

Dr. Mahesh Prakash Mane

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Objectives

- ❖ A hard-working and highly disciplined individual searching for a challenging position to earn work experience in my field.
- ❖ To utilise my skills and expertise for meeting the organisational objectives while also increasing my knowledge and gaining professional exposure.

Technical Skills

- ❖ **Plant Tissue culture:** Special expertise in tissue culture of any kind of plant. Hands on experience of designing protocol for micropropagation, callus development, suspension culture, elicitation. E.g.; Jambhul, Caranda, Jackfruit, Kokum, Guava, *Polygala* species.
- ❖ **Animal Tissue culture:** Hands on experience on culturing, passaging and checking cell cytotoxicity (MTT assay) of cell lines. Handled RAW 264.7 macrophage cell line for anti-inflammatory experiment.
- ❖ **RT-PCR:** Handling experience of Hi-Media and Bio-Rad RT-PCR during COVID pandemic and Ph.D. work. Extraction of mRNA to master mix preparation and loading of plate and analysis of results hands-on experience.
- ❖ **HPLC:** Basic knowledge of handling of HPLC. JASCO Autosampler.
- ❖ **ELISA:** Hands on experience of handling Thermo-Scientific, Multiskan Sky ELISA plate reader cum spectrophotometer.
- ❖ **Accelerated Solvent Extractor:** Hands on experience of handling Accelerated Solvent extractor for extraction of plant metabolites. Thermo-Scientific, Dionex350 system
- ❖ **Computer Knowledge:** Completed MS-CIT in 2007. Having working experience on MS-Word, MS-PowerPoint, MS-Excel etc.

Work Experience

- P.G. Department of Biotechnology, Vivekanand College, Kolhapur** July 2024
Assistant Professor
 - ✓ Engaged in teaching different biotechnology subject to M.Sc. Biotechnology students.
- Department of Botany, Shivaji University, Kolhapur** Dec 2020-April 2024
Junior Research Fellow
 - ✓ RGSTC funded project: phase-II
 - ✓ Grafting of *in vitro* grown shoots on natural seedlings.
 - ✓ Transferring such grafted plants into the field and monitoring their growth parameters.
 - ✓ Extra work including teaching to M.Sc. Botany students.
- RCSM, Medical College, Kolhapur** May- July 2020
Biotechnologist
 - ✓ COVID-19 testing work.
 - ✓ Isolation of RNA from human sample manually as well as by using automatic extractor machines like Hi-media, Qiagen and Thermofisher Scientific.
 - ✓ Handling of RT-PCR and analysis of results.

4. Department of Botany, Shivaji University, Kolhapur May 2017-March 2020
Junior Research Fellow

- ✓ RGSTC funded project: phase-I
- ✓ Kokum, Jackfruit and Guava plants tissue culture work
- ✓ Plant quality maintain by using biotechnological approaches

4. Department of Biotechnology, Vivekanand College, Kolhapur July 2010-2017
Assistant Professor

- ✓ Teaching of different biotechnology subjects at undergraduate level.
- ✓ Worked with various project on different topics.
- ✓ Worked as paper setter, practical examiner, Sub-CAP director etc.

Education

Ph.D. (Biotechnology)	Department of Biotechnology, Shivaji University, Kolhapur	2018-2023	*Awarded
M.Sc. (Biotechnology)	Department of Biotechnology, Shivaji University, Kolhapur	2009	58.33%
B.Sc. (Botany)	A.S.C. College, Ichalkaranji, Shivaji University, Kolhapur	2007	64.60%
H.S.C.	Maharashtra State Board Pune	2004	43.17%
S.S.C.	Maharashtra State Board Pune	2002	56.26%

National Exam

	Year of Passing	Marks obtained	Score
GATE	2010	31.00	257

* Ph.D. Thesis Title: “**Studies on Medicinal Properties of *Polygala L. species***” under the guidance of **Dr. Mansingraj S. Nimbalkar**, Asst. Professor, Department of Botany, Shivaji University, Kolhapur

Workshops / Conferences attended and presented

Total Workshops attended = 16

Total conferences attended =16

1. Participated and presented research paper in the Interdisciplinary International Conference on “Research Interventions and Technological Advancements in Plant Sciences” jointly organized by PG Department of Botany, Shri. Pancham Khemraj Mahavidyalaya, Sawantwadi in association with Plant Science Researchers, Dehradun on 26th and 27th March, 2021.

