DR. ANRINI MAJUMDER



Designation: Assistant Professor

Contact information: Department of Botany,

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ACADEMIC QUALIFICATIONS

Degree awarded	Year	Institution/University	Field(s) of study
Bachelor of	2000	Presidency College	Botany (Honours), Chemistry,
Science (B.Sc)		(University of Calcutta)	Zoology (Pass)
Master of	2002	University of Calcutta	Botany with specialization in
Science (M.Sc)			cell biology, molecular genetics
			and plant tissue culture
Doctor of	2009	University of Calcutta	"Biotechnological approaches
Philosophy			for the production of cytotoxic
(PhD)			anticancerous compounds"

TEACHING EXPERIENCE

- Guest Lecturer in the Department of Botany (UG and PG), Jogamaya Devi College, Kolkata (2017-2019)
- Assistant Professor in the Department of Botany, Harimohan Ghose College, Kolkata (2019-present)

RESEARCH EXPERIENCE

- **Junior Research Fellow** in the project entitled "Production of Pharmaceuticals through Genetic Transformation" funded by Indo-French Centre for Promotion of Advanced Research in the Centre of Advanced Study, Department of Botany, University of Calcutta, India (2003-2006)
- **Senior Research Fellow** (CSIR-SRF) in the Centre of Advanced Study, Department of Botany, University of Calcutta, India (2007-2008)

- Research Associate in the project entitled "Development of chromosome database for plants" funded by DBT in the Centre of Advanced Study, Department of Botany, University of Calcutta, India (2009-2011)
- **Principal Investigator** in the project entitled "Agrobacterium rhizogenes mediated transformation of Podophyllum hexandrum for the production of podophyllotoxin" under the Women Scientists Scheme (WOS-A) for Research in Basic/Applied Sciences, funded by Department of Science & Technology (DST), Govt. of India in the Centre of Advanced Study, Department of Botany, University of Calcutta, India (2011-2014)

PUBLICATIONS

1. Book chapters

- **Majumder A,** Roychowdhury D, Ray S (2023) Biotechnological approaches for ex situ conservation of medicinal plants. In: S. Jha, M. Halder (eds.) Medicinal Plants: Biodiversity, Biotechnology and Conservation. Sustainable Development and Biodiversity. https://doi.org/10.1007/978-981-19-9936-9_26, pp. 729-800, © Springer Nature Singapore
- Majumder A (2022) Plant in vitro cultures for phytoremediation of heavy metals. In: K. K. Ghosh, P. Mandal, S. Neogi (eds.) Back to basics: A multidisciplinary approach to organic living and waste management. Jogamaya Devi College Interdisciplinary Volume 3, ISBN: 999-99-999999-9-9, pp. 24-44
- Halder M, **Majumder A**, Ray S, Jha S (2021) Medicinal plant research at crossroads: Biotechnological approaches for conservation, production and stability in tissue cultures and regenerated plants. In: H. M. Ekiert et al. (eds.), Medicinal Plants, Sustainable Development and Biodiversity 28, DOI 10.1007/978-3-030-74779-4_16, pp. 459-544, © Springer Nature Switzerland AG
- **Majumder A,** Ray S, Jha S (2016) Hairy roots and phytoremediation. In: A. Pavlov, T. Bley (eds.) Bioprocessing of Plant In Vitro Systems, Reference Series in Phytochemistry. DOI 10.1007/978-3-319-32004-5_22-1, pp. 1-24, © Springer International Publishing AG
- Roychowdhury D, **Majumder A,** Jha S (2013) *Agrobacterium rhizogenes* mediated transformation in medicinal plants: prospects and challenges. In: S. Chandra et al. (eds.), Biotechnology for Medicinal Plants, DOI: 10.1007/978-3-642-29974-2-2, pp. 29-68, © Springer-Verlag Berlin Heidelberg
- Majumder A, Jha S (2012) Hairy Roots: A Promising Tool for Phytoremediation. In: T. Satyanarayana, B. N. Johri, A. Prakash (eds.) Microorganisms in Environmental Management: Microbes and Environment. DOI: 10.1007/978-94-007-2229-3_27, pp. 607-629, Springer Netherlands

2. Journals, conference volumes

- Majumder A (2023) Recent trends in conservation of the Himalayan Yew. Science of Eastern Himalaya Journal 3(1):1-16. ISSN: 2583-4169
- Ray S, **Majumder A**, Bandyopadhyay M, Jha S (2014) Genetic transformation of sarpagandha (*Rauvolfia serpentina*) with *Agrobacterium rhizogenes* for identification of high alkaloid yielding lines. *Acta Physiologiae Plantarum* 36:1599-1605. Springer Berlin Heidelberg (ISSN: 0137-5881-print; 1861-1664-online)
- Ray S, Samanta T, **Majumder A**, Bandyopadhyay M, Jha S (2014) Cytogenetic characterization of *Agrobacterium rhizogenes* transformed root lines of *Rauvolfia*

