Dr. Arif Shafi Wani, Department of Botany, HKM Govt. Degree College, Bandipora, J&K, India

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Plant Physiology Stress Physiology Phytohormones

Photosynthesis Antioxidant system

ARTICLES CITED BY PUBLIC ACCESS CO-AUTHORS

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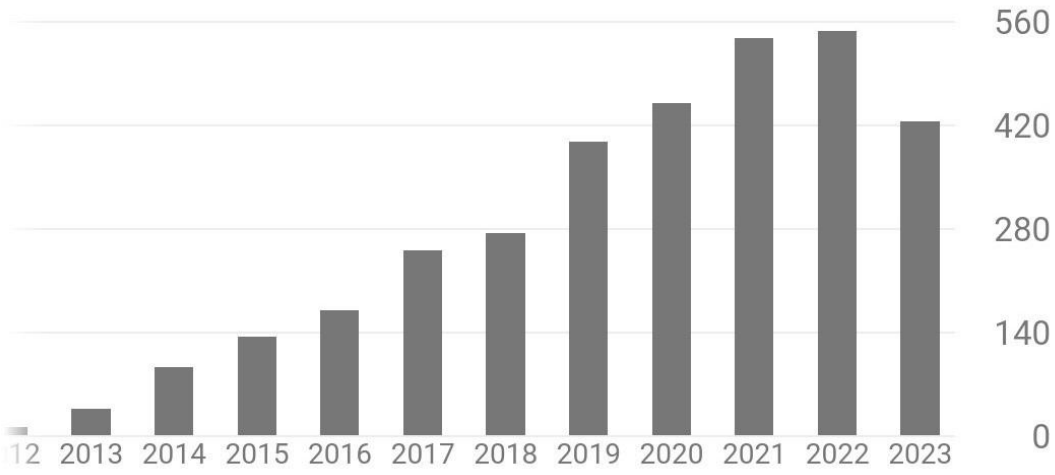

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DR. ARIF SHAFI WANI

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Objectives: *To be part of an institute where I can find challenging and competitive environment to contribute towards the growth and development of the institution through hard and smart work, perseverance and interpersonal skills utilizing my strong-analytical skills and extensive technical and theoretical knowledge as well as to enrich myself with knowledge and experience.*

Academic Qualifications

Examination	Board/University	Year	Division
B.Ed.	University of Kashmir	2022	1st
Diploma in Information Technology	Rashtriya Institute of Technical Education	2017	1st
Ph.D.* (Botany)	Aligarh Muslim University	2013	Awarded
M.Sc. Botany (*Advanced Plant Physiology*)**	Aligarh Muslim University	2009	Ist
B.Sc. (Hons.) Botany	Aligarh Muslim University	2007	Ist
Intermediate	JK Board	2003	Ist
High School	JK Board	2001	Ist

*** Title of Ph.D. thesis:** "Establishment of Dose Dependent Responses of Brassinosteroids and Proline against Salinity Stress in *Brassica juncea*" under the supervision of **Prof. Aqil Ahmad,** Dept. of Botany, Aligarh Muslim University, Aligarh, India. ***http://hdl.handle.net/10603/40590***

**** *Dissertation submitted on "***Effect of Salt Stress on Photosynthetic Pigments and Nitrate Reductase Activity in Six Mustard Cultivars" under the supervision of **Prof. Nafees A. Khan**, Dept. of Botany, Aligarh Muslim University, Aligarh, India.

Areas of expertise

- Plant Physiology and Biochemistry
- Stress Physiology
- Role of plant growth regulators in the regulation of growth and development of plants under environmental challenged conditions.

Teaching experience

- Working as Contractual Lecturer in Botany at HKM GDC Bandipora from March 27, 2023 to till date.
- Worked as Contractual Lecturer in Botany at HKM GDC Bandipora from May 02, 2022 to August 05, 2022.

Post-doctoral Research experience

- 3 years

Independent Research Projects

- Completed research project as **SERB-Young Scientist (Post-doctorate Fellow)** funded by DST-SERB, New Delhi in the Department of Botany, University of Kashmir, Srinagar-190006, J&K India.

