

Complete List of Publications

1. Rajput R, Tyagi S, Anchal K, Singh S, Laxmi A, **Misra P**, Pandey A (2025) Cytokinin-mediated repression of anthocyanin biosynthesis in banana fruits. **The Plant Journal** 122, e70267. DOI: 10.1111/tpj.70267. **Impact factor=6.2**
2. Sharma P, Wajid MA, Pal K, Fayaz M, Majeed A, Yadav AK, Singh D, Bhat S, Bhat WW, **Misra P*** (2025) Functional characterization of 1-deoxy-D-xylulose-5-phosphate synthase (DXS) genes from *Monarda citriodora* establishes the key role of McDXS2 in specialized terpenoid biosynthesis. **Plant Physiology and Biochemistry**. DOI: 10.1016/j.plaphy.2025.109961. **Impact factor=6.1 (Corresponding author)**
URL= <https://www.sciencedirect.com/science/article/pii/S0981942825004899>
3. Fayaz M, Angmo T, Katoch K, Majeed A, Kundan M, Wajid MA, Pal K, **Misra P*** (2025) The promoter regions of CBDAS and PT genes of cannabinoid biosynthesis in *Cannabis sativa* respond to phytohormones and stress-related signals. **Planta**. doi: 10.1007/s00425-025-04709-x. **Impact factor=3.6 (Corresponding author)**
URL= <https://link.springer.com/article/10.1007/s00425-025-04709-x>
4. Sen Y, Sharma V, Singh S, Bulle M, **Misra P**, Kota S (2024) MetaTopolin-driven breakthrough in lemon beebalm (*Monarda citriodora*) regeneration: A molecular fidelity study for genome engineering applications. **Journal of Medicinal and Aromatic Plant Sciences**. 46: 123-132, Doi: <https://doi.org/10.62029/jmaps.v46i3.sen>
URL= <https://jmaps.in/article/metatopolin-driven-breakthrough-in-lemon-beebalm-monarda-citriodora-regeneration-a-molecular-fidelity-study-for-genome-engineering-applications/>
5. Wajid MA, Sharma P, Majeed A, Bhat S, Angmo T, Fayaz M, Pal K, Andotra S, Bhat WW, **Misra P*** (2024). Transcriptome-wide investigation and functional characterization reveal a terpene synthase involved in γ -terpinene biosynthesis in *Monarda citriodora*. **Functional and Integrative Genomics**. 26; 24(6):222. DOI: <https://doi.org/10.1007/s10142-024-01491-z>. **Impact factor=3.9 (Corresponding author)**
URL= <https://link.springer.com/article/10.1007/s10142-024-01491-z>
6. Bhat S, Sharma A, Sharma P, Singh K, Kundan M, Fayaz M, Wajid MA, Gairola S, **Misra P*** (2023). Development and analysis of de novo transcriptome assemblies of multiple genotypes of *Cymbopogon* spp. reveal candidate genes involved in the biosynthesis of aromatic monoterpenes. **International Journal of Biological Macromolecules**, 253(Pt 8):127508. doi: 10.1016/j.ijbiomac.2023.127508. **Impact factor=8.2 (Corresponding author)**
URL=<https://www.sciencedirect.com/science/article/abs/pii/S0141813023044057?via%3Dihub>
7. Naik J, Tyagi S, Rajput R, Kumar P, Pucker B, Bisht NC, **Misra P**, Stracke R, Pandey A. (2023) Flavonols have opposite effects on the interrelated glucosinolate and camalexin biosynthetic pathways in *Arabidopsis thaliana*. **Journal of Experimental Botany** 75(1):219-240, doi: 10.1093/jxb/erad391. **Impact factor=6.9**
URL= <https://academic.oup.com/jxb/article/75/1/219/7303279?login=true>
8. Mirs JA, Yadav AK, Singh D, Gani U, **Misra P**, Ashraf N (2023) Natural variations in *Crocus sativus* lycopene epsilon cyclase (CstLcyE) alter carotenoid/apocarotenoid content and stress tolerance. **Environmental and Experimental Botany** 214, 105457, doi doi.org/10.1016/j.envexpbot.2023.105457 **Impact factor=5.7**
URL= <https://www.sciencedirect.com/science/article/abs/pii/S0098847223002526>

9. Sharma P, Wajid MA, Fayaz M, Bhat S, Nautiyal AK, Jeet S, Yadav AK, Singh D, Shankar R, Gairola S, **Misra P*** (2023). Morphological, phytochemical, and transcriptome analyses provide insights into the biosynthesis of monoterpenes in *Monarda citriodora*. **Planta**. 258(3):49. doi: 10.1007/s00425-023-04207-y. **Impact factor=4.3 (Corresponding author)**

