

Short CV

DR. MAHMOOD-UR-RAHMAN ANSARI

Associate Professor (Tenured),
Department of Bioinformatics and Biotechnology,
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PERSONAL INFORMATION

Father's Name: Hafiz Muhammad Rafique
Nationality: Pakistani
NIC No.: 33202-1208308-9
Date of Birth: April 06, 1981
Marital Status: Married (3 Kids; Javeria 14, Maimona 13 and Ahmad 7 years)

ACADEMIC QUALIFICATIONS

Institution	Degree	Year (s)	Field of Study
National Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan.	PhD	2006-2011	Molecular Biology
National Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan.	M. Phil.	2004-2006	Molecular Biology
University of Agriculture, Faisalabad, Pakistan.	B. Sc. (Hons.) Agriculture.	1999-2003	Plant Breeding & Genetics

RESEARCH/TEACHING EXPERIENCE

Institution	Position	Duration
Department of Bioinformatics and Biotechnology, Government College University, Faisalabad.	Associate Professor	Dec-2018- to date
South Kazakhstan Pedagogical University, Shymkent, Kazakhstan	Visiting Professor	November 2023
Department of Bioinformatics and Biotechnology, Government College University, Faisalabad.	Assistant Professor	Dec-2011 to Dec-2018
Department of Biotechnology, Mirpur University of Science & Technology (MUST), Mirpur, AJK	Assistant Professor	Oct 2011- Dec 2011
National Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan.	Research Associate/ Research Fellow	Oct 2008- Oct 2011
National Institute of Deafness and other	Visiting Fellow	Oct. 2007-Sep.

Communication Disorders, National Institutes of Health, USA.		2008
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RESEARCH PROJECTS

S. No.	Title of Research Project	PI/Co-PI	Funding Agency
1.	Optimization of the functioning of decentralized biological waste water treatment systems in the pharmaceutical and cosmetics industry (Completed)	Leading Researcher	Ministry of Education and Science, Republic of Kazakhstan (AP09563499)
2.	Transcriptional profiling of wax biosynthesis genes to search for drought tolerant sunflower cultivars (Completed)	PI	Higher Education Commission, Islamabad (Amount: PKR 2.049 millions)
3.	In silico Identification of Drought Tolerant Transcript (s) in Crop Plants (Completed)	PI	Higher Education Commission, Islamabad (Amount: PKR 0.500 millions)
4.	The role of nitric oxide in liver injury (Completed)	Co-PI	Higher Education Commission, Islamabad (Amount: PKR 0.500 millions)
5.	Screening of indigenous sunflower hybrids against drought stress (Completed)	PI	Government College University, Faisalabad (Amount: PKR 0.100 millions)
6.	Virtual Screening and Genetic Transformation of Stem Rust Resistant Genes in wheat (<i>Triticum aestivum</i>) for Sustainable Resistance against Stem Rust (Completed)	Co-PI	Higher Education Commission, Islamabad (Amount: PKR 3.69 millions)
7.	Genetic transformation of pathogenesis-related genes in wheat (<i>Triticum aestivum</i>) for sustainable resistance against advance stem rust strains (Completed)	Co-PI	Higher Education Commission, Islamabad (Amount: PKR 13.609 millions)
8.	Technology for obtaining new types of organic fertilizers based on the utilization of phosphorus-containing waste to increase the yield of vegetable crops in the Turkestan region (Completed)	Leading Researcher	Ministry of Agriculture, Republic of Kazakhstan.
9.	Development of innovative technology of eco-constructive modules for sanitation of urban environment (On Going)	Leading Researcher	Ministry of Science and High Education, Republic of Kazakhstan (Grant Number AP23484853).

PATENT REGISTERED

Patent No.: 7697

Method of producing a combined bacterial-humic preparation
Registered in: Republic of Kazakhstan

NATIONAL AND INTERNATIONAL TRAININGS/CONFERENCES

TRAININGS:

International: 12

National: 08

PROFESSIONAL COURSES:

International: 10

National: 03

CONFERENCES:

International: 74

National: 39

ABSTRACTS PUBLISHED:

