




Faculty Details Proforma For College Web-site

Title	Dr.	First Name	MEENAM	Last Name	BHATIA	Photograph
Designation		ASSOCIATE PROFESSOR				
Address		DAULAT RAM COLLEGE				
Phone No. Office						
Residence						
Mobile No.						
Email – ID		meenambhatia@dr.du.ac.in				
Joining		30th November 2005				

Educational Qualification :

Degree	Institution	Year
Ph. D.	Department of Botany, Delhi University, Delhi	2021
M.Sc	Department of Botany, University of Rajasthan, Jaipur.	2003
B.Sc	Maharani College, University of Rajasthan, Jaipur.	2001
NET & CSIR-UGC JRF	CSIR, Delhi	2002
SLET	Rajasthan Public Service Commission, Rajasthan.	2005

Career Profile

With teaching experience of more than 19 years, I have published many research articles in national and international peer-reviewed journals. I received a gold medal from the Indian Fern Society for my outstanding research work in Pteridology. I have presented many research papers and posters at national and international symposiums and conferences. Besides dedicated teaching and learning of the subject, I have also guided students in innovation projects, many SDPs, and internships. To develop and strengthen the skills, abilities, and scientific aptitude of students, I have organized many “Capacity Building Workshops” for students on “Mushroom Cultivation; Intellectual Property Rights and Biological Resources in 2022-23 and Learning Reproductive Biology with Fluorescence Microscopy” in 2021-22. More than 100 students from various streams have participated. Many lectures on multiple occasions were also organized like “Pollinators and Pollinator Dependent Plants and Conservation Values “on World Environment Conservation Day; “Montreal Protocols and SDGs” On World Ozone Day; “Algae in the Changing World”, “The Indian Biological Data Centre: The step before the leap “by eminent scientists. Now ICT has become an impeccable tool in the teaching and learning process. So, to meet the need of the hour many ITC In-house skill Development programs were organized for students of Botany Honours (2021-22) and Life Sciences (2022-23) and for non-teaching staff too to learn ITC skills and improve their efficiency. I have also organized a lecture series in November 2021 on “Redefining Gardening from Hobby to Enterprise’ to aim at developing self-employment and entrepreneurship among students and gave an idea to the young minds on how a hobby can be pursued as a career. I have also organized local and outstation excursions to Research Institutes and laboratory field trips. Such trips allow students to learn recent

research work in Plant sciences, Laboratory Techniques, and Instruments. In this series, we have been to the Regional Centre for Biotechnology (RCB), the Indian Agricultural Research Institute (IARI), and the Biological Data Center. I have organized two out-stationed educational trips for our students to Khajihar and Dalhousie, Himachal Pradesh in 2023 and to Mussoorie and Dehradun Uttarakhand in 2024 as a part of the curriculum.

Administrative Assignments

- TIC Botany Department 2021-22.: Admissions and all administrative-related work are required for the Department's smooth functioning.
- TIC Life Science Department 2022-23: Admissions and all administrative-related work are required for the Department's smooth functioning.
- Convenor, Prize Committee 2021-2022; 2022-2023: Annual day arrangements and Prize distributions.

Areas of Interest / Specialization

Biodiversity and its conservation, Reproductive Biology of Ferns, Archegoniate, Plant Anatomy, and Biochemistry Plant Physiology.

Subjects Taught

Even sem

VI Sem H- Plant Metabolism – TH+ PR

IV SEM II H- Developmental biology of Plants: structure and function - TH +PR.

II SEM I H- Microbiology- PR

Odd Sem

V Sem H- Plant Physiology – TH+ PR

III sem H: Bryophyte, Pteridophyte and gymnosperm - TH+ PR

I SEM I H- Biodiversity and evolution – PR

Research Guidance

- Supervising a student of Amity University for her Ph.D. degree as an external guide
- Supervised ten undergraduate students for innovation project DR-203: 2013.
- Supervised ten undergraduate students for innovation project DR-303: 2015.