URL= <https://link.springer.com/article/10.1007/s00425-023-04207-y>

10. Fayaz M, Kundan M, Gani U, Sharma P, Wajid MA, Katoch K, Babu V, Gairola S, **Misra P***. (2023) Identification of Lipxygenase gene repertoire of *Cannabis sativa* and functional characterization of CsLOX13 gene. **Plant Science**, 334:111780 Doi: <https://doi.org/10.1016/j.plantsci.2023.111780> **Impact factor=5.2. (Corresponding author)**

URL= <https://www.sciencedirect.com/science/article/abs/pii/S0168945223001978>

11. Gani U, Nautiyal AK, Kundan M, Rout B, Pandey A, **Misra P***. (2022) Two homeologous MATE transporter genes, NtMATE21 and NtMATE22, are involved in the modulation of plant growth and flavonol transport in *Nicotiana tabacum*. **Journal of Experimental Botany** 18;73(18):6186-6206. Doi: <https://doi.org/10.1093/jxb/erac249> **Impact factor=6.9 (Corresponding author)**

URL= <https://academic.oup.com/jxb/article/73/18/6186/6602097?login=true>

12. Kundan M, Gani U, Fayaz M, Angmo T, Kesari R, Rahul VP, Gairola S, **Misra P*** (2022) Two R2R3-MYB transcription factors, CsMYB33 and CsMYB78 are involved in the regulation of anthocyanin biosynthesis in *Cannabis sativa* L., **Industrial Crops and Products**, 188, Part A, 115546, Doi: <https://doi.org/10.1016/j.indcrop.2022.115546> **Impact factor=5.9 (Corresponding author)**

URL= <https://www.sciencedirect.com/science/article/abs/pii/S0926669022010299?via%3Dihub>

13. Hussain K, Kumar A, Fayaz M, **Misra P**, Ashraf N. (2022) CstMYB14 links ROS signaling, apocarotenoid metabolism, and stress response in *Crocus sativus* L. **Physiologia Plantarum** 174(3):e13712. Doi: <https://doi.org/10.1111/ppl.13712> (**Impact factor=6.4**)

URL= <https://onlinelibrary.wiley.com/doi/10.1111/ppl.13712>

14. Rajput, R., Naik, J., **Misra, P**, Trivedi PK, Pandey A (2023) Gene Pyramiding in Transgenic Plant Development: Approaches and Challenges. **Journal of Plant Growth Regulation**, 42, 6038-6056 (2022). <https://doi.org/10.1007/s00344-022-10760-9> (**Impact factor=4.8**)

URL= <https://link.springer.com/article/10.1007/s00344-022-10760-9>

15. Naik J, **Misra P**, Trivedi PK, Pandey A. (2022) Molecular components associated with the regulation of flavonoid biosynthesis. **Plant Science** 317:111196. Doi: <https://doi.org/10.1016/j.plantsci.2022.111196> (**Impact factor=5.2**)

URL= <https://www.sciencedirect.com/science/article/abs/pii/S0168945222000206?via%3Dihub>

16. Gani U, Sharma P, Tiwari H, Nautiyal AK, Kundan M, Wajid MA, Kesari R, Nargotra A, **Misra P*** (2021) Comprehensive genome-wide identification, characterization, and expression profiling of MATE gene family in *Nicotiana tabacum*. **Gene**, 783 doi.org/10.1016/j.gene.2021.145554 **Impact factor=3.5 (Corresponding author)**

URL= <https://www.sciencedirect.com/science/article/abs/pii/S0378111921001487>

17. Manjoor MM, Goyal P, Pandotra P, Dar MS, Dar MJ, **Misra P***, Gupta AP, Vishwakrama RA, Ahuja A, Dhar MK, Gupta S* (2021) Transcriptome-wide identification of squalene epoxidase genes from *Glycyrrhiza glabra* L.: expression analysis and heterologous expression of GgSQE1 suggest important role in terpenoid biosynthesis. **Protoplasma** 258(5):991-1007. doi: 10.1007/s00709-021-01616-2. **Impact factor=2.9 (Joint Corresponding author)**

