



Dr. Swaroopa Amit Patil (Dr. Swaroopa Ram Ghatge)

Department of Botany,
Shivaji University, Kolhapur, Maharashtra (INDIA)
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Educational profile:

Ph.D. (Botany) Awarded : September 2007

Shivaji University, Kolhapur

Title of thesis : “*In vitro* cultural studies in medicinal plants Viz. *Hemidesmus indicus* and *Rubia cordifolia*”

Pre Ph. D. – May 2001

Shivaji University, Kolhapur

Percentage/Class : Cleared with “Outstanding” grade.

Subjects offered were Research Methodology, Recent advances in Botany, Recent Advances in Cytogenetics.

M.Sc. (Botany) May 2000

Department of Botany, Shivaji University, Kolhapur

Percentage/Class :First Class with Distinction. Dr. G. V. Joshi Gold Medal, Stood first in University, Recipient of merit scholarship for both the years.

Specialisation: Cytogenetics and Plant breeding.

Other subjects : Plant Ecology and Environment, Plant Physiology, Cell Biology, Angiosperm and Taxonomy, Plant Biotechnology, Paleobotany.

B.Sc. (Botany) May 1998

The New College, Shivaji University, Kolhapur

Percentage/Class :First Class with Distinction. Stood first in College.

Specialisation: Botany

Other subjects : Ecology, Plant Physiology, Cell Biology, Angiosperm and Taxonomy, Biotechnology, Forestry, Paleobotany, Economic Botany.

Pre Primary, Primary Schooling done at Holy Cross Convent Primary School Kolhapur, High Schooling done at Holy Cross Convent High School Kolhapur.

Awards and Fellowships:

1. **G. V. Joshi Gold Medal** for standing 1st in the Subject Botany. (Year 1999-2000)
2. Recipient of Merit scholarship for both the years (Year 1999 & 2000)
3. **Departmental Research Fellowship** (From 5/5/2003- 4/5/2006).

4. D. S. T. sponsored **Junior Research Fellowship** (3/08/2006 to 2/8/2008).
5. D. S. T. sponsored **Senior Research Fellowship** (3/08/2008)
6. U. G. C. sponsored **Dr. D. S. Kothari Post doc fellowship** (3/10/2008)
7. M. S. Chennaverraih award for the best paper presentation at 11th all India Cytology Conference, January 2012.
8. Best Paper award (Oral presentation: Ms. C. M. Dalavi and Dr. S. A. Patil) in the National conference on Recent Advances in Physics and Botany, at KBP College, Urun Islampur on 24th January, 2018. Title: Assessment of phytoconstituents from *Solanum anguivi* Lam.
9. Best poster award (1st prize winning Poster presented: Dhanashree S. Patil and Swaroopa A. Patil) in the XLIV All India Botanical Conference of The Indian Botanical Society and National Symposium on Plant Science Research in Present Scenario: Opportunities and Challenges, organized by Department of Botany (UGC-CAS), Jai Narain Vyas University, Jodhpur Rajasthan from 18th to 20th October, 2021. Title: Regeneration via Somatic Embryogenesis from seed explants of rare medicinal plant *Solanum virginianum* (L.).
10. Best poster award (1st prize winning Poster presented by Pratik S. Kamble and Swaroopa A. Patil) in International conference on Innovative trends in Life Sciences (ITLS 2022) organized by SGM college, Karad. 11th and 12th March, 2022. Title: Exploring antibacterial potential of biosynthesized copper nanoparticles prepared by using *Drimia indica*.

ORCID ID : 0000-00001-9204-5019

Scopus ID : 57146039900

Research ID : AAH-2567-2021

Reviewer:

1. Journal of Biotechnology (Science Direct)
2. Springer Nature (Sugar Technology)
3. Annals of Phytomedicine

Wetlab Skills:

- ✚ Isolation and quantification of plasmid and genomic DNA
- ✚ Isolation of RNA
- ✚ SDS-PAGE
- ✚ RAPD, RFLP techniques
- ✚ PCR
- ✚ Initiation of Plant *in vitro* cultures (for all purposes like Somatic embryogenesis, callus induction, multiple shoot induction, *in vitro* seed germination, embryo rescue, encapsulation of embryos etc.)
- ✚ Maintenance of cultures.
- ✚ Secondary metabolite Extraction.
- ✚ Quantitative and Qualitative analysis of active components by TLC, HPLC.
- ✚ Genetic Transformation / hairy root induction in desired plants and plant parts.

- ✚ Culturing and maintenance of mushrooms (Oyster)
- ✚ Phytoremediation of textile dyes.
- ✚ Elicitation of secondary metabolites using chitosan (chemical elicitor).

