & Renu Bhardwaj* (eds.). Chapter 17. (Academic Press, Elsevier). *In Press*.
2. Arun Dev Singh, Kanika Khanna, Jaspreet Kour, Shalini Dhiman, Mohd. Ibrahim, Neeraj Sharma, Indu Sharma, Priyanka Sharma, Bilal Ahmad Mir, Renu Bhardwaj. (2023). Signaling Pathways of Gasotransmitters in Heavy Metal Stress Mitigation. *In: Tariq Aftab & Francisco J. Corpas* (eds.). Gasotransmitters Signaling in Plants under Challenging Environment. Plant in Challenging Environments, Vol 5. (Springer Nature, Switzerland). Pages 45-76. ISBN: 9783031430282. DOI: [https://doi.org/10.1007/978-3-031-43029-9\\_3](https://doi.org/10.1007/978-3-031-43029-9_3). (Online 26 November, 2023).
3. Shalini Dhiman, Shalini Dhiman, Jaspreet Kour, Mohd Ibrahim, Tamanna Bhardwaj, Neeraj Sharma, Isha Madaan, Anmol Sidhu, Pooja Ohri, Amrit Pal Singh, Geetika Sirhindi, Bilal Ahmad Mir & Renu Bhardwaj (2023). Regulatory role of nitric oxide in plants and its crosstalk with phytohormones. *In: Mohd Iqbal R Khan, Noushina Iqbal, Peter Poor, Antonio Ferrante, Vijay Pratap Singh, Durgesh K Tripathi & Vasileios Fotopoulos* (eds.). Nitric Oxide in Developing Plant Stress Resilience A volume on Plant Gasotransmitters and Molecules with Hormonal Activity. (Academic Press, Elsevier). Chapter 09, Pages 173-200. ISBN: 9780323912099. DOI: 10.1016/B978-0-323-91209-9.00007-5 (Online 11 August 2023).
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31. Neha Handa, Sukhmeen Kaur Kohli, Ravdeep Kaur, Kanika Khanna, Palak Bakshi, Ashwani Kumar Thukral, Saroj Arora, Pooja Ohri, Bilal Ahmad Mir, Renu Bhardwaj (2017). Emerging Trends in Physiological and Biochemical Responses of Salicylic Acid. In: Nazar R., Iqbal N., Khan K. (eds) Salicylic Acid: A Multifaceted Hormone (Springer Singapore), pp.47-75. ISBN: 9789811060670.
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## CONFERENCES/SYMPOSIA/SEMINARS/WORKSHOPS/INVITED LECTURES

### a) CONFERENCES/WORKSHOPS/WEBINARS ORGANISED:

1. Worked as Interlocutor of IndiaBioscience YI Huddle: A conversation series for Young Investigators in India (Webinar) on Wednesday (13<sup>th</sup> December 2023) in collaboration with Dr. Karishma Kaushik (IndiaBioscience, Bangalore) on the theme "Scientist-Founders: Building Industry Collaborations and Partnerships.
2. Lead Organizer/Organizing Secretary of Regional Young Investigators' Meeting-2023 (RYIM-2023) on the Theme "*Igniting Curiosity & Training Young Minds of J&K for Sustainable Tomorrow*" held from September 19-20, 2023 at University of Kashmir of Kashmir, Srinagar.
3. Lead Organizer/Organizing Secretary of Crafting Your Career Workshop (CYC) held on 21<sup>st</sup> November 2023 during Regional Young Investigators' Meeting-2023 (RYIM-2023) at University of Kashmir, Srinagar.
4. Convener/Coordinator of National Webinar on "Massive Open Online Courses (MOOCs) Development and Delivery" held at Kargil Campus, University of Ladakh on March 12, 2022.
5. Convener/Coordinator of National Webinar held on National Science Day on the theme Integrated Approach in Science & Technology for Sustainable Future held at Kargil Campus, University of Ladakh on February 28, 2022.
6. Coordinator/Organizing Secretary of Science Academies' Three-Day Lecture Workshop on Biodiversity of Kashmir Himalaya from 25-27<sup>th</sup> July, 2017 held at Satellite Campus Kargil, University of Kashmir.
7. Co-Organizing Secretary of National Conference on Recent advances and innovations in Artificial Intelligence, Machine learning and Deep learning held from October 3-5, 2019 at Satellite Campus Kargil, University of Kashmir.
8. Organizing Secretary of Annual Day cum Seminar held on November 4, 2018 at Satellite Campus Kargil, University of Kashmir.