International: 84

National: 53

INVITED LECTURES

1. **Expression analysis of KCS genes in sunflower under drought stress**, June 26, 2024, M. Auezov South Kazakhstan University, Shymkent and University of Adam Mickiewicz, Poland (**10th Polish – Kazakh Meeting – relationship between Chemistry and Biology**)
2. **Recent developments in Plant Biotechnology: a way forward for sustainable future**, May 4, 2014, Biotechnology Research Centre, Al-Nahrain University, Iraq
3. **Expression profiling of Nickel responsive genes in sunflower under stress conditions**, November 23-24, 2023, Akhmet Yassawi University, Turkestan, Kazakhstan (**International Turkic World Biology Congress**)
4. **Applications of Bioinformatics in Plant Genome Analysis**, February 23-25, 2022, National Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan (**Hands on Training Workshop on Structural Bioinformatics Tools**)
5. **Genetically Modified Plants: prospects and promises**, October 31, 2021, Biotechnology Research Centre, Al-Nahrain University, Iraq (**Symposium on GMO...present and future**)
6. **Applications of Bioinformatics in Plant Sciences**, November 21-22, 2019, Department of Botany, University of Gujrat, Pakistan (**1st National Workshop on “Emerging trends in Bioinformatics”**)
7. **Risk assessment of Genetically Modified Crops: current status in Pakistan**, May 12-13, 2018, Academy of Science of Turkmenistan, Ashgabat, Turkmenistan (**International Scientific Conference “Science, Technology and Innovative technologies in the prosperous epoch of the powerful state”**)
8. **Bioinformatics applications in animal genome and proteome analysis**, February 20-21, 2018, University of Veterinary and Animal Sciences, Lahore, Pakistan (**International Conference on OMICS for Animal Sciences: Opportunities and Challenges**)
9. **Ethics in Life Science Research**, July 5-6, 2017, University of Veterinary and Animal Sciences, Lahore, Pakistan (**International Conference on Bioethics in Molecular Biology and Biotechnology**)
10. **Bioinformatics approaches in agricultural sciences with a focus on cotton**, April 11-12, 2016, Renaissance Hotel, Kuala Lumpur, Malaysia (**3rd Plant Genomics Congress: Asia**)
11. **Bioinformatics applications in cotton genome and proteome analysis for drought stress tolerance**, April 05-09, 2016, Faculty of Agriculture, Benha University, Moshtohor, Egypt (**3rd International Conference on Biotechnology Applications in Agriculture**).

12. **Homology Modeling and Structure Prediction of Stem Rust Resistant Protein**, December 04-07, 2014, The Islamia University, Bahawalpur, Pakistan (**12th International Conference of Pakistan Society for Biochemistry and Molecular Biology – PSBMB**).
13. **Applications of Bioinformatics in Plant Sciences**, October 20-25, 2013, International Islamic University – Islamabad, Pakistan (**2nd Annual Computational Science Conference**).
14. **Computational Biology in Pakistan – Current Status and Future Challenges**, November 08, 2012, COMSATS Institute of Information Technology, Islamabad, Pakistan (**National Symposium**).

CONFERENCES/SYMPOSIA/WORKSHOPS ORGANIZED

1. **5th National Symposium on Advances in Biotechnology: towards circular bioeconomy**, February 27-28, 2023, at Department of Bioinformatics and Biotechnology, GC University, Faisalabad
2. Two-Day Workshop on **“Phylogenetic analysis: methods and applications”** April 15-16, 2019, at Department of Bioinformatics and Biotechnology, GC University, Faisalabad
3. Model and Poster Competition on **“World DNA Day”**, April 25, 2019, at Department of Bioinformatics and Biotechnology, GC University, Faisalabad.
4. Two-Day Workshop on **“Phylogenetic analysis: methods and applications”** April 15-16, 2019, at Department of Bioinformatics and Biotechnology, GC University, Faisalabad.
5. Model and Poster Competition on **“World DNA Day”**, April 25, 2018, at Department of Bioinformatics and Biotechnology, GC University, Faisalabad.
6. One Day Seminar on **“Cell Culture & Protein Biology Innovations”** February 20, 2018, at Department of Bioinformatics and Biotechnology, GC University, Faisalabad.
7. Model and Poster Competition on **“World DNA Day”**, April 25, 2017, at Department of Bioinformatics and Biotechnology, GC University, Faisalabad.
8. **2nd National Training Course “Molecular Methods in Biotechnology”**, at Department of Bioinformatics and Biotechnology, March 13-17, 2017, GC University Faisalabad.
9. **3rd National Symposium on Advancements in Biotechnology**, December 20-23, 2016, at Department of Bioinformatics and Biotechnology, GC University, Faisalabad
10. **3rd National Computational Science Conference (NCSC)**, May 13-15, 2015, at Institute of Space Technology, Islamabad, Joint Venture of Pakistan Society for Computational Biology, Institute of Space Technology & GC University – Faisalabad.
11. **1st National Training Course “Molecular Methods in Biotechnology”**, December 08-12, 2014, Joint Venture of Department of Bioinformatics and Biotechnology and Office of Research, Innovation and Commercialization, GC University Faisalabad.
12. **1st International Conference on Applied Chemical, Biological and Aquatic Sciences**, February 18-20, 2014, Joint Venture of Department of Bioinformatics and Biotechnology, Department of Applied Chemistry and Department of Zoology, Wildlife & Fisheries, GC University Faisalabad.
13. **One Day Symposium on “Prospects for A Glorious Pakistan: Role of Emerging Technologies”** December 12, 2013, Joint Venture of Department of Bioinformatics and Biotechnology and Department of Applied Chemistry, GC University Faisalabad.
14. **2nd Annual Computational Science Conference**, October 20-25, a joint venture of Pakistan Society for Computational Biology and International Islamic University, Islamabad.

