

# Dr. Vidya Patil-Patankar

(Ph.D., Post-Doctorate)



Expertise in cambial variant/wood anatomy, histopathological/histochemical analysis, medicinal plants, and adulterants, along with proficiency in screening secondary metabolites, metabolomics, and bioprospecting. Accomplished professional with a proven track record in teaching and conducting extensive research projects. Well-suited for a challenging role in the pharmaceutical or biotechnology sector, demonstrating exceptional attention to detail in demanding environments.

## CARRERE OBJECTIVES

- Positive attitude and professional approach towards the goal, commitment, dedication, and consistency the work flexible and transparent in all the functional area and hunger for learning and creative thinking.
- I envision myself a challenging role by contributing to the growth and success of organization.
- To work with a dynamic and ambitious Research Organization to enhance my skills in field of knowledge.

## EDUCATION AND CREDENTIALS

**Postdoctoral Researcher:** Savitribai Phule Pune University, 2014-2017.

**Doctorate/PhD** – The Maharaja Sayajirao University of Baroda, Vadodara, India, 2012.  
“Cambial Variant: Types, Structure and development in some dicotyledons.”

**Master of Science in Botany** – North Maharashtra University, 1<sup>st</sup> Class with Distinction, 2006.

**Bachelor of Science in Botany** – North Maharashtra University, 1<sup>st</sup> Class with Distinction, 2004.

## RESEARCH ACCOMPLISHMENTS

**Summer research Fellow:** “Do Donaidae butterflies concentrate toxic chemicals from host plants?” Indian Academy of science during May-July 2005.

**Research assistant:** “Investigation of soil fungi from Khandesh region, Maharashtra” sanctioned under UGC XI plan Research Award, From 2006-2007.

**Project fellow:** “Pattern of wood formation in some tropical woody climbers” Ph.D. work on wood anatomy of different plants is showing abnormal secondary growth, types, structure and development, Department of Botany, M. S. University of Baroda. 2008-2011

**DS Kothari Post Doc. Fellow:** “Comparative study of Morpho-anatomy, preliminary phytochemical analysis and secondary metabolites of some medicinally important plants and its adulterants.” 2014-2017.

## EXPERIENCE

### Teaching Experience: 7 Year

- Worked as temporary lecturer in Botany Department of the M. J. College, Jalgaon in academic year 2006-2007.
- Worked as temporary lecturer in department of Botany, S.M. Joshi college, Pune in June-October 2014. (Duration: 6/7/2014 to 21/10/2014)
- Worked as practical demonstrator in the Department of Botany for MSc Part I during academic year 2014 to 2017, conducted practical's on course BO 2.3 for MSc Part I students.
- Working as assistant professor in department of Botany from 1/07/2017 to till date.

### Research Experience: 5 Years

Year	Designation	Funding agency
2006-2007	JRF	UGC, New Delhi.
2008-2011	Project Fellow	UGC, New Delhi.
2014-2015	Post-Doctoral fellowship	D.S. Kothari UGC, New Delhi.
2017	Post Doc. Fellow SERB National	DST, New Delhi. Not joined

## CONTACT

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[Patilvidya14@gmail.com](mailto:Patilvidya14@gmail.com)