Extra Curricular activities :

1. **1st** in G. V. Joshi Essay Competition, organized by Department of Botany, Shivaji University, Kolhapur.
2. **1st** in Essay competition held at Shivaji University, for National Science Day.
3. Worked as Rapporteur in the International Seminar in Changing Scenario in Angiosperm Systematics, organized by Department of Botany, Shivaji University, Kolhapur.
4. Served as a member of various committees such as Publicity/Inauguration/Valedictory function committee, Registration committee and Academic Programme committee in the International Seminar in Changing Scenario in Angiosperm Systematics, organized by Department of Botany, Shivaji University, Kolhapur.
5. Served as a member of Executive committee, Local Hospitality committee and Travel and Accommodation committee in the National Seminar on Frontiers in Biotech and Bioinformatics 2010, organized by Dept. of Biotech and Bioinformatics, PDDYPatil University, Navi Mumbai.
6. A member of Institutional Biosafety Committee of Dept. of Biotechnology and Bioinformatics, PDDYP University, Navi Mumbai.
7. Recognized as a Ph. D. guide under Law no. 502 & 326 for Ph. D. programme in Dept. of Biotechnology and Bioinformatics, PDDYP University, Navi Mumbai (2010).
8. Recognized as a Ph. D. guide in the Department of Botany, Shivaji University, Kolhapur. (2012).
9. Participated in organizing National Science Day, 2012 at Shivaji University, Kolhapur.
10. Worked as a Central Government appointed Observer for NEET(UG)-2013 Examinations held at Mumbai (center name: Atomic Energy Central School No. 3, Tarapur).
11. Worked as Rapporteur in the XII Conference of Society of Cytologists and Geneticists and National Symposium on Challenges for Biologists in 21st Century, organized by Department of Botany, Shivaji University, Kolhapur (22nd -24th December, 2014).
12. Worked as Rapporteur in the One-day national seminar on Biodiversity and climate change, organized by Department of Botany, Shivaji University, Kolhapur, under the Lead Botanical Garden Program (Phase II) (31st January, 2015).
13. Worked as Rapporteur in XXVI Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Seminar on “Conservation and Sustainable Utilization of Biodiversity”, Organized by Department of Botany, Shivaji University, Kolhapur. 7th- 9th of November, 2016.
14. Worked as a judge for poster evaluation in 3rd International Conference on “Innovative Research in Science and Technology” (ICIRST-2017), organized by Gopal Krishna Gokhale College, Kolhapur. 7th- 8th November, 2017.
15. Worked as Rapporteur at National Conference on Mangroves and Coastal Resources, organized by Department of Botany, Shivaji University, Kolhapur, April 12th, 2019.
16. Recognized as a Ph. D. guide in Subject Biotechnology w.e.f. 21st of October, 2022 Letter Ref N. PAHSUS/ARD/Ph.D.-1/2022 dated, 21st October, 2022

Teaching Experience:

Sr. No	Name of the College/ Institute	Duration / Year	Type of appointment
1	Shikshan Prasarak Mandal's Gopal Krishna Gokhale College, Kolhapur	January 2001- April 2001 March 2003- April 2003	Leave vacancy (Senior College). Contributory Teacher.
2	The New College, Kolhapur	June 2001-March 2003	CHB Lecturer in Senior College.
3	Sericulture Department, Shivaji University, Kolhapur.	July 2001- December 2005	Contributory Teacher.
4.	Department of Botany, Shivaji University, Kolhapur.	July 2004 – November 2004	Contributory Teacher.
4.	Department of Biotechnology, Shivaji University, Kolhapur.	June 2004 - June 2007	Contributory Teacher.
5.	Certificate Course in Biotechnology, Y. C. College, Warananagar.	July 2005 – June 2006	Visiting Faculty
6.	Padmashree Dr. D. Y. Patil University, Dept. of Biotechnology and bioinformatics, Navi Mumbai	Since 21 st August 2008- 31 st Dec 2010.	Permanent- Assistant Professor
7.	Department of Botany, Shivaji University, Kolhapur	Since 1 st Jan, 2011- till date	Permanent– Assistant Professor

Seminar/workshop/Conferences attended:

Sr. No	Name of the workshop	Sponsoring agency	Place & Year.
1	Two-day seminar on Irradiation Techniques.	UGC & Shivaji University, Kolhapur.	Dept. of Physics, Shivaji University, Kolhapur. 10 th Sep. 1999.
2.	Workshop on "Bioinformatics"	UGC & Abeda Inamdar Senior College for girls & Indian Women Scientists Association & Dept. of Microbiology, AISCg – Pune.	Abeda Inamdar Senior College for Girls. Pune 4 th October 2002
3.	CME on Human Genetics	Moving Academy of Medicine & Biomedicine, Pune, and Rajeshri Chatrapati Shahu Maharaj Govt. Medical College, Kolhapur	CPR Hospital, Kolhapur. 11 th & 12 th October 2002
4.	Campaign on University Research Training (COURT 2003)	Shivaji University, Kolhapur.	Dept of Environment, Shivaji University, Kolhapur. 26 th and 27 th June 2003
5.	Training on hairy root cultures and <i>Agrobacterium</i> mediated genetic transformation	_____	Department of Genetics, Osmania University, Hyderabad.
6.	Two days International Seminar on "Sugarcane Genomics and Genetic transformation in Sugarcane	Vasantdada Sugar Research Institute, Pune	Hotel Le Meridian Pune, 26 th & 27 th August 2003
7.	Two days National Seminar on IPR, Biotechnology & its Agricultural Development : Applications & Apprehensions.	UGC and Economics Department, SUK.	Department of Economics, Shivaji University, Kolhapur. (13 th , 14 th Oct. 2003)
8.	Seminar on "Botany and Industry"	Shivaji University, Kolhapur.	Department of Botany, Shivaji University, Kolhapur. (21 st Feb. 2004).
9.	National Workshop on Advanced Molecular Biological Techniques.	University Grants Commission, New Delhi.	Department of Genetics, Osmania University, Hyderabad. Dec 6-18, 2004.
10.	XV Annual Conference of	IAAT	University Department of