URL= <https://link.springer.com/article/10.1007/s00709-021-01616-2>

18. Bhatt S, Sharma A, Dogra A, Sharma P, Kumar A, Kotwal P, Bag S, **Misra P**, Singh G, Kumar A, Sangwan PL, Nandi U. (2021) Glabridin attenuates paracetamol-induced liver injury in mice via CYP2E1-mediated inhibition of oxidative stress. **Drug and Chemical Toxicology** 2021 7:1-9. Doi: <https://doi.org/10.1080/01480545.2021.1945004> (Impact factor=2.6)

URL=<https://www.tandfonline.com/doi/full/10.1080/01480545.2021.1945004>
19. Dogra A, Gour A, Bhatt S, Sharma P, Sharma A, Kotwal P, Wazir P, **Misra P**, Singh G, Nandi U (2020) Effect of rutin on pharmacokinetic modulation of diclofenac in rats. **Xenobiotica**. 50(11):1332-1340. doi: 10.1080/00498254.2020.1773008 (Impact factor=1.8)
URL=<https://www.tandfonline.com/doi/full/10.1080/00498254.2020.1773008>
20. Gani U, Vishwakrama RA, **Misra P*** (2020) Membrane transporters: the key drivers of transport of secondary metabolites in plants. **Plant Cell Reports**. 40(1):1-18. doi: 10.1007/s00299-020-02599-9. (Impact factor=6.2)
URL=<https://link.springer.com/article/10.1007/s00299-020-02599-9>
21. Sharma A, Rana S, Rather GA, **Misra P**, Dhar MK, Lattoo SK (2020) Characterization and overexpression of sterol Δ 22-desaturase, a key enzyme modulates the biosyntheses of stigmasterol and withanolides in *Withania somnifera* (L.) Dunal. **Plant Science**, 301:110642. (Impact factor=5.2)
URL=<https://www.sciencedirect.com/science/article/abs/pii/S016894522030248X?via%3Dihub>
22. Nautiyal AK, Gani U, Sharma P, Kundan M, Fayaz M, Lattoo SK, **Misra P*** (2020) Comprehensive Transcriptome Analysis Provides Insights Into Metabolic and Gene Regulatory Networks in Trichomes of *Nicotiana tabacum*. **Plant Molecular Biology** 02(6):625-644. doi: 10.1007/s11103-020-00968-2 (Impact factor=5.1) (Corresponding author)
URL=<https://link.springer.com/article/10.1007/s11103-020-00968-2>
23. Manzoor MM, Goyal P, Gupta AP, Khan S, Jaswal P, **Misra P**, Pandotra P, Ahuja A, Vishwakarma RA, Gupta S (2020) Chemical and real-time based analysis revealed active gene machinery of glycyrrhizin biosynthesis and its accumulation in the aerial tissues of in-vitro regenerated *Glycyrrhiza glabra* L. **Plant Growth Regulation** 92: 263-271 doi.org/10.1007/s10725-020-00635-y (Impact factor=4.2)
URL=<https://link.springer.com/article/10.1007/s10725-020-00635-y>
24. Rather GA, Sharma A, **Misra P**, Kumar A, Kaul V, Lattoo SK. (2020) Molecular characterization and overexpression analyses of secologanin synthase to understand the regulation of camptothecin biosynthesis in *Nothapodytes nimmoniana* (Graham.) Mabb. **Protoplasma** 257(2):391-405. doi: 10.1007/s00709-019-01440-9 (Impact factor=2.9)
URL=<https://link.springer.com/article/10.1007/s00709-019-01440-9>
25. Sharma A, Rather GA, **Misra P**, Dhar MK, Lattoo SK. (2019) Gene Silencing and Over-Expression Studies in Concurrence With Promoter Specific Elicitations Reveal the Central Role of WsCYP85A69 in Biosynthesis of Triterpenoids in *Withania somnifera* (L.) Dunal. **Front Plant Sci**. 10:842. doi: 10.3389/fpls.2019.00842. eCollection 2019. (Impact factor=5.6)