### b) INVITED/LEAD LECTURE/SESSION CHAIRED IN CONFERENCES/ SYMPOSIA/ SEMINARS/WORKSHOPS:

1. Delivered a Keynote lecture on "Understanding Adaptation of *Artemisia brevifolia* at High Altitudes" in International Conference on Role of Science & Technology in Sustainable Development on October 13, 2023 organized by HIM Science Congress Association in Banikhet, Dalhousie, Himachal Pradesh from October 13-14, 2023.
2. Delivered a talk on "*Challenges faced by Young Investigators in Science*" during Regional Young Investigators' Meeting-2023 (RYIM-2023) organized by University of Kashmir, Srinagar in collaboration with IndiaBioscience from September 19-21, 2023.
3. Chaired a session on Young Investigators during Regional Young Investigators' Meeting-2023 (RYIM-2023) organized by University of Kashmir, Srinagar in collaboration with IndiaBioscience from September 19-21, 2023.
4. Delivered an invited talk on "Pharmacologically active withanolides and Biotechnological interventions in *Withania somnifera*-a high value medicinal plant" in National Conference on Academia-Industry Interface for Promoting Entrepreneurship in Medicinal and Aromatic Plants [PEMAP-2023] held from 24<sup>th</sup> to 25<sup>th</sup> August, 2023 organized by Department of Botany, Central University of Jammu, India in collaboration with AYUSH.
5. Delivered an invited lecture on "Metagenomics" on 16<sup>th</sup> February, 2023 in a Hands-on-training & Workshop on Basic Techniques in Clinical Microbiology organized under Skill Development Programme by Infectious Disease Division at CSIR-IIIM, Jammu from 13-17, February 2023.
6. Delivered an invited talk on "Investigating the phytochemical plasticity of *Artemisia brevifolia* Wall ex Dc (wormseed) across elevational gradients of Ladakh region of Western Himalaya" in International Conference on Emerging Trends in Plant & Environment Sciences on February 2-4, 2023. Organized by Department of Botany, University of Rajasthan, Jaipur, India in collaboration with SPR & International Forum for Botanists.
7. Delivered an invited talk on Role of Molecular Markers in Plant Taxonomic Studies in National Webinar on "Changing paradigms in Plant Taxonomy" held on January 6, 2022 at Central University of Jammu (Department of Botany).
8. Delivered an invited talk on Artificial Intelligence and Plant Sciences in National Conference on "Recent Advances in Artificial Intelligence, Machine learning and Deep learning" held from October 3-5, 2019 at Satellite Campus Kargil, University of Kashmir.
9. Delivered an invited talk on *Withania somnifera*: biology, pharmacology and biosynthesis of withanolides in National Symposium on Current Interventions to Plants and Microbes for Environmental & Agricultural Sustainability held at Guru Nanak Dev University Amritsar from March 6-8, 2019.
10. Chaired a session (Plant Secondary Metabolites) and delivered an invited talk on Plant Secondary Metabolites: From Biosynthesis to Biological Activity in National Symposium on Frontiers in Chemical Sciences (FICS)-2017 organized by Govt. Degree College Sopore, J&K, India from 4-5<sup>th</sup> November 2017.
11. Delivered an Invited lecture on "Second generation biofuel from lignocellulosic plant Biomass" in National Seminar on Himalayan Biodiversity: Characterization and Bioprospection for Sustainable Utilization Organized by University of Kashmir, Srinagar from 18-19<sup>th</sup> September 2017.
12. Delivered a Lead Lecture on Conservation and Diversity of Medicinal *Withania somnifera* during Science Academies' Lecture Workshop on Biodiversity of Kashmir Himalaya held at Satellite Campus Kargil, University of Kashmir from 25-27<sup>th</sup> July, 2017.

13. Delivered an Invited Lecture on Indian ginseng (*Withania somnifera*): A high value medicinal plant at Molecular Biology Training program held on May 29, 2017 at the Plant Molecular Biology Department of the Agricultural Institute in Martonvásár, Hungary.