15. **New Horizons and Recent Advances in Chemical and Biological Sciences**, February 14, 2013, Joint Venture of Department of Bioinformatics and Biotechnology and Department of Applied Chemistry, GC University Faisalabad.
16. **One Day Hands on Training on “Basic Bioinformatics Skills”**, May 11, 2012, Department of Bioinformatics and Biotechnology, GC University, Faisalabad.
17. **One Day Symposium on “Applications of Biotechnology in Health and Agriculture”**, March 28, 2012, Department of Bioinformatics and Biotechnology, GC University, Faisalabad
12. **Member National Core Committee**, High School Summer Science Research Project, PSCB, Pakistan (http://pscb.org.pk/rist/info/view/RIST_team)

PUBLICATIONS

1. Sadaqat, M., Fatima, K., Azeem, F., Shaheen, T., **Mahmood-ur-Rahman**, Ali, T., Al-Megrin, W. A. I., & ul Qamar, M. T. (2024). Computational analysis and expression profiling of two-component system (TCS) gene family members in mango (*Mangifera indica*) indicated their roles in stress response. *Functional Plant Biology*, 51(7).
2. Muhammad Nawaz, Iqbal Hussain, **Mahmood-ur-Rehman**, Muhammad A. Ashraf and Rizwan Rasheed, 2024. Salicylic acid and Gemma-Aminobutyric acid mediated regulation of growth, metabolites, antioxidant defense system and nutrient uptake in sunflower (*Helianthus annuus* L.) under Arsenic stress. Dose-response 1-21. DOI: 10.1177/15593258241258407
3. Abdul Samad, Kanval Shaukat, **Mahmood-ur-Rahman**, Hafiz Muhammad Ahmad, Mereen Nizar, Abdul Hakeem, Sajid Fiaz, Hayat Ali Alafari, Areej S. Jalal, Kotb A. Attia, Neva Karatas. 2023. Plant growth regulators ameliorate biochemical and molecular parameters in *Plantago ovate* Forssk. under salt stress. *Turkish Journal of Agriculture and Forestry* 47: 676-687.
4. Z. Afzaal, I. Hussain, Mahmood-ur-Rahman, M. A. Ashraf and S. Riaz. 2023. Ascorbic acid and Vanillic acid application alleviate the lead toxicity in *Lycopersicon esculentum* by modulating key biochemical attributes and antioxidant defense systems. *Russian Journal of Plant Physiology*, 70:129. DOI: 10.1134/S1021443723600769
5. Zahra S, Shaheen T, Qasim M, **Mahmood-ur-Rahman**, Hussain M, Zulfiqar S, Shaukat K, Rehman Mu. 2023. Genome-wide survey of HMA gene family and its characterization in wheat (*Triticum aestivum*). *PeerJ* 11:e14920 DOI 10.7717/peerj.14920
6. Parwsha Zaib, Hafiz Muhammad Ahmad, Safira Attacha, **Mahmood-Ur-Rahman**, Muhammad Rizwan Shafiq, Kousar Parveen, Sajid Fiaz, Kotb A. Attia, Saira Ishaq, Shazia Arif, Asmaa M. Abushady, Muhammad Jawad Umer. 2023. Comparative genomics of light harvesting chlorophyll (LHC) gene family and impact of chlorophyll-A contents under drought stress in *Helianthus annuus*. *Journal of Plant Physiology* 291 (2023) 154136.
7. Abdul Samad, Kanval Shaukat, **Mahmood-ur-Rahman Ansari**, Mereen Nizar, Noreen Zahra, Ambreen Naz, Hafiz Muhammad Waleed Iqbal, Ali Raza, Vladan Pesic, Ivica Djalovic. 2023. Role of foliar spray of plant growth regulators in improving photosynthetic pigments and metabolites in *Plantago ovate* (Psyllium) under salt stress – a field appraisal. *Biocell* 47(3): 523-532.
8. Asima Rasool, Farrukh Azeem, **Mahmood-ur-Rahman**, Muhammad Rizwan, Muhammad Husnain Siddique, Daniyah Habiballah Bay, Najat Binothman, Najla Amin T. Al Kashgry and Sameer H. Qari. 2023. Omics assisted characterization of two-component system

genes from *Gossypium raimondaii* in response to salinity and molecular interaction with abscisic acid. *Front. Plant Sci.* 14:1138048. doi: 10.3389/fpls.2023.1138048

