

MD IQBAL RAJA KHAN; Ph. D.

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**Other Academic Affiliations**

Adjunct Professor
Department of Plant Biotechnology
Korea University, Seoul, South Korea

Adjunct Associate Professor
The UWA-Institute of Agriculture
The University of Western Australia, Perth, Australia

Dr. Khan has been progressively working to delineate the consistent climatic perturbations, which have considerably increased global environmental concerns by hampering agronomic outputs. In his studies, he has essentially targeted the staple crops including wheat and rice to reduce their environmental stress-susceptibility under the expected climatic pressures in the future. He believes that plant stress physiology is a dynamic and exploratory discipline of science for the fulfillment of sustainable development goals (SDGs), and as a keen researcher and plant biologist, he has explored the putative targets of environmental stress-induced inhibitory responses with scrutinized methodologies and experimental designs. To date, optimized the oxidative stress markers, evaluated the stress-responsive behavior of plant stress hormones, and elucidated its influence on photosynthetic potential, source-sink capacity, growth traits, and defensive molecules under environmental stresses. Understanding these underlying phenomena and plant immune systems will unchain the emerging opportunities to optimize plant stress-responsive behavior for promoting agronomic traits. Dr. Khan has also contributed substantially in revamping the aspects of the education structure to create a new system aligned with the inspirational goals, including SDGs, while building modern but valuable education systems. Also providing career-related counseling to clarify the queries and uncertainty faced by the students during the recruitment process and/or switching the unproductive path.

Educational Background

Ph. D.	Awarded in Dec, 2014	Botany	Aligarh Muslim University, India
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Research Accomplishments

Published Articles	: 101
Books Edited	: 09
Book Chapters	: 15
Citations of Publication	: 12661
H-index	: 54
i10-index	: 93

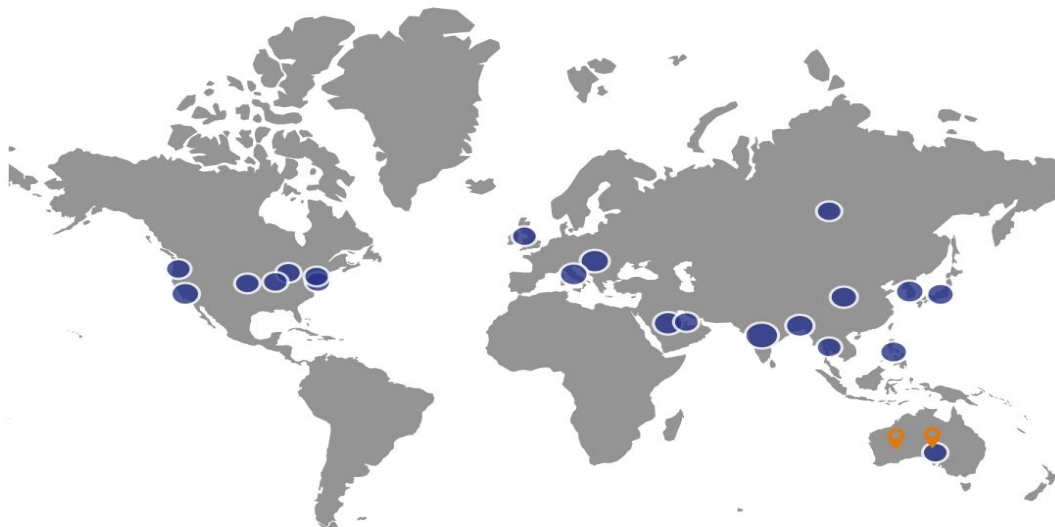
Work Experience

Position held	Institution/University	Duration
Assistant Professor	Department of Botany, Jamia Hamdard, New Delhi, India.	August 2018 to till date.
Deputy Director	Centre for Environment and Sustainable Development (CESD), Jamia Hamdard, New Delhi, India.	August 2023 to till date.
Adjunct Professor	Department of Plant Biotechnology, Korea University, Seoul, South Korea.	February 2025-till date
Adjunct Associate Professor	The UWA Institute of Agriculture, The University of Western Australia, Perth, Australia.	April 2023- till date.
Post-Doctoral Fellow	International Rice Research Institute, Philippines.	February 2016 to August 2018.
Research Associate	National Institute Plant Genome Research, New Delhi, India.	July 2015 to December 2015.

