

Dr. MOHD ASGHER

Current Position: Senior Assistant Professor

Department of Botany, School of Biosciences and Biotechnology

Baba Ghulam Shah Badshah University, Rajouri (J & K)

Email: asghermohd@gmail.com; mughalasgher@bgsbu.ac.in

Mobile No. +91-9622184466; +91-7006769094

Permanent Address: Rajouri-185234 Jammu and Kashmir

Ph.D. Topic and Place of work: 'Involvement of ethylene in sulfur-mediated changes in growth and metabolism of mustard (*Brassica juncea*) under cadmium stress' at department of Botany Aligarh Muslim University, Aligarh

Awards and Achievements



1	National Post Doctoral Fellowship in Plant Sciences	Funding Agency DST/SERB at BGSB University Rajouri (J & K) (Rs.19.2 Lakhs)
2	UGC start Up Research Grant	Funding Agency UGC New Delhi, GOI (Rs.10 Lakhs)
3	SERB-Start UP Research Grant	Funding Agency DST SERB, New Delhi GOI (Rs. 33 Lakhs)
4.	JK STIC, DST	Funding Agency JK DST, J&K (Rs. 8.75 lakhs)
5	Best poster award	National seminar at Department of Botany, AMU Aligarh Sept 21-22, 2013
6	Best poster award	Center University of Jammu, Jammu Dec 7-8 2018
7	INSA Medal 2021	2021 by INSA New Delhi (Rs.1.0 Lakh)

RESEARCH PROJECTS SANCTIONED

- Principal Investigator in a Research Project on "Proteomic investigation of ethylene and polyamine mediated reversal of chromium induced photosynthetic inhibition in *Brassica juncea*" of Rs 19.2 lakh for 2 years funded by Science and Engineering Research Board, New Delhi, GOI. SERB (PDF/2016/000591)**
- Principal Investigator in a Research Project on 'Nitric oxide and polyamine mediated reversal of low temperature-induced photosynthetic inhibition in *Lycopersicon esculentum***
'UGC start Up Research Grant New Delhi, GOI for Two year (85th meeting Feb 2018) **10 Lakhs** 30-441/2018 (BSR)
- Principal Investigator in a Research Project on "Developing methods for tolerance against drought and heat stress in *Zea mays* and *Phaseolus vulgaris* grown in Pir-Panjal region of Jammu and Kashmir**
"of Rs 33 lakh for 2 years funded by Science and Engineering Research Board, New Delhi, GOI (SRG/2019/001766)
- Principal Investigator in a Research Project on "Developing techniques for tolerance against low temperature stress in *Triticum aestivum* cultivated in Rajouri district of Jammu and Kashmir" of Rs. 6 Lakhs for 2 years funded by JK Science technology and Innovation Council, Department of Science and Technology. Govt of J&K**
- Co-Investigator in a Research Project on "Assessing the floristic diversity and ecosystem level carbon sequestration potential of Pir-Panjal Region of Rajouri J&K" of Rs 8.75 lakhs for 2 years funded by JK Science technology and Innovation Council, Department of Science and Technology. Govt of J&K (JKSTIC order no. 84 of 2021)**

AT GLANCE

Total Publications	51
Papers in Journals of High Impact Factor:	35
Project completed (PI) (DST/SERB-sponsored):	01
Project ongoing (PI) UGC-sponsored):	01
Project ongoing (PI) (DST/SERB-sponsored):	01
Project Completed (as JRF) (UGC-sponsored):	01
Project Completed (as JRF) (DBT-sponsored):	01
Book Chapters Published:	06

Curriculum Vitae

Papers Presented: 05
Conferences Attended: 07
Total Impact Points: 170.3
Citations to My Articles

<u>Citation indices</u>	All	Since 2018
Citations	4320	2918
H-index	29	27

Research Experience and Teaching Experience

1	Project Fellow (After Ph.D Award)	Department of Botany, AMU, Aligarh	12-4-2015 to 9-02-2016 (10 months)
2	Assistant Professor Botany (Contractual)	School Of Biosciences and Biotechnology BGSBU (J& K)	10-02-2016 to 16-06-2016 (5 months)
3	National Post Doctoral Fellow (DST/SERB)	School Of Biosciences and Biotechnology BGSBU (J& K)	25 July 2016 to 11 September 2017 (Also involved in teaching)
4	Assistant Professor	Department of Botany, BGSB University, Rajouri	12 September 2017 onwards
5	Coordinator Department of Botany		19-2-2022 to 18-2-2025