Publications Profile

Research Articles:

- Mycorrhizal association and its relation with pteridophytes. Kumari P, Bhatia M, Giri P and Uniyal PL (2024) Front. Microbiol. 15:1406891. doi: 10.3389/fmicb.2024.140689
- In vitro spore germination and development of sporophyte of *Thelypteris dentata* (forssk.) E. St. John. 2023. Meenam Bhatia and Prem L. Uniyal. Indian Fern J. 40(2) : 93-103 (2023) ISSN 0970-2741
- Ethnobotanical uses of plants of Mandakini valley in Rudraprayag, Uttarakhand Pradeep Kumar Bhandari, Meenam Bhatia, and Uniyal PL. Int. J. of Life Sciences, 2022; 10(3):273-28, ISSN:2320-7817.
- *Beta vulgaris* mediated bio-inspired copper Nanoparticle and its application as an Antibacterial agent. Darshan Singh, Deepti Rawat, and Meenam Bhatia. Rasayan J.Chem Vol. 15, No. 4 ,2287-2291. October – December 2022 ISSN: 0974-1496.

- In Vitro spore germination, Gametophyte ontogeny and Sporophyte regeneration in *Platycerium bifurcatum* (Cav.) C.Chr. 2018. Meenam Bhatia, Brijesh Kumar and P.L.Uniyal. Indian Fern Journal.35: 54-66. ISSN 0970-2741.
- Studies on the Gametophyte Development and Reproductive Behavior of *Achrostichum aureum* L.” Meenam Bhatia, Priti, P.L.Uniyal and P.V. Madhusoodanan. 2017. The International Journal of Plant Reproductive Biology 9(2): 89-92. ISSN 2249-7390.

Books & Book Chapters:

- Book “Introduction to Basic Laboratory Techniques” by Meenam Bhatia and Ritu Garg. 2009. Shree Kala Prakashan, Delhi. ISBN 81-86038-17-5.
- Book Chapter: In Vitro Gametophyte Development, Reproductive Biology, and Nitric Oxide Signaling in Ferns In **Ferns: Biotechnology, Propagation, Medicinal Uses, and Environmental Regulation**: Springer Nature Singapore Pte Ltd. ISBN 978-981-16-6169-3
- Book Chapter: Meenam Bhatia, Pratibha Kumari and Aradhna Yadav. Exploring the morphogenetic diversity in fern gametophytes and their potential in Plant Science research. In: Lianas ISBN 978-93-92603-05-1 Botanical Magazine, Department of Botany, Daulat Ram College, University of Delhi, Delhi. pp. 32-38.
- Book Chapter: Aradhana Yadav, Pratibha Kumari and Meenam Bhatia. In: Lianas ISBN 978-93-92603-05-1 Botanical Magazine, Department of Botany, Daulat Ram College, University of Delhi, Delhi. pp. 59-63.
- Book Chapter: Pratibha Kumari, Aradhana Yadav and Meenam Bhatia. In: Lianas ISBN 978-93-92603-05-1 Botanical Magazine, Department of Botany, Daulat Ram College, University of Delhi, Delhi. pp. 64-69.
- **e-content** on “Plant anatomy” for Restructured B.Sc. (Prog.) under e-content generation project **National Mission on Education through ICT of Institute for Life Long Learning, DU**.

Conference Organization / Presentation

- **Presented paper In vitro development of *Allantodia aspera* (Blume) Ching (Athyriaceae) from spore germination to Sporophyte formation** at the **National Symposium on Advances in Pteridology Research**: present status and Future Strategies at Bhopal, MP from 26th -28th November 2022.
- **Presented paper** at **National symposium** on “Pteridological studies in India: Perspectives and Modern approaches in relation to Environment and Climate change” organized by BSI, Regional Centre Itanagar, Arunachal Pradesh on 22-23 February 2018.
- **Presented paper** at the **International Conference on “Fern tissue culture: A step forward towards biodiversity conservation”** organized by the Chemistry Department, DRC, DU, Delhi from 17th -18th November 2016.
- Poster presentation on “Bio-inspired copper nanoparticle and its application as antibacterial agent” in **Antradhvani**, February 2014 at the sports complex of Delhi University.
- Co-chaired the morning session on 27th November 2022 at the National Symposium on Advances in Pteridology Research: Present Status and Future Strategies at Bhopal, MP from 26th -28th November 2022.
- Resource person in Skill Enhancement Workshop for Non-Teaching Staff held at DRC, DU, from 7th – 13th July 2021.
- Resource person in SDP for students “Disease prevention with natural remedies and identification of active molecules” held at DRC, DU on 20th -27th December 2021.
- Resource person in In-House Skill Development Programme on “An Insight into the Basic ICT Tools” held at DRC, DU from 24th -25th November 2021.