Research Expertise

Crop physiology; Environmental stresses; Molecular biology; Nutrient and food security; Plant growth regulators; Plant omic(s) strategies; Sustainable Development

International Collaborators



Current Research Projects

- To disseminate the potential impacts of plant growth regulators under environmental stressors in staple crops.
- To provide plant growth, physiological and yield tolerance against several environment contaminants and toxicants.
- To promote multi-omic(s) strategies in plant systems for enhancing agronomic productivity under limiting environment conditions.
- Characterizing multi-environment trials to reveal the plasticity of agronomic traits-linked gene(s) with climatic variations.
- To identify the quantitative trait loci hotspots influencing agronomic traits under abiotic stress conditions.
- To initiate multivariate analysis of agronomic traits promoting crop protection under extreme regimes.

Expertise related to UN Sustainable Development Goals



Dr. Khan believes that SDGs could be achieved through gaining the depth of corporate responsibility comprising the decisive analyses of the complex and incompatible ethics of the multi-university, particularly in the democratic nation states. He thinks that it is vital to first recognize the incommensurable values of the traditional, vocational commitment to teaching and research as goods in the education and research communities. His dedication towards his work has highlighted these neoliberal values, which will foster the working and collaborative environment promoting entrepreneurial income generating universities, and encourage research scholars to pursue funded research projects. This will help to develop research-oriented activities consistent with corporate personhood requirements that universities abide by a commitment to corporate responsibility. This could be achieved with the conjecture-based assumption, which states that universities are multi-attributed, multi-aimed corporate entities, which aim to resolve problematic issues through monitoring and evaluation of the corporate responsibilities of such entities. From his perspective, the education system should be examined first, followed by holistic practices of university corporate responsibilities falling within the terms of individual and social SDGs. Addressing problematic concerns will aid in harmonizing students as well as educators' life qualities, which should be presented and discussed with the legitimate and policy maker groups assigned in the University. In addition,

special attention should be paid for escalating the usefulness for monitoring the e-waste generated, disposable and dumping in confined areas using high quantitative measures delimiting the risk of biohazards in research institutions.

Awards and Honours

S. No.	Name of the Awards	Awarding Body	Year
1.	Adjunct Professor	Department of Plant Biotechnology, Korea University, Seoul, South Korea	2025
2.	Member	The National Academy of Sciences, India (NASI)	2024
3.	Young Associates	Indian National Science Academy (INSA)	2024
4.	R. H. Dastur Gold Medal	Indian Society for Plant Physiology (ISPP), India	2023
5.	Adjunct Associate Professor	The UWA Institute of Agriculture, The University of Western Australia, Perth, Australia	2023
6.	Highly Cited Researcher (Plant and Animal Science)	Clarivate (Web of Science)	2023, 2022
7.	Recognized in the list of Top 2% Scientists of the World	Elsevier Data Repository	2023, 2022, 2021
8.	Interdisciplinary Research for Sustainable Development (IRSD) Prominent Young Scientist	10th International Conference on Interdisciplinary Research for Sustainable Development (IRSD), Jamia Hamdard, New Delhi, organized by International Institute of Organized Research - I2OR (A Registered MSME with Ministry of MSME, Government of India and Green ThinkerZ (A Registered Society with Government of Punjab, India in association with Centre for Smart Modern Construction, Western Sydney University, Australia, Jamia Hamdard, New Delhi and IIT Bombay Spoken Tutorial, India	2023
9.	Young Scientist Platinum Jubilee Award	The National Academy of Sciences, India (NASI)	2021
10.	Young Scientist Award	Indian Society of Plant Physiology (ISPP), India	2018
11.	Resource person for Quality Breeder and Foundation Seed Course	International Rice Research Institute (IRRI), Philippines	
12.	Junior Scientist of the Year	National Environmental Science Academy (NESA), India	2017
13.	Vice President, SNEHA committee	International Rice Research Institute (IRRI), Philippines	2017-2018
14.	Chairperson in National Seminar on Environmental issues	Barkatullah University, Bhopal, India	2017
15.	Member Review of GEO-6 for Youth-Asia-Pacific	United Nation (UN)	
16.	Outstanding Reviewer, Plant Physiology and Biochemistry	French Society of Plant Physiology	2016