Academic Credentials:

Class	Board/university	Subjects	Division	Percentage	Year
Ph. D	A.M.U	Botany	-	Awarded (07-06-2011 to 11/04/2015)	2015
M. Sc	A.M.U	Botany	I	70.95	2010
B. Sc	J.U Jammu	Botany, Zoology, Chemistry	I	63.75	2008
10+2	JK Board	PCB	I	67.00	2005
10 th	JK Board	Science	I	80.00	2003

Summary of Publications

A: Research Papers

S.NO	Journals	Year	No. of Publications	Impact Factor
1	Journal of Hazardous Materials	2021	1	14.2
2	Environmental Pollution	2023	1	7.6

Curriculum Vitae

3	Environmental Pollution	2022	1	7.6
4	Plant Physiology	2015	1	6.5
5	Antioxidants	2022	1	6
6	Ecotoxicology and Environmental Safety	2014	1	6.2
7	Plant Physiology and Biochemistry	2016	1	6.1
8	Plant Physiology and Biochemistry	2014	1	6.1
9	Physiologia Plantarum	2021	1	5.4
10	Physiologia Plantarum	2019	1	5.4
11	Environmental Science and Pollution Research	2017	1	5.8
12	Environmental and Experimental Botany	2014	1	4.5
13	Frontiers in Plant Science	2016	1	4.1
14	Frontiers in Plant Science	2016	1	4.1
15	Frontiers in Plant Science	2021	1	4.1
16	Frontiers in Plant Science	2023	1	4.1
17	Plant stress	2023	1	6.8
18	Journal of Plant Growth Regulation	2018	1	3.9
19	Journal of Plant Growth Regulation	2018,	1	3.9
20	Journal of Plant Growth Regulation	2022	1	3.9
21	Plants	2023	1	4.0
22	Plants	2022	1	4.0
23	Plants	2020	1	4.0
24	Journal of Plant Physiology	2015	1	4.0
25	Journal of Plant Biochemistry & Physiology	2014	1	6.1
26	Sustainability	2023	1	3.3
27	Agriculture	2023	1	3.5
28	South African Journal of Botany	2023	1	2.7
29	Protoplasma	2015	1	3.1
30	Forests	2021	1	2.4
31	Forests	2023	1	2.4
32	Photosynthetica	2016	1	2.7
33	Plant Signaling & Behavior	2013	1	3.4
34	Stress Biology	2024	1	-
35	Pharmaceuticals	2024	1	4.3
Total Impact Points			35	170.3

B: Research Papers

S.NO	Journal	Year	No. of Publication	ISSN No.
------	---------	------	--------------------	----------

Curriculum Vitae

1	Climate Change and Environmental Sustainability	2013, 2015	2	2320-642X
2	Journal of Functional and Experimental Botany	2013	2	2231-1750
	Total		4	

C: Book Chapters

S.NO	Publisher	Year	No. of Publication
1	Springer, Elsevier	2023	2
1	Springer-Verlag, New York, Springer New Delhi Heidelberg New York Dordrecht London	2016, 2016*, 2017, 2019, 2012, 2022, 2023	7
2	CAB International, UK	2015	1
3	Nova Science Publishers, USA	2015	1
4	Wiley	2020	1
	Total		12

Research Area: Plant Stress Physiology (Hormonal and nutrient regulation under abiotic stress)

Research Interest: The focus of my research is mainly on understanding the metabolism of crop and medicinal plants under abiotic stress and significant role of nutrients and phytohormones in regulation of plant photosynthesis, S-metabolism, N-metabolism, antioxidant system and growth. The protection of photosynthetic apparatus against abiotic stress by manipulating phytohormones and nutrients in plant through modulating the components of antioxidant defense has been observed. Thus, phytohormones and mineral nutrients plays an important role in the alleviation of stress resulting in improved plant growth and development and in integrating various stress signals and controlling downstream stress responses and interacts in co-ordination with each other for defense signal networking to fine tune defense. Further studied will be focused on proteomic and genomic traits, and this biotechnological approach being used to understand the biological function of proteins and genes expressed in response to abiotic stress.