9. Fatima Ahmadzai, Kanval Shaukat, Hafiz Mohammad Akram, **Mahmood ur Rehman Ansari**, Noreen Zahra, Abdul Samad, Mereen Nizar, Muhammad Bilal Hafeez, Ali Raza. 2023. Evaluating the Morpho-physiological response of *Stevia* (*Stevia rebaudiana*) to foliar application of plant growth promoters under drought stress. *Gesunde Pflanzen*. <https://doi.org/10.1007/s10343-023-00928-y>

10. P. Zaib, T. Shaheen, M. Hamyat, **Mahmood-ur-Rahman**. 2022. Comparative genomics and expression analysis of KCS genes under drought stress in sunflower (*Helianthus annuus* L.). *Journal of Animal and Plant Sciences*. 32(5) 1385-1393.

11. Ijaz M, **Mahmood-ur-Rahman Ansari**, Alafari HA, Iqbal M, Alshaya DS, Fiaz S, Ahmad HM, Zubair M, Ramzani PMA, Iqbal J, Abushady AM and Attia K (2022) Citric acid assisted phytoextraction of nickel from soil helps to tolerate oxidative stress and expression profile of NRAMP genes in sunflower at different growth stages. *Front. Plant Sci.* 13:1072671. doi: 10.3389/fpls.2022.1072671

12. Hafz Muhammad Ahmad, Xiukang Wang, **Mahmood-Ur-Rahman**, Sajid Fiaz, Farrukh Azeem, Tayyaba Shaheen (2022) Morphological and Physiological Response of *Helianthus annuus* L. to Drought Stress and Correlation of Wax Contents for Drought Tolerance Traits. *Arabian Journal for Science and Engineering* 47:6747–6761

13. Bilal Rasool, **Mahmood-ur-Rahman**, Muhammad Zubair, Muhammad Asaf Khan, Pia Muhammad Adnan Ramzani, Agnieszka Dradrach, Veysel Turan, Muhammad Iqbal, Shahbaz Ali Khan, Hafz Muhammad Tauqeer, Muniba Farhad, Zaheer Abbas Virk, Muhammad Iqbal (2022) Synergetic Efficacy of Amending Pb-Polluted Soil with P-Loaded Jujube (*Ziziphus mauritiana*) Twigs Biochar and Foliar Chitosan Application for Reducing Pb Distribution in Moringa Leaf Extract and Improving Its Anti-cancer Potential. *Water Air Soil Pollut* 233:344

14. Rashid, F., Javaid, A., **Mahmood-ur-Rahman**, Ashfaq, U.A., Sufyan, M., Alshammari, A., Alharbi, M., Nisar, M.A., Khurshid, M (2022) Integrating Pharmacological and Computational Approaches for the Phytochemical Analysis of *Syzygium cumini* and Its Anti-Diabetic Potential. *Molecules* 27:5734. <https://doi.org/10.3390/molecules27175734>

15. Ahmad HM, Fiaz S, Hafeez S, Zahra S, Shah AN, Gul B, Aziz O, **Mahmood-Ur-Rahman**, Fakhra A, Rafique M, Chen Y, Yang SH and Wang X (2022) Plant Growth-Promoting Rhizobacteria Eliminate the Effect of Drought Stress in Plants: A Review. *Front. Plant Sci.* 13:875774. doi: 10.3389/fpls.2022.875774

16. Ahmad, H.M., Wang, X., Ijaz, M., **Mahmood-Ur-Rahman**, Oranab, S., Ali, M.A., Fiaz, S. (2022) Molecular Aspects of MicroRNAs and Phytohormonal Signaling in Response to Drought Stress: A Review. *Curr. Issues Mol. Biol.* 44:3695–3710. <https://doi.org/10.3390/cimb44080253>

17. Bilal Rasool, **Mahmood ur-Rahman**, Pia Muhammad Adnan Ramzani, Muhammad Zubair, Muhammad Asaf Khan, Karolina Lewinska, Veysel Turan, Anna Karczewska, Shahbaz Ali Khan, Muniba Farhad, Hafiz Muhammad Tauqeer, Muhammad Iqbal. 2021. Impacts of oxalic acid-activated phosphate rock and root-induced changes on Pb bioavailability in the rhizosphere and its distribution in mung bean plant. *Environmental Pollution* 280 (2021) 116903