Awards and Honors

- **Young Scientist** on the topic entitled, "Proteomic investigation of brassinosteroid mediated responses of nitrogen metabolism and antioxidant system in *Cicer arietinum* L. under salt and/or cadmium stress" funded by **Science & Engineering Research Board (SERB) (A Statutory body under Department of Science & Technology, Government of India).**
- University Grant Commission (UGC) Non-NET scholarship for Ph.D. scholars, from 13th February 2010 to 7th December 2013, **funded by UGC, New Delhi INDIA.**
- Post-graduate Merit Scholarship in M.Sc. **(Dr. Mohd Farooq Memorial Scholarship, awarded by Aligarh Muslim University, Aligarh, India)**
- Plant Physiology section: **Ranked Ist in M.Sc. specialization.**

Research/Experimental Skills

- Infra-Red Gas Analyzer (IRGA)
- Fluorometer
- Psypro Water Potential System
- Flame Photometer
- SPAD Chlorophyll Meter
- Gas Chromatography (GC)
- UV/VIS spectrophotometer
- Various enzyme assays
- Atomic Absorption Spectrophotometer (AAS)
- Ultra centrifuge
- Protein extraction, estimation, SDS-PAGE (2D-Gel Electrophoresis)
- PD-Quest (Protein spots analysis of 2D gel)
- Statistical analysis through software (SPSS, R software)
- Detailed observation, analysis of data that lead to interpretation of the results

Computer Skills

- Has done diploma in information technology
- Proficient in MS-OFFICE
- Sound knowledge of SPSS, Sigma Plot and R software
- Competent knowledge of Internet

Extracurricular activities

- NSS volunteer
- Participated in the National Polio eradication programme
- Participated in university fest (VM)

- Actively participated in various events in the university

Publications

✓ Research articles

1. **Wani, A.S.** and Tahir, I (2019). Screening of different chickpea varieties for their sensitiveness and tolerance to cadmium and/or salt stress. **Journal of Advancements in Plant Science 2(1):104. [IF=3.100]**
2. **Wani, A.S.,** Ahmad, A., Hayat, S. and Tahir, I (2019). Epibrassinolide and proline alleviate the photosynthetic and yield inhibition under salt stress by acting on antioxidant system in mustard. **Plant Physiology and Biochemistry 135: 385–394. [IF=5.437]**
3. Ahmad, S.S., Tahir, I., **Wani, A.S.,** Dar, R.A. and Nisar, S (2018). Adenine type and diphenyl urea derived cytokinins improve the postharvest performance of Iris germanica L. cut scapes. **Physiology and Molecular Biology of Plants 24(6):1127-1137. [IF=2.391]**
4. **Wani, A.S.,** Tahir, I., Ahmad, S.S., Dar, R.A. and Nisar, S (2017). Efficacy of 24-epibrassinolide in improving the nitrogen metabolism and antioxidant system in chickpea cultivars under cadmium and/or NaCl stress. **Scientia Horticulturae 225: 48-55. [IF=3.463]**
5. **Wani, A.S.,** Hayat, S., Ahmad, A. and Tahir, I (2017). Efficacy of brassinosteroid analogues in the mitigation of toxic effects of salt stress in *Brassica juncea* plants. **Journal of Environmental Biology 38: 27-36. [IF= 0.781]**
6. **Wani, A.S.,** Ahmad, F., Faizan, M., Ahmad, A., Hayat, S. and Tahir, I (2016). Foliar spray of proline enhanced the photosynthetic efficiency and antioxidant system in *Brassica juncea.* **Notulae Botanicae Horti Agrobotanici Cluj-Napoca 45(1):112-119. [IF= 1.444]**
7. **Wani, A.S.,** Ahmad, A., Hayat, S. and Tahir, I (2016). Is foliar spray of proline sufficient for mitigation of salt stress in *Brassica juncea* cultivars? **Environmental Science and Pollution Research 23:13413-13423. [IF= 4.223]**
8. Alyemeni, M.N., **Wani, A.S.,** Wijaya, L. and Hayat, S (2014). Activity of enzymes of nitrogen and cadmium accumulation in moong plants under cadmium stress. **Fresenius Environmental Bulletin 23:2645-2649. [IF=0.489]**
9. Hayat, S., Ahmad, A., **Wani, A.S.,** Alyemini, M.N. and Ahmad, A (2014). Regulation of growth and photosynthetic parameters by salicylic acid and calcium in *Brassica juncea* under cadmium stress. **Zeitschrift für Naturforschung A. 69: 452–458. DOI: 10.5560/ZNC.2014-0036. [IF=1.047]**
10. Hayat, S., Khalique, G., **Wani, A.S.,** Alyemini, M.N. and Ahmad, A (2014). Protection of growth in response to 28-homobrassinolide under the stress of cadmium and salinity in wheat. **International Journal of Biological Macromolecules 64: 130-136. [IF= 8.025]**
11. **Wani, A.S.,** Ahmad, A., Hayat, S. and Fariduddin, Q (2013). Salt-induced modulation in growth, photosynthesis and antioxidant system in two varieties of *Brassica juncea*. **Saudi Journal of Biological Sciences 20:183-193. [IF= 4.219]**