Guest Editor: Special Issue "Phytohormones Signaling in Crop Growth and Development in Relation to Environmental Stresses" Agriculture (IF:3.40)

Guest Editor: Special Issue The Contribution of Molecular Priming to Abiotic Stress Tolerance in Plants

Frontiers in Plant Science (IF:4.1)

Editorial Board member: Scientific Reports

Associate Editors: Frontiers in Plant Science

List of Publications

Research papers in journals with Impact Factor

1. Turhan E and Asgher M (2024) Editorial: The contribution of molecular priming to abiotic stress tolerance in plants. *Front. Plant Sci.* (IF 4.1) 14:1352312. doi: 10.3389/fpls.2023.1352312
2. Syed Nazar ul Islam, Shaista Kouser, Parveena Hassan , **Mohd Asgher***, Ali Asghar Shah, Nafees A. Khan (2024) Gamma-aminobutyric acid interplay with phytohormones under abiotic stress. **Stress Biology (*Corresponding author).**
3. Ashraf, M.V., Khan, S., Misri, S., Gaira, K.S., Rawat, S., Rawat, B., Khan, M.A., Shah, A.A., **Asgher, M.** and Ahmad, S., 2024. High-Altitude Medicinal Plants as Promising Source of Phytochemical Antioxidants to Combat Lifestyle-Associated Oxidative Stress-Induced Disorders. *Pharmaceuticals*, 17(8), p.975. (IF:4.3)
4. **Asgher M**, Rehaman A, Syed Nazar ul Islam, Khan NA (2023) Multifaceted Roles of Silicon Nano Particles in Heavy