	Indian Association for Angiosperm Taxonomy (IAAT) and National Seminar on Emerging Trends in Plant Taxonomy.		Botany, R. T. M. University of Nagpur. 20 th -21 st October, 2005.
11.	Workshop on Molecular Biology Techniques	Fumes Chemicals	Department of Biotechnology, Shivaji University, Kolhapur. 19 th November, 2005.
12.	International Symposium on "Frontiers in Genetics and Biotechnology- Retrospect and Prospect."	Department of Science and Technology, New Delhi, I C M R, CSIR New Delhi, Indian National Science Academy, New Delhi, Osmania University.	Department of Genetics, Osmania University, Hyderabad. 8-10 th January, 2006.
13.	Workshop on Third Year B. Sc. Revised Syllabus.	Sponsored by University Grants Commission, Pune.	Yashwantrao Chavan College Waranannagar, Kolhapur. 2006
14.	One day workshop on mol. biology techniques	Sponsored by GENEI Bangalore.	Department of Biotechnology Shivaji University, Kolhapur. 2006
15.	National Conference on Biodiversity related International conventions : Role of Scientific Community	Ministry of Environment and Forests, New Delhi.	Delhi University Botanical Society, International Society of Phytomorphology, Department of Botany, Delhi University, , New Delhi. 8-10 th March, 2006.
16.	Indian Association for Angiosperm Taxonomy	Indian Association for Angiosperm Taxonomy	Agharkar Research Institute, Pune, from 4 th -6 th October, 2006.
17.	Campaign on University Research Training	Shivaji University, Kolhapur	Shivaji University, Kolhapur.
18	International Seminar on Changing Scenario in Angiosperm Systematics,	DST New Delhi, UGC New Delhi ICAR New Delhi	Dept. of Botany, Shivaji University, Kolhapur 19-21 Nov. 2007
19.	A three day workshop on instrumentation	Shivaji University	USIC department from 3 rd to 5 th June, 2008
20.	State level Seminar on "Biodiversity of medicinal	UGC and SRTMUN	Dept. of Botany and Microbiology,

	plants: A treasure of India”		NSB College, Nanded, MS. 15 th -16 th July, 2008.
21.	National Seminar on Frontiers in biotechnology and Bioinformatics 2010	DST	Dept. of Biotech and Bioinformatics, PDDYP University, CBD Belapur, Mumbai. 5 th and 6 th March, 2010
22.	DAE BRNS Life Science Symposium	Board of Research in Nuclear Sciences, Department of Atomic Energy, Government of India.	Bio-medical Group, Bhabha Atomic Research Centre, Trombay, Mumbai. 22 nd - 24 th Dec, 2010.
23.	National symposium on Recent trends in Life Sciences.	UGC-SAP	Dept. of Biochemistry, Shivaji University, Kolhapur. 4 th -5 th March, 2011
24.	Eleventh all India conference on cytology and genetics.	Society of Cytology and Genetists, India.	Bangalore University, Jnana Bharathi, Bangalore-56. January 23 rd -25 th 2012.
25.	National Seminar on Medicinal plants: Status and Future.	Shivaji University, Kolhapur.	Dept. of Botany, Shivaji University, Kolhapur. 6 th – 7 th November, 2012.
26.	Workshop on “Tools and Techniques in Molecular Systematics/ Phylogenetics.	Shivaji University, Kolhapur.	Dept. of Botany, Shivaji University, Kolhapur. 8 th – 10 th November, 2012.
27.	Workshop on A brainstorming session for application of technology for sustainable development in the state of Maharashtra	Rajiv Gandhi Science and Technology Commission	Maharashtra academy of sciences, Shivaji University Kolhapur. 26 th -27 th November, 2012.
28.	National Conference on Sacred Groves as a Repository for Ethnomedicinal plants.	UGC	Govt. of Maharashtra Rajaram College, Kolhapur. 1 st -2 nd Feb, 2013.
29.	One day Seminar on “Plant Diversity Conservation” and Alumni meet.	Department of Botany, Shivaji University Kolhapur.	Department of Botany, Shivaji University Kolhapur. 25 th June, 2013.
30.	One day workshop on “Impact Factor, Citation Index”	Department of Library Science, Barr. Balasaheb Khardekar Library, Shivaji University, Kolhapur.	Shivaji University, Kolhapur.
31.	National Seminar on “Recent trends in plant sciences, its future prospects and	UGC	Department of Botany, Yashwantrao Chavan college of Science, Karad. 29 th November, 2013