**c) PRESENTED A PAPER IN CONFERENCES/SYMPOSIA/SEMINARS**

1. Oral Presented a paper titled "Understanding the dynamics of VOCs, Phenolic Compounds and Rhizomicrobiome in *Artemisia brevifolia*" across altitudinal gradients of Ladakh at 3-Day National Conference on *Changing Course in Global Environment: Challenges and Solutions* held from 5-7 June, 2023 organized by Department Environmental Sciences, University of Kashmir in collaboration with Zoological Society of India.
2. Presented a paper titled 'Effect of altitude on Volatile Organic and Phenolic compounds and the expression of artemisinin biosynthesis genes of *Artemisia brevifolia* Wall ex Dc (wormseed)' at *Young Scientists Conference (YSC) during India International Science Festival-2022 (IISF-2022)* held from 21-24 January 2023 at MANIT, Bhopal, Madhya Pradesh, India Organized by Ministry of Science & Technology, Govt. of India in collaboration with DBT, MoEF and CSIR.
3. Manzoor Hussain, Satwinder Kaur & Bilal Ahmad Mir. Presented a poster on 'Morphological, Physiological and Biochemical Adaptation of *Artemisia brevifolia* with altitude' in International Conference on Emerging Trends in Plant & Environment Sciences on February 2-4, 2023 Organized by Department of Botany, University of Rajasthan, Jaipur, India in collaboration with SPR & International Forum for Botanists.
4. Manzoor Hussain, Satwinder Kaur & Bilal Ahmad Mir. Presented oral presentation on 'Ethnomedicinal importance and phytochemical analysis of *Artemisia brevifolia* Wall.ex.DC from various altitudes in the Ladakh region of the Western Himalaya' at National Conference on Phytomedicine (NCPM 2023) Organized by Department of Botany, Bharathiar University, Coimbatore, India on 5-6<sup>th</sup> January 2023. (Awarded with BEST PRESENTATION AWARD).
5. Mohd Ibrahim, Renu Bharadwaj & Bilal Ahmad Mir. Presented oral presentation on 'Morphochemical variations in medicinally important *Aconitum heterophyllum* growing in Himalayan region' at National Conference on Phytomedicine (NCPM 2023) Organized by Department of Botany, Bharathiar University, Coimbatore, India on 5-6<sup>th</sup> January 2023.
6. Presented a paper titled "Effect of Elevation on Defence Compounds and Adaptation in *Artemisia brevifolia*: Evidence from studies of Cold Desert Ladakh region of Western Himalaya" at National Conference on Recent Innovations, Trends and Challenges in Plant Science and Research (NCRITCPSR) on 25<sup>th</sup> March 2022 held in Virudhunagar, Madurai, Tamil Nadu during March 25-26, 2022. (Got Best Presentation Award).
7. Poonam Chowdhary, Priya Badgal, Mudassir Ahmad Bhat, Amarjit Singh Soodan, Bilal Ahmad Mir. Physico-chemical characterization of phytolith structures of the grass species *Lolium perenne* L. (Poaceae)" at National Conference on Recent Innovations, Trends and Challenges in Plant Science and Research (NCRITCPSR) held in Virudhunagar, Madurai, Tamil Nadu during March 25-26, 2022.
8. Presented a paper titled Dynamics of bioactive withanolides in selected genotypes of Ashwagandha at *Young Scientists Conference (YSC) during India International Science Festival-2020 (IISF-2020)* held from 22-24 December 2020 Organized by Ministry of Science & Technology/Health and Family Welfare, Govt. of India in collaboration with VIBHA and CSIR.
9. Presented a paper titled Studies on *Withania somnifera*: a wonder Medicinal Plant in One Day Online National Conference on Biodiversity Conservation and Sustainable Future (BCSF-2020) held on 6<sup>th</sup> June 2020 & organized by Govt. SAM College Budgam and Degree College Pulwama, J&K, India.
10. Presented a paper titled Engineering plants for advanced biofuels at Young Investigators Meeting-2019 held at Guwahati, Assam, INDIA from March 03-06, 2019 as Young Investigator. (Young Investigators Abstracts Book Page. No. 86 abstract No. Y06).
11. Palak Bakshi, Pooja Sharma, Mohd Ibrahim, Arun Dev Singh, Bilal Ahmad Mir, Renu Bhardwaj. Detoxification of organophosphorous pesticide in *B. juncea* L. using microbial consortia and plant growth regulator. National Symposium on Current Interventions to Plants and Microbes for Environmental & Agricultural Sustainability. (March 6-8, 2019).
12. Palak Bakshi, Pooja Sharma, Pardeep Kumar, Bilal Ahmad Mir, Abhishek Walia, Renu Bhardwaj. PGPRs and BRs Assisted Detoxification of Chloropyrifos in *Brassica juncea* L. in National Conference on Plant Sciences: Network in Health and Environment. (October 30-31, 2018).
13. Parminder Kaur, Palak Bakshi, Bilal Ahmad Mir, Renu Bhardwaj. Role of Earthworms in Assisted Phytoremediation of Heavy Metals. National Conference on Plant Sciences: Network in Health and Environment. (October 30-31, 2018)
14. Presented a paper titled "In planta expression of novel recombinant/engineered hyperthermophilic lignocellulose digesting enzymes for improved cellulosic biofuel production" at Young Scientist's Conference in the theme Frontier Areas in Sciences during India International Science Festival (IISF-2018) held at Lucknow from 5-8<sup>th</sup> October 2018.
15. Presented a paper titled Synthesis and Biological Evaluation of Micheal-Type Thiol Adducts of  $\alpha$ -Santonin as Potential Anticancer Agents at Young Scientist's Conference in the theme Make in India (2<sup>nd</sup> Best Presentation award) during India International Science Festival (IISF-2018) held at Lucknow from 5-8<sup>th</sup> October 2018.
16. Harpreet Kaur, Palak Bakshi, Bilal Ahmad Mir, Renu Bhardwaj and A.K. Thukral. Brassinosteroids regulated amelioration of heavy metal stress in *B. juncea* L. in National Conference on Recent Trends in Plant Sciences from April 19-20, 2018 Ludhiana, Amritsar, India.
17. Palak Bakshi, Ravinder Singh, Kanika Khanna, Pooja Sharma, Bilal Ahmad Mir, Renu Bhardwaj. Crosstalk of phytohormones ameliorates metal toxicity in *Brassica juncea* L. at National Seminar on Emerging Trends in Plant and Environmental Sciences (March 29-30, 2018)
18. Presented a paper titled New Horizons of Biological Sciences at National Seminar on "National Development through Science and Technology Organized by University of Kashmir, Srinagar from 25-26<sup>th</sup> September 2017.
19. Presented (oral) a paper in Two Day National Inter-disciplinary conference, SSD-2016 on the theme Science for sustainable development organized from 24-26 February 2017 at Sri Pratap College, Srinagar, J&K.
20. Presented a paper titled Plants as green bioreactors for environment friendly energy source at National Seminar on Environmental Pollution: join the Race to make the world a better place held at University of Kashmir from 4-5<sup>th</sup> June, 2016.
21. Jasmine Martens Eloy Ferreras, Bilal Ahmad Mir, Don Cowan. In planta expression of Antarctic bacterial stress-response protein. 2nd Annual DuPont Plant Breeding Symposium, 29<sup>th</sup> September 2015, University of Pretoria, South Africa.



