Curriculum Vitae
Prof. Dr. Tariq Mahmood

PERSONAL INFORMTION

Address: Department of Plant Sciences, Faculty of Biological Sciences, Quaid-i-Azam University, Islamabad, Pakistan.

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Nationality: Pakistani

Domicile: Punjab

EDUCATION

Ph.D. in Biochemistry 2007
University of Arid Agriculture Rawalpindi, PAKISTAN
Ph.D. Thesis Title: Cloning and Analysis of a Germin-like Protein Gene(s) Promoter.

M.Sc. in Biochemistry 2002
University of Arid Agriculture Rawalpindi, PAKISTAN

B.Sc. 2000
Punjab University, Lahore, PAKISTAN

JOB EXPERIENCE/EMPLOYMENT HISTORY

Total experience (~22 YEARS)

Dec 2018- To Date **Tenured Professor, Department of Plant Sciences, Quaid-i-Azam University, Islamabad, Pakistan**

Nov 2013- Dec 2018 Tenured Associate Professor, Department of Plant Sciences, Quaid-i-Azam University, Islamabad, Pakistan

Aug 2007- Nov 2013 Assistant Professor, Department of Plant Sciences, Quaid-i-Azam University, Islamabad, Pakistan

Mar 2004-Aug 2007 Lecturer (Contract), Department of Biochemistry, PMAS Arid Agriculture University Rawalpindi, 46300-Pakistan

ADMINISTRARTIVE EXPERIENCE

Jan 2020-Oct 2024 Chairman, Central Workshop, Quaid-i-Azam University, Islamabad, Pakistan

Oct 2019 to Jan 2020 Chairman, Medical Center, Quaid-i-Azam University, Islamabad, Pakistan

May 2012- May 2018 Chairman, Department of Plant Sciences, Quaid-i-Azam University, Islamabad, Pakistan

Feb 2015- Mar 2016 Chairman, Horticulture Cell, Quaid-i-Azam University, Islamabad, Pakistan

CITATION & H-INDEX

Citations: ~ 8400

h-index: 48

RESEARCH EXPERTIES

- Regulation of eukaryotic gene expression
- Phytochemistry
- Nanotechnology
- Molecular markers

MEMBER OF PROFESSIONAL ORGANIZATIONS/SOCIETIES

- Member of "The International Alliance of Prevention and Treatment of Severe Infectious Diseases with Traditional Medicine (TM)"
- Member of the Governance Council of G2P "From Genome to Phenome: Deciphering Crop Genetic Resources"
- Member, Pakistan Academy of Sciences (2016-2025)
- International Society for Gastronomic Sciences and Studies
- Lifetime Member Botanical Society of Pakistan
- Lifetime Member Pakistan Phyto-pathological Society
- Lifetime Member Pakistan Proteomics Society
- Member, American Society for Microbiology
- Member, Academic Council, Azad Jammu & Kashmir University, Muzaffarabad (Appointed by the President of Azad Jammu & Kashmir)
- Member, Academic Council, Quaid-i-Azam University, Islamabad

TEACHING

Under-Graduate Courses

- Environmental Biology
- Molecular Biology
- Plant Biochemistry I
- Principles of Gene Manipulation

Post-Graduate Courses

- Advances in Molecular Biology
- Advances in Plant Biochemistry
- Advances in Virology
- Bioinformatics
- Biostatistics and Computation
- Gene Expression and Regulation
- Genetic Engineering
- Molecular Biology
- Molecular Systematics
- Plant Biochemistry
- Plant Cell and Tissue Culture
- Principles of Gene Manipulation
- Research Planning and Report Writing

POSTDOCTORAL FELLOWSHIPS/SHORT TRAININGS

- July 2019 to Feb. 2020, Talented Young Scientist Program, Institute of Crop Sciences, CAAS, Beijing, China

- August to October 2008 Short Training at Institute of Molecular Plant Sciences, University of Edinburgh, Edinburgh, UK

INVITED LECTURES/SEMINARS

- Therapeutic Potential of Medicinal Plants. Delivered as a keynote speaker on the occasion of the 65th Anniversary of the China Academy of Chinese Medical Sciences and launching ceremony of "The International Alliance of Prevention and Treatment of Severe Infectious Diseases with Traditional Medicine (TM)" (21 December 2020).
- Therapeutic Potential of Medicinal Plants: An Overview from Pakistan at The Chinese Academy of Chinese Medical Sciences, Beijing, China (26th November 2019)