	biodiversity conservation”		
32.	National Seminar on “New Trends in Pest Management”	DST-PURSE, New Delhi	Department of Agrochemicals and Pest Management. 31 st January, 2014.
33.	Workshop on Establishment of Field gene bank of RET Mangrove species in Sindhudurg District in Maharashtra	Department of Botany, Shivaji University, Kolhapur.	Department of Botany, Shivaji University, Kolhapur. 22-24 th July, 2014.
34.	One day workshop on “Outcome based Modular Syllabus”	Internal Quality Assurance Cell (IQAC) Under Lead College Scheme.	IQAC Shivaji University, Kolhapur. 6 th August 2014.
35.	XII Conference of Society of Cytologists and Geneticists and National Symposium on Challenges for Biologists in 21 st Century.	Department of Botany, Shivaji University, Kolhapur.	Department of Botany, Shivaji University, Kolhapur (22 nd -24 th December, 2014).
36.	One day national seminar on Biodiversity and climate change.	Under the Lead Botanical Garden Program (Phase II)	Department of Botany, Shivaji University, Kolhapur, (31 st January, 2015).
37.	One day seminar on Biodiversity Conservation and Bioprospecting.	Department of Botany, Shivaji University Kolhapur. UGC-DRS II –SAP programme.	Department of Botany, Shivaji University, Kolhapur, (24 th March, 2015)
38.	National Conference on Recent Advances and Applications of Taxonomy in Life Sciences.	UGC, New Delhi.	Department of Zoology, Yashwantrao Chavan Institute of Science, Satara. (6 th & 7 th October, 2015)
39.	Two Day Workshop on Mangrove plantation techniques	Shivaji University, Kolhapur.	Department of Botany, Shivaji University, Kolhapur. (16 th & 17 th October, 2015).
41.	One Day Workshop for Coordinators of Avishkar Research Competitions	Shivaji University, Kolhapur.	Department of English, Shivaji University, Kolhapur. (30 th October, 2015).
42.	One Day seminar on “Role of students and Teachers in Conservation of Biodiversity”	UGC-SAP-DRS-II	Department of Botany, Shivaji University, Kolhapur. (30 th January, 2016)
43	International Conference of “Plant Research and Resource Management” and 25 th APSI	Tuljaram Chaturchand College Baramati.	Anekant Education Society’s Tuljaram Chaturchand College

	Silver Jubilee Scientists Meet.		Baramati. (11 th -13 th February, 2016)
44.	Lead Botanical Garden (Second phase) “Loksahabhatun vrukshavalli sanvardhan”	UGC-SAP-DRS-II	Department of Botany, Shivaji University, Kolhapur. (14 th March, 2016)
45.	One day workshop on “International day for Biological diversity”	Department of Botany, Shivaji University, Kolhapur.	Department of Botany, Shivaji University, Kolhapur, (22 nd May, 2016)
46.	XXVI Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Seminar on “Conservation and Sustainable Utilization of Biodiversity”	Department of Botany, Shivaji University, Kolhapur.	Organized by Department of Botany, Shivaji University, Kolhapur. 7 th - 9 th of November, 2016.
47.	Training programme on sexual Harrasment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.	Maharashtra State Commission for Women	Organised by Shivaji University, Kolhapur on 7 th February, 2017.
48.	One day seminar on “Opportunities in banking”.	Department of Chemistry, Shivaji University, Kolhapur.	Department of Chemistry, Shivaji University, Kolhapur on 9 th March, 2017.
49.	One day Workshop on “E-resource access and introduction to API”.	Barr, Balasaheb Khardekar Library, Shivaji University, Kolhapur.	Organised by Barr, Balasaheb Khardekar Library, Shivaji University, Kolhapur, on 9 th August, 2017.
50.	Two days seminar on “Kharphuti Parisanstha-Naisargik Sansadhan”.	UGC-SAP	Jointly organised by Department of Botany, Shivaji University, Kolhapur and Department of Forest, BSKKV, Dapoli on 12 th -13 th September, 2017.
51.	National Conference on Multidisciplinary Approaches in Life Science: Research and Applications for sustainable development.	Y C I S, Satara	Jointly organized by Department of Botany, Dept. of Biotechnology and IQAC, YCIS, Satara from 5 th -6 th January, 2018.
52.	National Conference on Recent Advances in Physics and Natural Sciences.	K B P College, Urun Islampur.	Organized by Department of Physics and Botany, in association with Indian Association of Physics Teachers, on 23 rd of

			January, 2018.
53.	Value added course on “Commercialisation of important plants through tissue culture”.	Department of Botany, Shivaji University, Kolhapur.	Department of Botany, Shivaji University, Kolhapur. 4 th – 10 th July, 2018.
54.	International Conference on Materials and Environmental Science (ICMES-2018)	CSIR, New Delhi and Shivaji University, Kolhapur	Jointly organized by Shri Yashwantrao Patil Science College, Solankur December 07- 08, 2018 The New College, Kolhapur
56.	National Conference on “Mangroves and Coastal Resources”	MSI	Department of Botany, SUK and MSI, Goa and Mangrove Foundation Mumbai on 12 th April, 2019
55.	One day workshop on “rk Council Election”	Department of Students Development, Shivaji University, Kolhapur.	Department of Students Development, Shivaji University, Kolhapur. 15 th June, 2019.
56.	Value added course on “Entrepreneurship opportunities in Life sciences”	Department of Botany, Shivaji University, Kolhapur.	Department of Botany, Shivaji University, Kolhapur. 26 th August -30 th August, 2019
57.	Bamboo Workshop	Department of Botany, Shivaji University, Kolhapur.	Department of Botany, SUK, 18 th Sep, 2019
58.	One day National Conference on “Recent trends in Life Sciences RTLS -19”	Department of Zoology, Vidnyan Mahavidyala, Sangola.	Department of Zoology, Vidnyan Mahavidyala, Sangola, December 14 th , 2019.
59.	Talk on “Vaccinology at Indian Council of Medical Research,”	Elsevier and ICMR	Monday 20 December, 2021
60.	Hands on training in Cytology and Tissue Culture in Plant Sciences	STRIDE, Department of Botany, Shivaji University, Kolhapur	Department of Botany, Shivaji University, Kolhapur. 8 th -12 th April, 2022.
61	AAACU Biennial Conference with International forum on Agricultural Innovation, Sustainability, Entrepreneurship and Networking (i- FASEN)	Asian Association of Agricultural Colleges and Universities, Thailand (AAACU)	AAACU, Thailand July 4 th -8 th , 2022.
62.	International conference on "Frontiers in Nutrition, Medical Genomics and Drug Discovery".	VFSTR, Vadlamudi, Guntur.	VFSTR, Vadlamudi, Guntur 31 st Oct-2 nd Nov, 2022