22. Presented (Oral) a paper titled Lignocellulosic biofuels: challenges and prospects at National Science conference on Recent Research trends in Chemical and Environmental Sciences held at SP College, Srinagar from 18-19<sup>th</sup> August 2015.
23. Presented a paper titled Heterologous expression of engineered hyperthermophilic lignocellulose digesting enzymes: a novel approach for sustainable cellulosic biofuels at Young Investigators Meeting-2015, Srinagar, J&K, INDIA from 27-31 March, 2015 (poster 6, page 43).
24. Presented a Paper titled *In-planta* expression of recombinant hyperthermophilic  $\beta$ -1,4-endoglucanase and xylanase genes at *international conference on Bioenergy 2014, Helsinki, Finland, 15-18<sup>th</sup> September, 2014 (Proceedings, Page 181)*.
25. Presented a paper titled Functional expression of recombinant endoglucanase and endoxylanase in *Arabidopsis thaliana*. *Genomics Research Institute Seminar Day, University of Pretoria, Pretoria, South Africa, 31<sup>st</sup> October, 2014*
26. Presented a paper titled Heterologous expression of recombinant thermophilic enzymes. *International conference on Functional Metagenomic-2013, Zebra Lodge, Pretoria, South Africa, 2-5 June, 2013*.
27. Abdul Haleem, Bilal Ahmad Mir, Sushma Koul. Phytochemical variability of Ashwagandha germplasm from India. *National Conference on Medicinal Plants, Islamia College, University of Kashmir, Srinagar, India, 14-15 March, 2012*.
28. Bilal Ahmad Mir, A.S. Soodan, S. Koul. *International Conference on Environment and BioScience 2011-ICEBS held at Cairo, Egypt from 21-23 October, 2011*.
29. Bilal Ahmad Mir, Sushma Koul, Arun Kumar, MK Koul. Hybridization between two elite accessions of *withania somnifera* (solanaceae). *IX International Symposium on Plant Biotechnology, Santa Clara, Villa Clara, Cuba, 20-22 April, 2010*.
30. Bilal Ahmad Mir, Sushma Koul, Arun Kumar, MK Koul, SN Raina. New species status to *Withania ashwagandha* (Solanaceae) – Biosystematics considerations. *9<sup>th</sup> International Conference on Plant Molecular Biology held at St. Louis, Missouri, USA, 25-30 October, 2009*.
31. Presented a paper titled Distinctive features of wild and cultivated accessions of *Withania somnifera*. *96<sup>th</sup> Indian Science Congress, NEHU Shillong, Meghalaya, organized by DST, India, 3-7 January, 2009. (Best poster presentation award)*
32. Presented an invited lecture on Inter-chemotypic hybridization for elite genotype designing in *Withania somnifera* (L) Dunal. *Biodiversity: present trends and future challenges, Department of Botany, University of Kashmir, India, 2009*.
33. Presented a paper titled Withanolide production in two elite accessions by *in vitro* cultures of *Withania somnifera* (L) Dunal. *National Seminar on Environment and Sustainable Development, Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar Punjab, India, 3-4 November, 2009*.
34. Presented a paper titled Assessment of genetic diversity in *Withania somnifera* (L.) Dunal using AFLP and RAPD markers. *Asian Symposium on Medicinal Plants, Spices and other natural products (ASOMPS XIII – 2008) Indian Institute of Chemical Technology (IICT), Hyderabad, INDIA 3-6<sup>th</sup> November, 2008*.
35. Presented a paper titled Response of *Mentha longifolia* var. *incana* (L.) Hudson [RRL (J) ML4] to bioinoculants. *3<sup>rd</sup> J & K Science Congress, University of Jammu, Jammu, India, 26-28 February, 2008*.
36. Presented a paper titled Effect of VAM of Forest tree Seedlings. *3<sup>rd</sup> J & K Science Congress, University of Jammu, Jammu, India, 26-28 February, 2008*.