- Title of seminar: “Characterization of Germin-like Protein Genes Promoter” at the Institute of Molecular Plant Sciences, University of Edinburgh, Edinburgh, UK (22nd September 2008)

- Title of seminar: “The role of Promoters in Gene Expression” to the Secondary School Teachers from Rawalpindi Division and Islamabad in a workshop sponsored by National Commission on Biotechnology at University of Arid Agriculture Rawalpindi (5-9 December 2006).

- Title of seminar: “Control of Gene Expression” to the faculty members of different universities participating in HEC/UAAR Workshop on Plant Molecular Biology/Biotechnology, 30th January~4th February 2006.

AWARDS

- Talented Young Scientist Program (2019), Ministry of Science, China
- HEC Best Paper Award (Awarded in 2019)
- Abdus Salam Prize in Basic Sciences (2017) in the field of Biology given by Pakistan Academy of Sciences (PAS) and The World Academy of Science (TWAS)
- At position 3 in the Directory of Productive Scientists of Pakistan in the field of Biological Sciences under the age of 40, by Pakistan Council for Science and Technology for the year 2017
- At position 5 in the Directory of Productive Scientists of Pakistan in the field of Biological Sciences under the age of 40, by Pakistan Council for Science and Technology for the year 2016
- HEC Best Teacher Award-2014
- Young Researcher Award-QAU-2013
- Research Productivity Award for the years 2011, 2012, 2013, 2014, 2015, 2016 & 2017
- Performance Based Award for TTS Faculty at QAU for the years 2010, 2011, 2012, 2013, 2018, 2019, 2020, 2021

WORKSHOPS/CONFERENCES (*Organization and Participation*)

- International Conference on Emerging Trends in Plant Proteomics. 2-4 October 2017, Department of Plant Sciences, Quaid-i-Azam University, Islamabad, Pakistan.

- First National Pakistan Proteomics Society Workshop “Roadmap to Proteome” from 03~05 February 2007, at Department of Biochemistry, University of Karachi, Karachi, Pakistan.

- International Workshop on Techniques Related to Molecular Biology and Immunology from 18th~23rd December 2006, at Department of Biochemistry, University of Arid Agriculture Rawalpindi, Pakistan.

- UAAR/NCB workshop on Biotechnology for Secondary School Teachers from 05th~09th December 2006, at Department of Biochemistry, University of Arid Agriculture Rawalpindi, Pakistan.

- HEC sponsored Workshop on Plant Molecular Biology and Biotechnology for University Teachers from January 30-Feburary 04, 2006, at Department of Biochemistry, University of Arid Agriculture Rawalpindi, Pakistan.

- NCB sponsored Workshop on Protein Molecular Modeling and Docking from 23rd~27th January 2006, at Department of Biochemistry, University of Arid Agriculture Rawalpindi, Pakistan.

- HEC sponsored Workshop on Life Sciences from 02nd~07th August 2004, at Department of Biochemistry, University of Arid Agriculture Rawalpindi, Pakistan.

- Workshop on Identification, Maintenance & Preservation of Microorganisms from 10~12th May 2004, at Quaid-I-Azam University, Islamabad, Pakistan.

- NIBGE-COMSTECH (CPC) International Workshop on Advanced Techniques in Biotechnology from 05~17th January 2004, at National Institute for Biotechnology & Genetic Engineering, Faisalabad, Pakistan.

- 1st International Conference on Biological and Environmental Sciences. 12-16 March 2008. Hurghada, Egypt

- Plant Genomics in China VII, 08-10th August 2006 at College of Life Sciences, Heilongjiang University, Harbin, China.

- International Symposium on Characterization and Management of Emerging Viral Diseases in the Developing World, 20-22nd November 2006 at National Institute for Biotechnology & Genetic Engineering (NIBGE), Faisalabad, Pakistan.

- International Conference on Biotechnology: Shaping Future Agriculture, 20th~21st June 2006 at University of Arid Agriculture Rawalpindi, Pakistan.