- Metals-Stressed Plants. **Environmental Pollution** (IF:7.6) <https://doi.org/10.1016/j.envpol.2023.122886>
5. Bhat MA; Mishra AK; Saima Jan; Shah SA; **Asgher M**; Rahman S, Jan ATJ (2023) Chromium and plant health: a prospective study of toxicity to remediation and restoration of the environment. **South African Journal of Botany**. (IF:2.7)
 6. **Asgher, M**, Sehar, Z, Mehar F, Hanief, M, Shah, AA, Khan, NA (2023). Ethylene and spermine attenuate chromium-inhibited photosynthetic functions by improving nitrogen and sulfur assimilation, antioxidant system in mustard. **Plant Stress** (IF:6.8)
 7. **Asgher*, M.**; Rehaman, A.; Islam, S.N.u.; Arshad, M.; Khan, N.A. (2023) Appraisal of Functions and Role of Selenium in Heavy Metal Stress Adaptation in Plants. **Agriculture** (IF: 3.5) **13**, 1083. <https://doi.org/10.3390/agriculture13051083>(*Corresponding author).
 8. Khan, S.; Gaira, K.S.; **Asgher, M.**; Verma, S.; Pant, S.; Agrawala, D.K.; Alamri, S.; Siddiqui, M.H.; Kesawat, M.S. Temperature Induced Flowering Phenology of *Olea ferruginea* Royle: A Climate Change Effect. **Sustainability** 2023, 15, 6936. <https://doi.org/10.3390/su15086936> (IF: 3.5)
 9. Chopra, N.; Tewari, L.M.; Tewari, A.; Wani, Z.A.; **Asgher, M.**; Pant, S.; Siddiqui, S.; Siddiqua, A. (2023), Estimation of Biomass and Carbon Sequestration Potential of *Dalbergia latifolia* Roxb. and *Melia composita* Willd. Plantations in the Tarai Region (India). **Forests** 14, 646. <https://doi.org/10.3390/f14030646> (IF:2.4)
 10. Wani ZA, Ahmad Z, **Asgher M**, Bhat JA, Sharma M, Kumar A, Sharma V, Kumar A, Pant S, Lukatkin AS, Anjum NA. (2023) Phytoremediation of Potentially Toxic Elements: Role, Status and Concerns. **Plants**. (IF 4.0) 12(3):429. <https://doi.org/10.3390/plants12030429>
 11. Rehaman, A., Fatma, M., Jan, A.T., Shah AA, **Asgher* M**, Khan NA Co-Application of Nitric Oxide and Vermicompost Improves Photosynthetic Functions, Antioxidants, and Nitrogen Metabolism in Maize (*Zea mays* L.) Grown Under Drought Stress. **J Plant Growth Regul** (2022). <https://doi.org/10.1007/s00344-022-10854-41317> (IF: 3.9) (*Corresponding author).
 12. Fatma M , **Asgher M**, Iqbal N, Rasheed F , Sehar Z , Sofo A , Khan NA (2022) Ethylene signaling under stressful environments: Collaborative knowledge with new perspectives. **Plants** (IF 4.0) 11(17):2211. <https://doi.org/10.3390/plants11172211>
 13. Ahmed S, **Asgher M**, Amit Kumar A, Sumit Gandhi S (2022) Exogenously applied Rohitukine inhibits photosynthetic processes, growth and induces antioxidant defense system in *Arabidopsis thaliana*. **Antioxidants** (IF:6) 11(8):1512. <https://doi.org/10.3390/antiox11081512>
 14. **Asgher, M.**, Sehar, Z., Rehaman, A., Rashid, S., Ahmed, S., Per, T. S., & Khan, N. A. (2022). Exogenously-applied L-glutamic acid protects photosynthetic functions and enhances arsenic tolerance through increased nitrogen assimilation and antioxidant capacity in rice (*Oryza sativa* L.). **Environmental Pollution** (IF: 7.6) 301, 119008.
 15. Rehaman, A.; Mishra, A.K.; Ferdose, A.; Per, T.S.; Hanief, M.; Jan, A.T.; **Asgher, M.** Melatonin in Plant Defense against Abiotic Stress. **Forests** **2021**, *12*, 1404. <https://doi.org/10.3390/f12101404> (IF:2.4) (*Corresponding author).
 16. Aslam S, Gul N, Mir MA, **Asgher M**, Al-Sulami N, Abulfaraj AA and Qari S (2021) Role of Jasmonates, Calcium, and Glutathione in Plants to Combat Abiotic Stresses Through Precise Signaling Cascade. **Front. Plant Sci.** 12:668029. doi: 10.3389/fpls.2021.668029 (IF:4)
 17. Sajad Ahmed, Shaista Kouser, **Mohd Asgher**, , Sumit G. Gandhi (2021) Plant aquaporins: A frontward to make crop plants drought resistant. **Physiologia Plantarum** 172:1089-1105 (IF: 5.4) (*Corresponding author).
 18. **Mohd Asgher** , Sajad Ahmed , Zebus Sehar , Harsha Gautam , Sumit G. Gandhi , Nafees A. Khan (2021) Hydrogen peroxide modulates activity and expression of antioxidant enzymes and protects photosynthetic activity from arsenic damage in rice (*Oryza sativa* L.). **Journal of Hazardous Materials** (IF: 14.2) 12365.
 19. **Mohd Asgher, Susheel Verma** Nafees A. Khan , Dhiraj Vyas , Priyanka Kumari , Shaista Rashid, Sajid Khan , Shaista Qadir , Mohammad Ajmal Ali and Parvaiz Ahmad. Physiological, Biochemical and Reproductive Studies on *Valeriana wallichii*, a Critically Endangered Medicinal Plant of the Himalayan Region Grown under In-Situ and Ex-Situ Conditions. **Plants** (IF 4.0) 2020, 9, 131; doi:10.3390/plants9020131 (*Corresponding author)
 20. Anket Sharma , Cristiano Soares, Bruno Sousa, Maria Martins, Vinod Kumar, Babar Shahzad, Gagan P.S. Sidhu, Aditi S. Bali, **Mohd Asgher**, Renu Bhardwaj, Ashwani K. Thukral, Fernanda Fidalgo, and Bingsong Zheng. Nitric oxide-

