

**DR ANUPRABHA**

**Assistant Professor**

Department of Botany

GGDSD COLLEGE, Chandigarh

India-160030

[anuprabha1@ggdsd.ac.in](mailto:anuprabha1@ggdsd.ac.in)

[anu857pu@gmail.com](mailto:anu857pu@gmail.com)

**DOB: 7<sup>th</sup> April 1985**



### **Educational Qualifications**

#### **Ph.D. in Plant Tissue Culture**

Department of Botany, Panjab University, Chandigarh, India (2016)

PhD Thesis: *On Assessment of Asymbiotic Seed Germination and Regeneration Potential of Some Commercially Significant but Endangered Indian Orchids: A Study In Vitro*, Ph.D. Supervisor: Prof. Promila Pathak

Qualified GATE in Life Sciences

**M.Phil. (Botany)** - Department of Botany, Panjab University, Chandigarh, India (2009)

**M.Sc.Hons. (Botany)** -Department of Botany, Panjab University, Chandigarh, India (2006-2008)

**Bachelor of Science** – Post Graduate Govt. College for Girls, Sector 42, Chandigarh, India (2003-2006)

### **Teaching/Research Experience**

- 26 August 2016- till date

**Assistant Professor** in Department of Botany, GGDSD College, Chandigarh

Teaching Angiosperms, Economic Botany, Ecology, and Environmental studies at the undergraduate level

- May 2018-June 2018

**IASc-INSANA-NASI Summer Research Fellowship** in University of Agricultural Sciences, Bengaluru (India).

- Jan 2010-Dec 2015

**UGC-BSR Research Fellowship** in Department of Botany, Panjab University, Chandigarh (India).

### **Areas of Interest**

#### **Publications**

#### **(Journal/Book Chapters)**

- Plant tissue culture, Angiosperm and taxonomy

#### **Journal Publications:**

- Vasundhra, Promila Pathak and Anuprabha. “*In vitro* asymbiotic seed germination and regeneration competence of leaf explants in *Satyrium nepalense* D.Don, A medicinally important, and an endangered Terrestrial orchid of Kasauli Hills, Himachal Pradesh (Northwestern Himalayas)”. J. Orchid Soc. India. 35: 73-82, 2021
- Anuprabha and Promila Pathak. “Micropropagation of *Coelogyne fimbriata* Lindl. using pseudobulb explants,” J. Orchid Soc. India. 34: 1-9, 2020
- Anuprabha and Promila Pathak. “*In vitro* asymbiotic seed germination and seedling development in *Coelogyne fimbriata*,” Lindl. J. Orchid Soc. India. 33: 83-89, 2019
- Anuprabha, Promila Pathak and Ankush Prakash. “Regeneration Competence of *Dendrobium nobile* Lindl. through pseudobulb segments: A study *in vitro*”, J. Orchid Soc. India. 31: 73-77, 2017

- Chauhan, Shaveta, Promila Pathak, Anuprabha, and Sanjay Sharma. “Regeneration of *Eulophia dabia* through rhizome explants and flowering: A study *in vitro*”, J. Orchid Soc. India, 29: 61-65, 2015
- Arora, Sanjeev, Anuprabha, Promila Pathak. “Regeneration competence of *Arundina graminifolia* (D. Don.) Hochr. Through stem disc culture: A study *in vitro*”. J. Orchid Soc. India, 28: 109-113, 2014
- Anuprabha and Promila Pathak. “Green pod culture in *Dendrobium chrysanthum* Lindl.: A study *in vitro*”, J. Orchid Soc. India, 26(1-2): 105-109, 2012