17.	Reviewer for the grant proposal	The United Arab Emirates University, UAE	
18.	Thesis Reviewer	University of Philippines Los Banos, Philippines	
19.	National Post-Doctoral Fellowship	SERB-Department of Science and Technology, Government of India	
20.	SERB-Young Scientist program	SERB-Department of Science and Technology, Government of India	2015
21.	Young Scientist of the Year	International Conference on Environment and Ecology, Kolkata, India	2014
22.	SERB-DST, Travel Grant	SERB-DST	2014
23.	Senior Research Fellowship	UGC-MANF, India	2012
24.	Junior Research Fellowship	UGC-MANF, India	2010

Editorial Service

S. No.	Editorial Role	Journal	Year
1.	Section Editor	Plant and Soil	2023-to date
2.	Associate Editor	Journal of Plant Growth Regulation	2023-to date
3.	Associate Editor	3-Biotech	2023-to date
4.	Associate Editor	Plant Physiology Reports	2023-to date
5.	Guest Editor	Agriculture “The Role of Phytohormones in Crop Plant Growth and Development”	2023
6.	Research Topic Editor	Frontiers in Plant Science “Ethylene: A key regulatory molecule in plants- II”	2022
7.	Guest Editor	Sustainability "Sustainable Agricultural Approaches in Developing Climate Smart Crops"	2022
8.	Guest Editor	Plant Physiology and Biochemistry “Perspective of ethylene biology for abiotic stress acclimation in plants”	2021
9.	Guest Editor	Plant and Soil “Beneficial elements in plants: developing resilience under stressful environments”	2021
10.	Research Topic Editor	Frontiers in Plant Science “Improvement of Rice Through “-omics” Approaches”	2021
11.	Research Topic Editor	Frontiers in Plant Science “Plant responses to the dark scenario”	2020
12.	Guest Editor	Journal of Plant Growth Regulation “Salicylic acid: A versatile signaling molecule in plants”	2020
13.	Advisory Editorial Board Member	3-Biotech, Springer-Nature	2020-2021
14.	Editorial Manager Board	Botanical Society of America	2018-2019
15.	Research Topic Editor	Frontiers in Plant Science “Ethylene: A key regulatory molecule in plants”	2017

Member of Scientific Societies

Name of the Membership(s)	Awarding Body	Year
Life Member (Membership No.: L-809)	Society for Plant Biochemistry and Biotechnology, India	2017
Life Member (Membership No.: 1921)	National Environmental Science Academy, India	2017
Life Member (Membership No./ SEC Registration No.: 95469)	The Crop Science Society of the Philippines, Philippines	2018
Life Member (Membership No.: LM-1125)	Indian Society of Plant Physiology, India	2019
Life Member (Membership No.: 918/L/2024)	International Society of Environmental Botanists CSIR-National Botanical Research Institute	2024

List of Publications

[2025]

1. Sarika Kumari, Pravneet Kaur, Moksh Mahajan, Soumya Ranjan Nayak, Risheek Rahul Khanna, Md Tabish Rehman, Mohamed F. AlAjmi, **M. Iqbal R. Khan***. 2025. γ -aminobutyric acid (GABA) supplementation modulates phosphorus retention, production of carbon metabolites and antioxidant metabolism under arsenic toxicity in wheat. Plant Science [Impact Factor: 4.2] ***Corresponding author**
2. Sayeda Khatoon, Sarika Kumari, Muskan Gandhi, Kritika Nagarwal, Rudra Narayan Sahoo, Noushina Iqbal, **M. Iqbal R. Khan***. 2025. Appraising diverse metrics of nitric oxide in salt stress tolerance of high yielding wheat genotypes. Nitric Oxide. 156: 82-93 [Impact Factor: 3.2] ***Corresponding author**
3. Moksh Mahajan, Rudra Narayan Sahoo, **M. Iqbal R. Khan***. 2025. Lanthanum supplementation with abscisic acid modulates root architecture, root nitric oxide biosynthesis and root defense system in wheat (*Triticum aestivum*). Physiologia Plantarum. 177: e70126 [Impact Factor: 5.4] ***Corresponding author**
4. **M. Iqbal R. Khan***, Mohammad Irfan, Peter Poor. 2025. Jasmonates Action in Plants. Journal of Plant Growth Regulation <https://doi.org/10.1007/s00344-024-11599-y> [Impact factor- 3.9] ***Corresponding author**