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26. Rather GA, Sharma A, Jeelani SM, **Misra P**, Kaul V, Lattoo SK. (2019) Metabolic and transcriptional analyses in response to potent inhibitors establish MEP pathway as major route for camptothecin biosynthesis in *Nothapodytes nimmoniana* (Graham) Mabb. **BMC Plant Biology** 10;19(1):301. doi: 10.1186/s12870-019-1912-x. x. (Impact factor=5.3)
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27. Sharma A, Rather GA, **Misra P**, Dhar MK, Lattoo SK (2019) Jasmonate responsive transcription factor WsMYC2 regulates the biosynthesis of triterpenoid withanolides and phytosterol via key pathway genes in *Withania somnifera* (L.) Dunal. **Plant Mol Biol.** 100(4-5):543-560. doi: 10.1007/s11103-019-00880-4. (Impact factor=5.1)
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28. Rather GA, Sharma A, Pandith SA, Kaul V, Nandi U, **Misra P** *, Lattoo SK (2018) De novo transcriptome analyses reveals putative pathway genes involved in biosynthesis and regulation of camptothecin in *Nothapodytes nimmoniana* (Graham) Mabb. **Plant Molecular Biology** 96(1-2):197-215. doi: 10.1007/s11103-017-0690-9. (Impact factor=5.1) (Joint Corresponding Author)
URL=<https://link.springer.com/article/10.1007/s11103-017-0690-9>

29. Pandey A, **Misra P**, Alok A, Kaur N, Sharma S, Lakhwani D, Asif MH, Tiwari S, Trivedi PK (2016) Genome-Wide Identification and Expression Analysis of Homeodomain Leucine Zipper Subfamily IV (HDZ IV) Gene Family from *Musa accuminata*. **Frontiers in Plant Science**1; 7:20. doi: 10.3389/fpls.2016.00020. (Impact factor=5.6)
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30. Pandey A*, **Misra P***, Choudhary D, Yadav R, Goel R, Bhambhani S, Sanyal I, Trivedi R, Kumar Trivedi P (2015) AtMYB12 expression in tomato leads to large scale differential modulation in transcriptome and flavonoid content in leaf and fruit tissues. **Scientific Reports** doi: 10.1038/srep12412. **Impact factor=4.6 (Joint First Author)**
URL=<https://www.nature.com/articles/srep12412>

31. Pandey A, **Misra P**, Trivedi PK (2015) Constitutive expression of Arabidopsis MYB transcription factor, AtMYB11, in tobacco modulates flavonoid biosynthesis in favor of flavonol accumulation. **Plant Cell Reports** 34(9):1515-28. (Impact factor=6.2)
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32. Rai A, Bhardwaj A, **Misra P**, Bag SK, Adhikari B, Tripathi RD, Trivedi PK, Chakrabarty D (2015) Comparative Transcriptional Profiling of Contrasting Rice Genotypes Shows Expression Differences during Arsenic Stress. **The Plant Genome** 8(2):eplantgenome2014.09.0054. doi: 10.3835/plantgenome2014.09.0054. (Impact factor=4.2)
URL=<https://access.onlinelibrary.wiley.com/doi/10.3835/plantgenome2014.09.0054>

33. Pandey A, **Misra P**, Bhambhani S, Bhatia C, Trivedi PK. (2014) Expression of Arabidopsis MYB transcription factor, AtMYB111, in tobacco requires light to modulate flavonol content. **Scientific Reports** 21;4:5018. doi: 10.1038/srep05018. (Impact factor=4.6)
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34. Dubey, S., Shri M, **Misra P**, Lakhwani D, Bag, S, Asif, M.H., Trivedi PK, Tripathi, R.D., Chakrabarty, D. (2014) Heavy metals induce oxidative stress and genome wide modulation in transcriptome of rice roots. **Functional and Integrative Genomics**, 14(2):401-17. doi: 10.1007/s10142-014-0361-8 (Impact factor=2.9)
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35. Pandey, A*, **Misra P***, Khan, M.P., Swarnkar, G., Tewari, M.C., Bhambhani, S., Trivedi, R., Chattopadhyay, N. and Trivedi, P.K. (2013) Co-expression of Arabidopsis transcription factor, AtMYB12, and soybean isoflavone synthase, GmIFS1, genes in tobacco leads to enhanced biosynthesis of isoflavones and flavonols resulting in osteoprotective activity. **Plant Biotechnology Journal** 12(1):69-80. doi: 10.1111/pbi.12118. (Impact factor=13.8) (Joint first author)
URL=<https://onlinelibrary.wiley.com/doi/10.1111/pbi.12118>

36. Shri, M., Rai, A., Verma, P.K., **Misra P**, Dubey, S., Kumar, S., Verma, S., Gautam, N., Tripathi, R.D., Trivedi, P.K., Chakrabarty, D. (2013) An improved Agrobacterium-mediated transformation of recalcitrant indica rice (*Oryza sativa* L.) cultivars. **Protoplasma** ;250(2):631-6. doi: 10.1007/s00709-012-0439-x. (Impact factor=2.9)