## ACADEMIC IDENTITY



**Orcid Id** [0000-0001-7328-7143](https://orcid.org/0000-0001-7328-7143)



**Scopus Id** [25822579900](https://scopus.com/authid/detail.uri?authorId=25822579900)



**Researcher Id** [AEB-5729-2022](https://www.researcherid.com/rid/AEB-5729-2022)



**Google Scholar Id** [kD6nYQoAAAAJ](https://scholar.google.com/citations?user=kD6nYQoAAAAJ)

**Vidwan-ID :** 290091

<https://vidwan.inflibnet.ac.in/myprofile>

## Permanent Address:

201, Nightingale, Nyati Enclave,  
Mohammedwadi, Pune-411060

## Personal Details:

**Designation:** Assistant Professor  
PDEA'S Waghire  
College Saswad

**Date of Birth:** 14/04/1983

**Sex:** Female.

**Marital Status:** Married.

**Nationality:** Indian.

**Languages Known:** English Hindi,  
Marathi, Gujarati

## PUBLICATIONS IN INTERNATIONAL & NATIONAL JOURNALS:

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1. Rajput K.S., **Patil V.S.** and Shah D.J. 2008. Formation of successive cambia and stem anatomy of *Sesuvium sesuvioides* (Fenzl.) Verdcourt (Aizoaceae). *Botanical Journal of Linnean Society* 158: 548-555.
2. **Patil V.S.** and Rajput K.S. 2008. Structure and development of inter and intraxylary phloem in *Leptadenia reticulata* (Asclepiadeaceae). *Polish Botanical Journal* 53(1): 5-13.
3. Rajput K.S. and **Patil V.S.** 2008. Development of cambial variant in *Sesuvium portulacastrum* Linn. (Aizoaceae). *Journal Torrey Botanical Society* 135(4): 483-490.
4. **Patil V.S.**, Rajput K.S. and Rao K.S. 2009. Development of intraxylary phloem and internal cambium in *Ipomoea hederifolia* Linn. (Convolvulaceae) *Jour. Of Torrey Botanical Society* 136(4): 423-432.
5. Rajput K.S., **Patil V.S.** and Rao K.S. 2009. Development of included phloem of *Calycopteris floribunda* Lamk. (Combretaceae). *Journal of Torrey Botanical Society* 136(3): 302-312.
6. Rajput K.S., **Patil V.S.** and Kapadne K.K. 2009. Structure and development of secondary thickening meristem in *Mirabilis jalapa* (Nyctaginaceae). *Polish Botanical Journal* 54(1): 113-121.
7. **Patil V.S.**, Rao K.S. and Rajput K.S. 2010. Development of lateral meristem and pattern of secondary growth in the stem and roots of *Spinacia oleracea* Linn. (Chenopodiaceae). *Feddes Reportorium* 121(5-6): 1-10.
8. Sanghvi G.V., Koyani R.D., **Patil V.S.** and Rajput K.S. 2011. Morpho-anatomy of *Solanum pseudocapsicum* L. *Revista Brasileira de Farmacognosia Braz. J. Pharmacognosy* 21(1): 11-15.
9. **Patil V.S.**, Marcati C.R. and Rajput K.S. 2011. Stem anatomy and development of intraxylary and interxylary secondary phloem in *Coccinia indica* L. (Cucurbitaceae). *IWA J.* 32(4): 475-491.
10. Rajput K.S., **Patil V.S.** and Rao K.S. 2013. Wood anatomy and development of interxylary phloem of *Ipomoea hederifolia* Linn. (Convolvulaceae). *Journal of Plant Growth Regulation* 32: 654-662.
11. Rajput K.S. and **Patil V.S.** 2014. Multiple cambia and secondary xylem of *Ipomoea pes-caprae* (L.) R. Br. (Convolvulaceae). *Acta Botanica Gallica: Botany Letters* 161(1): 13-19.
12. **Patil V.S.**, Koyani R.D., Sanghavi G. V. and Rajput K.S. 2014. Structure and development of internal phloem in *Solanum pseudocapsicum* (Solanaceae). *IWA J.* 35(1):1-11.
13. Rina D. Koyani, **Vidya S. Patil** and Kishore S. Rajput 2014. Formation of pith flecks and pattern of compartmentalization in Response to fungal infection in *Derris trifoliata* Lour. (Fabaceae). *Indian Forester*, 140 (5): 508-517.
14. Kishore S. Rajput, **Vidya S. Patil** and K.S. Rao 2014. Stem anatomy of the dwarf subshrub *Cressa cretica* L. (Convolvulaceae). *Flora* 209: 408-41.
15. Kishore S. Rajput, Amreen Saiyed, Vidya S. Patil and K.S. Rao 2014. Cambial activity in the young branches and peduncles of *Couroupita guianensis* (Lecythidaceae). *IWA* 35(3)281 – 292
16. K.S. Rajput, B. D. Chaudhary and **V. S. Patil** 2014. Development of successive cambia and structure of secondary xylem of *Ipomoea obscura* (Convolvulaceae) *Polish Botanical Journal* 59(1): 55-61.
17. **V. S. Patil**, K. S. Rajput and N. P. Malpathak 2016. Comparative study on morpho-anatomy of leaf, stem and root of *Boerhaavia diffusa* L. (Nyctaginaceae) and its adulterant plants. *Braz. J. Pharm. Sci.* 52(3): 433-442.
18. K. S. Rajput and **V. S. Patil** 2016. Structure and development of cortical bundles in *Couroupita guianensis* Aubl. (Lecythidaceae) *Anales de Biologia* 38: 95-10.
19. **V. S. Patil** and N. P. Malpathak 2017. Micro-morphoanatomical approach for comparative analysis of *Tinospora cordifolia* (Willd.) Miers and its adulterant plant using SEM and Cryostat. *Pharmacognosy Journal* 9(1): 39-45.
20. **V. S. Patil** and N. P. Malpathak 2018. Development of xylem plates an abnormal conformation in *Tinospora cordifolia* (Willd.) Miers. (Menispermaceae). *Thaiszia - J. Bot., Košice*, 28 (1): 007-017.
21. Pradnya Jagtap, Yashashri Nimbalkar, **Vidya Patil**, R. Y. Patil 2021. *In vivo* antidiabetic activity of polyherbal extract against streptozotocin-nicotinamide induced type 2 diabetic mice model. *Tanzania Journal of Science.* 47 (3):1-17.
22. Ashok Bankar, **Vidya Patankar**, Nita Patil and Narendra Kamble 2023 Communication of Plant Growth Promoting Rhizobacteria in Agricultural Sustainability: An overview. *Bull. Env. Pharmacol. Life Sci., Spl Issue [1]* 42-49.
23. Prajakta Kulkarni, **Vidya Patil-Patankar** 2023. Systematic review on fungal diseases infecting *Ficus carica* L. Cultivations in Purandar region in comparison with the diseases reported worldwide. *IJRAR*, 10(3) 703-713.
24. **Vidya Patil**, Hitesh Patil, Pradnya Jagtap, Nikhil Gurav 2023. Comparative antidiabetic analysis of effects of crude extracts of *Capparis grandis* L., *Capparis rotundifolia* Rottl. and *Capparis zeylanica* L. on Streptozotocin-induced Wistar rats' level of blood glucose. *Annales de-Biologia* (Under revision)

