

DR. MIHIR HALDER (M.Sc., Ph. D.)

Current Status:

Designation: Assistant Professor
Department: Department of Botany
Institution name: Barasat Govt. College (affiliated under West Bengal State University)
Date of joining in this college 6/11/2015
Address: 10 K.N. C Road, North 24 paraganas, Kolkata Pin: 700124
Area of Specialization: Cell biology, Molecular genetics & Plant biotechnology

Personal detail:

Date of birth: 16/08/1986 **Sex:** Male
Category: General **Contact:** mhalder16@gmail.com

Academic Qualifications:

Institution	Degree Awarded	Year	Field of Study
University of Calcutta	Ph. D.	2017	<i>Agrobacterium rhizogenes</i> mediated transformation of <i>Arachis hypogaea</i> L. for production of resveratrol
University of Calcutta	M. Sc.	2009	Botany (Specialization in Plant Genetics and Genomics)
Presidency College	B.Sc.	2007	Botany (Honors) with Chemistry and Zoology (Pass)

National Level Examinations Qualified:

- ❖ CSIR/UGC NET: December (2008); June (2009)
- ❖ GATE: 2009

Key Research Areas:

- Plant Molecular Cytogenetics
- Plant Biotechnology- Plant tissue culture, *Agrobacterium rhizogenes* mediated transformation, Hairy root culture

List of Publications:

1. **Halder M.,** Jha S. (2021) Morphogenesis, Genetic Stability, and Secondary Metabolite Production in Untransformed and Transformed Cultures. In: Ramawat K.G., Ekiert H.M., Goyal S. (eds) Plant Cell and Tissue Differentiation and Secondary Metabolites. Reference Series in Phytochemistry. Springer, Cham. ISBN: [9783030112530](#), DOI: https://doi.org/10.1007/978-3-030-30185-9_15
2. **Halder, M.,** Sarkar, S., & Jha, S. (2019) Elicitation: A biotechnological tool for enhanced production of secondary metabolites in hairy root cultures. *Engineering in Life Sciences*. DOI: [10.1002/elsc.201900058](#)
3. Nandagopal, K., **Halder, M.,** Dash, B., Nayak, S., & Jha, S. (2018) Biotechnological approaches for production of anti-cancerous compounds resveratrol, podophyllotoxin and zerumbone. *Current medicinal chemistry*, 25(36), 4693-4717. DOI: [10.2174/0929867324666170404145656](#)
4. **Halder, M.,** Roychowdhury, D., & Jha, S. (2018) A Critical Review on Biotechnological Interventions for Production and Yield Enhancement of Secondary Metabolites in Hairy Root Cultures. In *Hairy Roots* (pp. 21-44). Springer, Singapore. ISBN: [978-981-13-2562-5](#), DOI: [10.1007/978-981-13-2562-5_2](#)
5. Roychowdhury, D., **Halder, M.,** & Jha, S. (2017) *Agrobacterium rhizogenes*-mediated transformation in medicinal plants: genetic stability in long-term culture. *Transgenesis and Secondary Metabolism*, 323-345. ISBN: [9783319274904](#), DOI: [10.1007/978-3-319-27490-4_8-1](#)
6. **Halder M.,** Nath S., Jha S. (2017) Flow Cytometry and Its Utility. In: Bhat T., Wani A. (eds) Chromosome Structure and Aberrations. Springer, New Delhi. ISBN: [9788132236719](#), DOI: [10.1007/978-81-322-3673-3_5](#)
7. **Halder, M.,** & Jha, S. (2016) Enhanced trans-resveratrol production in genetically transformed root cultures of Peanut (*Arachis hypogaea* L.). *Plant Cell, Tissue and Organ Culture (PCTOC)*, 124(3), 555-572 DOI: [10.1007/s11240-015-0914-0](#)

