

Curriculum Vitae **Tariq Mahmood**

PERSONAL INFORMATION

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

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Nationality: Pakistani

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

Total experience **(~16 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

ADMINISTRATIVE EXPERIENCE

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

RESEARCH EXPERTIES

- ◆ Regulation of eukaryotic gene expression
- ◆ Phytochemistry
- ◆ Molecular virology
- ◆ Molecular markers

MEMBER OF PROFESSIONAL SOCIETIES

- ◆ Member, Pakistan Academy of Sciences
- ◆ Life Time Member Botanical Society of Pakistan
- ◆ Life Time Member Pakistan Society for Biochemistry & Molecular Biology
- ◆ Life Time Member Pakistan Phyto-pathological Society
- ◆ Life Time Member Pakistan Proteomics Society
- ◆ Member, American Society for Microbiology
- ◆ Member, QAU Welfare Society

TEACHING

Post-Graduate courses

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

POSTDOCTORAL FELLOWSHIPS/SHORT TRAININGS

- ◆ July 2019-To Date, Talented Young Scientist Program, Institute of Crop Sciences, CAAS, Beijing, China

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

INVITED LECTURES/SEMINARS

- ◆ 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

- ◆ 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

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-February 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, 2005 at 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

- ◆ Head of Department of Plant Sciences, QAU from May 2012 to May 2018
- ◆ Member, Academic Council, QAU
- ◆ Chairman, Horticulture Cell, QAU from February 2015-March 2016
- ◆ Departmental Library In-Charge from (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 a number of 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. 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

Projects Completed as Principal Investigator

1. 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

2. Characterization of *OsRGLP1* Gene Promoter for its Functional Importance.
 Cost: Pak. Rs. 4.21 million
 Funding Agency: Higher Education Commission, Islamabad, Pakistan
3. *In vivo* Functional Analysis of a Wound Inducible Promoter to Evaluate its Potential for Insect Resistance.
 Cost: Pak. Rs. 4.8 million
 Funding Agency: Higher Education Commission, Islamabad, Pakistan
4. Establishment of Efficient Molecular Transformation Techniques in Wheat.
 Cost: Pak. Rs. ~1.82 million
 Funding Agency: Higher Education Commission, Islamabad, Pakistan
5. Characterization of a Rice Polyphenol Oxidase Gene Promoter.
 Cost: Pak. Rs. 2.69 million
 Funding Agency: Higher Education Commission, Islamabad, Pakistan
6. Functional Analysis of a Proteinase Inhibitor Gene Construct for Insect Resistance.
 Cost: Pak. Rs. 1.99 million
 Funding Agency: Pakistan Science Foundation, Islamabad, Pakistan
7. 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
8. 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. Isolation and Characterization of Defense-related Genes in wheat.
 Cost: Pak. Rs. 0.50 million
 Funding Agency: Higher Education Commission, Islamabad, Pakistan
2. Modeling the Impact of Climate Change (CO₂, 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
3. Proteomic analysis of nanoparticles stress on rice.
 Cost: Pak. Rs. ~0.50 million

Funding Agency: Higher Education Commission, Islamabad, Pakistan

Ongoing Projects 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

REVIEWER OF THE INTERNATIONAL JOURNALS

1. 3Biotech
2. Acta Scientiarum Polonorum Hortorum Cultus
3. Applied Biochemistry and Biotechnology
4. Arabian Journal of Chemistry
5. Asian Pacific Journal of Tropical Medicine
6. Biotechnology Reports
7. BMC Genomics
8. Current Bioactive Compounds
9. Current Synthetic and Systems Biology
10. Electronic Journal of Biotechnology
11. Emirates Journal of Food and Agriculture
12. European Journal of Medicinal Plants
13. Food and Chemical Toxicology
14. Global Research Journal of Microbiology
15. International Journal of Biodiversity and Conservation
16. International Journal of Food Properties
17. International Journal of Genetics and Molecular Biology
18. International Journal of Immunopathology and Pharmacology
19. International Journal of Medicine and Medical Sciences
20. International Journal of Plant Biology and Research
21. International Journal of Plant Physiology and Biochemistry
22. International Research Journal of Biotechnology
23. International Research Journal of Plant Sciences
24. Iranian Journal of Science and Technology
25. Journal of Agricultural Science and Technology
26. Journal of Applied Research on Medicinal and Aromatic Plants
27. Journal of Botany
28. Journal of Chemotherapy
29. Journal of Cleaner Production
30. Journal of Ecology and Natural Environment
31. Journal of Essential Oil Bearing Plants
32. Journal of the Marine Biological Association of the United Kingdom
33. Journal of Nanostructure in Chemistry
34. Journal of Theoretical Biology
35. Journal of Toxicology and Environmental Health Sciences
36. Journal of the Chemical Society of Pakistan
37. Liver International
38. Molecular Biology Reports
39. Natural Product Research
40. Pakistan Journal of Biochemistry and Molecular Biology