18. Muhammad Zubair, Pia Muhammad Adnan Ramzani, Bilal Rasool, Muhammad Asaf Khan, **Mahmood ur-Rahman**, Imran Akhtar, Veysel Turan, Hafiz Muhammad Tauqeer, Muniba Farhad, Shahbaz Ali Khan, Javed Iqbal, Muhammad Iqbal. 2021. Efficacy of chitosan-

coated textile waste biochar applied to Cd-polluted soil for reducing Cd mobility in soil and its distribution in moringa (*Moringa oleifera* L.). Journal of Environmental Management 284 (2021) 112047

19. Hafiz Muhammad Ahmad, Xiukang Wang, Sajid Fiaz, **Mahmood-Ur-Rahman**, Muhammad Azhar Nadeem, Sher Aslam Khan, Sunny Ahmar, Farrukh Azeem, Tayyaba Shaheen, Freddy Mora-Poblete (2021) Comprehensive genomics and expression analysis of eceriferum (CER) genes in sunflower (*Helianthus annuus*). Saudi Journal of Biological Sciences 28 (2021) 6884–6896
20. Hafiz Muhammad Ahmad, **Mahmood-ur Rahman**, Sunny Ahmar, Sajid Fiaz, Farrukh Azeem, Tayyaba Shaheen, Munazza Ijaz, Shazia Anwer Bukhari, Sher Aslam Khan, Freddy Mora-Poblete (2021) Comparative genomic analysis of MYB transcription factors for cuticular wax biosynthesis and drought stress tolerance in *Helianthus annuus* L. Saudi Journal of Biological Sciences 28 (2021) 5693–5703
21. Muhammad Numan, Shazia Anwer Bukhari, **Mahmood-ur- Rehman**, Ghulam Mustafa, Bushra Sadia (2021) Phylogenetic analyses, protein modeling and active site prediction of two pathogenesis related (PR2 and PR3) genes from bread wheat. PLoS ONE 16(9): e0257392. [https:// doi.org/10.1371/journal.pone.0257392](https://doi.org/10.1371/journal.pone.0257392)
22. M. S. Javaid, U. A. Ashfaq, M. Ijaz, B. Naz, B. Saleem, A. Arshad and **Mahmood-ur-Rahman** (2021) COMPUTATIONAL ANALYSIS OF HOMEODOMAIN-LEUCINE ZIPPER (HD-ZIP) FAMILY OF TRANSCRIPTION FACTORS IN ARABIDOPSIS THALIANA. The Journal of Animal & Plant Sciences, 31(4):1145-1159
23. S. Noreen, **Mahmood-ur-Rahman** and T. Husanin (2021) PHYSICAL MAPPING AND INHERITANCE STUDIES OF CRY1AC GENE ON TRANSGENIC COTTON CHROMOSOMES. Journal of Animal & Plant Sciences, 31(5): 1470-1476
24. **Mahmood-ur-Rahman**, Tayyaba Shaheen, Parwsha Zaib, Muhammad Fazal Abbas, Mehboob-ur-Rahman and Anjuman Arif. 2021. Identification, characterization and interaction studies of *Di19-2* gene from *Gossypium arboreum*. Pakistan Journal of Botany, 53(2): 483-492
25. Ayesha ASLAM, Shahid SHAH, Muhammad Ahmed SHEHZAD, Zunera CHAUDHARY, **Mahmood-ur-RAHMAN**, Muhammad ZAFARULLAH, Ghulam ABBAS, Umar FAROOQ, Haris KHURRAM, Usman Rashid CHAND, Nimra ZULFIQAR & Nehaj UI SAKEENA (2021) Knowledge, Attitude, and Practices of Antibiotics and Antibiotic Resistance among Pharmacy Customers in Punjab, Pakistan: A Multicenter Survey Study. Lat. Am. J. Pharm. 40 (7): 1685-92
26. Ayesha ASLAM, Shahid SHAH, Ghulam ABBAS, **Mahmood-ur-RAHMAN**, Zunera CHAUDHARY, Muhammad Masood AHMED, Haris KHURRAM, Akhtar RASUL, Muhammad Yasir ALI, Usman Rashid CHAND & Muhammad HARIS. 2021. Community Pharmacists Interest and Attitudes to Pharmacy Practice Research in Pakistan: A Cross-sectional study. Latin American Journal of Pharmacy **40** (5): 1015-20
27. Shahid SHAH, Zunera CHAUDHARY, **Mahmood-ur RAHMAN**, Malik SAADULLAH, Ayesha ASLAM, Ghulam ABBAS, Ayesha KAZMI, Muhammad Abid SHAH, Sana TAHIR & Komal NAYAB. 2021. Iron chelation Therapy in β -Thalassemia Major Showing Non-Inferiority of Oral Chelator over Parenteral Chelator. Latin American Journal of Pharmacy **40** (4): 655-62
28. Shahid SHAH, Muhammad Masood AHMED, **Mahmood-ur-RAHMAN**, Zunera CHAUDHRY, Ayesha ASLAM, Naveed NISAR, Ghulam ABBAS, Haris KHURRAM, Ayesha MUKHTAR, Sibgha NOUREEN & Nimra ZULFIQAR. 2021. Utilization of Self-Medication,