#### d) WORKSHOPS/WEBINARS/SYMPOSIA/SEMINARS ATTENDED

1. Attended One Day Workshop on 'Gender Parity for Ensuring Quality Work Culture in HEI's' on 27<sup>th</sup> December-2023 organized by DIQA, University of Kashmir.
2. Attended One Day Workshop on "Authorship and Manuscript Writing: Techniques and Practices for Quality Publications" organized by DIQA, University of Kashmir on 22<sup>nd</sup> December-2023 at Gandhi Bhawan, University of Kashmir.
3. Attended one day workshop on "Intellectual Property Rights (IPR)-Patent filling" organized by DIQA, in collaboration with IPR Cell, University of Kashmir, Srinagar on November 23, 2023.
4. Attended workshop on "Understanding quality benchmarks for Academic and Research" organized by DIQA, University of Kashmir, Srinagar on November 8, 2023.
1. Attended one-week FDP on 'Genome Engineering & Technology/Application of CRISPR-Cas Gene Editing Tool' at Maulana Abul Kalam Azad University of Technology, West Bengal and AICTE from 7<sup>th</sup> February 2022 to 11<sup>th</sup> February 2022.
2. Attended UGC Sponsored "Webinar on MOOCs Development and Delivery" held by HRDC, University of Kashmir on October 30, 2021.
3. Attended Webinar on "How to Read Scientific Literature" held by Department of Bioresources, University of Kashmir in collaboration with NCCS and ISER, Pune and MANAV Human Atlas Initiative on September 20, 2021.
4. Attended *National Conference on Climate Change as well International Quiz competition* held by Department of Botany, Central University of Punjab, Bathinda, India on June 05, 2021.
5. Participated two-day National conference on "Diagnosis, Management and Vaccination for COVID 10" organized by IQAC of AMET in collaboration with Department of Marine Biotechnology, AMET Deemed to be University and Young Academy of India held from May 11-13, 2021.
6. Attended One-week Short Term Programme on 'Intellectual Property Rights' at UGC-Human Resource Development Centre of Guahati University, Guwahati from 1<sup>st</sup> February 2021 to 7<sup>th</sup> February 2021.
7. Attended a session on Online Supervision of Scientific Research during the Pandemic Organized by Discussion Forum for Online Teaching (DFOT) on 8<sup>th</sup> November 2020.
8. Participated in Science Academies Science Leadership Workshop organized by Central University of Punjab, Bathinda, India from June 22-28, 2021.
9. Participated in COVID-19 Awareness quiz conducted by Amity Institute of Biotechnology, Amity University Mumbai on 31<sup>st</sup> May 2020 and successfully qualified the quiz with a score of 80% (Online quiz).
10. Participated in Severe Acute Respiratory Infection (SARI) Treatment Facility Design conducted by World Health Organization under Health Emergencies Program on 26<sup>th</sup> April 2020.
11. Attended Regional-Young Investigators Meeting-2019 held at NIPGR, New Delhi, INDIA from 6-7 August 2019 as Young Investigator.
12. Invited to attend Mission Innovation's International Conference on Sustainable Biofuels -2018" ICSB2018 organized by Department of Biotechnology, Ministry of Science & Technology, Government of India and ICGB, New Delhi from 26-27<sup>th</sup> February, 2018.