- mediated regulation of oxidative stress in plants under metal stress: a review on molecular and biochemical aspects *Physiologia Plantarum* 2020 168:318-344 (IF: 5.4) doi:10.1111/ppl.13004
21. **Mohd Asgher**, Tasir S. Per, Susheel Verma, Shahzad A. Pandith, Asim Masood, Nafees A. Khan (2018) Ethylene Supplements Increases PSII Efficiency and Alleviates Chromium Inhibited Photosynthesis Through Increased Nitrogen and Sulfur Assimilation in Mustard. *J of Plant Growth Regulation* 37:1300-1317 (IF: 3.9) (*Corresponding author).
 22. **Mohd Asgher**, Khan MIR. Anjum NA, Verma S., Vyas D. Per TS. Masood A. Khan NA (2018) Ethylene and Polyamines in Counteracting Heavy Metal Phytotoxicity: A Crosstalk Perspective *J of Plant Growth Regulation* 37: 1050-1065 (IF: 3.9) <https://doi.org/10.1007/s00344-018-9823-x>
 23. Nafees A. Khan, **Mohd Asgher***, Tasir S. Per, Asim Masood and Mehar Fatma (2016) Ethylene potentiates sulfur-mediated reversal of cadmium inhibited photosynthetic responses in mustard. *Frontiers in Plant Science*. 7:1628. doi: 10.3389/fpls.2016.01628 (IF: 4.1). (*Corresponding author)
 24. **Mohd Asgher**, Nafees A. Khan, M.Iqbal R. Khan, Mehar Fatma, Asim Masood (2014) Ethylene production is associated with alleviation of cadmium-induced oxidative stress by sulfur in mustard types differing in ethylene sensitivity. *Ecotoxicology and Environmental Safety* 106:54–61. (IF: 6.2)
 25. **Mohd Asgher**, M. Iqbal R.Khan, Naser A. Anjum and Nafees A. Khan (2015). Minimizing toxicity of cadmium in plants – role of plant growth regulators. *Protoplasma* 252:399–413. (IF: 3.1)
 26. **Mohd Asgher**, Tasir Sharief Per, Asim Masood, Mehar fatma, Luciano Freschi, Francisco J. Corpas and Nafees A. Khan (2016) Nitric oxide signaling and its crosstalk with other plant growth regulators in plant responses to abiotic stress *Environmental Science and Pollution Research* 24:2273–2285 (IF: 5.8)
 27. Tasir.S. Per, Shumaila Khan, **Mohd Asgher**, Bilquees. Bano and Nafees A. Khan (2016) Photosynthetic and growth responses of two mustard cultivars differing in phytoalexin activity under cadmium stress. *Photosynthetica* (IF: 2.7).
 28. M. Iqbal R. Khan, Nafees A. Khan, Asim Masood, Tasir S. Per and **Mohd Asgher** (2016) Hydrogen peroxide alleviates nickel-inhibited photosynthetic responses through increase in use-efficiency of nitrogen and sulfur, and glutathione production in mustard. *Frontiers in Plant Science*. doi: 10.3389/fpls.2016.00044 (IF: 4.1).
 29. Asim Masood, M. Iqbal Khan, Mehar Fatma, **Mohd Asgher**, Tasir S. Per and Nafees Khan (2016) Involvement of ethylene in gibberellic acid-induced sulfur assimilation, photosynthetic responses, and alleviation of cadmium stress in mustard. *Plant Physiology and Biochemistry* 104:1-10 (IF: 6.1)
 30. Nguyen Phuong Thao, M. Iqbal R. Khan, Nguyen Binh Anh Thu, Xuan Lan Thi Hoang, **Mohd Asgher**, Nafees A. Khan, and Lam-Son Phan Tran (2015) Role of ethylene and its crosstalk with other signaling molecules in plant responses to heavy metal stress. *Plant Physiology* 169:73-84 (IF: 7.4)
 31. M. Iqbal R. Khan, Farooza Nazir, **Mohd. Asgher**, Tasir S Per, Nafees A Khan (2015) Selenium and sulfur influence ethylene formation and alleviate cadmium-induced oxidative stress by improving proline and glutathione production in wheat (*Triticum aestivum* L.). *Journal of Plant Physiology* 173:9–18 (IF:4)
 32. Mehar Fatma, **Mohd Asgher**, Asim Masood and Nafees A. Khan (2014) Excess sulfur supplementation improves photosynthesis and growth in mustard under salt stress through increased production of glutathione. *Environmental and Experimental Botany* 107:55–63. (IF: 4.5)
 33. M. Iqbal R. Khan, **Mohd. Asgher** and Nafees A. Khan (2014) Alleviation of salt-induced photosynthesis and growth inhibition by salicylic acid involves glycinebetaine and ethylene in mungbean (*Vigna radiata* L.) *Plant Physiology and Biochemistry* 80:67–74. (IF: 6.1)
 34. Noushina Iqbal, Asim Masood, M. Iqbal R. Khan, **Mohd. Asgher**, Mehar Fatma and Nafees A. Khan (2013) Cross-talk between sulfur assimilation and ethylene signaling in plants. *Plant Signaling & Behavior* 8:1 (IF: 2.7)
 35. Nafees A. Khan, M. Iqbal R. Khan, **Mohd Asgher**, Mehar Fatma, Asim Masood and Shabina Syeed (2014) Salinity tolerance in plants: Revisiting the role of sulfur metabolites. *Journal of Plant Biochemistry & Physiology* 2: 120. (IF: 6.1) .doi:10.4172/2329-9029.1000120.
 36. Rehaman, A., Khan, S., Rawat, B. KS Gaira, **Mohd Asgher**, P Semwal, V Tripathi. Mechanistic Insights into Plant Drought Tolerance: A Multi-level Perspective. *Journal of Crop Health* 77, 53 (2025). <https://doi.org/10.1007/s10343-025-01115-x>