Prescription Medication and Herbal Remedies During Pregnancy in Punjab, Pakistan. Latin American Journal of Pharmacy **40** (2): 339-46

29. Muhammad HANIF, Shahid SHAH, Abdul MAJEED, **Mahmood-ur-RAHMAN**, Zunera CHAUHDARY, Muhammad MASOOD AHMED, Shams-UL-HASSAN, Usman SALEEM, Sajid MEHMOOD KHAN, Ghulam ABBAS. 2020. *In vitro* and *In Vivo* Evaluation of Immediate Release Tablets of Domperidone Maleate. Latin American Journal of Pharmacy **39** (1): 22-8

30. Afzaal Z, I Hussain, MA Ashraf, R Rasheed, MT Javed, **Mahmood-ur-Rahman Ansari**, S Anwer, M Iqbal (2020). Lead induced modulation in growth, chlorophyll pigment, nutrient uptake, antioxidant enzyme regulation, gene expression and fruit quality in two tomato cultivars. International Journal of Agriculture and Biology 24:1732–1744

31. Khan, Muhammad Asaf, **Mahmood-ur-Rahman**, Pia Muhammad Adnan Ramzani, Muhammad Zubair, Bilal Rasool, Muhammad Kamran Khan, Ammar Ahmed, Shahbaz Ali Khan, Veysel Turan, and Muhammad Iqbal. (2020). "Associative effects of lignin-derived biochar and arbuscular mycorrhizal fungi applied to soil polluted from Pb-acid batteries effluents on barley grain safety." Science of The Total Environment 710: 136294.

32. Rajwana, I. A., Shaheen, T., Malik, A. U., Khan, A. S., **Mahmood-ur-Rahman**, Iqbal, M. A., & Zafar, Y. (2020). A high genetic similarity among the selected mango (*Mangifera indica* L.) genotypes-cultivars demonstrated by SSR fingerprinting assay. Journal of Animal and Plant Sciences, 30(4), 895-904.

33. Ahmad HM, **Mahmood-ur-Rahman**, F Azeem, T Shaheen, MA Irshad (2020). Genomewide analysis of long chain acyl Co-A synthetase (LACS) genes in sunflower (*Helianthus annuus*) suggests their role in drought stress. International Journal of Agriculture and Biology 24:863–870

34. Salman, M., Shahid, M., Sahar, T., Naheed, S., **Mahmood-ur-Rahman**, Arif, M., Iqbal, M., & Nazir, A. (2020). Development of regression model for bacteriocin production from local isolate of *Lactobacillus acidophilus* MS1 using Box-Behnken design. Biocatalysis and Agricultural Biotechnology, 24, 101542.

35. Bukhari, Shazia Anwer, Ghulam Mustafa, Shahzad Bashir, Nudrat Aisha Akram, **Mahmood-ur Rahman**, Bushra Sadia, M. N. Alyemeni, and Parvaiz Ahmad. (2020) "Genetic transformation of Sr22 gene in a high yielding susceptible cultivar of commercial wheat (*Triticum aestivum* L.)." 3 Biotech 10: 1-9.

36. Saleem, U., Chauhdary, Z., Raza, Z., Shah, S., **Mahmood-ur-Rahman**, Zaib, P., & Ahmad, B. (2020). Anti-Parkinson's Activity of *Tribulus terrestris* via Modulation of AChE, α -Synuclein, TNF- α , and IL-1 β . ACS omega. <https://dx.doi.org/10.1021/acsomega.0c03375>

37. Ali Khan Shahbaz, Pia Muhammad Adnan Ramzani, Rashid Saeed, Veysel Turan, Muhammad Iqbal, Karolina Lewinska, Farhat Abbas, Muhammad Saqib, Hafiz Muhammad Touqeer, Mutahar Iqbal, Maryam Fatima, **Mahmood-ur-Rahman**. 2019. Effect of Biochar and Zeolite soil amendments with foliar proline spray on nickel immobilization, nutritional quality and nickel concentrations in wheat. Ecotoxicology and Environmental Safety 173: 182-191. **(ISI-Indexed)**