Orientation course/ Refresher Courses:

1. Completed the 151st General Orientation Course at Academic Staff College, University of Pune, Pune from 13th February, 2014 to 12th March, 2014.
2. Completed two day Orientation Course on Advances in Teaching-Learning Strategies and Professional Development, organized by Department of Education, Shivaji University, Kolhapur. 2nd -3rd September, 2014.
3. Completed Refresher Course in “Environmental studies” at HRDC, Goa University, Goa, Taleigaon from 10th January, 2017 to 30th January, 2017.
4. Completed Refresher Course in “Environmental studies” at HRDC, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad from 3rd March- 22nd March, 2018.
5. Completed Refresher Course in “Recent trends in Teaching learning Technologies (Botany)”, conducted at the Department of Education , Shivaji University, Kolhapur from 8th December to 28th of December, 2018.

Papers/Posters Presented:

1. **Swaroop R. Ghatge** and G. B. Dixit. (2003) Biotechnology and Agricultural Development: Applications and Apprehensions. paper presented at "National Seminar on IPR, Biotechnology & its Agricultural Development : Applications and Apprehensions", organised by Department of Economics, Shivaji University, Kolhapur. (13th, 14th Oct. 2003)
2. **Swaroop R. Ghatge** and G. B. Dixit (2003). Callus induction studies in *Hemidesmus indicus* (L) R. Br. for the production of secondary metabolites, presented a poster in COURT 2003., Shivaji University, Kolhapur.
3. Vinayak V. Kedage, **Swaroop R. Ghatge** and G. B. Dixit (2004). *In vitro* rapid multiplication of *Gladiolus* species. A poster presented in the seminar on Botany and Industry held at Department of Botany, Shivaji University, Kolhapur (21st Feb. 2004).
4. Vinayak V Kedage, **Swaroop R. Ghatge**, S R Yadav and G B Dixit (2005) *In vitro* propagation of *Seshagiriya sahyadrica* Ans. & Hem. : A Rare Endemic plant of Western Ghats. Paper presented at XV Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and National Seminar on Emerging Trends in Plant Taxonomy., organized by University of Nagpur, R. T. M. University , 20th and 21st October, 2005.
5. **Swaroop R. Ghatge** and G B Dixit (2005) *In vitro* clonal multiplication of *Hemidesmus indicus* R. Br. An important multipurpose medicinal plant of India. Paper presented at XV Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and National Seminar on Emerging Trends in Plant Taxonomy., organized by University of Nagpur, R. T. M. University , 20th and 21st October, 2005.
6. **Swaroop Ghatge** and G. B. Dixit (2006) Somatic Embryogenesis and Plant Regeneration from the Leaf Cultures of *Hemidesmus indicus* Br. A medicinal Plant. A Poster Presented at International Symposium on "Frontiers in Genetics and Biotechnology- Retrospect and Prospect." Department of Genetics, Osmania University, Hyderabad.
7. **Swaroop R. Ghatge** and G. B. Dixit (2006). *Agrobacterium* mediated hairy root induction in leaf discs explants of *Hemidesmus indicus*.: A Rare medicinal plant. Poster presented at National Conference on Biodiversity related International conventions :Role of Scientific Community, organized by Delhi University Botanical Society, International Society of Phytomorphology, Department of Botany, Delhi University, New Delhi.
8. Vinayak V. Kedage, **Swaroop R. Ghatge**, Mansingraj S. Nimbalkar, S. R. Yadav and G. B. Dixit (2006). Micropropagation, the only way for multiplication, conservation and survival of *Ceropegias*. Poster presented at National Conference on Biodiversity related International conventions : Role of Scientific Community, organized by Delhi University Botanical Society, International Society of Phytomorphology, Department of Botany, Delhi University, New Delhi.