Research Projects (Major Grants/Research Collaboration)

- Supervising ten Students in an ongoing research project under the Navdhara scheme titled Physico-chemical analysis of Laboratory wastewater and its treatment using bacteria.

- Supervised ten undergraduate students for innovation project DR-203: “Bio-inspired copper nanoparticle and its application as antibacterial agent” in 2013.
- Supervised ten undergraduate students for innovation project Dr-303: “Development of New Fluorescent Silica Nanoparticles for Rapid Detection of Clinical Pathogen” in 2015.

Awards and Distinctions

Received **SS Bir Medal from the Indian Fern Society** in recognition of my outstanding research work in the field of Pteridology at the National Symposium on Advances in Pteridology Research: Present Status and Future Strategies at Bhopal, MP on 27th November 2022.

Association with Professional Bodies

Life Member of Indian Fern Society
Life Member of Delhi University Botanical Society

Other Activities

- SDP for students under IQAC on “Disease prevention with natural remedies and identification of active molecules” from 20th-27th December 2021.
- ICT Workshop under IQAC for Non-teaching from 27th -28th January 2022.
- In-House Skill Development Programme on “An Insight into the Basic ICT Tools” 24th -25th November 2021.
- Workshop on Learning Reproductive Biology with Fluorescence Microscopy” in 2021-22.
- Webinar cum Workshop series on “Building Self Confidence- Preparing Yourself For Success” from 12th - 14th September 2020.
- International Conference on Effective Strategies for Biodiversity Conservation 23rd -24th March 2021.
- Staff advisor of the Botanical Society Vasundhara (2021-22): organized many curricular and Extracurricular activities to showcase the talent of the students. Organized lectures on “Pollinators and Pollinator Dependent Plants and Conservation Values “on World Environment Conservation Day; “Montreal Protocols and SDGs” On World Ozone Day; “Algae in the Changing World” and "New Insights to Climate Change Research: The Carbon Angle.
- Staff advisor of the Life Science Association Astitva (2022-23): organized many curricular and Extracurricular activities to showcase the talent of the students. Workshops, on “Capacity Building Workshops series 1 on “Mushroom Cultivation; series 2 on Intellectual Property Rights and Biological Resources in 2022-23. Organized lecture on “The Indian Biological Data Centre: The step before the leap “by an eminent scientist from Biological Data Centre, Faridabad, Haryana.
- Convenor of the garden Committee, organized a lecture series in November 2021 on “Redefining Gardening from Hobby to Enterprise’ series to aim at developing self-employment and entrepreneurship among students and gave an idea to the young minds on how a hobby can be pursued as a career.
 - Series 1: Topic 1: Sustainable Ecosystems in Farming: Aquaponics and Its Commercial Applications Topic 2: Organic Farming and Organic Waste Management
 - Series 2: Topic 1: Garden Types and its Benefits Topic 2: Gardening: A Wonderful Hobby and a Promising Career Option
 - Series 3: Urban Gardening
 - Series 4: Urban Gardening
- Organised different educational visits to the Biological Data Centre, and Regional Centre for Biotechnology (RCB), for students to give them exposure to current research in plant sciences in different institutes, Laboratory Techniques, Instruments, etc.
- Organised Curriculum based academic field trip for students to Khajihar and Dalhousie, Uttarakhand from 26th to 30th Sept 2023
- Organised Institute and laboratory field trip for students to the Indian Agricultural Research Institute (IARI) to give them exposure to current research in plant sciences in different institutes, available facilities, Laboratory Techniques, Instruments, etc.