8. Jha, T. B., & **Halder, M.** (2016) Searching chromosomal landmarks in Indian lentils through EMA-based Giemsa staining method. *Protoplasma*, 253(5), 1223-1231 DOI: [10.1007/s00709-015-0873-7](https://doi.org/10.1007/s00709-015-0873-7)
9. Majumdar, S., Basu, A., Paul, P., **Halder, M.**, & Jha, S. (2013) Bacosides and neuroprotection. *Natural Products: Phytochemistry, Botany and Metabolism of Alkaloids, Phenolics and Terpenes*, 3639-3660. ISBN 978-3-642-22143-9, DOI: [10.1007/978-3-642-22144-6_157](https://doi.org/10.1007/978-3-642-22144-6_157)
10. Paul, P., **Halder, M.**, & Jha, S. (2013) Alkaloids derived from tyrosine: penethylisoquinoline (autumnaline, colchicine). *Natural Products: Phytochemistry, Botany and Metabolism of Alkaloids, Phenolics and Terpenes*, 461-478. ISBN 978-3-642-22143-9, DOI: [10.1007/978-3-642-22144-6_16](https://doi.org/10.1007/978-3-642-22144-6_16)
11. Samaddar, T., Nath, S., **Halder, M.**, Sil, B., Roychowdhury, D., Sen, S., & Jha, S. (2012) Karyotype analysis of three important traditional Indian medicinal plants, *Bacopa monnieri*, *Tylophora indica* and *Withania somnifera*. *The Nucleus*, 55(1), 17-20 DOI: [10.1007/s13237-012-0048-2](https://doi.org/10.1007/s13237-012-0048-2)

Research Gate Profile: <https://www.researchgate.net/profile/Mihir-Halder>

ORCID Profile ID: <https://orcid.org/0000-0002-8422-0814>

TEACHING AND PEDAGOGY:

Online and Offline Modes; PPT, Lecture, Videos and Board work

Stream	Sem1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6
B. Sc. (H)	CC 2 Cell Biology	-	CC 7 Genetics	CC 8 Molecular Biology; CC 9 Plant Ecology and Phytogeography; CC10 Plant Systematics	-	CC-14 Plant Biotechnology DSE 4 Analytical Techniques in Plant Sciences
B. Sc. (G)	-	-	-	-	DSE 1 Cell and Mol. Biology	DSE 2 Analytical Techniques in Plant Sciences
M. Sc.	ILS Integrated Life Sciences; AECC	D6 Angiosperm Systematics; SEC 1 Biodiversity & Conservation	D11 Mol., Cellular Genetics & Plant Breeding; D14 Lab. Course GEC 1 Instrumentati on	D16 Mol. Genetics & Adv. Cell Biology; D17 Applied Plant Breeding & Plant Tissue Culture; D18 (P) Lab. course D19 (P) Lab. Course; D20 (P) Dissertation Project Work	NA	NA

- ❖ **Professional experience:** 5+ years
- ❖ **Supervise Dissertation of Genetics Special Paper Post Graduate Students In Botany From 2015 Onwards**

EXCURSIONS (EDUCATIONAL TOURS)

- ❖ Educational excursion with M. Sc. Semester II students at Himachal Pradesh in 2016.
- ❖ Educational excursion with the students of B.Sc. Botany Hons 2nd year at Sikkim- in 2017
- ❖ Educational excursion with the students of B.Sc. Botany Hons 2nd Semester to Darjeeling Himalayas in 2019

OTHER PROFESSIONAL EXPERIENCE:

1. Paper setter and examiner for Barasat Govt. College-post graduate department of botany.
2. Paper setter and examiner- West Bengal State University.
3. External Examiner for Netaji Subhas Open University Practical Examination

MEMBER OF SUB-COMMITTEES OF TEACHERS' COUNCIL

- ❖ **All India Survey on Higher Education:** Nodal officer of Barasat Govt. College
- ❖ **Banglar Uchha Shiksha Portal:** Nodal officer of Barasat Govt. College
- ❖ **M.Sc. Department of Botany:** Joint Conveners
- ❖ **Canteen and cheap stores committee:** Joint Conveners
- ❖ **System management committee:** Member
- ❖ **Admission Committee:** Member
- ❖ **College games and sports committee:** Member
- ❖ **Carrier counseling:** Member
- ❖ **NSS committee:** Member

ACHIEVEMENTS OF THE STUDENTS:

- ❖ Saikat Sahoo (M.Sc, 2016) qualified CSIR-NET JRF in 2017 and is currently working as a JRF in Calcutta University.
- ❖ Sontosh Kumar Jana (M.Sc, 2018) qualified GATE and CSIR-NET JRF in 2017 and is currently perusing his PhD in Calcutta University.