Presented Paper Title: - “Evaluation of antioxidant and anti-inflammatory potential of *Polygala species*”.

2. Participated and presented research paper in the, international e-conference on New Horizons and Multidisciplinary Applications in Sciences and Technology, organized by Faculty of Science and IQAC Shri Vitthal Rukhmini College, Sawana on 11th to 13th October 2021.

Presented Paper Title: - “Anti-inflammatory potential of plant *Polygala persicarifolia*”

3. Participated and presented research paper **Poster** in International Conference “Material and Environmental Science (ICMES-2018)” organized by Shri Yashwantrao Patil Science College, Solankur and The New College, Kolhapur, 7th-8th December 2018.

Presented Paper title: - i) *In vitro* regeneration of shoots through organogenesis from *Garcinia indica* Choisy seed explant.

4. Participated and presented research paper Poster in National Conference “Multidisciplinary Approaches in Life Science: Research & Application for Sustainable Development (NCMALS)” organized jointly by Dept. of Botany, Biotechnology & IQAC, Yashwantrao Chavan Institute of Science, Satara, 5th-6th January 2018.

Presented Paper title: - i) Microanatomical studies and Scanning Electron Microscopy of *in vitro* shoot proliferation in *Garcinia indica*

- ii) Development and organization of specialized cellular structure contributing *in vitro* shoot formation & strength in *Artocarpus heterophyllous*

5. Participated and presented a paper in the UGC sponsored National Conference “Recent Trends and Future Prospectus in Multidisciplinary Approaches in Microbiology-RTFPM, 2014” organized by Dept. of Microbiology, Rajaram College, Kolhapur in Association with Microbiology Society, India on 4th and 5th October 2014.

Presented Paper title: - i) Isolation and Characterization of Indole-3 Acetic Acid from

Agrobacterium tumefaciens

- ii) Isolation of *Erwinia species* from Potato and Banana and studying the effect of Streptomycin on its growth.

6. Participated and Presented paper in the UGC sponsored Second National Symposium on “Modern Research Trends and Applications in Life Sciences” organized by the Government of Maharashtra’s Elphinstone College, Mumbai held during 9th February 2013.

Presented Paper title: - Isolation and Characterization of Indole-3 Acetic Acid from

Agrobacterium tumefaciens.

Research Projects

1. “Establishing Demonstration Plots and Technology Transfer for Quality Plant Production Using Biotechnological Approaches: Phase-II”, RGSTC funded project at Department of Botany, Shivaji University, Kolhapur.

2. “Quality Plant Production Using Low-Cost Biotechnological Approaches: Phase-I”, RGSTC funded project at Department of Botany, Shivaji University, Kolhapur.
3. “*In Vitro* Studies in Medicinally Important Woody Plants- *Syzigium cumini* and *Carissa congesta*”, completed in M.Sc. under the guidance of Prof. Dr. V.A. Bapat, Department of Biotechnology, Shivaji University, Kolhapur.
4. “Studies on Medicinal Properties of *Polygala* L. species” – Ph.D. work, work is specially focussed on finding bioactive secondary metabolites, antioxidant potential and anti-inflammatory activity of *Polygala* species, with the finding of some useful anti-inflammatory metabolites. Also, animal cell line and animal model study were conducted to check the effect of such metabolites.