13. Attended National Training Workshop on Plant Taxonomy: Principles and Practices from 27<sup>th</sup> to 29<sup>th</sup> March 2017 organized by Centre for Biodiversity and Taxonomy, Department of Botany, University of Kashmir.
14. Invited to attend the First Indian Chemical Ecology Workshop held at National Centre for Biological Sciences (NCBS-TIFR), Bangalore from 10-13<sup>th</sup> September, 2016. The outcome of the vision statement was published as a guest editorial in *Journal of Chemical Ecology*.
15. Attended joint South African Bioinformatics Society (SABIS) & South African Genetics Society (SAGS) conference, Kwalata Reserve, Pretoria, South Africa, 23-26 September, 2014.
16. Attended a work shop on Microsatellites at University of Pretoria, Pretoria, South Africa from 9-10<sup>th</sup> April, 2013.
17. Attended lecture series of Nobel Laureate "Dr. David Baltimore" (New Avenues to health) held at New Delhi on January 14, 2008.
18. Attended National meet for Biodiversity Studies-Road Map held at Center for Biodiversity Studies, Baba Ghulam Shah Badshah University, Rajouri, INDIA on 18<sup>th</sup> October, 2008.
19. Attended two days Training Workshop on *Existing Tools and Related Mapping Softwares in Geological, Seismological, and remote sensing and GIS applications*, Department of Geology, University of Delhi, 6-7 December, 2007.
20. Attended one-day seminar on *Recent Advances in Environmental Sciences*, Malegaon, Maharashtra, India on 28<sup>th</sup> January, 2006.

#### TRAINING/ORIENTATION/REFRESHER/FDP COURSES ATTENDED

- Attended one week online Short Term Course on "NEP- Orientation and Sensitization Programme" organized by Malviya Mission Teacher Training Centre (UGC-Human Resource Development Centre) of University of Kashmir, Hazratbal, Srinagar from 01 January to 15 January 2024.
- Attended "Induction-cum-training programme" organized by DIQA, University of Kashmir on August 28, 2023.
- Attended two-week Refresher Course in Information Technology (Interdisciplinary) at Human Resource Development Centre of University of Kashmir from July 18, 2023 to July 31, 2023.
- Attended One-week Faculty Development Programme on Emerging Trends and Challenges in Higher Education organized by University of Ladakh, Ladakh from October 15-21, 2021.
- Attended One-week Faculty Development Programme on Protein-Receptor Binding Chemistry jointly organized by VSCIMB, NSU (Baroda) and NIT (Warangal) from May 17-22, 2021.
- Attended two-week Refresher Course in Sciences at Human Resource Development Centre of University of Kashmir from January 02, 2021 to January 15, 2021.
- Attended One-week online Workshop on Applications of Bioinformatics held from 10-17 December 2020 Organized by Department of Biotechnology, Delhi Technical University, New Delhi.
- Attended One-week Workshop on Research Methodology at Human Resource Development Centre of Jamia Millia Islamia, New Delhi from 17<sup>th</sup> December 2020 to 23<sup>rd</sup> December 2020.
- Attended two-week Refresher Course on Human Rights (Interdisciplinary) at Human Resource Development Centre of University of Kashmir from 29<sup>th</sup> January 2020 to 12<sup>th</sup> February 2020.
- Attended a 71<sup>st</sup> General Orientation program (Four week) at Human Resource Development Centre of University of Kashmir from 30 April to 28<sup>th</sup> May 2016.
- Attended ONE WEEK molecular biological training at the Plant Molecular Biology Department of the Agricultural Institute from 23 to 29 May, 2017 in Martonvásár, Hungary.
- Three-Week training course at NCBS-TIFR, Bangalore on GC-MS and Volatile estimations for Chemical Ecology from 8<sup>th</sup> Feb. 2017 to 28<sup>th</sup> Feb 2017.
- Six-week training at ICGEB, New Delhi with Dr. Shams Yazdani on biofuels related enzymes: their cloning and characterization from bacteria and fungi from 24<sup>th</sup> August 2016 to 3<sup>rd</sup> October 2016.

#### e) MEMBERSHIP OF PROFESSIONAL SOCIETIES

1. Life Fellow of International Society for Development & Sustainability (Japan) by resolution of the council (Membership ID: M23110221) on December 19, 2021.
2. Life Member of Royal Society of Biology (London, UK) by resolution of the council (Membership No. P0142527) on July 01, 2021.
3. Life Member of Society for Plant Research, India (Membership No. SPR-LM-256) from March 03, 2022.
4. Life Member of Indian Science Congress Association (ISCA), India (Membership No. ID: L41715) from March 20, 2022.