### Book Chapters:

- Anuprabha, Vikas Kushwaha, Anamika Kumari and Promila Pathak. *Cypripedium* Orchids and their Utilization in Traditional and Modern Medicine. In: Azamal Husen and Manu Pant (ed.) Exploring Medicinal Orchids. CRC Press, Boca Raton, 2024, <https://doi.org/10.1201/9781003436638-8> (doi: 10.1201/9781003436638-8).
- Anuprabha and Vikas Kushwaha. 2024. Exploring Medicinal Orchids: *Crepidium* Orchids and their Therapeutic Potential In: Azamal Husen and Manu Pant (ed.) Exploring Medicinal Orchids. CRC Press, Boca Raton, 2024, <https://doi.org/10.1201/9781003436638-8> (doi: 10.1201/9781003436638-7).
- Anuprabha and Jakinth Jay Paul. A Critical Review of Biofuel production from Organic waste. In: Ruchi Sharma, Mani Parti, Kapil Dev and Shipra Bansal (ed.) Sustainable Development in India: Strategies and Way Ahead: Sustainable Resource Management, pp. 185-193, 2024, Mohindra Publishing House, Chandigarh, India. ISBN: 978-81-970010-1-7.
- Anuprabha and Vikas Kushwaha. Composting: A Comprehensive approach to Sustainable Organic Waste Management. In: Ruchi Sharma, Mani Parti, Kapil Dev and Shipra Bansal (ed.) Sustainable Development in India: Strategies and Way Ahead: Sustainable Resource Management, pp. 133-139, 2024, Mohindra Publishing House, Chandigarh, India. ISBN: 978-81-970010-1-7.
- Anuprabha, Jakinth Jay Paul, and Shivang Kapoor. *Achyranthes aspera*: A Promising Source of Pharmacological Solutions for Health Challenges. In: Ved Prakash (ed.) Significance of Indian Medicinal Plants and Mushrooms, Vol II, pp. 19-34, 2024, AkiNik Publications, New Delhi, India. ISBN: 978-93-6135-204-1; Book DOI: <https://doi.org/10.22271/ed.book.2702>.
- Anuprabha and Anamika Kumari. Microfluidics: An Emerging Technique. In: Futuristic Trends in Biotechnology pp. 135-143, 2024, Iterative International Publisher (IIP), Karnataka, Vol3. e-ISBN: 978-93-6252-915-2.
- Anamika Kumari, Anuprabha, and Promila Pathak. Orchids in Traditional Medicine Practices and their Conservation Strategies using Plant Tissue Culture Techniques. In: Silvy Mathew, K. Jisha, K. Rekha (ed.) Biosustainability: Concerns and Challenges, pp.81-93, 2024. Sooryagatha Publishers, Ernakulam, Kochi, Kerala, India. ISBN: 978-81-7255-174-2.
- Anuprabha and Vikas Kushwaha. Role of CRISPER/Cas9 Gene Editing Technology in Agriculture to Engineer Future Food. In: B. Singh, M.M. Barwant, S. Tripathi, V.C. Karande, V.K.Singh, and R.

Srivastava (ed.) Innovative Trends in Biological Sciences. pp.266-278, 2023, Bluerose Publishers, Delhi, India. ISBN 978-93-5704-927-6.

- Anuprabha and Vikas Kushwaha. Mushroom as An Ideal Nutritional Supplements. In: B. Singh and V.K. Singh (ed.) The Mushrooms An Incredible Natural Resources, pp. 239- 263, 2022, Bluerose Publishers, Delhi, India. ISBN 978-93-5628-257-5
- Vikas Kushwaha, Anuprabha and R.C. Sobti. mRNA Vaccine: An Advanced and Transformative Technology for Vaccine Development. In: R.C. Sobti, Naranjan S. Dhalla, Masatoshi Watanabe, Aastha Sobti (eds.) Delineating Health and Health System: Mechanistic Insights into Covid 19 Complications. 2021, Springer nature, Singapore. ISBN 978-981-16-5104-5, ISBN 978-981-16-5105-2 (eBook) <https://doi.org/10.1007/978-981-16-5105-2>
- Anuprabha. Ethnobotanical Importance of Medicinal Orchids in India. In: Ved Prakash (ed.) Significance of Indian Medicinal Plants and Mushrooms. pp. 214- 227, 2021, Krishna Publication House, Gujarat, India. ISBN 978-93-90627-49-3
- R. P. Maurya and Anuprabha (eds). *Animal Husbandry & Veterinary Science*, 2018. Kushal Bioscience Book, Varanasi, India. ISBN 978 8193668214.

**Seminars/  
Conferences/Symposiums  
(Paper Presented)**

- Presented paper on “Composting-A Comprehensive Approach to Sustainable Organic Waste Management in International Seminar on *Sustainable Development in India: Strategies and Way Ahead* organized by PG Department of Commerce, Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh on 27 February, 2024
- Presented paper on “An Effective *In Vitro* Asymbiotic Seed Germination and Regeneration Protocol for Rapid and Mass Propagation of *Malaxis acuminata* D.Don [=*Crepidium acuminatum* (D. Don) Szlach.] in National Conference cum Workshop on *Multidisciplinary Approaches in Studies, Conservation and Resource Development of Medicinal and Ornamental Orchids & Orchid Show* organized by Department of Botany, Panjab University, Chandigarh during March 3-5, 2023
- Presented paper on “Regeneration Potential of *Coelogyne Punctulata* Through Leaf Explants: A Study *In Vitro*” in National Conference cum Workshop (Hybrid Mode) on *Agrotechnology, Value Addition, Global Trade, and Sustainability of Medicinal / Nutraceutical Orchids & Orchid Show* being organized by The Orchid Society of India (TOSI) jointly with Dr YSR Horticultural University, Venkataramannagudem (Andhra Pradesh) and in cooperation with BSI, Kolkata (West Bengal) and ICAR- NRC for Orchids, Pakyong (Sikkim) at Venkataramannagudem (Andhra Pradesh) on March 25-27, 2022
- Presented paper on “Asymbiotic seed germination and regeneration potential of *Dendrobium aphyllum* a study *in vitro*” in National Conference cum Workshop on *Interdisciplinary Approaches to Taxonomy, Conservation and Economic Utilization of Floriculturally and Medicinally Important Orchids* organized by TOSI and BSI, Kolkata jointly with NEHU, Shillong at Botanical Survey of India (BSI), Eastern Regional Centre, Woodlands, Laitumkhrah, Shillong, Meghalaya during March 5-7, 2021
- Presented paper on “*In vitro* seed germination and regeneration competence of a threatened medicinal orchid, *Malaxis acuminata*”