[2024]

5. Pravneet Kaur, Moksh Mahajan, Moksh Mahajan, Himanshi Gambhir, Adiba Khan, **M. Iqbal R. Khan***. 2024. Rare earth metallic elements in plants: Assessing benefits, risks and mitigating strategies. Plant Cell Reports. 43, 216 [Impact factor- 5.3] ***Corresponding author**
6. Faroza Nazir, Sayeda Khatoon, Moksh Mahajan, Sarika Kumari, Mohamed F AlAjmi, Md Tabish Rehman, **M. Iqbal R. Khan***. 2024. Enhanced arsenic stress tolerance in landrace and improved rice (*Oryza sativa*) cultivars through modulation of gibberellic acid (GA₃) synthesis and antioxidant metabolism via phosphorus and silicon supplementation. Plant Stress 100511. [Impact factor- 5.0] ***Corresponding author**

7. **M. Iqbal R. Khan***, Autar Mattoo, Nafees Khan, Antonio Ferrante, Maren Lilian Müller **2024**. Perspective of ethylene biology for abiotic stress acclimation in plants. *Plant Physiology and Biochemistry*, 210, 108284. **[Impact factor- 6.5] *Corresponding author**
8. Sayeda Khatoon, Moksh Mahajan, Sarika Kumari, Noushina Iqbal, Iram Wahid, **M. Iqbal R. Khan***. **2024**. Green-synthesized gold nanoparticles induces adaptation in photosynthetic responses, starch-sucrose and nitrogen metabolism and yield traits of salt-stressed mustard plants. *Clean Technologies and Environmental Policy*. Accepted. **[Impact factor- 4.3] *Corresponding author**
9. Sarika Kumari, Faroza Nazir, Apoorva Singh, Hyda Haroon, Nahida Rashid Khan, Rudra Narayan Sahoo, Mohammed Albaqami*, Kadambot H. M. Siddique, **M. Iqbal R. Khan***. **2024**. γ -aminobutyric acid (GABA) strengthened nutrient accumulation, defense metabolism, growth and yield traits against salt and endoplasmic reticulum stress conditions in wheat plants. *Plant and Soil*, 1-21. **[Impact factor- 4.9] *Corresponding author**
10. Faroza Nazir, Poor Peter, Ravi Gupta, Sarika Kumari, Kashif Nawaz, **M. Iqbal R. Khan*** **2024**. Plant hormone ethylene: a leading edge in conferring drought stress tolerance. *Physiologia Plantarum*, 176(1), p.e14151. **[Impact factor- 6.4] *Corresponding author**
11. Sarika Kumari, Faroza Nazir, Chirag Maheshwari, Harmanjit Kaur, Ravi Gupta, Kadambot HM Siddique, and **M. Iqbal R. Khan***. **2024**. Plant hormones and secondary metabolites under environmental stresses: Enlightening defense molecules. *Plant Physiology and Biochemistry*, 108238. **[Impact factor- 6.5] *Corresponding author**

[2023]