#### ADMINISTRATIVE/ CORPORATE ASSIGNMENTS

- ✓ Coordinator, Department of Botany, North Campus, University of Kashmir (From December 2023).
- ✓ Member, Departmental Research Committee, North Campus, University of Kashmir.
- ✓ Nodal Officer for Vikshit Bharat@2047, North Campus, University of Kashmir.
- ✓ Coordinator, DIQA, University of Kashmir, Srinagar (From August 2023).
- ✓ Member, Board of Studies (BOS), Department of Botany, University of Kashmir for Course & Curriculum Development of 5-Year Integrated (B.Sc-M.Sc) Programme in Botany at North Campus (From November, 2023)
- ✓ Member, Committee for drafting statutes for Integrated Programmes offered at University of Kashmir.
- ✓ Member, Campus Development Committee, North Campus, University of Kashmir.
- ✓ Member, Transport Committee, North Campus, University of Kashmir.
- ✓ Member, Canteen Committee, North Campus, University of Kashmir.
- ✓ Academic Coordinator, Department of Botany, Satellite Campus Kargil, University of Kashmir, Jammu & Kashmir, India. (November 2017 to December 2020).
- ✓ Examination Coordinator, Department of Botany, School of Life Sciences, Satellite Campus Kargil, University of Kashmir (2017 to 2020).

- ✓ Nodal Officer for All India Survey for Higher Education (AISHE) for Satellite Campus Kargil, University of Kashmir (2016 to December, 2020).
- ✓ Nodal Officer for Swachh Bharat Summer Internship Program of MHRD, Govt. of India for Satellite Campus Kargil, University of Kashmir (till December, 2020).
- ✓ In-charge Library, Satellite Campus Kargil, University of Kashmir (2017 to July 2020).
- ✓ Academic Councilor, Department of Botany, Satellite Campus Kargil, University of Kashmir, Jammu & Kashmir, India. (2017 to 2020).
- ✓ Chairman/member of various committees of the Kargil Campus, University of Kashmir viz., Board of Studies, Purchase Committee, Verification Committee, Campus Development Committee, Academic Councilors Committee etc. (2017 to 2020).
- ✓ Convener/member of various committees of the Kargil Campus University of Ladakh viz., Campus Landscaping Advisory Committee, IQAC, Research Committee etc. (2021 to 2022).

### RESEARCH INTERESTS & SPECIALIZATION

- ✓ Plant Molecular Biology & Biotechnology.
- ✓ Metabolic Engineering & Plant tissue culture
- ✓ Secondary plant metabolites & Metabolomics.
- ✓ Biofuels Biotechnology & Feedstock improvement
- ✓ Genetic profiling/genetic diversity & molecular markers.
- ✓ Chemical Ecology and Microbial study (recently expanded area).

### TEACHING ASSIGNMENTS AT UG/PG LEVEL

1. Cell & Molecular Biology of Plants
2. Plant Physiology, Biochemistry & Metabolism
3. Cytology, Genetics and Cytogenetics
4. Plant biotechnology, Genetic Engineering & Plant Culture
5. Biology and Diversity of Microorganisms
6. Plant Development & Reproduction

### RESEARCH STUDENTS (Ph. D) UNDER SUPERVISION/GUIDANCE

S. No.	Student Name	Title of thesis	Reg. Number	Ph. D Reg. Date	Status
1.	Palak Bakshi (Co-Supervisor)	Effects of 24-epibrassinolide & Plant growth promoting rhizobacteria on detoxification of Chlorpyrifos in <i>Brassica juncea</i> L.	2013.BOT/A.11	17.08.2016	<b>Degree Awarded</b> in November 2022 from GNDU, Amritsar
2.	Manzoor Hussain (Co-Supervisor)	Effect of altitude gradient on VOCs, phenolic compounds and rhizosphere microbiome of <i>Artemisia brevifolia</i> Wall. Ex DC. Growing in Ladakh region in the Western Himalayas	2018.Ph.D.(BOT).206	04.09.2018	<b>Degree Awarded</b> in January 2024 from GNDU, Amritsar
3.	Poonam Chowdhary (Co-Supervisor)	Physico-chemical Characterization of Phytoliths of Grasses from sub-families Pooideae, Aristoideae and Dantghonioideae in relation to taxonomy and Ecology	2013.BOT/A.05	14.09.2017	Thesis Submitted at GNDU, Amritsar
4.	Maqsooma Bano (Co-Supervisor)	Understanding antioxidative potential and expression of pathway genes in <i>Artemisia brevifolia</i> Wall. Ex DC./ Cold desert medicinal plants	---	2023	Registered at University of Kashmir