41. Pakistan Journal of Botany
42. Physiology and Molecular Biology of Plants
43. Plant Biosystems
44. Plant Breeding
45. Plant Molecular Biology Reporter
46. Plant Systematics and Evolution
47. PLOS One
48. Research Journal of Biotechnology
49. ScienceAsia
50. Scientific Report
51. The Scientific World Journal
52. The Plant Pathology Journal
53. Turkish Journal of Biochemistry
54. Turkish Journal of Biology
55. Turkish Journal of Botany
56. World Journal of Gastroenterology

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 Biochemistry, PMAS Arid Agriculture University Rawalpindi, Pakistan
7. Department of Horticulture, PMAS Arid Agriculture University Rawalpindi, Pakistan
8. Department of Environmental Sciences, Fatima Jinnah Women University, Rawalpindi, Pakistan
9. Department of Biotechnology, Mirpur University of Science and Technology, Mirpur, Azad Jammu & Kashmir, Pakistan

STUDENTS SUPERVISED

Completed

Ph.D

<i>As Supervisor</i>	16
<i>As Co-Supervisor</i>	02

M.Phil	
<i>As Supervisor</i>	86
<i>As Co-Supervisor</i>	02
Currently enrolled	
<i>As Supervisor</i>	
Ph.D students	07
M.Phil	04

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

- 1 J. Iqbal, B. A. Abbasi, A. T. Khalil, S. Hameed, S. Kanwal, T. Mahmood, I. Ullah (2019). Biogenic synthesis of green and cost effective cobalt oxide nanoparticles using *Geranium wallichianum* leaves extract and evaluation of *in vitro* antioxidant, antimicrobial, cytotoxic and enzyme inhibition properties. Material Research Express (Accepted).
- 2 F. Kiran, M. A. Khan, R. Batool, S. Kanwal, S. L. Shah and T. Mahmood (2019). Biological evaluation of some important medicinal plants from Poonch valley, Azad Kashmir, Pakistan. Journal of Traditional Chinese Medicine (Accepted).
- 3 R. Batool, E. Aziz, H. salahuddin, S. Tabassum, Javed Iqbal, Benny KH Tan and T. Mahmood (2019). Study of *Rumex dentatus* extracts for phytochemicals, antioxidant, antimicrobial and cytotoxic properties. Journal of Traditional Chinese Medicine (Accepted).
- 4 A. Rabab, S. Kanwal and T. Mahmood (2019). Phytochemical investigation of medicinally important plants of Pothohar region Pakistan. Journal of Traditional Chinese Medicine (Accepted).
- 5 M. Ilyas, M. Irfan, T. Mahmood, H. Hussain, L. U. Rahman, I. Naeem. Analysis of Germin-like Protein Genes (OsGLPs) Family in Rice Using Various *in Silico* Approaches. Current Bioinformatics 14.1.
- 6 F. Khalid, Y. Aman, M. Shaukat, J. I. Mirza, M. Tariq, A. Munir, Z. K. Shinwari and T. Mahmood (2019). New Source of Resistance to Stripe Rust in Wheat Landrace Pi388060 Originated from Punjab, Pakistan. Pakistan Journal of Botany (Accepted).

