RESUME

NAME: Dr. Saikat Gantait

DESIGNATION: Assistant Professor

CONTACTS:

1. **OFFICIAL ADDRESS FOR CORRESPONDENCE:**

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6. **RESEARCHGATE:** https://www.researchgate.net/profile/Saikat-Gantait

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7. ACADEMIC PROFILE:

LEVEL	NAME OF THE DEGREE WITH DISCIPLINE/ DEPARTMENT	INSTITUTE	YEAR OF PASSING
DOCTORAL	Ph.D. in Biotechnology	B.C.K.V.	2010
MASTER'S	M.Sc. (Agri.) Genetics	B.C.K.V.	2004
BACHELOR'S	B.Sc. Agriculture (Hons.)	Visva Bharati	2002

8. EMPLOYMENT HISTORY:

POSITION	ORGANIZATION	PERIOD	
		From (Date)	To (Date)
Assistant Professor (Genetics and Plant Breeding)	Bidhan Chandra Krishi Viswavidyalaya	03/11/15	Cont.
Subject Matter Specialist (Genetics and Plant Breeding)	Sasya Shyamala Krishi Vigyan Kendra	30/05/14	02/01/15
Research Officer	National Tea Research Foundation	15/07/13	27/05/24
Post-Doctoral Researcher	Universiti Putra Malaysia	210/4/11	12/07/13
Research Associate	West Bengal State Council of Science and Technology	10/09/10	13/04/11

9. AREAS OF RESEARCH:

- *Ex Situ* Conservation of Plant Germplasms
- Plant Cell, Tissue and Organ Culture
- Synthetic Seeds for Storage and Exchange of Germplasms
- Mutagenesis for Enhancement of Quality Traits
- Polyploidization for Improvement of Commercial Traits
- Enhancement of Plant Secondary Metabolites Production
- Molecular Characterization of Wild and Cultivated Germplasms

10. COURSES ASSOCIATED WITH:

LEVEL	COURSE NO.	COURSE TITLE	CREDIT
UNDERGRADUATE	GPB156 GPB105(H)	Fundamentals of Genetic Principles of Genetic and Plant Breeding	(2+1) (2+1)
POST GRADUATE	GPB501 CC502 GPB506	Principles of Genetics Laboratory Tools and Techniques Molecular Breeding and Bioinformatics	(2+1) (0+1) (2+1)
Ph.D.	GPB 701	Genomics in Crop Improvement	(1+2)

11. NUMBER OF STUDENTS SUPERVISED:

Master's: **08**; Doctoral: **03**

12. RESOURCE PERSON FOR OTHER INSTITUTES

- *Resource Person:* Short-term Course on "Plant Tissue Culture and Micropropagation: Methods and Application" at Department of Applied Biology on 28/02/2022 to 10/03/2022 at University of Science & Technology, Meghalaya
- *Resource Person:* International Faculty Development Programme on 'Writing and Publishing Quality Research Paper' at The Neotia University, West Bengal on 26/12/2022 to 30/12/2022

13. LIFE MEMBERSHIP OF ACADEMIC SOCIETIES

- Crop and Weed Science Society
- Medicinal and Aromatic Plants Association of India
- Society for Conservation and Resource Development of Medicinal Plants
- The Orchid Society of Eastern Himalaya
- Cooch Behar Association for Cultivation of Agricultural Science
- Society of Krishi Vigyan

14. PROJECT ACTIVITIES

SL. NO.	TITLE OF THE PROJECT	FUNDING AGENCY	ONGOING/ COMPLETED	PI/ Co-PI
1	*In vitro* mutagenesis of *Stevia* for enhanced production of steviol glycosides	DAE-BRNS, Govt. of India	ONGOING	PI
2	Development of novel mutant(s) with improved lutein content in African marigold (*Tagetes erecta* L.) via gamma irradiation exposure	-do-	ONGOING	Co-PI
3	Induction of *in vitro* polyploidisation and mass propagation of gerbera for improved commercial traits, along with their routine demonstration	Dept. of Science & Technology and Biotechnology, Govt. of WB	COMPLETED	PI
4	Development of protocol for virus free synthetic seeds in potato and their potentiality assessment	-do-	COMPLETED	Co-PI

15. CAPACITY BUILDING/FACULTY DEVELOPMENT PROGRAMME ATTENDED

SL. NO.	NAME OF THE PROGRAMME	DURATION	PLACE	ROLE
1	Virtual Training Programme on Plant Genetic Resources Management and Utilization	19/07/21 to 01/08/21	ICAR-National Bureau of Plant Genetic Resources, New Delhi (India)	Trainee
2	Hands on Training Programme on "Recent Advances on Mutation Breeding for Crop Improvement"	20/01/20 to 30/01/20	FACC, BCKV, Kalyani (India)	Trainee
3	Winter School on "Processing Value Addition and Waste Utilization of Medicinal and Aromatic Plants with Advanced Techniques"	30/11/18 to 20/12/18	ICAR-Directorate of Medicinal and Aromatic Plant Research, Anand (India)	Trainee