9. **Swaroopo R Ghatge**, Vinayak Kedage and G. B. Dixit (2006). Conservation of *Rubia cordifolia* L.: An economically important medicinal plant through micropropagation and reintroduction in its natural habitat. XVI Annual Conference of Indian Association for Angiosperm Taxonomy, 4th to 6th October, 2006.
10. Vinayak V. Kedage, **Swaroopo R. Ghatge**, Sandeep R. Pai, Nilesh V. Pawar, Minal Mhatre and G. B. Dixit (2007) Morphological Diversity Analysis in Grape Germplasm. A poster presented in International Seminar on Changing Scenario in Angiosperm Systematics, Department of Botany, Shivaji University, Kolhapur, 19-21 Nov. 2007.
11. Amit A. Chhatre, **Swaroopo R. Ghatge** and G B Dixit (2007) Occurrence of *Drimia* species in Maharashtra. A poster presented in International Seminar on Changing Scenario in Angiosperm Systematics, Department of Botany, Shivaji University, Kolhapur, 19-21 Nov. 2007.
12. Amit A. Chhatre, **Swaroopo R. Ghatge** and G B Dixit (2008) Extraction of Bufadienolide glycosides and quantitative analysis of Proscillaridin A from *Urginea indica* (Kunth). Poster presented in State level Seminar on “Biodiversity of medicinal plants: A treasure of India” Dept. of Botany and Microbiology, NSB College, Nanded, MS. 15th -16th July, 2008.
13. Mohini Somu, N. S. Desai and **Swaroopo Ghatge** (2010) Biochemical investigation of a rare medicinal plant: *Hemidesmus indicus* R. Br. To explore its antioxidant potential. **National Seminar on** Frontiers in biotechnology and Bioinformatics 2010, Dept. of Biotech and Bioinformatics, PDDYP University, CBD Belapur, Mumbai. 5th and 6th March, 2010.
14. Firdose Kolar, **Swaroopo Ghatge** and Ghansham Dixit.(2011) Studies on Phytochemical analysis and Antioxidant activity of *Rubia cordifolia* L. Poster presented in UGC-SAP sponsored National symposium on Recent trends in Life Sciences., Dept. of Biochemistry, Shivaji University, Kolhapur. 4th -5th March, 2011.
15. **Swaroopo Ghatge**, Subhash Kudale, Firdose Kolar & Ghansham Dixit. Induction of embryogenic callus and regeneration studies in *Chlorophytum kolhapurensis* (Sardesai, S.P. Gaikwad & S. R. Yadav). (2011) Poster presented in UGC-SAP sponsored National symposium on Recent trends in Life Sciences., Dept. of Biochemistry, Shivaji University, Kolhapur. 4th -5th March, 2011.
16. **Swaroopo Ghatge** and Neetin Desai (2012) Phytoremediation of textile dyes using hairy root cultures of *Solanum nigrum*. Paper presented in Eleventh All India Conference on Cytology and Genetics. Dept. of Molecular Biology, Jnana Bharathi campus, Bangalore. 23rd – 25th January, 2012.
17. **Swaroopo Ghatge**, Firdose Kolar, Charushila Dalvi and Ghansham Dixit (2013) Bioprospecting of *Rubia cordifolia* : an important medicinal plant occurring in sacred groves. Paper presented in UGC sponsored National Conference on Sacred Groves as

- a Repository for Ethnomedicinal plants. Govt. of Maharashtra Rajaram College, Kolhapur.1st-2nd Feb, 2013.
18. Charushila M Dalavi, **Swaroop R Ghatge** and Ghanasham B Dixit. (2013). *Solanum* :a valuable genus of Sacred groves..... Poster presented in UGC sponsored National Conference on Sacred Groves as a Repository for Ethnomedicinal plants. Govt. of Maharashtra Rajaram College, Kolhapur.1st-2nd Feb, 2013.
 19. Charushila M Dalavi, **Swaroop R. Ghatge** and Ghansham B. Dixit. (2013) Influence of BA on multiple shoot induction of *Solanum virginianum* L. National Seminar on “Recent trends in plant sciences, its future prospects and biodiversity conservation”, Department of Botany, Yashwantrao Chavan college of Science, Karad.29th November, 2013.
 20. Prachi Shinde and **Swaroop Patil** (2014). Biosynthesis of Silver nanoparticles using *Solanum torvum* Sw. XII Conference of Society of Cytologists and Geneticists and National Symposium on Challenges for Biologists in 21st Century, organized by Department of Botany, Shivaji University, Kolhapur (22nd -24th December, 2014).
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Served as a Resource Person at

1. State level Seminar on “Biodiversity of medicinal plants: A treasure of India” sponsored by UGC and SRTMUN Nanded July, 2008. Invited Lecture on Biotechnological tools in conservation of Biodiversity of medicinal plants.
2. Guest Lecture at The New Arts and Science College, Ahmednagar on “Biotechnological tools for conservation of Biodiversity”, November, 2008.
3. Guest lecture for Remedial coaching in Department of Biotechnology, Shivaji University, Kolhapur, “Mendelian Genetics” and “Biotechnological techniques for gene transfer”. December 12th, 2009.
4. Worked as Resource person in Two Day Workshop on Mangrove plantation techniques arranged by Department of Botany, Shivaji University, Kolhapur. (16th & 17th October, 2015).
5. Guest Lecture on “Stress Physiology” for NET-SET coaching in Department of Zoology, Shivaji University, Kolhapur (21st December, 2016).
6. Guest Lecture for Research Methodology Course organized by Y.C. I. S. Satara, on 30th December, 2016.
7. Inaugural Chief - Guest Lecture on “Plant Tissue Culture”, delivered at Department of Botany, The New College, Kolhapur on 24th August, 2017. (Inauguration of Anjan Nature Club).
8. Delivered a guest lecture on “Plant tissue culture: Biotechnological tool to conserve biodiversity (with special emphasis to medicinal plants)” at the National Conference on Recent Trends in Physics and Natural Sciences organized by the department of Physics and Botany, KBP College, Islampur on 23rd of January, 2018.
9. Delivered a lecture on Plant tissue culture in Value added Courses on “Commercialization of important plants through tissue culture” organized by Department of Botany, Shivaji University, Kolhapur (4th - 10th July, 2018)
10. Delivered a lecture on Plant Tissue Culture: Opening New Facets for Entrepreneurship in Value added Courses on “Entrepreneurship opportunities in Life Sciences” from 26th to 30th 2019 organized by Department of Botany, Shivaji University, Kolhapur.