D. Don.” in National Symposium on *Biotechnology: Trends and Innovations* organized by Department of Biotechnology, GGDS College, Chandigarh on February 7-8, 2020

- Presented paper on “*In vitro* seed germination, regeneration and synthetic seed production based micropropagation of a terrestrial medicinal orchid (*Malaxis acuminata* D. Don) in National Conference cum Workshop on *Recent advances in Orchidology with special emphasis on Biology, Climate Change, Conservation, and Commercialization of Floriculturally and Therapeutically important taxa* organized by ICAR-Central Inland Agricultural Research Institute (CIARI), Port Blair, February 15-17, 2019
- Presented paper on “Regeneration of plantlets from *in vitro* raised stem and leaf explants of *Coelogyne punctulata* Lindl.” in National Conference cum Workshop on *Current Trends in Conservation, Sustainable Development, and Biological and Social Benefits of Medicinally and Floriculturally Significant Orchids* organized by Regional Agricultural Research Station, Kerala Agricultural University, Ambalavayal, Wayanad, Kerala on March 16-18, 2018
- Presented paper on “Mass propagation of therapeutically important *Malaxis acuminata* D. Don through seed culture” at 12<sup>th</sup> Chandigarh Science Congress organized by Panjab University, Chandigarh on February 12-14, 2018
- Presented paper on “*In vitro* Clonal Propagation of *Cymbidium macrorhizon* Lindl. Using Seed and Rhizome Explants” in National Conference cum Workshop on *Recent Trends in Biology, Culture, Conservation, Commercialization, and Sustainable Utilization of Medicinally and Floriculturally Important Orchids* organized by Graphic Era University (GEU), Dehradun (Uttarakhand) on March 24-26, 2017
- Presented paper on “Micropropagation of Some Economically Important but Endangered Indian Orchids” in National Seminar on Innovations & Challenges in Basic & Applied Sciences at Maharaja Agrasen University at Baddi (Solani) on March 4, 2017
- Presented paper on “Micropropagation of medicinally important *Malaxis acuminata* D. Don through seed and pseudobulb explants” in National Conference cum Workshop on *Advances in Orchid Biology with Focus on Climate Change, Medicinal and Floricultural Plants, and Sustainable Economic Utilization* organized by Dr. YSR Horticultural University, Venkataramannagudem, Andhra Pradesh on February 26-28, 2016
- Presented paper on “Micropropagation of *Dendrobium chrysanthum* Lindl. Using nodal segments” in National Conference on *Orchids Science and Commerce: Integration of Medicinal Orchids, Sustainable Development and Societal Benefits* organized by Shri Mata Vaishno Devi University, Kakryal, Katra, Jammu on February 13-15, 2015
- Presented paper on “Micropropagation of *Dendrobium aphyllum* Roxb. Using Leaf Explants” in National Symposium on *Gene Conservation of Medicinal and Horticultural Orchids of The North Eastern Region and Their Sustainable Use through Community Participation* organized by ORDC, Krishi Vigyan Kendra-Sylvan/FEEDS campus, Hengbung (Manipur) on April 5-6, 2014
- Presented paper on “Asymbiotic Seed Germination and Micropropagation of *Dendrobium chrysanthum* Lindl. A Study *In Vitro*” in National Conference on *Orchids: Conservation, Improvement and Sustainable Development & Orchid Show*

organized by Kerala Agricultural University, Thrissur (Kerala) on March 13-15, 2014