### MASTERS STUDENTS (M. SC. DISSERTATIONS) GUIDED

S. No.	Student Name	Dissertation Title	Reg. Number	Status
1.	Cho Cho Ruqaya	<i>Artemisia</i> : An Insight into its pharmacological activities, medicinal profile and Phytochemistry.	UOL-2020/UCK-0015	Dissertation Submitted to Department of Botany as partial fulfillment of degree of Masters in Botany from University of Ladakh
2.	Abida Banoo	<i>Aconitum heterophyllum</i> : An Insight into its pharmacological activities, medicinal profile and phytochemistry.	UOL-2020/UCK-0010	-do-
3.	Sonam Angmo	Traditional medicinal plants of cold desert Ladakh used in <i>Sowa-rigpa</i> for the treatment of diseases	UOL-2020/UCK-0007	-do-

4.	Aliya Khatoon	Medicinal flora of Suru Valley, Kargil (Ladakh)	UOL-2020/UCK-0009	-do-
5.	Sudiqa Banoo	Biochemical profile and biological activities of Seabuckthorn ( <i>Hippophae rhamnoides</i> L.)	UOL-2020/UCK-0022	-do-
6.	Hasina Banoo	Conservation, Propagation, Chemical composition and medicinal importance of <i>Podophyllum hexandrum</i> Royale	UOL-2020/UCK-0008	-do-

### EDITORIAL BOARD MEMBER

1. Assistant Editor, Vegetos (An International Journal of Plant Research and Biotechnology) Published by Springer Nature from January 2023.
2. Review Editor in Plant Biotechnology (Specialty section of Frontiers in Bioengineering and Biotechnology and Frontiers in Plant Sciences) w.e.f. July 01, 2022
3. Associate Board Member of Nanoscience & Nanotechnology-Asia (Bentham Science)
4. Associate Editorial Board Member of Mini-Reviews in Medicinal Chemistry (Bentham Science)
5. Editorial Board Member of Journal of Biologically Active Products from Nature (Taylor and Francis).
6. Editor in Chief, Journal of Applied Biology and Biotechnology from March 2018 to December 2020.
7. Editorial Board Member of Journal of Modern Medicinal Chemistry (Synergy Publishers from Feb. 2022).
8. Editorial Board Member of Advances in Biomedicine and Pharmacy.
9. Editorial Board Member of International Journal of Biodiversity & Conservation.
10. Editorial Board Member of Austin Journal of Biology, Austin press, USA.
11. Editorial Board Member of Journal of Integrative Medicine.
12. Editorial Board Member of Journal of Herbal Medicine, Beijing, China
13. Reviewer of research publications of international journals.

### PROJECTS IN WHICH I HAVE WORKED DURING PHD & Post-PHD

- ✓ Identification, characterization, engineering and heterologous expression of hyperthermophilic cell wall degrading enzymes and novel Antarctic bacterial stress-response WHY protein.
- ✓ Development of high output suspension cultures of selected medicinal plants as a perennial source of bio-molecules and herbals.
- ✓ Exploratory studies on climate change and adaptation of species complex

### PERSONAL PROFILE

<b>Name</b>	<b>Dr. Bilal Ahmad Mir</b>
Date of Birth	1st March, 1982
Nationality/Gender	INDIAN/Male
Present Physical Address	Department of Botany, University of Kashmir, North Campus, Delina, Baramulla, Jammu & Kashmir, PIN-193103, INDIA
Permanent Address	Singo Narbal, Newa Pulwama, J&K, India 192301
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Marital status	Married
Cell Number	+917051623467
Passport No.	T2395028 (old PP No. H6376205)

### ACADEMIC REFERENCES

1. **Prof. Don A. Cowan (Postdoc Mentor)**  
Director, Genomics Research Institute (GRI)  
Director, Centre for Microbial Ecology and Genomics  
University of Pretoria, Pretoria 0028, South Africa  
E-mail: [don.cowan@up.ac.za](mailto:don.cowan@up.ac.za)
2. **Dr. Sushma Koul (PhD Supervisor)**  
Ex-Scientist G & Head  
Biodiversity and Applied Botany Division,  
CSIR-Indian Institute of Integrative Medicine (CSIR-IIIM) INDIA-180001  
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4. **Prof. Amarjit Singh Soodan**  
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5. **Prof. Shashi B. Babbar**  
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