Other administrative and University Responsibilities:

1. Workshop on Third Year B. Sc. Revised Syllabus. Sponsored by UGC at Yashwantrao Chavan College Warananagar, Kolhapur. 2006
2. Chairperson at UGC sponsored National Seminar on “Recent trends in plant sciences, its future prospects and biodiversity conservation”, Department of Botany, Yashwantrao Chavan college of Science, Karad. 29th November, 2013.
3. Worked as Departmental Placement Officer since 2011 July till June 2017, from 2019 till present date.
4. Life member of Society of cytology and genetists, India. (2014).
5. Working as Departmental Nodal Officer for “Shivsandesha” since 11th December, 2014.
6. Worked as a Coordinator for Avishkar Research Competitions (for 2015-16)

7. Chairperson at UGC sponsored National Conference on 'Recent Advances and Applications of Taxonomy in Life Sciences', organized by Yashvantrao Chavan Institute of Science, Satara, on 6th and 7th October, 2015.
8. Co-ordinator for Function organizing committee in Department of Botany, 2017, Yuvamahotsav-2017 organised by Shivaji University, Kolhapur.
9. Worked as a judge for Avishkar 2017- district level (Sangli District) for the branch of Agriculture and Animal Husbandary organized at Deshbhakt Naik College, Chikhali, Tal. Shirala. (27th December, 2017).
10. Working as NSS Co-ordinator for Department of Botany, Shivaji University, Kolhapur since June 2017 till date.
11. Worked as the Departmental Coordinator for "Beti Bachao Abhiyan- 2018" organized by Shivaji University, Kolhapur- date 24th January, 2018.
12. Worked as a judge for the Recitation Competition at "Holy Cross Convent Pre-Primary School"- date 24th January, 2018.
13. Worked as a member welcome committee and anchor for the 3rd Inter-university Qawwali Competition organized by Shivaji University, Kolhapur on 22nd and 23rd of October, 2018.
14. Worked as a judge for "NVS National Science Exhibition 2018" on 25th of November, 2018.
15. Avishkar examiner for the District Level Avishkar Research Convention 2019-20 organized at Rajaram College, Kolhapur on 06/01/2020.
16. Avishkar examiner for the district level "Avishkar Research Convention 2021-22" organized online by The New College, Kolhapur.
17. Chairperson BOE, Shivaji University, Kolhapur June 2021-23
18. Worked as LIC member at Annasaheb Dange College of Engineering and Technology, Ashta, Sangli August 2022.
19. Worked as a judge for Avishkar 2022-23 for the branch of Agriculture and Animal Husbandary organized at Lokakala Kendra, Shivaji University, Kolhapur, organized by Department of Nanoscience (7th and 8th December, 2023).
20. Working as RAC member in Department of Botany from 2022 June till date.
21. Worked as LIC member at Dahiwadi College, Dahiwadi, KWC Sangli and New College Kolhapur in the academic year 2022-2023.

Organization of workshops / seminars / trainings:

1. Convener of Value-added course on "Commercialization of important plants through tissue culture" from 4th to 10th July, 2018.
2. Convener of Value-added course on "Entrepreneurship opportunities in Life Sciences" from 26th to 30th August, 2019.

Research Highlights / Experience

List of students worked for projects:

Sr. No.	Name of student registered under her guidance	Registered for M.Sc./ M. Phil / Ph.D.	Year of award Degree	Branch and brief title of research
1.	Ms. Snehal Patil	M.Sc. Project	2003-2004	<i>In vitro</i> propagation and biochemical studies in <i>Pogostemon cablin</i> Benth., an essential oil-bearing medicinal plant.
2.	Mr. Atul Rajage	M.Sc. Project	2003-2004	<i>In vitro</i> studies in an important orchid <i>Vanilla planifolia</i> .
3.	Mr. Amit Chattrre	M.Sc. Project	2003-2004	<i>In vitro</i> cultural studies in <i>Stevia rebaudiana</i> .
4.	Mr. Swapnil Patil	M.Sc. Project	2004-2005	<i>In vitro</i> studies and biochemical analysis of <i>Seshagiriya sahyadrica</i> Ans and Hem. A rare and endemic plant of Western Ghats.
5.	Ms. Shinde, Ms. Shirke	M.Sc. Project	2005-2006	<i>In vitro</i> studies in <i>Chlorophytum kolhapurens</i>
6.	Mr. Parthraj Kshirsagar. Mr. Umdale	M.Sc. Project	2005-2006	Somatic Embryogenesis in Indian squill <i>Urginea indica</i> .
7.	Mr. Satish Palo	B. Tech Project	2008-2009	Scoring of Salivary proteins associated with dental caries.
8.	Ms. Priyanka Desai	B. Tech Project	2009-2010	Phytoremediation of an industrial dye by using hairy root cultures of <i>Solanum nigrum</i> .
9.	Mr. Ashish Tripathi	B. Tech Project	2009-2010	Bioremediation studies on some industrial dyes.
10.	Ms. Rajvi Doshi	B. Tech Project	2009-2010	To study the effect of anticancer drug i.e. vinblastin entrapped in nanoparticle on cell line Hela.
11.	Ms. Madhura S. Salvi	M. Sc. Project	2011-2012	<i>In vitro</i> and biochemical studies of a medicinal plant <i>Rubia cordifolia</i> .
12.	Neha K. Jadhav	M. Sc. Project	2022	Biological Synthesis of Copper Nanoparticles from <i>Bauhinia racemosa</i> and exploring its antibacterial activity.
13	Nehal V. Patil	M. Sc. Project	2022	To Study Phytochemical Status of <i>Stereospermum suaveolens</i> .
14	Poonam A. Patil	M. Sc. Project	2022	Biological synthesis of Cobalt nanoparticles from <i>Drimia indica</i> and its antibacterial activity.