Research Papers Published in Reputed Journals

1. **Mohd Asgher**, M. Iqbal R. Khan, Noushina Iqbal, Asim Masood and Nafees A. Khan (2013) Cadmium tolerance in mustard cultivars: Dependence on proline accumulation and nitrogen assimilation. *Journal of Functional and Experimental Botany* 3:30-42
2. M. Iqbal R. Khan, **Mohd Asgher**, Mehar Fatma, Tasir S Per and Nafees A. Khan (2015) Drought stress vis a vis plant functions in the era of climate change. *Climate Change and Environmental Sustainability*. 3:13-25
3. M. Iqbal R. Khan, **Mohd. Asgher** and Nafees A. Khan (2013) Rising temperature in the changing environment: A serious threat to plants. *Climate Change and Environmental Sustainability* 1: 25-36.
4. Asim Masood, Noushina Iqbal, **Mohd. Asgher**, M. Iqbal R. Khan, Mehar Fatma, Nafees A Khan (2013) Variation in carbohydrate accumulation in two cultivars of mustard and its association with salt tolerance. *Journal of Functional and Experimental Botany* 3:94-102.

Book Chapters

5. Islam SN, Arshad M, Ahmad S and **Asgher M** (2023) Role of Sulfur and its Metabolites Crosstalk with Phytohormones under Abiotic Stress in Plant. in Improving Stress Resilience in Plants: Physiological and Biochemical Basis and Utilization in Breeding Edited by Mohammad Abass Ahanger, Javaid Akthar Bhat, Parvaiz Ahmad and Riffat John. Elsevier
6. Islam SN, **Asgher M** and Khan NA (2023) Strengthening the Redox biology under abiotic stress: Role of H₂O₂. Gasotransmitters Signaling in Plants: Implication in Sustainable Development edited by Mehar Fatma, Zebus Sehar and Nafees A. Khan Springer Press
7. Kouser S, Rehaman A, Ahmed A, Rashid S, Pant S, **Mohd Asgher** (2021) **Crosstalk of Potassium and Phytohormones Under Abiotic Stress**" in Role of Potassium in Abiotic Stress Edited by Noushina Iqbal and Shahid Umar Springer Press
8. **Mohd Asgher**, Tasir S. Per, Susheel Verma¹, M. Iqbal R. Khan, Asim Masood and Nafees A. Khan (2017) Contribution of Glutathione in Heavy Metal Stress Tolerance in Plants. In: Dr. M. Iqbal R. Khan, Dr. Nafees Khan, and Dr. Abdelbagi M. Ismail, Reactive Oxygen Species and Antioxidant System. In Plants: Role and Regulation under Abiotic Stress. Springer Nature Singapore Pte Ltd.
9. **Mohd Asgher**, M. Iqbal R. Khan, Mehar Fatma and Nafees A. Khan (2015) Potentiality of ethylene in sulphur-mediated counteracting adverse effects of cadmium in plants. In: Usha Chakraborty, Bishwanath Chakraborty. Abiotic Stresses in Crop Plants. CAB International, UK136-163.
10. Asim Masood, Tasir S. Per, **Mohd. Asgher**, Mehar Fatma, M. Iqbal R. Khan, Faisal Rasheed, Sofi J Husain; Nafees A. Khan (2016) Glycinebetaine: Role in shifting plants towards adaptation under extreme environment In: Noushina Iqbal, Rahat Nazar and Nafees A Khan. Osmolytes and Plants Acclimation to Changing Environment: Emerging Omics Technologies. Springer New Delhi Heidelberg New York Dordrecht London. 69-82.
11. Mehar Fatma, Asim Masood, M. Iqbal R. Khan, **Mohd. Asgher**, Tasir S. Per and Nafees A. Khan (2017) . Salicylic acid and Nutrients Interplay in Abiotic Stress Tolerance. In Salicylic Acid: A Multifaceted Hormone. Rahat Nazar, Noushina Iqbal and Nafees A. Khan Springer:
12. M. Iqbal R. Khan, **Mohd. Asgher**, Noushina Iqbal and Nafees A. Khan (2012). Potentiality of sulfur-containing compounds in salt stress tolerance. In: Ahmad P, Azooz MM, Prasad MNV. Ecophysiology and responses of plants under salt stress. Springer: New York. 443-472.
13. M. Iqbal R. Khan Nafees A. Khan, **Mohd. Asgher**, Mehar Fatma, Asim Masood, Shabina Syeed Tasir S Per, Wasim Kaiser (2015) Photosynthesis in changing environment: analyzing the role of phytohormones in modulation. In: Nafees A. Khan. Photosynthesis Functional Genomics, Physiological Processes and Environmental Issues Nova Science Publishers, Inc 129-167.
14. Abbu Zaid, **Mohd Asgher**, Ishfaq Ahmad Wani; Shabir H. Wani, (2019) Role of Triacntanol in overcoming Environmental Stress In Protective chemical agents in the amelioration of plant abiotic stress: biochemical and molecular perspectives" to be published by Dr. Aryadeep Roychoudhury in Wiley