- 7 B. A. Abbasi, J. Iqbal, T. Mahmood, A. Qyyum and S. Kanwal (2019). Biofabrication of Iron Oxide Nanoparticles by Leaf Extract of *Rhamnus virgata*: Characterization and Evaluation of Cytotoxic, Antimicrobial and Antioxidant Potentials. *Applied Organometallic Chemistry* 33:e4947.
- 8 S. Ayub, R. Hayat, Z. Zainab, W. Akhtar, T. Mahmood (2019). *OsRGLP2* Promoter Derived GUS Expression in Transgenic Tobacco in Response to Salicylic acid, H₂O₂, PEG, NaCl and Auxins. *Plant Gene* 19 (2019) 100190.
- 9 J. Liu, A. Rasheed, Z. He, M. Imtiaz, A. Arif, T. Mahmood, A. Ghafoor, S. U. Siddiqui, M. K. Ilyas, W. Wen, F. Gao, C. Xie, X. Xia (2019). Genome-wide variation patterns between landraces and cultivars uncover divergent selection during modern wheat breeding. *Theoretical and Applied Genetics* doi: 10.1007/s00122-019-03367-4.
- 10 B. A. Abbasi, J. Iqbal, T. Mahmood, R. Ahmad, S. Kanwal, S. Afridi (2019). Plant-mediated synthesis of Nickel oxide nanoparticles (NiO) via *Geranium wallichianum*: Characterization and different biological applications. *Materials Research Express* 6 0850a7.
- 11 J. Iqbal, B. A. Abbasi, T. Mahmood, S. Hameed, A. Munir and S. Kanwal (2019). Green synthesis and characterizations of Nickel oxide nanoparticles using leaf extract of *Rhamnus virgata* and their potential biological applications. *Applied Organometallic Chemistry* 33:e4950.
- 12 B. A. Abbasi, J. Iqbal, R. Ahmad, S. Bibi, T. Mahmood, S. Kanwal, S. Bashir, F. Gul, S. Hameed (2019). Potential phytochemicals in the prevention and treatment of esophagus cancer: A green therapeutic approach. *Pharmacological Reports* 71: 644-652.
- 13 I. Fatima, S. Kanwal and T. Mahmood (2019). Microbiostatic, antioxidative and cytotoxic potentiation of some grasses of Bahawalpur, Pakistan. *Journal of Traditional Chinese Medicine* 39(4): 482-491.
- 14 N. Nazar, J. J. Clarkson, D. Goyder, E. Kaky, T. Mahmood, M. W. Chase (2019). Phylogenetic relationships in Apocynaceae based on nuclear PHYA and plastid trnL-F sequences, with a focus on tribal relationships. *Caryologia* 72(1): 55-81.
- 15 J. Iqbal, B. A. Abbasi, T. Mahmood, S. Kanwal, R. Ahmad, M. Ashraf (2019). Plant-extract mediated green approach for the synthesis of ZnONPs: Characterization and evaluation of cytotoxic, antimicrobial and antioxidant potentials. *Journal of Molecular structure* 1189: 315-327.
- 16 I. Fatima, S. Kanwal and T. Mahmood (2019). Natural Products Mediated Targeting of Virally Infected Cancer. *Dose-Response* 1:16.
- 17 M. Ilyas, W. Akhtar, S. Rehman, SMS Naqvi, T. Mahmood (2019). Functional Characterization of the Rice Root Germin-like protein gene-1 (*OsRGLP1*) Promoter in *Nicotiana tabaccum*. *3Biotech* 9:130.
- 18 J. Iqbal, Z. K. Shinwari and T. Mahmood (2019). Phylogenetic Relationships within the Cosmopolitan Family Rhamnaceae using *atpB* Gene Promoter. *Pakistan Journal of Botany* 51(3): 1027-1040.
- 19 E. Aziz, R. Batool, W. Akhtar, S. Rehman, P. L. Gregersen, T. Mahmood (2019). Expression analysis of the polyphenol oxidase gene in response to signaling