12. Hayat, S., Yadav, S., Alyemini, M.N., Irfan, M., **Wani, A.S.** and Ahmad, A (2013). Alleviation of salinity stress with sodium nitroprusside in tomato. **International Journal of Vegetable Science 19(2): 164-176. [IF= 0.943]**
13. Hasan, S.A., **Wani, A.S.,** Irfan, M. and Hayat, S (2013). Brassinosteroids Root Drenching as an Effective Method of Cadmium Induced Oxidative Stress Amelioration in *Solanum lycopersicum*. **International Journal of Chemical, Environmental & Biological Sciences 1(3): 484-487. [IF=2.571]**
14. Hayat, S., Yadav, S., **Wani, A.S.,** Irfan, M., Alyemini, M.N. and Ahmad, A (2012). Impact of sodium nitroprusside on nitrate reductase, proline content, and antioxidant system in tomato under salinity stress. **Horticulture Environment and Biotechnology 53(5):362–367. [IF= 1.842]**
15. Hayat, S., Hayat, Q., Alyemeni M.N., **Wani, A.S.,** Pichtel, J. and Ahmad, A (2012). Role of proline under changing environments: A review**. Plant Signaling & Behavior 7(11):1–11. [IF=2.247]**
16. Hayat, S., Maheshwari, P., **Wani, A.S.,** Irfan, M., Alyemeni, M.N., Ahmad, A (2012). Comparative effect of 28 homobrassinolide and salicylic acid in the amelioration of NaCl stress in *Brassica juncea* L. **Plant Physiology and Biochemistry 53:61-68. [IF= 5.437]**
17. **Wani, A.S.,** Irfan, M., Hayat, S. and Ahmad, A (2012). Response of two mustard (*Brassica juncea* L.) cultivars differing in photosynthetic capacity subjected to proline. **Protoplasma 249: 75–87. [IF= 3.356]**
18. Yadav, S., Hayat, S., **Wani, A.S.,** Irfan, M. and Ahmad, A (2012). Comparison of the influence of 28-homobrassinolide and 24-epibrassinolide on nitrate reductase activity, proline content and antioxidative enzymes of tomato. **International Journal of Vegetable Science 18(2): 161-170. [IF=0.943]**
19. Hayat, S., Khalique, G., Irfan, M., **Wani, A.S.,** Tripathi, B.N., Ahmad, A (2011). Physiological changes induced by chromium stress in plants: An overview. **Protoplasma 249(3):599-611. [IF= 3.356]**
20. Hayat, S., Yadav, S., **Wani, A.S.,** Irfan, M. and Ahmad, A (2011). Comparative effect of 28-homobrassinolide and 24-epibrassinolide on the growth, carbonic anhydrase activity and photosynthetic efficiency of *Lycopersicon esculentum*. **Photosynthetica 49(3):397-404. [IF= 1.740]**
21. Hayat, S., Yadav, S., **Wani, A.S.,** Irfan, M. and Ahmad, A (2011). Nitric oxide effects on photosynthetic rate, growth and antioxidant activity in tomato. **International Journal of Vegetable Science 17: 333-348. [IF=0.943]**
22. Hasan, S.A., Hayat, S., **Wani, A.S.,** Ahmad, A (2011). Establishment of sensitive and resistant variety of tomato on the basis of photosynthesis and antioxidative enzymes in the presence of cobalt applied as shotgun approach. **Brazilian Journal of Plant Physiology 23: 175-185. [IF= 0.1538]**
23. Hayat, S., Irfan, M., **Wani, A.S.,** Nasser, A., Ahmad, A (2011). Salicylic acids: Local, systemic or inter-systemic regulators? **Plant Signaling and Behavior 7: 93-102. [IF= 2.247]**

24. Hayat, S., Mir, B.A., **Wani, A.S.,** Hasan, S.A., Irfan, M. and Ahmad, A (2011). Screening of salt-tolerant genotypes of *Brassica juncea* based on photosynthetic attributes. **Journal of Plant Interactions 6: 53-60. [IF=1.650]**
25. Hayat, S., Yadav, S., **Wani, A.S.,** Irfan, M. and Ahmad, A (2010). Response of tomato to two possible modes of salinity stress - a comparative analysis. **Journal of soil salinity and water quality 2(2): 84-90.**

✓ Chapters in Books

26. Irfan, M. Hayat, S., **Wani, A.S.,** and Ahmad, A (2013). Overlapping horizons of salicyclic acid under different stresses. In: Tuteja, N., Gill, S.S (Eds.). Crop Improvement under Adverse Conditions. **Springer New York.**