12. Tanasvi Seth, Sejal Asija, Sayeda Khatoon, Noushina Iqbal, Princi, Shahid Umar*, **M. Iqbal R. Khan***. **2023**. A new perspective of melatonin in stress tolerance through regulation of nutrients. *South African Journal of Botany* 163, 316-329. **[Impact factor- 3.1]*Corresponding author**
13. Komal Tyagi, Prathap V., Prachi Tyagi, Arti Kumari, Rakesh Pandey, Nand Lal Meena, **M. Iqbal R. Khan**, ArunaTyagi, Chirag Maheshwari*. **2023**. Seed priming with melatonin induces rhizogenesis and modulates physio-biochemical traits in high-yielding rice (*Oryza sativa* L.) genotypes. *South African Journal of Botany* 163, 191-200. **[Impact factor- 3.1]**
14. Faroza Nazir, Badar Jahan, Sarika Kumari, Noushina Iqbal, Mohammed Albaqami, Adriano Sofo, and **M. Iqbal R. Khan***. **2023**. Brassiosteroid modulates ethylene biosynthesis and antioxidant metabolism to protect rice (*Oryza sativa*) against heat stress-induced inhibition of source-sink capacity, photosynthetic and growth attributes. *Journal of Plant Physiology* 289, 154096. **[Impact factor- 4.3] *Corresponding author**
15. **M. Iqbal R. Khan**, Mohammad Irfan, and Ravi Gupta. 2023. Improving crop nutritional security for sustainable agriculture in the era of climate change. *Frontiers in Plant Science* 14, 1292264. **[Impact factor- 5.6]**
16. Faroza Nazir, Badar Jahan, Noushina Iqbal, Ashish B. Rajurkar, Manzer H. Siddiqui, and **M. Iqbal R. Khan***. **2023**. Methyl jasmonate influences ethylene formation, defense systems, nutrient homeostasis and carbohydrate metabolism to alleviate arsenic-induced stress in rice (*Oryza sativa*). *Plant Physiology and Biochemistry* 107990. **[Impact factor- 6.5] *Corresponding author**
17. Sarika Kumari, Harmanjit Kaur, Ayushi Jain, Sofi J. Hussain, Manzer H. Siddiqui, and **M. Iqbal R. Khan***. **2023**. Hydrogen sulfide modulates ascorbate-glutathione system, osmolytes production, nutrient content and yield responses under salt stress in wheat. *South African Journal of Botany* 160, 295-308. **[Impact factor- 3.1] *Corresponding author**
18. Moksh Mahajan, Faroza Nazir, Badar Jahan, Manzer H. Siddiqui, Noushina Iqbal, and **M. Iqbal R. Khan***. **2023**. Salicylic acid mitigates arsenic stress in Rice (*Oryza sativa*) via modulation of nitrogen–

sulfur assimilation, ethylene biosynthesis, and defense systems. Agriculture 13, 1293. **[Impact factor- 3.6] *Corresponding author**

19. **M. Iqbal R. Khan***, FarozaNazir, Chirag Maheshwari, Priyanka Chopra, Himanshu Chhillar, Nese Sreenivasulu*. **2023**. Mineral nutrients in plants under changing environments: a road to future food and nutrition security. Plant Genome e20362 **[Impact factor- 4.2] *Corresponding author**
20. Sarika Kumari, Faroza Nazir, Kajal Jain, **M. Iqbal R. Khan***. **2023**. GABA and potassium modulates defence systems, assimilation of nitrogen and carbon, and yield traits under salt stress in wheat. Journal of Plant Growth Regulation, 1-20. **[Impact factor- 4.8] *Corresponding author**
21. Harmanjit Kaur, FarozaNazir, Sofi J. Hussein, Rupinder Kaur, Ashish Rajurkar, Sarika Kumari, Manzer H. Siddiqui, Moksh Mahajan, Sayeda Khatoon, **M. Iqbal R. Khan***. **2023**. Gibberellic acid alleviates cadmium induced seed germination inhibition through modulation of carbohydrate metabolism and antioxidant capacity in mung bean seedlings. Sustainability 15(4), 3790 **[Impact factor- 3.9] *Corresponding author**
22. Faroza Nazir, Moksh Mahajan, Sayeda Khatoon, Mohammed Albaqami, Farha Ashfaq, Himanshu Chhillar, Priyanka Chopra and **M. Iqbal R. Khan***. **2023**. Sustaining nitrogen dynamics: A critical aspect for improving salt tolerance in plants. Frontiers in Plant Science 14, 1087946. **[Impact factor- 5.6] *Corresponding author**
23. **M. Iqbal R. Khan***, Khan, N.A., Sofo, A. Kadambot HM Siddique. **2023**. Beneficial elements in plants: developing resilience under stressful environments. Plant and Soil 486, 1–5. **[Impact factor- 4.9] *Corresponding author**
24. Khan NA, Ferrante A, **M. Iqbal R. Khan**, and Poor P. **2023**. Ethylene: A key regulatory molecule in plants, Volume II. Frontiers in Plant Science 14, 1222462. **[Impact factor- 5.6]**
25. Faroza Nazir, Sarika Kumari, Moksh Mahajan, and **M. Iqbal R. Khan***. **2023**. An explicit story of plant abiotic stress resilience: Overtone of selenium, plant hormones and other signaling molecules. Plant and Soil, 486, 135–163 **[Impact factor- 4.9] *Corresponding author**
26. **M. Iqbal R. Khan***, Sarika Kumari, Faroza Nazir, Risheek Rahul Khanna, Ravi Gupta, Himanshu Chhillar. **2023**. Defensive role of plant hormones in advancing abiotic stress-resilient rice plant. Rice Science, 30, 15-35. **[Impact factor- 4.8] *Corresponding author**