- Presented paper on “Assessing Regeneration Potential of Stem Nodal Explants for Mass Scale Propagation of *Coelogyne fimbriata* Lindl” in National Conference on *Perspectives and Trends in Plant Sciences and Biotechnology* organized by Panjab University, Chandigarh on February 21-23, 2014
- Presented paper on “Micropropagation of *Dendrobium chrysanthum* Lindl. Using Nodal Segments” in Indian Science Congress organized by Jammu University, Jammu on February 3-7, 2014
- Presented paper on “Regeneration Competence of *Dendrobium aphyllum* Roxb. Pseudobulb Segments: A Study *In Vitro*”. 1<sup>st</sup> International and 3<sup>rd</sup> National Conference on *Biotechnology, Bioinformatics and Bioengineering* at Tirupati (Andhra Pradesh) on June 28-29, 2013
- Presented paper on “Regeneration Competence of Nodal Explants in *Dendrobium aphyllum* Roxb. A study *In Vitro*” in National Dialogue on *Orchid Conservation & Sustainable Development for Community Livelihood* organized by Pakyong (Sikkim) on March 8-9, 2013
- Presented paper on “Asymbiotic and Symbiotic Seed Germination in a Medicinally Important Orchid *Malaxis acuminata* D. Don.” in International Conference on *Allelopathy: A Multi-faceted Process* organized by Botany Department, Panjab University, Chandigarh on December 14-18, 2012
- Presented paper on “*In Vitro* Mass Propagation of a Medicinally Important Orchid *Dendrobium nobile* Lindl. through Embryo Culture.” National Conference on *Plant & Microbial Biodiversity, Present Scenario, Threats and Conservation Strategies* organized by Panjab University, Chandigarh during March 1-2, 2012
- Presented paper on “Asymbiotic seed germination in *Dendrobium aphyllum* Roxb.: A Study *in vitro*” in National Conference on *Orchids in India: Diversity, Characterization and Resource Development for Community Livelihood* and an Orchid Show organized by NASI, Allahabad during December 21-23, 2011
- Presented paper on “Mass propagation of *Dendrobium aphyllum* Roxb. through green pod culture: *In vitro*” in 5<sup>th</sup> Chandigarh Science Congress on *Building Gateway to Sustainable Green Communities* organized by Panjab University, Chandigarh during February 26-28, 2011
- Presented paper on “Mass Propagation of *Dendrobium chrysanthum* Lindl. Through Green Pod Culture: A Study *in vitro*” in National Conference on *Medicinal Orchids: Sustainable Use & Benefit Sharing for Rural & Tribal Communities* at Panjab University, Chandigarh during March 29-30, 2011
- Presented paper on “Mass Propagation of *Dendrobium aphyllum* Roxb. Through Green Pod Culture: A Study *In vitro*” in National Seminar on Biodiversity-Impact of Global Change at D.A.V. College (Lahore), Ambala City during January 22, 2011
- NEP Orientation & Sensitization Programme - MMC-015-2024-JAN-B-00700 – from 16-26 January, 2024, organized by the UGC-Malaviya Mission Teacher Training Centre, Panjab University, Chandigarh.
- Seven Day Workshop on Microscopic Techniques and its Applications from 22-28 May, 2023, conducted by Indian Institute

**Refresher  
Courses/Workshops/  
Training Programmes**

of Science Education and Research Mohali in association with Amity University under the auspices of Department of Science and Technology (DST) Government of India under Synergistic Training Program Utilizing Scientific and Technological Infrastructure (STUTI).

- One-Week online National Level Faculty Development Programme on Curriculum, Research and Innovation for Academic Excellence from 1- 7 February 2024 organized by PG and Research Department of Botany, Jamal Mohamed College (Autonomous), Tiruchirappalli, Tamil Nadu
- Seven days online mode upskilling faculty development programme from 21-27 February, 2024 organized by cluster department of life sciences, Ayya Nadar Janaki Ammal College (autonomous), Sivakasi
- Faculty Development Program on Innovations in Water Treatment and Sustainable Infrastructure from 29 May- 02 June 2023 organized by Chandigarh Engineering College, Jhanjeri, Mohali
- One week Faculty Skill Development Programme on Biological Data Analysis & Data Sciences from 27 February -04 March, 2020 organized by Department of Bioinformatics and Biochemistry, GGSDS College, Chandigarh under RUSA U.T. Administration, Chandigarh

#### **Invited Talks**

- Delivered Guest talk on topics Importance of gymnosperm, brief account of fossils, external morphology, life cycle of *Cycas* and *Pinus* at Post Graduate Government College Sector-11, Chandigarh (8-15, November 2022).
- Delivered Guest talk on topics Irrigation and Mulching at Regional Institute of Cooperative Management, Sector32 Chandigarh (2020).

#### **Projects**

- Department of Science and Technology & Renewable Energy, Chandigarh Administration Project: “To study the potential of plant and agri-residues for adsorption of dyes from effluent and wastewater” (No. S&T&RE/RP/F/Sanc/10/2023/1051-1057 dated 4.10. 2023)

#### **MOOCS/Online Content**

- YouTube channel for Plant taxonomy, anatomy, and physiology  
<https://www.youtube.com/@dranuprabha9298>

#### **M. Phil Dissertation Supervised**

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#### **PhD Thesis**

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#### **Administrative Experience**

- Member of Green Campus Committee, GGSDS College

#### **Membership**

- Life Membership of The Orchid Society of India (TOSI)

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