

◆ **MODERN EDUCATION SOCIETY'S** ◆
NOWROSJEE WADIA COLLEGE, PUNE
FACULTY ACADEMIC PROFILE



Dr Swapna Rahul Sathe
Assistant professor

Dept of Biotechnology

PhD (Biotechnology), M.Sc. (Botany)
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PROFESSIONAL SNAPSHOT

Working in Dept of Biotechnology, Nowrosjee Wadia College since 2010.

EDUCATION

Qualification	University / Institution	Year
Ph.D.	SPPU	2010
M.Sc.	SPPU	2003
B.Sc.	SPPU	2001

TEACHING & ACADEMIC INTERESTS

Subjects taught

Plant Biotechnology Genetics Molecular Biology Nanobiotechnology Plant Tissue Culture Research Methodology
Plant Development Agricultural Biotechnology Biodiversity

RESEARCH & PUBLICATIONS

Research Area: Plant Biotechnology and Nanobiotechnology, Crop Improvement

Patent registered

Patent Application No. 202521079391 dated 21.08.2025, Entitled 'Method of preparation of Nanoparticles for plant growth promotion'

Publications

1. Abhijit Limaye, Shreya Mulay, Jidnyasa Jangale, Rasadnya Joshi, **Swapna Sathe**, Kishor Bhosale (2025), Influence of biosynthesized silver nanoparticles on pollen germination and tube growth in *Catharanthus roseus* (L.) G. Don, Journal of Biodiversity and Environmental Sciences, Vol. 27(5), 85-90
2. **Swapna R. Sathe** and S.R.Thengane_ 'Genetic diversity of *Garcinia indica* Choiss. In Maharashtra revealed by ISSR markers' in 'International Conference on plant Research and Resource Management' organized by TC College, Baramati, Maharashtra, India, 11th -13th February, (2016), ISBN 978- 81-924850-2-7
3. **Swapna Deodhar**, Kiran Pawar, Nitasha Singh, R.J. Thengane, S.R. Thengane (2014), Clonal propagation of female plants of *Gracinia indica* Choiss. A tree species of high medicinal value, Journal of applied biology and Biotechnology, 2(6), 18-25
4. **Swapna R. Deodhar**, R.J.Thengane and S.R.Thengane (2008) De novo shoot regeneration from root culture of

Garcinia indica Choiss., Indian Journal of Experimental Biology, 46, 482-486

5. S.R.Thengane, **S.R.Deodhar**, S.V.Bhosle, S.K.Rawal (2006) Repetitive somatic embryogenesis and plant regeneration in *Garcinia indica* Choiss., In vitro Cellular and Developmental Biology – Plant, Vol. 42, No. 3, pp256-261
6. S.R.Thengane, **S.R.Deodhar**, S.K.Rawal (2006) Direct somatic embryogenesis and plant regeneration in *Garcinia indica* Choiss., Current Science, vol 91s, no. 8, pp 1074-1078.
7. S.R.Thengane, S.V.Bhosle, **S.R.Deodhar**, K.D.Pawar, D.K.Kulkarni, (2006) Micropropagation of Indian Laurel (*Calophyllum inophyllum*) an anti-HIV drug, Current Science, vol. 90, No.10, pp 1393-1397.
8. S.V.Bhosle, S.R.Thengane, **S.R.Deodhar** and M.M.Sardesai (2006) New distributional record of an rare and endemic species *Calophyllum austroindicum* Kosterm ex. Stevens Guttiferae (Clusiaceae), Journal of Economic and taxonomic Botany, vol 30, No.4, pp 856-858.

Manuscripts Communicated

- Biosynthesized Silver nanoparticles to mitigate the effect of salt stress at germination level, Chavan Vaishnavi, Gajanan Suryavanshi, **Sathe Swapna**, Limaye A.S., Bhosale K.S., Bodas Dhananjay, Communicated to ‘Crop and Environment’
- Enhanced fenugreek growth with micronutrient chelates derived from Citrus fruit peel extracts, Ruchita Shewale, Priya Ghodake, **Sathe Swapna**, Limaye A.S., Communicated to ‘Tropical Agriculture Research’
- Synergistic Influence of Citrus Fruit Peel Derived D-Limonene and Other Phytochemicals on *In-vitro* Plant Regeneration, Akansha Chavan, Ruchira Gokhale, **Sathe Swapna**, Ayesha Khan, Limaye A.S., Communicated to ‘Journal of Tissue Culture and Bioengineering’
- Silver Nano priming’s Metabolic Footprint on Mungbean Germination, **S. R. Sathe**, R. Kamble, D. S. Bodas and A. S. Limaye, Communicated to ‘Journal of Crop Science and Biotechnology’

