

Curriculum vitae



Name: Dr. Sautrik Basu

Academic qualification: M.Sc; Ph.D.

Designation: Assistant Professor of Botany (W.B.E.S)

Area of Specialization: Cell biology, Molecular genetics & Plant biotechnology.

Area of research: Plant tissue culture, Plant cytogenetics, Phytochemistry, Enzymology.

Date of joining this Institution: 27.07.2016.

Teaching Experience: 13 years of teaching experience at UG level and 4 years at PG level.

Research Guidance: Empanelled as a research supervisor under the West Bengal State University. Currently working as a co supervisor along with Prof. J. Adhikari (Supervisor). Sri D. S. Mahanty (Assistant Prof. of Botany) (**Registration no: 10017421114000031 of 2017**) is working under our supervision [**Proposed title of the thesis: Biosynthesis of *myo*-inositol in green and non green marine macro algae**].

ORCID ID: <https://orcid.org/0000-0002-3517-900X>

List of Publications:

Papers published in peer reviewed journals:

Mahanty, D. S., Basu, S., Adhikari, J. (2020). Salinity endurance of marine macro Rhodophycean algae with special emphasis on myo-inositol biosynthesis: An enzymological analysis from *Halymenia venusta* Børgesen. *Journal of Plant Stress Physiology*. 6: 30-39. DOI:10.25081/jpsp.2020.v6.6351.

Ghosh, S.S., Das, M., Basu, S., Adhikari, J. (2020). Gluconeogenic fructose-1,6-bisphosphatase from the mature sporocarps of common aquatic ferns: partial purification and basic characterization of this enzyme from *Marsilea minuta* (Polypodiopsida). *Ukrainian Botanical Journal*, 77(5), 386-397. doi.org/10.15407/ukrbotj77.05.386.

Basu, S., Basak, A., Mahanty, D. S., Bhattacharjee, S., & Adhikari, J. (2019). Comparative characteristics of cytosolic and chloroplastidial D/L-myo-Inositol-1-phosphate phosphatase partially purified from *Enteromorpha intestinalis* (L.) Nees (a marine macro alga) grown under high salinity niche. *Phycology International*, 2(1). DOI:10.4081/phycol.2019.62.

Basu, S., Basak, A., Mahanty, D. S., Bhattacharjee, S., & Adhikari, J. (2019). Biosynthesis of Myo-Inositol in Chloroplasts of Salinity-Stressed Marine Macro Alga *Ulva lactuca*. *Botanica*, 25(1), 32-40.

Basu, S., Basak, A., Bose, R., Chakrabarty, R., & Adhikari, J. (2018). Isolation, partial purification and biochemical characterization of chloroplastic L-myo-inositol-1-phosphate synthase from a macro alga *Enteromorpha intestinalis* under high salinity. *Environmental & Experimental Biology*.16:21-30. DOI:10.22364/eeb.16.03.

Basu, S., & Jha, T. B. (2014). Direct organogenesis, phytochemical screening and assessment of genetic stability in clonally raised *Chlorophytum borivilianum*. *Environ. Exp. Biol*, 12, 167-178.

Basu, S., & Jha, T. B. (2013). In vitro root culture: an alternative source of bioactives in the rare aphrodisiac herb *Chlorophytum borivilianum* Sant et Fern. *Plant Tissue Culture and Biotechnology*, 23(2), 133-146.

Pandey, D. K., Basu, S., & Jha, T. B. (2012). Screening of different East Himalayan species and populations of *Swertia* L. based on exomorphology and mangiferin content. *Asian Pacific Journal of Tropical Biomedicine* (Elsevier), 2(3), S1450-S1456. DOI:10.1016/S2221-1691(12)60436-5.

Sautrik Basu, Devendra Kumar Pandey & Timir baran Jha. (2011). HPTLC analysis of Stigmasterol in three populations of *Chlorophytum borivillianum*. *Journal of Tropical Medicinal Plants*. 12(2): 147-151.

Basu, S., & Jha, T. B. (2011). In-vitro propagation of *Chlorophytum nepalense*. *Journal of Tropical Medicinal Plants*. 12(1): 33-39.

Basu, S., & Jha, T. B. (2011). Cytogenetic studies in four species of *Chlorophytum* Ker-Gawl. (Liliaceae). *The Nucleus*, 54(3), 123-132. DOI:10.1007/s13237-011-0039-8

Basu, S., & Jha, T. B. (2008). *Chlorophytum nepalense* (Lindl.) Baker—An unexplored plant of potential economic value. *Curr. Sci*, 95(4), 439.

Basu, S and Jha, T (2007) *In-vitro* propagation of the rare medicinal plant *Chlorophytum borivillianum* Sant. et. Fern. Proc. of Nat Symp on Plant Biotechnology: New Frontiers, CIMAP (Lucknow). pp: 285-289.