[2022]

27. Ravi Gupta, **M. Iqbal R. Khan**, Jose Luis Gonzalez Hernandez, Wei Wang, and Laurence Veronique Bindschedler. **2022**. Improvement of rice through “-omics” approaches. Frontiers in Plant Science 1775. **[Impact factor- 5.6]**
28. **M. Iqbal R. Khan**, Poor, P. and Janda, T., **2022**. Salicylic Acid: A Versatile Signaling Molecule in Plants. Journal of Plant Growth Regulation 1-4. **[Impact factor- 4.8]**
29. Czékus, Z., Szalai, G., Tari, I., **M. Iqbal R. Khan**, and Poór, P., **2022**. Role of ethylene in ER stress and the unfolded protein response in tomato (*Solanum lycopersicum* L.) plants. Plant Physiology and Biochemistry 181, 1-11. **[Impact factor- 6.5]**
30. SarikaKumari, Risheek Rahul Khanna, Faroza Nazir, Mohammed Albaqami, Himanshu Chhillar, Iram Wahid, and **M. Iqbal R. Khan***. **2022**. Bio-synthesized nanoparticles in developing plant abiotic stress resilience: A new boon for sustainable approach. International Journal of Molecular Sciences 23, 4452. **[Impact factor-5.6] *Corresponding author**
31. Peter Poór, Kashif Nawaz, Ravi Gupta, Farha Ashfaq, and **M. Iqbal R. Khan***. **2022**. Involvement of ethylene in the regulation of heat stress tolerance in plants. Plant Cell Reports 41, 675-698. **[Impact factor-6.2] *Corresponding author**
32. Harmanjit Kaur*, Sofi J. Hussain, Gursharan Kaur, Peter Poor, Saud Alamri, Manzer H. Siddiqui, and **M. Iqbal R. Khan***. **2022**. Salicylic acid improves nitrogen fixation, growth, yield and antioxidant

defence mechanisms in Chickpea genotypes under salt stress. *Journal of Plant Growth Regulation* 41(5), 2034-2047. **[Impact factor- 4.8] *Corresponding author**

