

Government General Degree College, Singur

ACADEMIC PROFILE



DR. SAYANTANI NATH

Assistant Professor in Botany (W.B.E.S.)

M.Sc., Ph.D.

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Specialization: Genetics, Plant Cytogenetics, Molecular Biology

➤ **Date of joining in this college:** 02.03.2015

➤ **Total teaching experience in college level:** 11 years

➤ **Area of research:** Genetics and cytotaxonomy

➤ **Title of Ph.D. thesis :** Cytogenetic Study Of Indian Species Of *Drimia* (syn. *Urginea*) And Other Related Taxa Of Scilloideae (Hyacinthaceae)

➤ **Research guidance (if any):** Nil

➤ **Research projects [completed / ongoing] :**

Co-investigator: DST-SERB-CRG (CRG/2022/001700) 2023-2026: Phylogenetic inferences based on chloroplast non-coding DNA and ribosomal DNA ITS1, 5.8S and ITS2 secondary structures and sequence motifs, cytogenetic and morphological characteristics of the genus *Pancratium* (Amaryllidaceae: Amaryllidoideae: Pancratieae) in India: a bulbous geophyte with convoluted taxonomy

➤ **List of publications:**

A. Published papers in Journals:

1. T Samaddar, S Nath, M Halder, B Sil, D Roychowdhury, S Sen and S Jha. Karyotype analysis of three important traditional Indian medicinal plants, *Bacopa monnieri*, *Tylophora indica* and *Withania somnifera*. *The Nucleus* (2012) Volume 55(1) pp 17–20 (IF: 2.8) <https://doi.org/10.1007/s13237-012-0048-2>
2. S. Nath, SK Mallick, S Jha. An improved method of genome size estimation by flow cytometry in five mucilaginous species of Hyacinthaceae. *Cytometry Part A*. 85(10): 833-40 (2014). (IF: 3.4) <https://doi.org/10.1002/cyto.a.22489>
3. S Nath, TB Jha, SK Mallick, S Jha. Karyological relationships in Indian species of *Drimia* based on fluorescent chromosome banding and nuclear DNA amount. *Protoplasma* 252(1):283-99 (2015) (IF: 3.1) <https://doi.org/10.1007/s00709-014-0679-z>
4. Jha TB and S. Nath, EMA based chromosome analysis in *Bixa orellana* L. and *Limonia acidissima* L. (2016). *The Nucleus* 59: 93- 98. (IF: 2.8)
5. Jha T. B., Saha P. S., S. Nath, Das A., Jha S. Morphological and cytogenetical characterization of 'Dalle khursani': a polyploid cultivated *Capsicum* of India". . (2017) *Scientia Horticulture* 215: 80-90. (IF 4.8) <https://doi.org/10.1016/j.scienta.2016.12.005>
6. S Nath et al. "Cytogenetic Diversity in Scilloideae (Asparagaceae): a Comprehensive Recollection and Exploration of Karyo-Evolutionary Trends." *The Botanical Review* (2022): 1-43. (IF: 6.8) DOI: [10.1007/s12229-022-09279-1](https://doi.org/10.1007/s12229-022-09279-1)
7. S. Nath, Saha P.S. Cytogenetic diversity and phylogeny of *Pancratium* (Amaryllidaceae): Taxonomic insights into a medicinal bulbous geophyte. *Plant Science Today*, 12 (2) , 1-8, , 2025 , (IF: 0.9) <https://doi.org/10.14719/pst.6687>

B. Published papers in Seminars/Symposia/Conferences: Nil

C. Published Books / Chapters in Books:

1. Flow cytometry and its utility. In: Chromosome structure and aberrations. Bhat T. A., Wani A. A. (eds.)". Halder M., **Nath S.**, Jha S. (2017) Springer India, pp 109-12.
2. S Nath, PS Saha and **S Jha**. Medicinal Bulbous plants: Biology, Phytochemistry and Biotechnology;. In : K G Ramawat, Jean-Michel Merillon (eds) ***Bulbous Plants Biotechnology***; 13

D.Participation in Seminars/Symposia/Conferences/Workshops:

Title of the invited lecture/ presented paper (oral/poster)	Title of the conference/seminar with date	Organized by	Level
Algae: a potential solution for sustainable development	Sustainable development goals and their evaluation (06.06.2022)	Rani Rashmoni Green University and Government General Degree College Singur in association with Association of Chemistry Teachers (ACT) c/o TIFR, Mumbai	National
Molecular cytogenetic characterization of Indian species of Scilloideae: a group of medicinal bulbous geophytes with convoluted taxonomy	Cytogenetics to Genomics and beyond (24.05.2024)	Archana Sharma Foundation of Calcutta and Department of Botany, University of Calcutta, in collaboration with WBDSTBT	National

➤ Participation in OP/RC/FIP/FDP:

Name of the course	Place	Duration	Sponsoring agency
93 rd Orientation Programme	Osmania University, Hyderabad	03.03.2020 to 24.03.2020	UGC HRDC, Osmania University
Interdisciplinary Refresher Course in Environmental Sciences (MD)	Kumaun University , Uttarakhand	14.09.2020 to 28.09.2020.	UGC HRDC, Kumaun University
Orientation Programme on NEP 2020 on the theme : orientation and sensitization	Aligarh Muslim University, Aligarh	20.02.2024 to 28.02.2024	UGC- MMTTC, Aligarh Muslim University
Interdisciplinary Refresher Course on Recent Advances in applied biology	Assam University, Sichar	16.08.2024 to 29.08.2024	UGC- MMTTC, Assam University
Short Term Programme on 'Mental Health, Well Being and Life skills'	RTM Nagpur University, Nagpur	07.07.2025 to 12.07.2025	UGC- MMTTC, RTM Nagpur University
Short Term Programme on ' Digital Transformation of HEIs: Tools and Infrastructure'.	Burdwan University, Burdwan	16.07.2025 to 22.07.2025	UGC- MMTTC, Burdwan University

➤ **Membership of Learned Societies/ Editorial Boards, etc. (if any):**

➤ **Patents (if any):** Nil

➤ **Awards (if any):**

1. Received INSPIRE (Innovation in Science Pursuit for Inspired Research) Fellowship from Department of Science and Technology, New Delhi for securing First class First position at M.Sc. level (University of Calcutta) in 2010.

2. Qualified NET twice- CSIR UGC-NET (LS)[2009, Rank 73], CSIR-NET (JRF) [2010, Rank 103] and GATE 2010

3. Recipient of H. L. Mukherjee Memorial Award 2010 for securing first class first position at Postgraduate level in Botany from University of Calcutta

➤ **Other notable activities (if any):**

1. Gold Medallist in Botany from University of Calcutta (2010)

2. Ranked 7th in B.Sc. In Botany from Calcutta University (2008)