- 18th FAOBMB symposium (Genomics & Proteomics in Health & Agriculture), 20th~23rd November, 2005at Awan-e-Iqbal, Lahore, Pakistan.

- 4th National Conference of Plant Pathology, 14~17th October 2003 at University of Arid Agriculture Rawalpindi, Pakistan.

- Trends in Biochemistry & Molecular Biology: 7th International Conference organized by Pakistan Society for Biochemistry and Molecular Biology, April 2nd~5th, 2003. Institute of Biochemistry & Biotechnology, University of the Punjab, Lahore, Pakistan.

- 8th National Meeting of Plant Scientists, February 24~28th, 2003 at Department of Botany, University of Karachi, Karachi, Pakistan.

- 23rd Pakistan Congress of Zoology (International), March 3rd~5th, 2003 at Department of Biological Sciences, University of Arid Agriculture Rawalpindi, Pakistan.
- 3rd International Science Conference, 26-28 September 2002 at University of Arid Agriculture Rawalpindi, Pakistan.

ADMINISTRATIVE RESPONSIBILITIES

- Chairperson, Central Workshop, QAU
- Head of Department of Plant Sciences, QAU from May 2012 to May 2018
- Member, Academic Council, QAU
- Chairman, Medical Committee to October 2019 to January 2020
- Chairman, Horticulture Cell, QAU from February 2015-March 2016
- Departmental Library In-Charge (2009-12), QAU
- Member, Horticulture Cell Committee (2009-10), QAU
- Member, Quality Enhancement Cell, Department of Plant Sciences, QAU

OTHER PROFESSIONAL EXPERIENCE

- Aug 2001~Aug 2002 Research Experience in National Institute for Biotechnology & Genetic Engineering (NIBGE), Faisalabad, Pakistan
- Oct 2002~Aug 2007 Lab In-charge Biochemistry and Molecular Biology Lab, Department of Biochemistry, University of Arid Agriculture Rawalpindi, Pakistan

COMPUTER/STATISTICAL SKILLS

- Proficient in the use of several Internet-based bioinformatics tools for gene annotation, foreign gene expression, restriction analysis, primer designing, local and global alignments, phylogenetic analysis, regulatory elements analysis, protein properties/structure prediction etc.
- Proficient in the use of Windows based software e.g., MS Word, Excel, PowerPoint, and Internet explorer etc. and other routine packages.

LANGUAGE PROFICIENCY

English & Urdu

RESEARCH PROJECTS

Ongoing Projects as Principal Investigator

1. Biofortification of Bread Wheat for iron (Fe) and Zinc (Zn) by CRISPR/Cas9 Genome Editing.

   Cost: Pak. Rs. 5.2 million

   Funding Agency: Pakistan Science Foundation, Islamabad, Pakistan

Ongoing Projects as Co-Principal Investigator

1. Molecular mapping and map based cloning of disease resistance genes and developing news disease resistant wheat germ plasm.
   Cost: 11.8 million (Pak) & 2 million RMB (China)
   Funding Agency: Pakistan Science Foundation, Islamabad, Pakistan

2. Development of Nanotherapeutics Based on Phyto Fabrication of Metal Oxide Nano Particles
   Cost: Pak. Rs. 5.21 million
   Funding Agency: Pakistan Science Foundation, Islamabad, Pakistan

Projects Completed as Principal Investigator

1. Green Synthesis, Characterization of Metal Oxide Nanoparticles, and their application to Control Tomato Leaf Curl New Delhi Virus (ToLRNDV) in Tomato. Cost: Pak. Rs. ~1 million
   Funding Agency: Pakistan Academy of Sciences, Islamabad, Pakistan

2. Green Synthesis of Nanoparticles of Selected Medicinal Plants and their Biological Evaluation
   Cost: Pak. Rs. 0.52 million
   Funding Agency: Pakistan Academy of Sciences, Islamabad, Pakistan

3. Functional Analysis of Rice NAC Transcriptional Factor in Transgenic Wheat against Various Stresses. Cost: Pak. Rs. ~3.74 million
   Funding Agency: Pakistan Science Foundation, Islamabad, Pakistan

4. Comparative Assessment of Biological Potential of some Novel Medicinal Plants of Gilgit-Baltistan. Cost: Pak. Rs. 0.95 million
   Funding Agency: Pakistan Academy of Sciences, Islamabad, Pakistan