33. Noushina Iqbal, Mehar Fatma, Harsha Gautam, Zebus Sehar, Faisal Rasheed, **M. Iqbal R. Khan**, Adriano Sofo, and Nafees A. Khan. **2022**. Salicylic acid increases photosynthesis of drought grown mustard plants effectively with sufficient-N via regulation of ethylene, abscisic acid, and nitrogen-use efficiency. *Journal of Plant Growth Regulation* 41(5), 1966-1977. **[Impact factor- 4.8]**
34. Iram Wahid, Pratibha Rani, SarikaKumari, Rafiq Ahmad, Sofi J.Hussain, Saud Alamri, NirmalyaTripathy, **M. Iqbal R. Khan***. **2022**. Biosynthesized gold nanoparticles maintained nitrogen metabolism, nitric oxide synthesis, ions balance, and stabilizes the defense systems to improve salt stress tolerance in wheat. *Chemosphere* 287, 132142. **[Impact factor- 8.8] *Corresponding author**
35. Kaur, H., Hussain, S.J., Al-Huqail, A.A., Siddiqui, M.H., Al-Huqail, A.A., and **M. Iqbal R. Khan***, **2022**. Hydrogen sulphide and salicylic acid regulate antioxidant pathway and nutrient balance in mustard plants under cadmium stress. *Plant Biology* 24(4), 660-669. **[Impact factor- 3.9] *Corresponding author**

[2021]

36. Riyazuddin, R., Nisha, N., Ejaz, B., **M. Iqbal R. Khan**, Kumar, M., Ramteke, P.W., and Gupta, R., **2021**. A comprehensive review on the heavy metal toxicity and sequestration in plants. *Biomolecules* 12(1), 43. **[Impact factor-5.5]**
37. **M. Iqbal R. Khan***, Badar Jahan, Mohamed F. AlAjmi, MdTabishRehman, Noushina Iqbal, Mohammad Irfan, Zebus Sehar, and Nafees A. Khan*. **2021**. Crosstalk of plant growth regulators protects photosynthetic performance from arsenic damage by modulating defense systems in rice. *Ecotoxicology and Environmental Safety* 222, 112535. **[Impact factor-6.8] *Corresponding author**
38. Sarika Kumari, Himanshu Chhillar, Priyanka Chopra, Risheek Rahul Khanna, and **M. Iqbal R. Khan***. **2021**. Potassium: A track to develop salinity tolerant plants. *Plant Physiology and Biochemistry* 167, 1011-1023. **[Impact factor- 6.5] *Corresponding author**
39. Iqbal, Z., Iqbal, M.S., **M. Iqbal R. Khan**, and Ansari, M.I., **2021**. Toward integrated multi-omics intervention: rice trait improvement and stress management. *Frontiers in Plant Science*, 12, 741419. **[Impact factor- 5.6]**
40. **M. Iqbal R. Khan***, Priyanka Chopra, Himanshu Chhillar, Mohammad Abass Ahanger, Sofi Javed Hussain, and Chirag Maheshwari. **2021**. Regulatory hubs and strategies for improving heavy metal tolerance in plants: Chemical messengers, omics and genetic engineering. *Plant Physiology and Biochemistry* 164: 260-278. **[Impact factor- 6.5] *Corresponding author**
41. Sehar, Z., Iqbal, N., **M. Iqbal R. Khan**, Masood, A., Rehman, M., Hussain, A., AlAjmi, M.F., Ahmad, A., and Khan, N.A., **2021**. Ethylene reduces glucose sensitivity and reverses photosynthetic repression through optimization of glutathione production in salt-stressed wheat (*Triticum aestivum* L.). *Scientific Reports*, 11, 1-12. **[Impact factor-4.6]**
42. **M. Iqbal R. Khan***, Sudhakar Reddy Palakolanu, Priyanka Chopra, Ashish B. Rajurkar, Ravi Gupta, Naushina Iqbal, and Chirag Maheshwari. **2021**. Improving drought tolerance in rice: Ensuring food security through multi-dimensional approaches. *Physiologia Plantarum*. 172, 645–668. **[Impact factor- 6.4] *Corresponding author**
43. Hussain, S.J., Khan, N.A., Anjum, N.A., Masood, A., and **M. Iqbal R. Khan**. **2021**. Mechanistic elucidation of salicylic acid and sulphur-induced defence systems, nitrogen metabolism, photosynthetic, and growth potential of mungbean (*Vigna radiata*) under salt stress. *Journal of Plant Growth Regulation* 40, 1000-1016. **[Impact factor- 4.8]**
44. **M. Iqbal R. Khan***, Nafees A. Khan*, Badar Jahan, Vaishali Goyal, Jasie Hamid, Samar Khan, Noushina Iqbal, Saud Alamri, Manzer H. Siddiqui. **2021**. Phosphorus supplementation modulates nitric

oxide biosynthesis and stabilizes defense system to improve arsenic stress tolerance in mustard. **Plant Biology** 23, 152–161. **[Impact factor- 3.9] *Corresponding author**