## BOOK CHAPTERS:

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1. **Chapter 11. Photocatalytic Biomass transformation into valuable products** in “Handbook of *Biomass* Valorisation for Industrial Applications”. Scrivener-Wiley Publishers PP. 243-265 5<sup>th</sup> Jan 2022 Print ISBN:9781119818731 |Online ISBN:9781119818816
2. **Chapter 13. Valorisation of secondary in plants in “Handbook of *Biomass* Valorisation for Industrial Applications”**. Scrivener-Wiley Publishers PP. 287-313. 5<sup>th</sup> Jan 2022 Print ISBN:9781119818731 |Online ISBN:9781119818816
3. **Chapter 15: Nanoherbicides: a sustainable option for field** in Applications."Relationship Between Microbes and Environment for Sustainable Ecosystem Services, Volume 1" Microbial Products for Sustainable Ecosystem Services, Elsevier Inc. 2022, Pages 335-355.
4. **Chapter 15: Comparative pharmacognostic studies of medicinal plants and their adulterant plants in “Herbal Formulations, Phytochemistry and Pharmacognosy: Natural Remedies and Drug Discovery”** Elsevier Inc. published on 14th June 2024. Paperback ISBN: 9780443153839; eBook ISBN: 9780443153822
5. **Text Book of Cell and Molecular biology**, contributed as author for the T.Y.B.Sc Text Books by success publication. (2021) ISBN: 978-93-24457-51-1
6. **Text Book of Biochemistry** contributed as author, Success Publication (2022) ISBN: 978-93-24457-56-6