Research Profile: ORCID Id – 0000-0002-6546-1954

ACHIEVEMENTS & PROFESSIONAL DEVELOPMENT

Papers presented in symposia

1. S. R. Sathe, R. Kamble, D. S. Bodas and A. S. Limaye, ‘Silver Nano priming’s Metabolic Footprint on Mungbean Germination’, International Conference on Pioneering Science and Progress: Nanotechnology for Sustainable Development, School of Nanoscience and Biotechnology, Shivaji University, Kolhapur, 11th -13th September 2025
2. Swapna Sathe, Vaidehi Shinde, Rucha Pawar, Dhananjay Bodas and Abhijit Limaye, ‘Enhancing explant response using biosynthesized silver nanoparticles in MS medium’, Oral presentation at “An International Conference on Advancement and Emerging Trends In Sciences”, Dahiwadi College, Dahiwadi, Maharashtra, 8th -10th January 2025.
3. Dr. Swapna R. Sathe and Dr. S.R.Thengane ‘Genetic diversity of *Garcinia indica* Choiss. In Maharashtra revealed by ISSR markers’ in ‘International Conference on plant Research and Resource Management’ organized by TC College, Baramati, Maharashtra, India, 11th -13th February, 2016.
4. S.R.Deodhar, S.V.Bhosle, K.D.Pawar, D.K.Kulkarni and S.R.Thengane ‘In-vitro techniques for conservation of *Calophyllum* species in Western Ghats of India’ in National Symposium on ‘Biotechnology for a better future’ held on the occasion of the 26th meeting of the Plant Tissue Culture Association of India organized by St Aloysius College, Mangalore, 15 th -17 th January 2004.
5. S.R.Deodhar, S.V.Bhosle, S.K.Rawal and S.R.Thengane ‘Repetitive somatic embryogenesis and plant regeneration in *Garcinia indica* Choiss.’ in ICAR National Symposium ‘Biotechnological interventions for improvement of horticultural crops- issues and strategies’ at College of Horticulture, Thrissur, organized by Kerala agriculture University, 10 th -12 th January 2005
6. S.V.Bhosle, K.D.Pawar, S.R.Deodhar, P.P. Gaikwad and S.R. Thengane ‘Distribution of *Calophyllum* from 3 states along the Western Ghats of India and in-vitro conservation of *Calophyllum inophyllum* Linn.’ in International Conference on ‘Modern trends in plant sciences with special reference to the role of Biodiversity in Conservation’ ICPSBC-05, organized by Department of Botany, Amravati University, Amravati , 17th-20th February 2005
7. S. R. Deodhar, S.K.Rawal, S.R.Thengane, ‘A shift in morphogenetic pattern due to prolonged cultures of in vitro grown plants of *Garcinia indica*’, in National Symposium held on the occasion of 27th meeting of the Plant Tissue Culture Association of India organized by Center for medicinal and Aromatic Plants (CIMAP) Lucknow, 18 th –20 th November 2005.

8. S. R Thengane and Swapna Deodhar 'In vitro conservation and molecular / chemical diversity studies in *Garcinia indica* Choiss' Poster presented at Asia Pacific Conference on Plant Tissue Culture and Agrobiotechnology" held at Kaulalampur, Malaysia, 17-21 June 2007.
9. Swapna R. Deodhar, R.J.Thengane and S.R.Thengane, 'Genetic diversity of *Garcinia indica* Choiss. in Maharashtra revealed by ISSR markers' in National Symposium held on the occasion of 30th meeting of the Plant Tissue Culture Association of India organized by IHBT, Palampur, 3 rd -4th April 2009.

Conferences and Workshops attended

- One day workshop on "Wonderful Millets: Understanding Nutritional Benefits" Organized by Centre for Millet Research and Training (CMRT), Department of Botany, SPPU, 13th July 2024
- One day workshop on " Hands on Training Seminar in Instrumentation , Application and Basic Maintainance of Instruments" Oraganized by Department of Chemistry, Nowrosjee Wadia College, Pune , 24th August 2024
- Two days state level workshop on 'Bioinformatics and Biostatistics using R Software' at SP College, Pune, Maharashtra, India, held on 30th September and 1st October 2016.
- National workshop on Recent Advances in Cell Biology and Molecular Biology at Department of Botany and Zoology SP College, Pune, Maharashtra, India held on 5th and 6th February 2016.
- International Conference on Perspectives of Computer Confluence with Science Organised by Nowrosjee Wadia College, Pune, on 10th -12th December 2012.

ACADEMIC RESPONSIBILITIES

Other contributions towards profession and activities

- Guiding BSc and MSc Biotechnology students for Avishkar competition since last 4 years and getting selected till university level consecutively
- BOS member of Dept Of Biotechnology, Nowrosjee Wadia College, Pune
- Worked as Member of Autonomous Committee for Department of Biotechnology and contributed in Syllabus finalization for the Autonomy
- Mentorship of UG and PG Biotechnology students for their project work
- Work as a coordinator of SY/TY Biotechnology Students, Timetable and Workload In charge at Dept of Biotechnology, Nowrosjee Wadia College
- Member of CTSE core Committee of Wadia College, Pune
- MTS paper setting
- For MTS Exam worked as center incharge
- Appointed as External Examiner for practical courses in B.Sc. and M.Sc. Biotechnology in various colleges under Savitribai Phule Pune University
- Appointed as Paper Setter for Theory courses paper setting of B.Sc. and M.Sc. Biotechnology under Savitribai Phule Pune University
- Assessment of Answer papers in Central Assessment Programm (CAP) of Savitribai Phule Pune University as Examiner and Moderator for B. Sc. Biotechnology
- Contributed towards 'Environment Awareness Programme' by delivering lectures, assessment of projects and answer papers for Second year B.Sc. , B. A., B.Sc. (Biotechnology and Computer Science) students in Academic year 2012 to 2016 which is a compulsory course by Savitribai Phule Pune University.