Publications

1. S. A. Patil, M. S. Nimbalkar, M. C. Pagariya, A. J. Kulkarni, P. R. Jadhav, **M. P. Mane**, A. B. Magdum, T. N. Saha, K. V. Shinde, K. V. Prasad, G. B. Dixit & P. G. Kawar, (2024), Pollen morphology and variability among Indian cultivars of *Chrysanthemum morifolium* and comparative analysis with genera of the Asteraceae family, Genetic Resources and Crop Evolution, 1-21, doi.org/10.1007/s10722-024-02094-0. (IF - 1.7).
2. Shriram B. Fasale, Mansingraj S. Nimbalkar, **Mahesh P. Mane**, Mahendra B. Waghmare and Sudhakar S. Khot, (2024), Phytochemical Characterization of *Anisomeles indica* (L.) Kuntze Extract Using GC-MS: Evaluation of Antioxidant and Antimicrobial Properties, International Journal of Plant and Environment, Volume 10 Issue 1, 132-137. ISSN: 2454-1117 (Print), 2455-202X (Online).(IF -1.8, NAAS score-5.14)
3. A.B. Magdum, R.S. Waghmode, K.V. Shinde, **M.P. Mane**, M.V. Kamble, R.S. Kamble, A.P. Jangam, K.D. Pawar, K.D. Sonawane, P.S. Patil, M.S. Nimbalkar, (2024), Biogenic synthesis of silver nanoparticles from leaves extract of *Decaschistia trilobata* an endemic shrub and its application as antioxidant, antibacterial, anti-inflammatory and dye reduction, Catalysis Communications (IF: 3.3)
4. **Mahesh P. Mane**, Ruturaj S. Patil, Aditya B. Magdum, Samidha S. Kakade, Devashree N. Patil, Mansingraj S. Nimbalkar, (2022), Chemo-profiling by UPLC-QTOF MS analysis and *in vitro* assessment of Anti-inflammatory activity of Field Milkwort (*Polygala arvensis* Willd.), South African Journal of Botany 149 (2022) 49-59 (IF: 3.1).
5. Ruturaj S. Patil, **Mahesh P. Mane**, Aditya B. Magdum, Mansingraj S. Nimbalkar, (2022), *Dioscorea oppositifolia* plant extract reduces adipogenesis by down-regulating PPAR γ , C/EBP α , SREBP-1, and FASN in 3T3L1 pro-adipocytes, Phytomedicine Plus 2, 100293.
6. **Mahesh P. Mane**, Ruturaj S. Patil, Aditya B. Magdum, Chirag U. Narayankar, Mansingraj S. Nimbalkar, (2021), Evaluation of antioxidant and pancreatic lipase inhibitory potential of

Polygala glaucoides L. and *Polygala erioptera* DC, International Journal of Botany Studies, Volume 6, Issue 6, Page No. 1259-1264, ISSN: 2455-541X.

7. Raturaj S Patil, **Mahesh P Mane**, Aditya B Magdum, Mansingraj S Nimbalkar, (2021), In vitro pancreatic lipase inhibition potential of commonly used *Dioscorea* species, International Journal of Botany Studies, Volume 6, Issue 6, Page No. 1107-1110, ISSN: 2455-541X.
8. Chirag U. Narayankar, **M. Mane**, R. Patil, A. Magdum M. D. Satpute, S. Gaikwad, D. K. Gaikwad, (2021), “Inhibition of proliferation of K-562 Human Blood Cancer Cell due to *Opuntia elatior* fruit extract”, Journal of Science and Technology, Vol. 06, Issue 04, pp32-38, ISSN: 2456-5660.
9. Snehal Wadkar, Aditya Magdum, **Mahesh Mane**, D. K. Gaikwad, Chirag U. Narayankar, Nivas Desai, (2021), GC-MS/MS Analysis of Some *Amaranthus* Species, Anveshana’s International Journal of Research in Engineering and Applied Sciences, Volume 6, Issue 6, ISSN-2455-6300.
10. Komal S. Walvekar, **Mahesh P. Mane**, Mansingraj S. Nimbalkar, (2022), “GC-MS and LC-MS: an integrated approach towards phytochemical evaluation and in vitro anti-inflammatory activity of methanolic extracts of *Pinda concanensis*” proceeding of Multidisciplinary Research in Emerging Trends in Life Science published by Bright MP Publisher, ISBN: 978-93-91143-89-3.
11. Kapil Shinde, **Mahesh Mane**, Raturaj Patil, Aditya Magdum, Mansingraj Nimbalkar, Akshay Jangam, Ratan More, Ashok Chougule and Nilesh Pawar, (2022), “Anti-oxidant, antimicrobial and anti-Inflammatory potential of silver nanoparticles synthesized from an endemic climber *Argyrea lawii* C.B. Clarke”, proceeding of Multidisciplinary Research in Emerging Trends in Life Science published by Bright MP Publisher, ISBN: 978-93-91143-89-3.
12. Devashree N. Patil, **Mahesh P. Mane**, (2014), “Isolation of *Erwinia* species from Potato and Banana and studying the effect of Streptomycin on its growth”, Proceedings of “Flora and Fauna” an International Research Journal of Biological Sciences, Vol.20, NO.-2, ISSN-0971-6920.
13. Raturaj S. Patil, **Mahesh P. Mane**, (2014), “Isolation and Characterization of Indole-3 Acetic Acid from *Agrobacterium tumefaciens*” In Proceeding journal of RTFPM-2014, ISBN-978-81-927211-92.

Declaration

I hereby declare that the information stated above is true to belief of my knowledge.

Dr. Mahesh Prakash Mane