Abstracts Published/Conferences Attended

- **Mohd. Asgher**, Rahat Nazar, Noushina Iqbal, M. Iqbal R. Khan and Nafees A. Khan. Variation in photosynthesis and

growth of mustard cultivars: Role of ethylene sensitivity.

Presented Poster on National Seminar of Plant Physiology "Physiological and Molecular Approaches for development of Climate Resilient Crops" at **Acharya N.G Ranga Agricultural University Hyderabad** 12-14, 2012.

- **Mohd. Asgher**, W. Kaiser and Nafees. A. Khan. Sulfur protects photosynthetic capacity inhibition in mustard induced by cadmium through increase in antioxidant metabolism. Presented Poster on National Seminar "Trends and Advances in Plant Sciences" at **Department of Botany, Aligarh Muslim University, Aligarh** Sept 21-22, 2013. Won best poster award
- Mehar Fatma, **Mohd. Asgher** and Nafees A. Khan. Ethylene promotes excess-S utilization to alleviate salt stress in mustard. Presented Poster at National Seminar "Trends and Advances in Plant Sciences" at **Department of Botany, Aligarh Muslim University, Aligarh** Sept 21-22, 2013.
- **34th All India Botanical Conference** at Department of Botany, Lucknow University, Lucknow, India (Oct10-12, 2011).
- **Mohd. Asgher** and Nafees A. Khan Ethylene production is associated with alleviation of cadmium-induced oxidative stress by sulfur in mustard types differing in ethylene sensitivity. **Page 95** International Conference on "**Emerging Trends in Biomedical Sciences**" (ETBS-2016) held on March 6-8, 2016
- **Mohd asgher**, Nafees A Khan and Susheel Verma. Cadmium tolerance in mustard cultivars: dependence on proline accumulation and Nitrogen assimilation Poster presentation **At Jamia Millia Islamia in the National seminar on recent advances in environmental toxicology Feb 13-14 2017**
- **Mohd Asgher** Nafees A. Khan, Susheel Verma. Ethylene potentiates sulfur-mediated reversal of cadmium inhibited photosynthetic responses in mustard. **12th JK science congress** Jammu university 71 Page **March 2-4 2017**
- **Mohd Asgher**, Susheel Verma, Nafees A. Khan (2018) Ethylene Supplements Increases PSII Efficiency and Alleviates Chromium Inhibited Photosynthesis Through Increased Nitrogen and Sulfur Assimilation in Mustard. **RDPSB Central University of Jammu Dec 7-8 2018** Presented poster and won best poster award

Courses Attended

Faculty Induction Programme/Orientation Course

Participated in the On-Line Faculty Induction Programme from 02 December 2020 to 06 January 2021 organized by UGC Human Resource Development Centre, Aligarh Muslim University, Aligarh and obtained Grade- 'A'.