## Patent Filed :

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1. Patent filed on “SKIN REJUVENATION IN A JAR: A HOMEMADE CREAM WITH THE GOODNESS OF CRAB FAT, ORANGE OIL, CASTOR OIL, VITAMIN E AND EMULSIFYING WAX” Application Reference Number: INBA3202305032
2. Patent filed on “NEXT-GENERATION 2 IN 1 SERUM: HARNESSING THE POTENT HEALING PROPERTIES OF MORINGA AND MURRAYA LEAVES, REINFORCED WITH XANTHUM GUM, GLYCERIN, SORBIC ACID AND CITRIC ACID FOR CUTTING-EDGE SKIN AND HAIR CARE SOLUTIONS” Application Reference Number: INBA3202405959

## PG and Ph.D. research guidance:

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1. **Ms. Supriya Memane** from Ferguson College Pune (2023), had completed her PG dissertation thesis entitled “ THE MORPHOANATOMICAL STUDY OF DIFFERENT CAPPARIS L. SPECIES FOUND IN PURANDAR TEHSIL” received excellent grade for her findings during projects.
2. **Ms. Prajкта Kulkarni** (2022) working as Ph.D. student “ Isolation, Authentication and Microanatomical Study of Fungal Diseases on *Ficus carica* L. (Common Fig) in Western Region of Maharashtra. Working since- 22nd August 2022.
3. **Ms. Akshada Suresh Deshmane**, PhD Topic: Unlocking the Medicinal potential of five *Habenaria* spp.: A LC-MS Analysis of secondary metabolites and Therapeutic Activities. Working since: 12th April 2023.

## Invited lectures:

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1. Invited lecture on “**Importance of Taxonomy in standardization of natural products**” at SGRS College of Pharmacy, guest lecture series organised on 17th Jan 2017.
2. Invited as an expert at TLC workshop at Department of Botany, SPPU on 27-28 April 2018 and contributed as expert on **Cryomicrotomy demonstration, workshop on innovative ways to teaching theory and practical aspects of topics in “Developmental Biology and Embryology.**
3. Invited lecture talk on “**Importance of morpho-anatomy in pharmacology**” at Series – Expert Talk on 10th April 2021, by virtual mode organized by Dept. of Botany, Telangana University, Nizamabad.
4. Text Book of Cell and Molecular biology, contributed as author for the T.Y.B.Sc Text Books by Success publication. ISBN 978-93-24457-51-1 (2020)
5. Text Book of Biochemistry, contributed as author for the T.Y.B.Sc Text Books by Success publication. ISBN 978-93-24457-56-6 (2021)

## FACULTY DEVELOPMENT/WORKSHOPS/ TRAINING PROGRAMS:

1. Participated in online Refresher course in **Environmental Sciences** (Botany) conducted by MVP& KRS Arts Commerce and Science Collee Nasik, and HRDC SPPU from 06/03/2022 to 19/03/2022.
2. Organized Faculty Development program for teachers on **Enriching Online Teaching and Learning** organized by Department of Botany, PDEA'S Waghire College, Saswad in collaboration with HRDC, SPPU from 7/10/2021 to 13/10/2021. (**FDP Coordinator**)
3. Participated in online FDP on **Soft skills for Teachers**, (30 hrs) conducted by HRDC SPPU from 21/02/2022 to 27/02/2022.
4. Participated in online short-term FDP on **Characterization Techniques used in Chemical and Biological Sciences**, (30 hrs) conducted by WCS and HRDC SPPU from 10/02/2022 to 16/02/2022.
5. Participated and successfully completed **170<sup>th</sup> general Orientation Program** organized by UGC-MHRDC center of SPPU, Pune on 15/09/2019 to 5/10/2019 and obtained "A" grade.
6. Participated and successfully completed the ARPIT Online Refresher Course on for Career Advancement Scheme (CAS) promotion, "**Refresher Course on Teacher and Teaching in Higher Education**" from 1/09/2019 to 31/12/2019.
7. Participated and successfully completed Two Weeks Faculty Development Program on "**MANAGING ONLINE CLASSES and CO-CREATING MOOCS:2.0**" by Ramanujan College New Delhi from May 18 - June 03, 2020.
8. Participated and successfully completed Four Weeks Faculty Development Program on "**Plant Developmental Biology**" from 26/08/2019 to 17/11/2019.
9. Actively participated and successfully completed one-week national level short term course on "**VIRTUAL LEARNING ENVIRONMENT**" through online mode from 18.05.2020 to 24.05.2020
10. Participated and has successfully completed the Faculty Development Programme in "**Mathematics for Biological Sciences**" conducted at Shardabai Pawar Mahila College, Shardanagar from 15<sup>th</sup> June 2020 to 20<sup>th</sup> June 2020, under the auspices of UGC-HRDC, Savitribai Phule Pune University, PMMMNMTT scheme.
11. Participated in the AICTE sponsored Online Short-Term Training Programme on "**Functional Metagenomics and Bioprocessing of Therapeutic Enzymes**" organized by the Department of Biotechnology, Sri Venkateswara College of Engineering from 22.02.2021 to 27.02.2021.
12. Participated and completed successfully the 1-Week Hands-on **Workshop on Human/Cancer Cell Culture Techniques & MTT Assay** at ICSCCB, Pune from 18-24 June 2017
13. Participated and obtained **Excellent grade** in course on **Genomics and Molecular Biotechnology** under **Global Initiative of Academic Networks (GIAN), MHRD and SPPU**, Pune, 7<sup>th</sup>-18<sup>th</sup> Nov 2016.
14. One Month hands-on training on **Industrial Summer Training on Bioinformatics and Molecular Biology** in Molecular Techniques and Bioinformatics at RASA Life Sciences informatics, Pune. 17<sup>th</sup> June 2016