15	Prajakta A. Mali	M. Sc. Project	2022	Biological synthesis of Iron nanoparticles from <i>Drimia indica</i> and exploring its antibacterial activity.
16	Rutuja R. Ashtekar	M. Sc. Project	2022	Biological synthesis of Silver nanoparticles from <i>Bauhinia racemosa</i> and exploring its antibacterial potential
17	Kailas K. Satpute	M. Sc. Project	2022	<i>Agrobacterium</i> mediated hairy root induction in <i>Capsicum annuum</i> L.
18	Ms. Poonam Prakash Sutar	M. Sc. Project	2022	Phytoremediation of Textile Dyes DY7QD, DV3R, PFBH-EXL and RYHE4G by <i>Vigna radiata</i> (L.)
19	Ms. Shrutika Shivaji Katkar	M. Sc. Project	2022	Phytoremediation study of Textile Dyes RRM5B, RTBH5G, DDR2B and RGYHE4G by <i>Vigna radiata</i> (L.)

List of Ph. D. / M. Phil. Students.

Sr. No.	Name of student registered under her guidance	Registered for M.Sc./ M. Phil / Ph.D.	Year of award Degree	Branch and brief title of research	Status
1.	Ms. Dalavi Charushila Mohanrao	Ph. D.	Dt of registration 01/07/ 2012	<i>In vitro</i> studies in <i>Solanum anguvi</i> Lam. and <i>Solanum virginianum</i> L.	Awarded April 2019
2.	Ms. Gadade Jayashree Pandurang	Ph. D.	Dt. Of Registration 01 st January, 2016	<i>In vitro</i> studies in medicinal plant: <i>Rotheca serrata</i> (L.) Steane & mabb. [<i>Clerodendrum serratum</i> (L.) Moon]	Awarded July 2022
3.	Mr. Pratik Sunil Kamble	Ph. D.	Dt. Of registration 01 st July 2017	Extracellular biosynthesis of some transition metal nanoparticles from medicinal plants <i>Bauhinia racemosa</i> lam. and <i>Drimia indica</i> kunth. and its application in management of guava wilt.	Spiral thesis Submitted
4.	Ms. Dhanashree Subhash Patil	Ph. D.	Dt. Of Registration 01/07/2018	Phytoremediation of textile dyes by using <i>in vitro</i> cultures of <i>Solanum virginianum</i> L.	Awarded February 2023
5.	Ms. Mamata Ashok Jagtap	Ph. D.	Dt. Of Registration 01/01/2020	Phytochemical investigations of Dashmula plants.	Ongoing
6.	Mr. Jayannawar Dayanand Parashram	Ph. D.	Dt. Of registration 01/07/2022	Hybridization studies in <i>Delphinium malabaricum</i> (Huth) Munz.	Ongoing

List of Projects

Sr. No.	Name of the Project	PI/ Co-PI	Agency	Funds / reference letter / duration	Year of implementation
1.	Standardization of micropropagation protocol for mass multiplication of Bamboo variety ' <i>Manga</i> '.	PI	Project Director, Agricultural Technology Management Agency, Sindhudurg, Maharashtra State	500000/- JaKra/PraSanAa/Atma/Navinyapurn/584/2013 Start date:2014	Completed
2.	Quality Plant Production by using low cost biotechnology approaches	Co-PI	RGSTC	8133592/- RGSTC/2015/DPP-164/CR-31 March 2017-2019	Completed
3.	Use of Biotechnology in phytoremediation	PI	SUK Research Strengthening scheme	189000/- JaKra. S. U./Ma. Va. Vi. Vi. Vibhag/464 March 2019-March 2021	Completed
4.	“Establishing demonstration fields and technology transfer for Quality Plant Production Using Biotechnological Approaches. Phase II”	Co-PI	RGSTC	57,73,000/- 2020 to 2023	Ongoing

Personal profile

Father's Name : Late. Mr. Ram Khanderao Ghatge.
Date of Birth : 27th October, 1977.
Languages known : English, Hindi, Marathi.
At present : Working as an **Assistant Professor**.
Permanent address : 1196 "D" Ward, Jyoti Niwas, Guruwar peth, Kolhapur 416002.

Areas of Interest:

- Molecular Biology.
- Plant tissue culture.
- Secondary metabolite studies.
- Elicitation of active principles.
- Hairy root induction.
- Floral Biology

Personal Strengths:

- Good communication skills.
- Team leader as well as team member, flexible anywhere provided the work environment is healthy.
- Much concerned to how the work is carried out and not with how much work is completed.

References:

1. Prof. (Dr.) G. B. Dixit.
Head, Department of Botany,
Shivaji University, Kolhapur – 416004.
Maharashtra India. Email: g_b_dixit@yahoo.co.in
2. Prof. P. B. Kavikishor
Head, Department of Genetics,
Osmania University,
Hyderabad 500007. Email: pbkavi@yahoo.com

No. of students working for Ph.D.: Three (03)