Webinar Attended

- Attended the International Webinar on "Advances in Resilience of Sustainable Crop Production", held on December 9, 2020, organized by the Department of Botany, A.M.U., Aligarh.
- Attended the Webinar on Plant microRNA Research held on 27th October 2020 organized by Department of Botany, Aligarh Muslim University, Aligarh (India)

Faculty Development Programmes

- Attended NEP 2020 Orientation and Sensitization Programme under Malaviya Mission Teacher Training Programme of UGC organized by Centre for Professional Development in Higher Education, University of Delhi from 2nd July 2024 to 11th July 2024
- Attended NEP 2020 Orientation and Sensitization Programme under Malaviya Mission Teacher Training Programme of UGC organized by National Institute of Educational Planning and Administration, New Delhi from 12 November-21 November 2024.
-

- Participated in a two- week Online Faculty Development Programme on “ICT Tools for Teaching, Learning Process and Institute” jointly organized by Electronics and ICT Academies held from 10th - 21st August, 2020 by NIT Patna, MNIT Jaipur, PDPM IITDM Jabalpur, IIT Guwahati and IIT Roorkee
- Attended One week FDP on “Tools and techniques for writing quality Research papers and publishing in high-impact international journals” organized by IQAC Shobit Institute of Engineering and Technology Meerut held during September 22-27 2020.
- Successfully completed a 2-Week Faculty Development Programme on "RESEARCH METHODOLOGY" from October 01- October 15, 2020 and obtained a grade A Teaching Learning Centre, Ramanujan College University of Delhi.
- MHRD sponsored TEQIP assisted course on “Structure and Dynamics in Biology, Chemistry and materials Science” from 16th to 20th November 2020 organized by the Department of Chemistry, IIT Roorkee.
- Attended UGC sponsored online refresher Course In Teacher Education From 21 August 2021 to 04 september 2021 organized by UGC HRDC, AMU, Aligarh and obtained Grade A

Reviewer of Prestigious Scientific Journal

Journal of Hazardous Materials
Environmental Pollution
Ecotoxicology and Environmental Safety
Frontiers in Plant Science
Environmental and Experimental Botany
Plant Growth Regulation
Physiologia Plantarum
Journal of Plant Growth Regulation
Agricultural Water Management
Plant Biology
Peer J
3 Biotech
Biomolecules
Horticulturae
International Journal of Molecular Science
Molecules
Plant Stress
Stresses

Administrative Responsibilities

Coordinator Department of Botany (19-2-2022 to 18-2-2025)

Member, Departmental Research Committee

Member, M.Phil Committee

Member, Departmental Purchase Committee

Member, Admission Committee

MEMBER OF PROFESSIONAL SOCIETIES

- Indian Botanical Society
- Indian Science Congress
- National Environmental Science Academy
- Indian Society for Plant Physiology

M.Sc. Dissertations Supervised at BGSBU 22

CAPABILITIES

- Patient listener, Quick Learner.
- Optimist, Honest, commitment of work
- Better understanding of basic scientific principles.

PROFICIENCY IN COMPUTING TOOLS

- Application software's: MS-Office (Powerpoint, MS Word, MS EXCEL)
- Basic Internet Application: Email programs, File Transfer Protocol (FTP), Downloading, Uploading Chatting etc.

Skills

Can handle various scientific equipments viz. Photosynthesis System, SPAD chlorophyll meter, Junior PAM, Electrophoresis System, Gel Documentation System, Water and Osmotic Potential Units, Leaf Area Meter, Gas Chromatograph, Ultracentrifuge, UV-vis Spectrophotometer with ease. • Standardized the protocol for extraction and purification of Rubisco Protein from the leaf tissue and its separation using Gel Electrophoresis during Ph.D. • Has a good understanding of various scientific protocols for extraction and estimation of enzymes of biological importance and other related techniques and protocols. Having good knowledge in preparing scientific research proposal.

Course taught at M.Sc. level

Plant Physiology and Biochemistry

Stress Physiology

Cell Biology (Sharing)

Plant Resources and Utilization (Sharing)

Mysteries of green plants (Sharing)

Anatomy and Developmental Biology of Angiosperms (Sharing)

PERSONAL PROFILE

Name : Mohd Asgher
Father's Name : Mohd Aslam
DOB : 10/4/1987
Permanent Address : Rajouri (Jammu & Kashmir).
Gender : Male
Nationality : Indian
Marital Status : Married
Blood group : O ^{+ve}
Linguistic ability : English, Urdu and Punjab

I hereby declare that the information and facts given above are correct to best of my knowledge and belief.

Date: 18/5/2025

Place: Rajouri

Dr. MOHD ASGHER
Assistant Professor
Dept. of Botany BGSB University, Rajori