- molecules, herbivory and wounding in antisense transgenic tobacco plants. *3Biotech* 9:55
- 20 J. Iqbal, B. A. Abbasi, R. Ahmad, T. Mahmood, B. Ali, A. Khalil, S. Kanwal, S. A. Shah, M. M. Alam, H. Badshah, S. Bashir and R. Batool (2019). Potential phytochemicals in the fight against skin cancer: Current landscape and future perspectives. *Biomedicine and Pharmacotherapy* 109: 1381-1393.
 - 21 J. Iqbal, B. A. Abbasi, T. Mahmood, B. Ali, A. T. Khalil, S. Kanwal, S. A. Shah, R. Ahmad, M. M. Alam, H. Badshah and A. Munir (2018). Nanomedicines for Developing Cancer Nanotherapeutics: From Benchtop to Bedside and Beyond. *Applied Microbiology and Biotechnology* 102: 9449-9470.
 - 22 J. Iqbal, B. A. Abbasi, R. Ahmad, T. Mahmood, S. Kanwal, B. Ali, A. T. Khalil, S. A. Shah, M. M. Alam, H. Badshah (2018). Ursolic acid a promising candidate in the therapeutics of breast cancer: Current status and future implications. *Biomedicine and Pharmacotherapy* 108: 752-756.
 - 23 B. A. Abbasi, J. Iqbal, T. Mahmood, A. T. Khalil, B. Ali, S. Kanwal, S. A. Shah, R. Ahmad (2018). Role of dietary phytochemicals in modulation of miRNA expression: Natural swords combating breast cancer. *Asian Pacific Journal of Tropical Medicine* 11(9): 501-509.
 - 24 S. Jehangir, Z. K. Shinwari and T. Mahmood (2018). Genetic Characterization of Selected Genera of Family Rhamnaceae Based on *rps 11* Gene. *Pakistan Journal of Botany* 50(5): 1935-1939.
 - 25 R. Batool, E. Aziz, T. Mahmood, B. K. H. Tan and V. T. K. Chow (2018). Inhibitory activities of extracts of *Rumex dentatus*, *Commelina benghalensis*, *Ajuga bracteosa*, *Ziziphus mauritiana* as well as their compounds of gallic acid and emodin against dengue virus. *Asian Pacific Journal of Tropical Medicine* 11(4): 265-271.
 - 26 J. Iqbal, B. A. Abbasi, R. Batool, T. Mahmood, B. Ali, A. T. Khalil, S. Kanwal, S. A. Shah, R. Ahmad (2018). Potential phytochemicals for developing breast cancer therapeutics: Nature's healing touch. *European Journal of Pharmacology* 827: 125-148.
 - 27 J. Iqbal, B. A. Abbasi, A. T. Khalil, B. Ali, T. Mahmood, S. Kanwal, S. A. Shah, W. Ali (2018). Dietary isoflavones, the modulator of breast carcinogenesis: Current landscape and future perspectives. *Asian Pacific Journal of Tropical Medicine* 11(3): 186-193.
 - 28 T. Mahmood, T. Tahir, F. Munir, Z. K. Shinwari (2018). Characterization of regulatory elements in *OsRGLP2* gene promoter from different rice accessions through sequencing and *in silico* evaluation. *Computational Biology and Chemistry* 73: 206-212.
 - 29 I. Fatima, S. Kanwal and T. Mahmood (2018). Evaluation of biological potential of selected species of family Poaceae from Bahawalpur, Pakistan. *BMC Complementary and Alternative Medicine* 18:27.
 - 30 S. Rehman, B. Jørgensen, S. K. Rasmussen, E. Aziz, W. Akhtar, and T. Mahmood (2018). Expression analysis of Proteinase inhibitor-II under *OsRGLP2* promoter in response to wounding and signaling molecules in transgenic *Nicotiana benthamiana*. *3Biotech* 8:51.