5. Expression Analysis of an Anti-Sense Polyphenol Oxidase Gene Construct under the Control of a Wound Inducible Promoter. Cost: Pak. Rs. 2.69 million
   Funding Agency: Pakistan Science Foundation, Islamabad, Pakistan

6. Characterization of *Os*RGLP1 Gene Promoter for its Functional Importance.
   Cost: Pak. Rs. 4.21 million
   Funding Agency: Higher Education Commission, Islamabad, Pakistan

7. *In vivo* Functional Analysis of a Wound Inducible Promoter to Evaluates its Potential for Insect Resistance. Cost: Pak. Rs. 4.8 million
   Funding Agency: Higher Education Commission, Islamabad, Pakistan

8. Establishment of Efficient Molecular Transformation Techniques in Wheat.
   Cost: Pak. Rs. ~1.82 million
   Funding Agency: Higher Education Commission, Islamabad, Pakistan

9. Characterization of a Rice Polyphenol Oxidase Gene Promoter.
   Cost: Pak. Rs. 2.69 million
   Funding Agency: Higher Education Commission, Islamabad, Pakistan

10. Functional Analysis of a Proteinase Inhibitor Gene Construct for Insect Resistance.
    Cost: Pak. Rs. 1.99 million
    Funding Agency: Pakistan Science Foundation, Islamabad, Pakistan

11. Molecular Characterization of *Glu-1*, *Glu-3* and *wbm* loci in D-genome synthetic hexaploid wheats and their advanced derivatives. Cost: Pak. Rs. 0.53 million
    Funding Agency: Pakistan Academy of Sciences, Islamabad, Pakistan

12. Strengthening/Upgrading Plant Biochemistry and Molecular Biology Laboratory.
    Cost: Pak. Rs. 0.9 million
    Funding Agency: Pakistan Science Foundation, Islamabad, Pakistan

Completed Project as Co-Principal Investigator

1. Wheat Omics to Decipher Input Use Efficiency for Yield Maximization and Genomic Selection Program. Cost: Pak. Rs. ~8 million
   Funding Agency: Higher Education Commission, Islamabad, Pakistan

2. Isolation and Characterization of Defense-related Genes in wheat variety “Shafaq 2006”.
   Cost: Pak. Rs. 0.50 million
   Funding Agency: Higher Education Commission, Islamabad, Pakistan

3. Modeling the Impact of Climate Change (CO_2, Temperature, Nitrogen & Rhizobium regimes) on Growth, Development and Yield of Sunflower under Controlled Conditions using Crop Growth Model (DSSAT)
   Cost: Pak. Rs. 0.50 million
   Funding Agency: Higher Education Commission, Islamabad, Pakistan

4. Proteomic analysis of nanoparticles stress on rice.
   Cost: Pak. Rs. ~0.50 million
   Funding Agency: Higher Education Commission, Islamabad, Pakistan

REVIEWER OF THE INTERNATIONAL JOURNALS

1. 3Biotech
2. Acta Scientiarum Polonorum Hortorum Cultus
3. Advances in Agriculture
4. Advancing Discovery
5. African Health Sciences
6. Agriculture
7. Arabian Journal of Chemistry
8. Asian Journal of Agriculture and Biology
9. Bangladesh Journal of Botany
10. Biotechnology Reports
11. BMC Genomics
12. Chemistry and Biodiversity
13. Current Bioactive Compounds
14. Electronic Journal of Biotechnology
15. Ecological Genetics and Genomics
16. Environmental Technology Reviews
17. Electronic Journal of Biotechnology
18. Functional Plant Biology
19. Genomics
20. Heliyon
21. In Vitro Cellular and Developmental Biology – Plant
22. Information Processing in Agriculture
23. Inorganic Chemistry Communications
24. International Journal of Ecology
25. International Journal of Food Properties
26. Iranian Journal of Science and Technology Transactions A: Science
27. Jordan Journal of Biological Sciences
28. Journal of Agricultural Science and Technology
29. Journal of Applied Research on Medicinal and Aromatic Plants
30. Journal of Cleaner Production
31. Journal of Nanostructure in Chemistry
32. Journal of Theoretical Biology
33. Molecular Biology Reports
34. Natural Product Research
35. Open Life Sciences
36. Pakistan Journal of Agricultural Sciences
37. Pakistan Journal of Botany
38. Physiology and Molecular Biology of Plants
39. Plant Physiology and Biochemistry
40. Proceedings of the Pakistan Academy of Sciences B. Life and Environmental Sciences
41. Research Journal of Biotechnology
42. Science of the Total Environment
43. Scientific reports
44. The Journal of Animal & Plant Sciences