- serpentina. The Nucleus, 57(2):105-112. Springer India (ISSN: 0029-568X-print; 0976-7975-online)
- **Majumder A** (2012) Influence of an indirect precursor on podophyllotoxin accumulation in cell suspension cultures of *Podophyllum hexandrum*. *Plant Tissue Culture & Biotechnology* 22(2): 171-177. (ISSN: 1817-3721-print; 1818-8745-Online)
- Than MMM, **Majumder A**, Pal A, Jha S (2011) Genomic variations among in vitro regenerated *Bulbophyllum auricomum* Lindl. plants. *Nucleus* 54(1): 9-17. Springer-Verlag (ISSN: 0029-568X –print; 0976-7975-electronic).
- **Majumder A**, Jha S (2009) Characterization of podophyllotoxin yielding cell lines of *Podophyllum hexandrum. Caryologia* 62(3): 220-235. Taylor and Francis Group (ISSN: 0008-7114 –print; 2165-5391-electronic)
- **Majumder A**, Jha S (2009) Biotechnological approaches for the production of potential anticancer leads podophyllotoxin and paclitaxel: an overview. *eJournal of Biological Sciences* 1, Issue 1: 46-69 (ISSN: 2076-9946, EISSN: 2076-9954)
- **Majumder A**, Jha S (2007) Growth and podophyllotoxin production in callus and cell suspension cultures of *Podophyllum hexandrum*. *Proceeding of National Symposium on Plant Biotechnology: New Frontiers, CIMAP, Lucknow*. pp. 433-438
- Datta MM, **Majumder A**, Jha S (2006) Organogenesis and plant regeneration in *Taxus wallichiana* (Zucc.). *Plant Cell Reports* 25: 11-18. Springer-Verlag (ISSN: 0721-7714-print; 1432-203X-online)

3. Abstracts

- Ray S, **Majumder A**, Bandyopadhyay M, Jha S (2016) Genetic transformation of *Rauvolfia serpentina* with *Agrobacterium rhizogenes*: Effects of Ri T-DNA on growth, phenotype and secondary metabolism in hairy root cultures. International conference on The Green Planet: past, present and future organized by Department of Botany, University of Calcutta
- **Majumder A,** Jha S (2012) Effect of precursors and coculture on podophyllotoxin accumulation in cell suspension cultures of *Podophyllum hexandrum*. International Conference on Biotechnology Advances: Omics Approaches and Way Forward (ICBA-2012) held at Siksha 'O' Anusandhan University, Bhubaneswar, India
- Basu A, Majumder A, Nayak S, Joshi RK, Jha S (2012) Development of genetically transformed root cultures of medicinally important plants using cryptogein gene of novel elicitor function. International Conference on Biotechnology Advances: Omics Approaches and Way Forward (ICBA-2012) held at Siksha 'O" Anusandhan University, Bhubaneswar, India
- Than MMM, **Majumder A**, Pal A, Jha S(2010) Clonal propagation, germplasm conservation and DNA fingerprinting pattern in *Bulbophyllum auricomum* Lindl. National Symposium on Plant Cell Tissue and Organ Culture: The Present Scenario organized by Centre of Advanced Study, Department of Botany, University of Calcutta
- Than MMM, **Majumder A**, Pal A, Jha S (2009) Analyses of chromosomes and DNA fingerprinting patterns in *in vitro* propagated *Bulbophyllum auricomum* Lindl. 14th All India Congress of Cytology and Genetics organized by Indian Institute of Chemical Biology, Kolkata and Department of Genetics, Calcutta University, Kolkata

• **Majumder A,** Jha S (2008) Evaluation of podophyllotoxin producing cell lines of *Podophyllum hexandrum*. Asian Symposium on Medicinal Plants, Spices and other Natural Products (ASOMPS) XIII held at Indian Institute of Chemical Technology, Hyderabad, India

SEMINARS/PROGRAMMES ORGANIZED

- One day state level seminar on "Unlocking physiology of diseases: from plants to humans" jointly organized by the Departments of Botany and Physiology, Harimohan Ghose College on 13.12.2023 (Joint Convenor)
- Awareness and sensitization programme on "Internet usage for students: Awareness about the negative effects", Harimohan Ghose College on 19.12.2023 (Convenor)

EXAMINER, HEAD EXAMINER, SCRUTINEER, PAPER SETTER, MODERATOR, RE-EXAMINER:

• University of Calcutta

AWARDS/CERTIFICATES/FELLOWSHIPS

- Certificate of Merit for securing high position in Madhyamik Pariksha in 1995
- Certificate of Merit for securing high position in Higher Secondary Examination in 1997
- Certificate of Honour for securing the first position in the B.Sc. Part I Examination of the Calcutta University in 1999 among the students of Presidency College in Botany
- Certificate of Merit under National Scholarships Scheme for securing high position in B.Sc. Part II Examination of the Calcutta University in 2000
- Qualified the graduate aptitude test in engineering (GATE) conducted by All India Council of Technical Education (AICTE), Govt. of India, for Technical research/Masters degree in 2003
- Senior Research Fellowship (SRF) by the Council of Scientific and Industrial Research (CSIR), Govt. of India, in 2007
- Awarded the best poster award at Asian Symposium on Medicinal Plants, Spices and other Natural Products (ASOMPS) XIII held at Indian Institute of Chemical Technology, Hyderabad, India, 2008

RESEARCH INTEREST

Plant Biotechnology

24.01.24 Anrini Majumder