- 31 A. Aziz, T. Mahmood, K. Shazadi, Z. Mahmood, A. Mujeeb-Kazi and A. Rasheed (2018). Genotypic variation and genotype x environment interaction for yield-related traits in synthetic hexaploid wheats under a range of optimal and heat-stressed environments. *Crop Science* 58: 295-303.
- 32 F. Almas, A. Hassan, A. Bibi, M. Ali, S. Lateef, T. Mahmood, A. Rasheed and U. M. Quraishi. (2018). Identification of genome-wide single-nucleotide polymorphisms (SNPs) associated with tolerance to chromium toxicity in spring wheat (*Triticum aestivum* L.). *Plant and Soil* 422: 371-384.
- 33 R. Batool, H. Salahuddin, T. Mahmood and M. Ismail M (2017). Study of anticancer and antibacterial activities of *Foeniculum vulgare*, *Justicia adhatoda* and *Urtica dioica* as natural curatives. *Cellular and Molecular Biology*, 63(9):109-114.
- 34 J. Iqbal, B. A. Abbasi, T. Mahmood, S. Kanwal, B. Ali, S. A. Shah and A. T. Khalil (2017). Plant-derived anticancer agents: A green anticancer approach. *Asian Pacific Journal of Tropical Biomedicine*, 7(12): 1129-1150.
- 35 F. Deeba, T. Sultana, T. Mahmood, C. O'Shea, K. Skriver and S. M. S. Naqvi. (2017). Involvement of WRKY, MYB and DOF DNA Binding Proteins in interaction with a rice germin-like protein gene promoter. *Acta Physiologiae Plantarum*, 39:189.
- 36 R. Batool, E. Aziz, BK-H. Tan and T. Mahmood (2017) *Rumex dentatus* inhibits cell proliferation, arrests cell cycle, and induces apoptosis in MDA-MB-231 cells through suppression of the NF- κ B Pathway. *Frontiers in Pharmacology*, 8:731.
- 37 S. Rehman, B. Jørgensen, S. K. Rasmussen and T. Mahmood (2017). Characterization of Proteinase inhibitor-II Gene under *OsRGLP2* Promoter for salt stress in transgenic *Nicotiana benthamiana*. *Turkish Journal of Biology*, 41: 494-502.
- 38 S. Rehman, E. Aziz, W. Akhtar, M. Ilyas and T. Mahmood (2017). Structural and Functional characteristics of Plant Proteinase Inhibitor-II (PI-II) Family. *Biotechnology Letters*, 39: 647-666.
- 39 W. Akhtar, E. Aziz, H. Koiwa and T. Mahmood (2017). Characterization of rice Polyphenol Oxidase Promoter in transgenic *Arabidopsis thaliana*. *Turkish Journal of Botany*, 41: 223-233.
- 40 B. Jabeen, S. M. Saqlan Naqvi, T. Mahmood, T. Sultana, M. Arif and F. Khan (2017). Ectopic Expression of plant RNA chaperone offering multiple stress tolerance in *E. coli*. *Molecular Biotechnology*, 59: 66-72.
- 41 F. Deeba, T. Sultana, B. Javaid, T. Mahmood and S. M. S. Naqvi. (2017). Molecular Characterization of a MYB protein from *Oryza sativa* for its role in abiotic stress tolerance. *Brazilian Archives of Biology and Technology*, v.60: e17160352.
- 42 E. Aziz, W. Akhtar, M. Ilyas, S. Rehman, H. Koiwa, Z. K. Shinwari and T. Mahmood (2017). Response of Tobacco Polyphenol Oxidase gene to wounding, Abscisic Acid (ABA) and Methyl Jasmonate (MeJ). *Pakistan Journal of Botany*, 49(2): 499-502.
- 43 S. Shaukat, M. Angez, T. Mahmood, M. M. Alam, S. Sharif, A. Khurshid, M. S. Rana and S. S. Z. Zaidi (2017). Molecular characterization of Echovirus 13

- uncovering high genetic diversity and identification of new genotypes in Pakistan. *Infection, Genetics and Evolution*, 48: 102-108.
- 44 W. Akhtar and T. Mahmood (2017). Response of rice Polyphenol Oxidase Promoter in drought and salt stress. *Pakistan Journal of Botany*, 49(1): 21-23.
- 45 A. Rasheed, X.C. Xia, T. Mahmood, H. Bux, U.M. Quraishi, Z. Mahmood, J.I. Mirza, A. Mujeeb-Kazi and Z.H. He (2016). Comparison of alleles at economically important loci in wheat landraces and cultivars from Pakistan. *Crop Science*, 56(1): 287-301.
- 46 N. Bostan, N. Amen, W. Safdar, T. Adam, A. A. Durrani, A. S. Shakoor, H. Ahmed, A. A. Siddiqui, S. Javed and T. Mahmood (2016). Risk factors involved in spread of HCV in patients from sub urban Rawalpindi and their association with existing genotypes. *Tropical Biomedicine*, 33(4): 652-662.
- 47 T. Mahmood, N.U. Bakht and E. Aziz (2016). Computational analysis of *atpB* gene Promoter from different Pakistani apple varieties. *Computational Biology and Chemistry*, 64: 1-8.
- 48 F. Munir, S. Hayashi, J. Batley, S.M.S. Naqvi and T. Mahmood (2016). Germin-like Protein 2 gene promoter from Rice is responsive to fungal pathogens in transgenic potato plants. *Functional and Integrative Genomics*, 16: 19-27.
- 49 H. Salahuddin, Q. Mansoor, R. Batool, A.A. Farooqi, T. Mahmood and M. Ismail (2016). Anticancer activity of *Cynodon dactylon* and *Oxalis corniculata* on Hep2 cell line. *Cellular and Molecular Biology*, 62 (5): 60-63.
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Book Chapters

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Abstracts Presentation

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Poster Presentation

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