45. The Plant Pathology Journal
46. Turkish Journal of Biochemistry
47. Turkish Journal of Botany

MEMBER EDITORIAL BOARD

1. The Scientific World Journal
2. Turkish Journal of Biology
3. Journal of Botany

EXTERNAL EXAMINER FOR THESIS EVALUATION

1. Division of Plant Biotechnology, Institute of Forest Genetics and Tree Breeding, Bharathiar University, Coimbatore, Tamilnadu, India
2. Department of Bio-Sciences, COMSATS Institute of Information Technology, Islamabad, Pakistan
3. Department of Botany, PMAS Arid Agriculture University Rawalpindi, Pakistan
4. Department of Botany, University of Azad Jammu & Kashmir, Muzaffarabad, Pakistan
5. Department of Biotechnology, University of Azad Jammu & Kashmir, Muzaffarabad, Pakistan
6. Department of Botany, University of Azad Jammu & Kashmir, Muzaffarabad, Pakistan
7. Department of Biochemistry, PMAS Arid Agriculture University Rawalpindi, Pakistan
8. Department of Horticulture, PMAS Arid Agriculture University Rawalpindi, Pakistan
9. Department of Environmental Sciences, Fatima Jinnah Women University, Rawalpindi, Pakistan
10. Department of Biotechnology, Fatima Jinnah Women University, Rawalpindi, Pakistan
11. Department of Biotechnology, Mirpur University of Science and Technology, Mirpur, Azad Jammu & Kashmir, Pakistan
12. Institute of Molecular Biology and Biotechnology, The University of Lahore, Lahore, Pakistan
13. Department of Botany, University of Swat, Swat, Pakistan
14. Department of Botany, Bacha Khan University, Charsada, Pakistan
15. Department of Plant Breeding and Genetics, Bahauddin Zakariya University, Multan, Pakistan
16. Department of Botany, Rawalpindi Women University, Rawalpindi, Pakistan
17. Department of Botany, University of Baltistan, Skardu, Pakistan

MEMBER BOARD OF STUDIES

1. Department of Botany, The Rawalpindi Women University, Rawalpindi
2. Department of Zoology, The Rawalpindi Women University, Rawalpindi
3. Department of Botany, Shaheed Benazir Bhutto Women University, Peshawar

STUDENTS SUPERVISED

Completed

Ph.D	**28**	**(**26 as Supervisor & 2 as co-supervisor)
M.Phil	**121**	**(**119 as supervisor & 2 as co-supervisor)
BS	**15**	

Currently enrolled

Ph.D	**04**
M.Phil	**07**

ACTIVE COLLABORATIONS

a. Chinese Academy of Agricultural Sciences

b. The International Alliance of Prevention and Treatment of Severe Infectious Diseases with Traditional Medicine (TM)

c. China Academy of Chinese Medical Sciences

PUBLICATIONS

DNA Sequences in Genbank

- ~1500 other sequences allotted accession numbers by Genbank

Patent

- S.M. Saqlan Naqvi and **T. Mahmood**. Promoter for Driving Genes Expression in Plants Under Environmental Stress Conditions, Patent Office Karachi, PAKISTAN, Patent Number: 139803.