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37. Pandey A, **Misra P**, Chandrashekar K, Trivedi PK (2012) Development of AtMYB12-expressing transgenic tobacco callus culture for production of rutin with biopesticidal potential. **Plant Cell Reports** 31(10):1867-76. doi: 10.1007/s00299-012-1300-6 (Impact factor=6.2)

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38. Pathak S, Mishra BK, **Misra P**, Misra P, Joshi VK, Shukla S, Trivedi PK (2012) High frequency somatic embryogenesis, regeneration and correlation of alkaloid biosynthesis with gene expression in *Papaver somniferum*. **Plant Growth Regulation** DOI: 10.1007/s10725-012-9689-z (Impact Factor 4.2)

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39. Pandey A, Niranjana A, **Misra P**, Lehri A, Tewari SK, Trivedi PK (2011) Simultaneous Separation and quantification of targeted group of compounds in *Psoralea corylifolia* L. through HPLC-PDA-MS-MS. **Journal of Liquid Chromatography & Related Technologies** 35:1–17 <https://doi.org/10.1080/10826076.2011.636854> (Impact factor=1.3)

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40. Niranjana A, Pandey, A, **Misra P**, Trivedi PK, Lehri A and Amla DV (2011) Development and optimization of HPLC-PDA-MS-MS method for simultaneous quantification of three classes of flavonoids in legume seeds, vegetables, fruits and medicinal plants. **Journal of Liquid Chromatography & Related Technologies**, 34, 1729-1742 <https://doi.org/10.1080/10826076.2011.578324> (Impact factor=1.3)

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41. **Misra P**, Pandey A, Tewari SK, Nath P and Trivedi PK (2010) Characterization of isoflavone synthase gene of *Psoralea corylifolia*, a medicinal plant. **Plant Cell Reports** 29(7):747-55. doi: 10.1007/s00299-010-0861-5.(Impact factor=6.2) (First author)

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42. **Misra P**, Pandey A, Tewari M, Chandrashekhar K, Siddhu OP, Asif MH, Chakrabarty D, Singh PK, Nath P, Trivedi PK and Tuli R (2010) Modulation of transcriptome and metabolome by AtMYB12 transcription factor leads to insect tolerance. **Plant Physiology** 152(4):2258-68. doi: 10.1104/pp.109.150979. (Impact factor=7.4) (First author)

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43. Dubey S, **Misra P**, Dwivedi S, Chatterjee S, Bag S, Mantri S, Asif MH, Rai A, Kumar S, Shri M, Tripathi P, Tripathi RD, Trivedi PK, Chakrabarty D and Tuli R (2010) Transcriptomic and metabolomic shifts in rice roots in response to Cr (VI) stress. **BMC Genomics** 20;11:648. doi: 10.1186/1471-2164-11-648. (Impact Factor=4.4)

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44. Chakrabarty D, Trivedi PK, **Misra P**, Tiwari M, Shri M, Shukla D, Kumar S, Rai A, Pandey A, Nigam D, Tripathi RD and Tuli R (2009) Comparative transcriptome analysis of arsenate and arsenite stresses in rice seedlings. **Chemosphere** 74, 688–702. (Impact Factor=8.8)

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45. Chakrabarty D, Trivedi PK, Shri M, **Misra P**, Asif MH, Dubey S, Kumar S, Rai A, Tiwari M, Shukla D, Pandey A, Nigam D and Tuli R (2009) Differential transcriptional expression following thidiazuron induced shoot primordia developmental shift in rice. **Plant Biology** 12(1):46-59. doi: 10.1111/j.1438-8677.2009.00213.x. (Impact factor=3.9)

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47. Asif MH, Trivedi PK, **Misra P** and Nath P (2009) Prolyl-4-hydroxylase (AtP4H1) mediates and mimics low oxygen response in Arabidopsis thaliana. **Functional and Integrative Genomics** 9(4):525-35. doi: 10.1007/s10142-009-0118-y (Impact factor=2.9)

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Book chapter

Kundan M, Gani U, Nautiyal AK, **Misra P*** (2019) Molecular biology of glandular trichomes and their functions in environmental stresses. In: Singh S, Upadhyay S, Pandey A, Kumar S (eds) **Molecular approaches in plant biology and environmental challenges**, 1st edn. Springer, Singapore, pp 365–393 (Invited book chapter, corresponding author)

Editorials

Rahim MA, **Misra P**, Cairns JK (2023) Editorial: Advances in metabolism and chemodiversity – focus – anthocyanin and proanthocyanin: biosynthesis, accumulation, regulation. **Frontiers in Plant Science** 14:1222082 (Impact factor=5.6)