

## Publications

1. 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. **Int J Biol Macromol.** 20;253(Pt 8):127508. doi: 10.1016/j.ijbiomac.2023.127508.
2. 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*. **J Exp Bot.** erad391. doi: 10.1093/jxb/erad391.
3. Mir 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. **Env. Exp. Bot.** 214, 105457
4. 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.
5. Fayaz M, Kundan M, Gani U, Sharma P, Wajid MA, Katoch K, Babu V, Gairola S, **Misra P\***. (2023) Identification of Lipoxygenase gene repertoire of *Cannabis sativa* and functional characterization of CsLOX13 gene. **Plant Sci.**
6. 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*. **J Exp Bot.** 18;73(18):6186-6206. (Corresponding author)
7. 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,
8. Hussain K, Kumar A, Fayaz M, **Misra P**, Ashraf N. (2022) CstMYB14 links ROS signaling, apocarotenoid metabolism, and stress response in *Crocus sativus* L. **Physiol Plant.** 174(3):e13712.
9. Rajput, R., Naik, J., **Misra, P. et al.** Gene Pyramiding in Transgenic Plant Development: Approaches and Challenges. **J Plant Growth Regul** (2022). <https://doi.org/10.1007/s00344-022-10760-9>
10. Naik J, **Misra P**, Trivedi PK, Pandey A. (2022) Molecular components associated with the regulation of flavonoid biosynthesis. **Plant Sci.** 317:111196.
11. 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](https://doi.org/10.1016/j.gene.2021.145554)
12. 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** doi: 10.1007/s00709-021-01616-2.
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15. Gani U, Vishwakrama RA, **Misra P\*** (2020) Membrane transporters: the key drivers of transport of secondary metabolites in plants. **Plant Cell Reports.** (doi.org/10.1007/s00299-020-02599-9)

16. Sharma A, Rana S, Rather GA, **Misra P**, Dhar MK, Lattoo SK (2020) Characterization and overexpression of sterol  $\Delta$  22-desaturase, a key enzyme modulates the biosyntheses of stigmaterol and withanolides in *Withania somnifera* (L.) Dunal. **Plant Science**, 301:110642.
17. 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 Mol Biol**. 102(6):625-644.
18. 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** doi.org/10.1007/s10725-020-00635-y
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20. 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**. 2019 Jul 5; 10:842. doi: 10.3389/fpls.2019.00842. eCollection 2019.
21. 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 Biol**. 2019 Jul 10; 19(1):301. doi: 10.1186/s12870-019-1912-x. IF:3.670
22. 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. Epub 2019
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27. Rai A, Bhardwaj A, **Misra P**, Bag SK, Adhikari B, Tripathi RD, Trivedi PK, Chakrabarty D (2015) Comparative Transcriptomic Profiling of Contrasting Rice Genotypes Shows Expression Differences during Arsenic Stress. **The Plant Genome** 8: 1: 14.
28. 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.
29. 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: 401-417

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31. 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** 250:631-636
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33. 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 IF: 2.473
34. Pandey A, Niranjan A, **Misra P**, Lehri A, Tewari SK, Trivedi PK (2011) Separation and simultaneous determination of targeted group of compounds in *Psoralea corylifolia* L. through HPLC-PDA-MS-MS. **Journal of Liquid Chromatography & Related Technologies** 35:1–17 IF:0.987
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40. 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, 46-59.
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42. 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, 525-535

### **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