Research Papers

Publications (with Impact Factor)

1. A. Arooj, A. Khan, Z.T. Ain, S. Kanwal, T. Mahmood (2025). Elucidating the Phytochemical Composition and Biological Properties of *Cyperus flavescens*: a Comprehensive *in vitro* Analysis. Journal Plantarum, 7(2): 56-68. **(Corresponding)**
2. S. Ijaz, J. Iqbal, B. A. Abbasi, F. Zarshan, T. Yaseen, Z. Ullah, S. Uddin, S. Kanwal, T. Mahmood, W. N. Setzer, J. Sharifi-Rad, D. Calina (2025). Bruceantin and Brusatol: Molecular Insights and Therapeutic Promise of Quassinoids in Cancer Drug Discovery. Archiv der Pharmazie 358(11): e70142 https://doi.org/10.1002/ardp.70142 **(Coauthor)**
3. S. Naseer, T. Seher, M. Fatima, S. Kanwal, T. Mahmood (2025). Hepatoprotective Effects of *Oxalis debilis* -Derived Zinc Oxide Nanoparticles Against CCl_4-Induced Oxidative Stress via NF-κB Modulation. Journal of Drug Delivery Science and Technology 108: 106946 (Impact factor: 4.5). **(Corresponding)**
4. F. Gul, Z. Ullah, J. Iqbal, B. A. Abbasi, S. Ali, S. Kanwal, J. Uddin, M. Kazi & T. Mahmood (2025). Ecofriendly synthesis characterization and biological activities of Eruca sativa mediated silver oxide nanoparticles. Scientific Report 15: 13466

https://doi.org/10.1038/s41598-025-87670-9 (Impact factor: 4.996). (**Corresponding)**

5. Z. Ullah, J. Iqbal, B. A. Abbasi, F. Gul, S. Ali, S. Kanwal, R. M. Aljowaie, G. Murtaza, R. Iqbal, T. Mahmood (2025). Eco-friendly Synthesis of Iron Oxide Nanoparticles Using *Parietaria alsinifolia* Extracts and Evaluation of Biological Applications. Applied Biochemistry and Biotechnology DOI: 10.1007/s12010-024-05151-7 (Impact factor: 3.1). (**Corresponding)**

6. W. Sarfraz, M. Khalid, A. Rasheed, T. Mahmood (2025). Assessment of *Solanum lycopersicum SlPI-II* gene under *OsRGLP2* promotor against salt and drought stress in transgenic wheat plants. Asian Journal of Agriculture and Biology doi.org/10.35495/ajab.2023.366 (Impact factor: 1.2). **(Corresponding)**

7. S. A. Zahra, J. Iqbal, B. A. Abbasi, S. Kanwal, M. S. Alwahibi, M. S. Elshikh, M. Rizwan, R. Iqbal and T. Mahmood (2024) Phylogenetic Analysis of Selected Species of Asteraceae on the Basis of *RPS* 11 Gene. Scientific reports 14:24808 (Impact factor: 4.996). **(Corresponding)**

8. H. Bibi, J. Iqbal, B. A. Abbasi, S. Kanwal, M. Mahmoodi, M. Raish, T. Mahmood (2024). *Centaurea iberica* Trevir. ex Spreng. Phytochemical Content and Evaluation of Cytotoxicity, Phytotoxicity, Anti-inflammatory, Larvicidal and Anti-inflammatory Potentials. Journal of King Saud University-Science 36: 103421 (Impact factor: 3.8). **(Corresponding)**

9. S. Ijaz, J. Iqbal, B. A. Abbasi, S. Kanwal, M. Mahmoodi, M. Raish, T. Mahmood (2024). Investigation of bioactive constituents and evaluation of *in vitro* bioactivities of different *Setaria glauca* extracts. Journal of King Saud University - Science 36(8): 103321 (Impact factor: 3.8). **(Corresponding)**

10. Y. Ahmad, S. Haider, J. Iqbal, S. Naseer, K. A. Attia, A. A. Mohammed, S. Fiaz, and T. Mahmood. *In-silico* Analysis and Transformation of OsMYB48 Transcription Factor Driven by CaMV35S Promoter in Model Plant – *Nicotiana tabacum* L. Conferring Abiotic Stress Tolerance. GM Crops and Food 15(1): 130-149 (Impact factor: 3.9) **(Corresponding)**

11. Z. T. Ain, S. Naseer, I. Fatima, S. Kanwal, T. Mahmood (2024). Assessment of phytochemicals, antioxidant, anti-hemolytic, anti-inflammatory and anti-cancer potential of flowers, leaves and stem extracts of *Rosa arvensis*. Journal of Traditional Chinese Medicine 44(4): 804-812 (Impact factor: 2.547). **(Corresponding)**