45. **M. Iqbal R. Khan***, Syed Uzma Jalil, Priyanka Chopra, Himanshu Chhillar, Antonio Ferrante, Nafees A. Khan, and Mohammad Israil Ansari*. **2021**. Role of GABA in plant growth, development and senescence. *Plant Gene* 26, 100283. ***Corresponding author**
46. **M. Iqbal R. Khan***, Farha Ashfaq, Himanshu Chhillar, Mohammad Irfan, and Nafees A. Khan*. **2021**. The intricacy of silicon, plant growth regulators and other signaling molecules for abiotic stress tolerance: An entrancing crosstalk between stress alleviators. *Plant Physiology and Biochemistry*. 162, 36–47. **[Impact factor- 6.5] *Corresponding author**
47. Risheek Rahul Khanna, Badar Jahan, Noushina Iqbal, Nafees A. Khan, Mohamed F. AlAjmi, Md Tabish Rehman, and **M. Iqbal R. Khan***. **2021**. GABA reverses salt-inhibited photosynthetic and growth responses through its influence on NO-mediated nitrogen-sulfur assimilation and antioxidant system in wheat. *Journal of Biotechnology* 325, 73–82. **[Impact factor- 4.1] *Corresponding author**
48. Farhan Ahmad, Aisha Kamal*, Ananya Singh, Farha Ashfaq, Saud Alamri, Manzer H. Siddiqui, and **M. Iqbal R. Khan***. **2021**. Seed priming with gibberellic acid induces high salinity tolerance in *Pisum sativum* through antioxidant system, secondary metabolites and upregulation of antiporter genes. *Plant Biology*. 23, 113–121. **[Impact factor- 3.9] *Corresponding author**

[2020]

49. Rafiq Ahmad, Marya Khan, Mohammad Rizwan Khan, Nirmalya Tripathy, **M. Iqbal R. Khan**, Prabhash Mishra, Mansoor Ali Syed, and Ajit Khosla. **2020**. Nano-donuts shaped nickel oxide nanostructures for sensitive non-enzymatic electrochemical detection of glucose. *Microsystem Technologies* 1-6. **[Impact factor- 2.1]**
50. Saima Liaqat, Shahid Umar, Peer Saffeuallah, Noushina Iqbal, Tariq O. Siddiqui, and **M. Iqbal R. Khan***. **2020**. Protective Effect of 24-epibrassinolide on barley plants growing under combined stress of salinity and potassium deficiency. *Journal of Plant Growth Regulation* 39, 1543–1558. **[Impact factor-4.8] *Corresponding author**
51. Iram Wahid, Sarika Kumari, Rafiq Ahmad, Sofi J. Hussain, Saud Alamri, Manzer H. Siddiqui and **M. Iqbal R. Khan***. **2020**. Silver nanoparticle regulates salt tolerance in wheat through changes in ABA concentration, ion homeostasis, and defense systems. *Biomolecules* 10, 1506. **[Impact factor-5.5] *Corresponding author**
52. Saud Alamri, Hayssam M. Ali, **M. Iqbal R. Khan**, Vijay Pratap Singh, and Manzer H. Siddiqui. **2020**. Exogenous nitric oxide requires endogenous hydrogen sulfide to induced the resilience through sulfur assimilation in tomato seedlings under hexavalent chromium toxicity. *Plant Physiology and Biochemistry* 155, 20–34. **[Impact factor- 6.5]**
53. **M. Iqbal R. Khan***, Alice Trivellini, Himanshu Chhillar, Priyanka Chopra, Antonio Ferrante, Nafees A. Khan, and Abdelbagi M. Ismail. **2020**. The significance and functions of ethylene in flooding stress tolerance in plants. *Environmental and Experimental Botany* 179, 104188. **[Impact factor-5.7] *Corresponding author**
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