38. Hafiz Muhammad Tauqeer, **Mahmood-ur-Rahman**, Sabir Hussain, Farhat Abbas, Muhammad Iqbal. 2019. The potential of an energy crop "*Conocarpus erectus*" for lead phytoextraction and phytostabilization of chromium, nickel and cadmium: An excellent option for the management of multi metal contaminated soils. Ecotoxicology and Environmental Safety 173: 273-284. **(ISI-Indexed)**

39. Hanif, M., Abbas, G., Shah, S., Khan, H. U., **Mahmood-ur-Rahman**, Khan, S. M., Maheen, S., & Majeed, A. 2019. Application of Box-Behnken Design for Simultaneous Monitoring of Pantoprazole and Domperidone in Plasma by High Performance Liquid Chromatography. *Latin American Journal of Pharmacy* 38(8), 1636-1644. **(ISI-Indexed)**
40. Shahzad Bashir, Shazia Anwer Bukhari, Irfan Afzal, Ghulam Mustafa and **Mahmood-ur-Rahman**. 2019. Molecular identification of stem rust resistance genes(s) from Pakistani wheat cultivars. *International Journal of Agriculture & Biology*. 21(5): 1013-1018. **(ISI-Indexed)**
41. Ahmad, B., Ashfaq, U. A., **Mahmood-ur-Rahman**, Masoud, M. S., & Yousaf, M. Z. 2019. Conserved B and T cell epitopes prediction of ebola virus glycoprotein for vaccine development: An immuno-informatics approach. *Microbial Pathogenesis* 132, 243-253. **(ISI-Indexed)**
42. Bukhari, S. A., Qasim, M., Masoud, M. S., **Mahmood-ur-Rahman**, Anwar, H., Waqas, A., & Mustafa, G. 2019. Evaluation of Medicinally Important Constituents of *Cotoneaster afghanicus* G. Klotz Collected from Baluchistan Region of Pakistan. *Indian Journal of Pharmaceutical Sciences* 81(2), 259-265. **(ISI-Indexed)**
43. Hussain, G., Ashfaq U. A., **Mahmood-ur-Rahman**, Masoud, M. S., Nahid, N., Bhinder, M. A., Aslam, N., Yousaf, N., Ahmed, U., & Qasim, M. 2019. Computational screening of phytochemicals against survivin protein: A potent target for cancer. *Pakistan Journal of Pharmaceutical Sciences* 32(3), 1145-1154. **(ISI-Indexed)**
44. Shahzad Bashir, Shazia Anwer Bukhari, **Mahmood-ur-Rahman** and Muhammad Ali. 2019. Homology modeling, structure and active site prediction of stem rust resistant gene Sr22 in wheat cultivars. *Pure Appl. Biol.* 8(1): 553-558.
45. Iqra Tariq, Ali Farhan, Usman Ali Ashfaq, Muhammad Qasim, **Mahmood-ur-Rahman**, Fahad Humanyun, Masaoud Shah, Anam Munir and Muhammad Shareef Masoud. 2019. Study on the structural insights of the analysis of negative effects of opioids analgesics in naltrexone with TLR4 mutations. *Pakistan Journal of Pharmaceutical Sciences* 32(1): 345-351. **(ISI-Indexed)**
46. H. M. Ahmad, **Mahmood-ur-Rahman**, F. Azeem, N. Tahir and M. S. Iqbal. 2018. QTL mapping for crop improvement against abiotic stresses in cereals. *Journal of Animal & Plant Sciences*, 28(6): 1558-1573. **(ISI-Indexed)**
47. Shazia Anwer Bukhari, Shahzad Bashir, **Mahmood-ur-Rahman** and Makhlof Bekhit. 2018. Fighting Wheat Stem Rust: Pathogenesis-Related Genes, From Conventional To Modern Approaches. *Annals of Agriculture Science* 56(4):1031–1044.
48. Shazia Anwer Bukhari, **Mahmood-ur-Rahman**, Waseem Akhter Shamshari, Shahzad Bashir. 2018. Homology modeling, structure and active site prediction of stem rust resistant protein in wheat. *Annals of Agriculture Science (Special Issue)* 411-414.
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14. **Aqsa Irshad** (2019) Sequence analysis of novel wax bio synthesis genes in *Helianthus annuus*. (**Supervisor**)
15. **Mutahir Iqbal**. (2018) Immobilization of lead by using different amendments in a lead polluted soil and their effect on the growth of pea (*Pisum sativum*) (**Supervisor-II**)
16. **Fahad Humayun**. (2017) Modeling of wax biosynthesis genes using Boolean Network under drought conditions in Sunflower (**Supervisor**)
17. **Nida Tahir**. (2017) Molecular studies of β -ketoacyl-CoA synthases (KCS) genes in sunflower (**Supervisor**)
18. **Zunaira Nazish**. (2016) Studies of wax biosynthesis genes in *Helianthus annuus* (**Supervisor**)
19. **Iqra Tabbasum**. (2016) Characterization of drought responsive genes in *Gossypium arboreum* (**Supervisor-II**)
20. **Alina Goheer**. (2014) Analysis of Wax Biosynthesis genes in cotton (**Supervisor**)
21. **Parwasha Zeb**. (2014) Computational analysis of drought responsive genes in cotton (**Supervisor-II**)
22. **Noor-us-Sabah**. (2013) Identification of Drought Related Transcripts in Cotton Using Bioinformatics Tool (**Supervisor**)
23. **Shafaq Ramzan**. (2013) Vertical Flow of *Bt* Genes from Transgenic to Non-Transgenic Cotton (**Supervisor**)
24. **Aqsa Hafeez Khan**. (2013) Genetic Diversity of Begomovirus complex in Chili (**Supervisor-II**)
25. **Afzal Akram**. (2013) Molecular Characterization of Begomovirus Complex in Cotton (**Supervisor-II**)