12. S. Rehman, A. Waheed, B. Parveen, S. Naseer, D. Habib, R. Batool, B. A. Abbasi, T. Mahmood (2024). Assessment of Genetic Diversity and Phylogenetic Relationship among Brinjal Genotypes based on Chloroplast rps 11 Gene. Genetic Resources and Crop Evolution 71: 385-395 (Impact Factor 1.876). **(Coauthor)**

13. I. Ali, K. B. H. Salah, H. Sher, H. Ali, Z. Ullah, A. Ali, N. Alam, S. A. Shah, J. Iqbal, M. Ilyas, D. A. H. Al-Quwaie, A. A. Khan and T. Mahmood (2024). Drought stress enhances the efficiency of floral dip method of Agrobacterium-mediated transformation in *Arabidopsis thaliana* Drought stress enhances the efficiency of floral dip method of Agrobacterium-mediated transformation in *Arabidopsis thaliana*. Brazilian Journal of Biology, 84, e259326 (Impact factor: 1.32). **(Coauthor)**

14. H. Bibi, J. Iqbal, B. A. Abbasi, S. Kanwal, M. Tavafoghi, M. Z. Ahmed, T. Mahmood (2024). Evaluation and Chemical Profiling of Different *Centaurea iberica* Extracts and Investigation of Different *In Vitro* Biological Activities. Journal of King Saud University-Science 36: 102992 (Impact factor: 3.8). **(Corresponding)**

15. Z. Ullah, J. Iqbal, B. A. Abbasi, W. Akhtar, S. Kanwal, I. Ali, W. Chalgham, M. A. El-Sheikh, T. Mahmood (2023). Assessment of Gus Expression Induced by Anti-Sense OsPPO Gene Promoter and Antioxidant Enzymatic Assays in Response to Drought and Heavy Metals Stress in Transgenic *Arabidopsis Thaliana*. Sustainability 15: 12783 (Impact factor: 3.889). **(Corresponding)**

16. S. Ijaz, J. Iqbal, B. A. Abbasi, Z. Ullah, T. Yaseen, S. Kanwal, T. Mahmood, S. Sydykbayeva, A. Ydyrys, Z. M. Almarhoon, J. Sharifi-Rad, C. Hano, D. Calina, W. C. Cho (2023). Rosmarinic acid and its derivatives: Current insights on anticancer potential and other biomedical applications. Biomedicine & Pharmacotherapy 162: 114687 (Impact factor: 7.419). **(Coauthor)**

17. M. Ilyas, I. Ali, D. N. Binjawhar, S. Ullah, S. M. Eldin, B. Ali, R. Iqbal, S. H. A. Bukhari, and T. Mahmood (2023). Molecular Characterization of Germin-like Protein Genes in *Zea mays* (ZmGLPs) Using Various *in Silico* Approaches. ACS Omega 8(18): 16327-16344 (Impact factor: 3.152). **(Coauthor)**

18. Z. Ullah, F. Gul, J. Iqbal, B. A. Abbasi, S. Kanwal, W. Chalgham, M. A. El-Sheikh, S. E. Diltemiz, and T. Mahmood (2023). Biogenic Synthesis of Multifunctional Silver Oxide Nanoparticles Using *Parieteria alsinaefolia* Aqueous Extract and assessment of Their Diverse Biological Applications. Microorganisms 11:1069 (Impact factor: 4.926) **(Corresponding)**

19. S. Shafqat and T. Mahmood (2023). Diversity, Phylogeny and 3-D Protein Modeling of Family *Acanthaceae* based on *rps*14 Gene Sequence in Pakistan. Journal of Animal and Plant Sciences 33(2): 397-408 (Impact factor: 0.570). **(Corresponding)**

20. B. A. Abbasi, J. Iqbal, T. Yaseen, S. A. Zahra, S. Ali, S. Uddin, T. Mahmood, S. Kanwal, H. A. El Serehy, W. Chalgham (2023). Exploring physical characterization and different bio-applications of *Elagnus angustiflora* orchestrated nickel oxide nanoparticles. Molecules 28(2): 654 (Impact factor: 4.927). **(Coauthor)**