Papers presented in Seminars & Symposia:

1. Basu, S.; Mukherjee, P.; Kundu Chaudhuri, R and Jha, T (2007). Efficient and rapid *in-vitro* protocols for mass propagation, conservation and commercial exploitation of three important medicinal plants (Abstract). Proc. of Nat Symp on medicinal and aromatic plants for economic benefit of rural people. Feb: 16-18. pp: 61. **(Oral presentation)**
2. Basu, S and Jha, T (2008). *In-vitro* micropropagation of *Stevia rebaudiana* Bertoni. – A zero calorie sweetener through node and leaf culture (Abstract). Proc. of Nat Symp on Diversity and functionality of plant and microbes. Jan: 24-25. pp: 65.
3. Basu, S; Banerjee, A and Jha, T (2008). *In-vitro* techniques for biotechnological improvement of *Chlorophytum borivillianum* Sant. et. Fern (Abstract). In Proc of International Symp on Plant tissue Culture and Biotechnology. Dhaka (Bangladesh). Apr: 11-13. pp: 65. **(Oral presentation)**

4. **Basu, S.**; Sil, S and Jha, T (2009). Micropropagation of *Chlorophytum nepalense* (Lindl.) Baker. An endemic Himalayan species (Abstract). In Proc of 4th International Botanical Conference, Dhaka (Bangladesh). Jan:16-18. pp: 113.
5. **Basu, S** and Jha, T (2010). *In-vitro* tuberization and a comparative phytochemical analysis of *in-vivo* and *in-vitro* grown roots of *Chlorophytum borivillianum* Sant et Fern- A rare medicinal herb (Abstract). In Proc of National Symposium on Plant Cell Tissue and Organ Culture: The Present Scenario-2010. pp: 103. **(Poster presentation)**
6. **Basu, S** and Jha, T.B (2011) HPTLC fingerprinting and quantitative analysis of some nutritional bioactives from different populations of safed musli (*Chlorophytum borivillianum* Sant et Fern). (Abstract). In Proc of National Conference on Emerging Trends in Natural Product Research. Feb: 12-13. pp: 77. **(Poster presentation)**
7. Basak, A; **Basu, S**; Jha, T.B and Adhikari, J (2011) *In-Vitro* grown *Selaginella microphylla* is an excellent source of Lupeol and Stigmasterol, Identification and Quantification by HPTLC. (Abstract). In Proc of National Conference on Emerging Trends in Natural Product Research. Feb: 12-13. pp: 88.
8. **Basu, S**; Das, A and Jha TB (2013). Micropropagation and conservation of a new genetic resource in *Capsicum* L. (Abstract). In Proc of National Symposium on Plant Tissue culture & Biotechnology for food and Nutritional Security. March 11-13. pp: 48. **(Oral presentation)**
9. Dutta., S, Banerjee, N, Jaiswal, P, **Basu, S** & Mukhopadhyay, S. (2016). Evaluation of antioxidant activity of some selected East Himalayan ethno medicinal plants. (Abstract). In Proc of first Regional Science and Technology Congress. Organized by DBT, Govt. of W.B. 13-14TH Nov. 2016. pp: 77.

Educational Excursions/Field trips:

Conducted following field trips/Excursions with undergraduate and post graduate students (2017-2020)

- ❖ Educational excursion to East Sikkim with UG students [2017].
- ❖ Educational excursion to Charkhole, Lolegaon, Darjeeling and surrounding areas with UG students. [2018].
- ❖ Educational Excursion to West Sikkim (Hilley, Bersay, Rinchenpong and surrounding areas) with second semester PG students [2020].

Achievements of the Students:

The following students who worked under my supervision during their final year of post graduation are currently working as teachers/research scholars in various institutes of high repute.

- ❖ Miss Priyanka Raha (M.Sc, 2017) and miss Ishita Khatua (M.Sc, 2017) are currently working as research fellow in the Department of Molecular Biology, University of Kalyani.
- ❖ Miss Mouli Nahar (M.Sc, 2017) is currently working as a State Aided College Teacher (SACT) in Sri Chaitanya College Habra.
- ❖ Sri Plaban Kumar Saha (M.Sc, 2018) (qualified **GATE** in 2018) has completed his M. Tech from IIT Kharagpur and is currently perusing his PhD from NIT Durgapur.
- ❖ Miss Pinki Datta (M.Sc, 2018) has qualified **CSIR-NET JRF** in 2019 and is currently working as a JRF in ICRISAT (Hyderabad).
- ❖ Mr. Imadul Islam (M.Sc, 2019) has qualified **GATE** in 2020.