## AWARDS & RECOGNITIONS:

- Best oral Paper presentation award received for oral presentation at international conference on Recent innovations in Science and Technology" (RIST-2023), Osmania University, 30<sup>th</sup> Sep. 2023
- Best Paper presentation award given on International academic award at international conference organized by AKS University and Asian Institute of Technology, Bangkok, Thailand 20-22<sup>nd</sup> Nov 2022.
- Serving as STAR DBT College Scheme Coordinator from 2020.
- Serving as IQAC teacher representative member since 2018 to till date.
- Served as College coordinator for Academic Research Committee in 2018 & 2019.
- Served as NSS program officer in 2018 & 2019.
- National post-doctoral fellowship awarded by DST SERB (6-07-2017) for two years.
- Research Paper entitled with "Development of included phloem of *Calycopteris floribunda* Lamk. (Combretaceae)" is selected for "Dr. C. K. Shah" Best Paper Award in plant sciences for the year 2009-2010.
- Summer Research Fellowship 2005 from Indian Academy of Sciences, Bengaluru.

## TECHNICAL SKILLS

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### **Chromatography Techniques**

- Ion-exchange chromatography
- Size exclusion chromatography
- TLC, HPTLC, HPLC, LCMS, GCMS

### **Microbiological Techniques**

- Isolation, identification and maintenance of microorganisms- Fungi and Bacteria.
- Microscopic studies using light microscope

### **Microscopic Techniques**

- Sectioning (Sledge, Rotary Microtome and Cryostat)
- Microscopic Photographic observation and photography
- Electron Microscopic techniques
- Scanning Electron microscopy
- Fluorescence microscopy
- Different techniques of sample preparation for microscopy

### **Instruments (can handle independently)**

- Different Microtomes
- Different types of Microscopes
- UV-Vis spectrophotometer
- PCR

### **Molecular techniques**

- Expression analysis by Real Time PCR
- Molecular cloning

### **Animal tissue culture**

- Basic ATC techniques
- MTT Assay

### **Bioinformatics**

- Biological databases mining (pathway analysis)
- Sequence Alignment
- Intro to Phylogenetics and MSA
- Gene Prediction, Primer Designing
- Protein Structure, sec. & ter. prediction and protein databases
- Structure Visualization and Evaluation

## REFERENCES

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1. Dr. Kishore Rajput, Department of Botany, The M. S. University of Baroda, Vadodara. Mob: 9428165791  
Email: ks.rajput15@yahoo.com
2. Prof. Nutan Malpathak, Department of Botany, Savitribai Phule Pune University.  
Email: mpathakster@gmail.com
3. Prof. Satyanarayana Sirsani Former Vice-Chancellor, Osmania University Mob: 09490156670  
Email: [ssn.sirasani@gmail.com](mailto:ssn.sirasani@gmail.com)