✓ Books Published

27. **Wani, A.S** (2018). Photosynthetic pigments and nitrate reductase activity under salt stress. LAP, LAMBERT Academic Publishing, Mauritius. ISBN:978-613-9-93649-6

Seminars/Conferences/Workshop/Symposium/Webinars attended

- **National Webinar** on "Phytoremediation: A Sustainable Approach for Revegetation of Heavy Metal-Polluted Land August 29, 2020" delivered by Dr. Khalid Rehman Hakeem Professor at King Abdul Aziz University jointly organized by **Internal Quality Assurance Cell (IQAC) of Amar Singh College**, **Srinagar** as part of the International Webinar Series on Recent Advances in Science, Social Sciences and Humanities (RASSSH-2020).
- **National Webinar** on "Recent trends in Botany August 31, 2020" jointly organized by **Department of Botany, Yogeshwari Mahavidyalaya, Ambajogai and IQAC**.
- **National Webinar** on "Biodiversity Conservation and Waste Management September 23, 2020" jointly organized by **Department of Botany, Ekamra College, BBSR and The Vitae Learning.**
- **National Seminar** on "Trends and Advances in Plant Sciences Sept 21-22, 2013" Organized by **Department of Botany, Aligarh Muslim University, Aligarh.**
- **National Seminar** on "Plant Sciences: New Technologies, Conservation and Environment Feb 23-24, 2013" Organized by **Department of Botany, Aligarh Muslim University, Aligarh.**
- **National Conference** on "Nanoscience and Nanotechnology Mar 10-12, 2012" Organized by **Department of Applied Physics, Aligarh Muslim University, Aligarh.**
- **National Seminar of Plant Physiology** on "Sustainable Crop productivity through Physiological Interventions Nov 24-26, 2011" Jointly organized by **Department of life science, Ramnarain Ruia College, Matunga, Mumbai and Indian Society for Plant Physiology, Pusa Campus, New Delhi, India.**
- **International Conclave** on "Unani Medicine: Strength and Strategies of Globalization" on March 25-26, 2011 jointly organized by **Department of Kulliyat (Basic Sciences of Unani Medicine), Faculty of Unani Medicine,**

Aligarh Muslim University, Aligarh and Department of Ayush Ministry of Health and Family Welfare, Government of India, New Delhi, India.

- **International Conference** on "*Chemistry: frontiers and challenges"* **March 5-6, 2011** organized by **Department Of Chemistry, Aligarh Muslim University, Aligarh, India.**
- **Interaction Programme on Research Methodology in Biological Sciences December 14 to January 06, 2010** organized by **UGC Academic Staff College, Muslim University, Aligarh, India**
- **National Conference of Plant Physiology** on "*Physiological and Molecular Approaches for Crop Improvement under Changing Environment*" **November 25-27, 2010** organized by **Department of Plant Physiology, Institute of Agricultural Sciences, BHU and Indian Society for Plant Physiology, New Delhi at Banaras Hindu University, Varanasi, India.**
- **Seminar presented on the topic** "*Blue Light Responses: Stomatal Movements and Morphogenesis*" during **M.Sc. degree at Aligarh Muslim University, Aligarh.**

Abstracts published

- **Arif Shafi Wani** and Inayatullah Tahir (2017). "Epibrassinolide improves the nitrogen metabolism and antioxidant system in chickpea cultivars under Cd and/or NaCl stress". **In: National Conference on "Biotechnology and Environment April 10-11, 2017"** jointly organized by Department of Biotechnology, Jamia Millia Islamia, New Delhi and National Environmental Science Academy (NESA), New Delhi.
- Shaziya Nisar, Syed Sabhi Ahmad, **Arif Shafi Wani**, Riyaz Ahmad Dar and Inayatullah Tahir (2017). "Physiological and Biochemical changes during flower development and senescence in *Nicotiana plumbaginifolia* viv. and *Petunia hybrida* L.: A Comparative study". **In: National Conference on "Biotechnology and Environment April 10-11, 2017"** jointly organized by Department of Biotechnology, Jamia Millia Islamia, New Delhi and National Environmental Science Academy (NESA), New Delhi.
- **Arif Shafi Wani**, Aqil Ahmad and Shamsul Hayat (2013). "Amelioration of salt stress in Brassica juncea plants by the application of brassinosteroid analogues: A comparative study". **In: National Seminar on "Plant Sciences: New Technologies, Conservation and Environment Feb 23-24, 2013"** Organized by Department of Botany, Aligarh Muslim University, Aligarh.
- **Arif Shafi Wani**, Sangeeta Yadav, Mohd. Irfan, Shamsul Hayat and Aqil Ahmad (2011). "Response of 28-homobrassinolide and 24-epibrassinolide on the growth, carbonic anhydrase activity and photosynthetic efficiency of *Lycopersicon esculentum*". **In: National Seminar of Plant Physiology on "Sustainable Crop productivity through Physiological Interventions Nov 24-26, 2011"** jointly organized by Department of Life Science, Ramnarain Ruia College, Matunga, Mumbai and Indian Society for Plant Physiology, Pusa Campus, New Delhi.
- Shamsul Hayat, Qaiser Hayat, **Arif Shafi Wani**, Mohd. Irfan and Aqil Ahmad (2011). "Exogenous application of proline enhances antioxidative enzyme activity, growth, photosynthesis and yield of chickpea plants exposed to