21. F. Gul, I. Khan, J. Iqbal, B. A. Abbasi, A. Shahbaz, R. Capasso, I. Amaro-Estrada, Y. A. Bin Jardang, T. Mahmood (2022). Phytochemistry, biological activities and in silico molecular docking studies of *Oxalis pescaprae* L. compounds against SARS-CoV-2. Journal of King Saud University-Science 34: 102136 (Impact factor: 3.829). **(Corresponding)**

22. B. A. Abbasi, J. Iqbal, M. Israr, T. Yaseen, S. A. Zahra, A. Shahbaz, A. Rahdar, B. Raouf, S. Kanwal, T. Mahmood (2022). *Rhamnella gilgitica* functionalized green synthesis of ZnONPs and their multiple therapeutic properties. Microscopy Research and Technique 85(6): 2338-2350 (Impact factor: 2.893). **(Coauthor)**

23. F. Ali, Q. Wang, A. Fazal, L-J. Wang, S. Song, M-J. Kong, T. Mahmood, and S. Lu (2022). The DnaJ-like Zinc Finger Protein ORANGE Promotes Proline Biosynthesis in Drought-Stressed *Arabidopsis* Seedlings. International Journal of Molecular Sciences 23: 3907. (Impact factor: 6.208). **(Corresponding)**

24. S. Naseer, J. Iqbal, A. Naseer, S. Kanwal, I. Hussain and T. Mahmood (2022). Deciphering Chemical Profiling, Pharmacological Responses and Potential Bioactive Constituents of *Saussurea lappa* Decne. extracts through *In Vitro* Approaches. Saudi Journal of Biological Sciences 29: 1355-1366 (Impact factor: 4.052). **(Coauthor)**

25. I. Fatima, S. A. Zahra, A. Shahbaz, S. Naseer, S. Kanwal, N. Rauf, R. Kalsoom and T. Mahmood (2022). Relative Bioefficacy of Seventeen Poaceae Extracts Targeting Oxidative Stress-related Diseases Coupled with Elemental Profiling using ICP-MS. South African Journal of Botany 147: 586-595 (Impact factor: 3.111). **(Corresponding)**

26. L. Zhang, W. Yang, Y. Chu, B. Wen, Y. Cheng, T. Mahmood, M. Bao, F. Ge, L. Li, J. Yi, C. Du, C. Lu and Y. Tan (2022). The Inhibition Effect of Linezolid with Reyanning Mixture on MRSA and its Biofilm is More Significant than that of Linezolid Alone. Frontiers in Pharmacology 12: 766309 doi: 10.3389/fphar.2021.766309. (Impact factor: 5.988). **(Coauthor)**

27. U. Khalil, I. Fatima, S. Kanwal and T. Mahmood (2022). Relative Efficacy and Toxicity Studies on Three Wild Medicinal Plants of Fabaceae: A Pharmaceutical Perspective. Pakistan Journal of Botany 54(4): 1567-1573 DOI: http://dx.doi.org/10.30848/PJB2022-4(34) (Impact factor: (1.101) **(Corresponding)**

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Abstracts Presentation

1 **T. Mahmood** (31 October-1 November 2024) Genetic Transformation of Wheat for Abiotic Stress Tolerance. In: II International Biological and Life Sciences Congress (BIOLIC 2024) organized by Trakya University Plant Breeding Research Center, Türkiye

2 **T. Mahmood** (5-8 October 2023) Wheat Genetic Transformation for Developing Novel Germplasms. In: 14th Agrosym Symposium-2023 organized by Faculty of Agriculture, University of East Sarajevo, at Jahorina, Bosnia and Herzegovina.

3 **T. Mahmood** (21 December 2020) Therapeutic Potential of Medicinal Plants. Delivered as a keynote speaker on the occasion of the 65th Anniversary of the China Academy of Chinese Medical Sciences and launching ceremony of "The International Alliance of Prevention and Treatment of Severe Infectious Diseases with Traditional Medicine (TM)".

4 **T. Mahmood** (13 to 15 November 2016) Rice Root Germin-like Protein 2 Gene Promoter (*Os*RGLP2) is Responsive to Different Plant Signaling Molecules in Potato. In: First UAEU Symposium on Biological Sciences organized by Department of Biology and the Khalifa Center for Genetic Engineering and Biotechnology at the United Arab Emirates University, AlAin, UAE.

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Poster Presentation

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