HONORS & AWARDS

- | | |
|------|--|
| 2017 | Wood Badge Completion Certificate, Pakistan Boy Scouts Association, Pakistan |
| 2013 | Profile published in e-Magazine of National Academy of Young Scientists (NAYS), Pakistan |

- 2004-2009 Indigenous Ph. D. Fellowship, Higher Education Commission, Islamabad, Pakistan
- 2007-2008 Visiting Fellowship, National Institute of Deafness and other Communication Disorders, National Institutes of Health, USA
- 2004 Best Councillor Award, Agrivarsity Scouts Group, University of Agriculture, Faisalabad, Pakistan.
- 2002 President's Rover Scout Award, Pakistan Boy Scout Association.
- 2001 Certificate of Excellent Performance, awarded by "Agrarian Quiz Club" University of Agriculture, Faisalabad, Pakistan.
- 1997 Certificate of Honor, awarded by "Jhang Association".
- 1996-98 Quaid-e-Azam Scholarship

Merit scholarship holder throughout academic career.

MEMBER REVIEW COMMITTEE

Member review committee of the following international research journals (and many more):

1. Member Review Committee, Science of the Total Environment (Impact Factor 6.551)
2. Member Review Committee, Experimental and Environmental Botany (Impact Factor 4.027)
3. Member Review Committee, Gene (Impact Factor 2.984)
4. Member Review Committee, Pakistan Journal of Agricultural Sciences (Impact Factor 0.663)
5. Member Review Committee, Applied Biochemistry & Biotechnology (Impact Factor 2.277)
6. Member Review Committee, Acta Physiologiae Plantarum (Impact Factor 1.76)
7. Member Review Committee, Ecotoxicology and Environmental Safety (Impact Factor 4.872)
8. Member Review Committee, The Journal of Animal and Plant Sciences (Impact Factor 0.481)

ACADEMIC EDITOR

1. PLOS ONE (Impact Factor 2.74)

PROFESSIONAL MEMBERSHIPS

1. Biosciences Research Support Foundation (BRSF), Nigeria (**Member Scientific Advisory Board**) since July 2015
2. Pakistan Society for Computational Biology (PSCB), Pakistan (**General Secretary**) since December 2014
3. Asian Federation of Biotechnology (AFOB), South Korea (**Member**) since June 2012
4. British Science Association, UK (**Member**) since 2004
5. American Society for Microbiology, USA (**Member**) since 2011
6. International Cotton Genome Initiative (ICGI) (**Member**) since 2004
7. National Academy of Young Scientists, Pakistan (**Member**) since 2011
8. Electronic Forum on Biotechnology in Food and Agriculture, FAO, UNO (**Member**) since 2005

ADMINISTRATIVE ASSIGNMENTS

1. Group Leader, Plant Biotechnology Research Group, Department of Bioinformatics & Biotechnology, GC University - Faisalabad, Pakistan (Since 2019).
2. Convener, Plant Laboratory Management Committee, Department of Bioinformatics & Biotechnology, GC University - Faisalabad, Pakistan (Since 2014).
3. Incharge, Molecular Biology Section, Central HI-TECH Laboratory, GC University - Faisalabad, Pakistan (2017-2020).
4. Time Table Incharge, Department of Bioinformatics & Biotechnology, GC University - Faisalabad, Pakistan (Since 2012).
5. Staff Secretary, Department of Bioinformatics & Biotechnology, GC University - Faisalabad, Pakistan (Since 2012).
6. Incharge/President, GCUF Scouts Group, GC University - Faisalabad, Pakistan.
7. Incharge, GCUF Adventure Club, GC University - Faisalabad, Pakistan.