cadmium stress". **In: National Seminar of Plant Physiology on "Sustainable Crop productivity through Physiological Interventions Nov 24-26, 2011"** jointly organized by Department of Life Science, Ramnarain Ruia College, Matunga, Mumbai and Indian Society for Plant Physiology, Pusa Campus, New Delhi.

- Mohammad Irfan, Sangeeta Yadav, Shamsul Hayat, **Arif Shafi Wani** and Aqil Ahmad (2011). "A comparative influence of 28-homobrassinolide and 24-epibrassionolide on activities of nitrate reductase, antioxidative enzymes and proline content of tomato". **In: National Seminar of Plant Physiology on "Sustainable Crop productivity through Physiological Interventions Nov 24-26, 2011"** jointly organized by Department of Life Science, Ramnarain Ruia College, Matunga, Mumbai and Indian Society for Plant Physiology, Pusa Campus, New Delhi.
- **Arif Shafi Wani,** Sangeeta Yadav, Syed Aiman Hasan, Shamsul Hayat*, and Aqil Ahmad (2011) Nitric Oxide Effects on Photosynthetic Rate, Growth and Antioxidant Activity in Tomato. **In: International Conclave on "Unani Medicine: Strength and Strategies of Globalization" on March 25-26, 2011** jointly organized by Department of Kulliyat (Basic Sciences of Unani Medicine), Faculty of Unani Medicine, Aligarh Muslim University, Aligarh and Department of Ayush Ministry of Health and Family Welfare, Government of India, New Delhi, India.
- Syed Aiman Hasan, Shamsul Hayat, Mohd. Irfan**, Arif Shafi Wani** and Aqil Ahmad (2011). "Brassinosteroids protect photosynthetic machinery against the cadmium induced oxidative stress in two tomato cultivars". **In: National Symposium on "Current Trends in Biochemical, Biomedical and Environmental Sciences" Feb 22, 2011** organized by Department of Biochemistry, Faculty of Life Sciences, Aligarh Muslim University, Aligarh, India under the auspices of UGC-DRS-II programme.
- **Arif Shafi Wani** (2010). "Growth, photosynthetic activity and antioxidant response of two mustard (*Brassica juncea* L.) cultivars differing in photosynthetic capacity subjected to proline"**. In: National Conference of Plant Physiology on *"Physiological and Molecular Approaches for Crop Improvement under Changing Environment"* November 25-27, 2010** jointly organized by Deptt. Of Plant Physiology, Institute of Agricultural Sciences, BHU and Indian Society for Plant Physiology, New Delhi at Banaras Hindu University, Varanasi, India.

Reviewer of journals

- Acta Physiologiae Plantarum
- Saudi Journal of Biological Sciences
- Environmental Engineering and Management Journal
- Ecotoxicology and Environmental Safety
- Hort Science
- Journal of Plant Interactions
- Philippine Agricultural Scientist

Editorial board member

- Acted as a Section Editor for "Advances in Applied Agricultural Sciences" Journal.

Personal Profile

Father's Name	:	Mohammad Shafi
Mother's Name	:	Haseena Begum
Date of Birth	:	May 12, 1985
Nationality	:	Indian
Sex	:	Male
Marital Status	:	Married
Languages' Known	:	English, Urdu, Hindi, Kashmiri
Religion	:	Islam
Permanent Address	:	Wani Mohalla, Mader, Ward No. 10, Bandipora Distt. Bandipora Jammu and Kashmir- 193502

Academic Referees

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Declaration

I hereby declare that all the above information furnished by me is true and best of my knowledge.

Place: Bandipora
Date: 05-10-2023

(ARIF SHAFI WANI)