16. SEMINAR/ SYMPOSIUM/ WORKSHOP etc.

A. ORGANIZED

SL. NO.	NAME OF THE PROGRAMME	DURATION	PLACE	ROLE
1	National Level Workshop on Jute Production, Marketing, & Utilization Strategies	25/02/21	FACC-BCKV, Kalyani	Member, Technical Committee

B. ATTENDED (Best 05 out of 30)

SL. NO.	NAME OF THE PROGRAMME	DURATION	PLACE	ROLE
1	National Conference on "Recent Trends and Future Prospects of Floriculture in India"	09/01/24 to 11/01/24	Organized by ICAR-IIHR & SPH, India	Lead Speaker
2	6th International Conference on Agricultural Innovations for Sustainable Development Goals with Special Focus on Natural Farming	30/09/13 to 02/10/12	FACC-BCKV, Kalyani, India	Participant
3	International Agri Congress	04/09/12 to 06/09/12	Putrajaya, UPM, Malaysia	Participant
4	PRPi 2012: UPM's research & innovation	2012	UPM, Malaysia	Participant
5	Plant Tissue Culture & Biotechnology Conference 2008: Opportunities and challenges of agricultural biotechnology in developing countries	11/04/08 to 13/04/08	Dhaka University, Bangladesh	Participant

17. HONOURS/ AWARDS/ RECOGNITION:

- **Senior Scientist of the Year**: bestowed by Cooch Behar Association of Cultivation of Agricultural Sciences at UBKV, Cooch Behar, India (2024)
- **Silver medal**: Research work presentation at Exhibition of Research and Innovation (PRPI), Putra Science Park, UPM, Malaysia (2012)
- **Best Poster**: Research paper presentation at International Symposium on System Intensification Towards Food and Livelihood Security at BCKV, India (2011)

- **Best Poster**: Research paper presentation at National Symposium on Physiological and Biotechnological Approaches to Improve Plant Productivity at CCSHAU, India (2008)

18. INTERNATIONAL COLLABORATIONS/ INVOLVEMENT:

- Universiti Putra Malaysia
- Associate Editor-in-Chief: 3 Biotech (Springer Nature)
- Associate Editor: Plant Cell, Tissue and Organ Culture (Springer Nature)
- Associate Editor: In Vitro Cellular & Developmental Biology-Plant (Springer Nature)
- Associate Editor: Frontiers in Horticulture (Frontiers)
- Consulting Editor: Sugar Tech (Springer Nature)
- Member Editor: Horticultural Plant Journal (Elsevier)

19. PUBLICATIONS

A. BOOKS

1. **Gantait S**, Majumder J, Sharangi AB (2024) *Biotechnology of Medicinal Plants with Antiallergy Properties: Research Trends and Prospects*, **Springer Nature**, Singapore [ISBN 978-981-97-1466-7]
2. **Gantait S**, Verma SK, Sharangi AB (2021) *Biotechnology of Anti-diabetic Medicinal Plants*, **Springer Nature**, Singapore [ISBN 978-981-16-3529-8]

B. BOOK CHAPTERS (Best 10 out of 24)

1. **Gantait S**, Subrahmanyeswari T, Kamble SN, Singh S (2024) Strategies for the ameliorated production of pharmaceutically important glycosides via plant cell culture. In: A Jain, S Malik (eds) *Peptide and Protein Drug Delivery Using Polysaccharides*, Academic Press **Elsevier**, UK, pp. 51-74. [ISBN 978-0-443-18925-8]
2. **Gantait S**, Mukherjee E, Jogam P, Harinath Babu K, Jain SM, Suprasanna P (2022) Improving crops through transgenic breeding—Technological advances and prospects. In: AC Rai, A Kumar, A Modi, M Singh (eds) *Advances in Plant Tissue Culture*, Academic Press **Elsevier**, UK, pp. 295-324. [ISBN 978-0-323-90795-8]
3. Das A, Mahanta M, Pramanik B, **Gantait S** (2021) Artificial seed development of selected anti-diabetic plants, their storage and regeneration: progress and prospect. In: S Gantait, SK Verma, AB Sharangi (eds) *Biotechnology of Anti-diabetic Medicinal Plants*, **Springer Nature**, Singapore, pp. 409-436. [ISBN 978-981-16-3529-8]
4. **Gantait S**, Mitra M (2021) Role of *meta*-topolin on in vitro shoot regeneration: an insight. In: N Ahmad, M Strnad (eds) *Meta-topolin: A Growth Regulator for Plant Biotechnology and Agriculture*, **Springer Nature**, Singapore, pp.143-168. [ISBN 978-981-15-9045-0]
5. **Gantait S**, Mitra M, Panigrahi J (2020) Application of in vitro technologies for production of vasicine and vasicinone: key bioactive compounds of *Adhatoda* spp. In: MK Swamy (ed), *Plant-derived Bioactives: Production, Properties and Therapeutic Applications*, **Springer Nature**, Singapore, pp. 101-114 [ISBN 978-981-15-1760-0]
6. **Gantait S**, Mitra M (2019) Applications of synthetic seed technology for propagation, storage, and conservation of orchid germplasms. In: M Faisal, AA Alatar (eds), *Synthetic Seeds: Germplasm Regeneration, Preservation and Prospects*, **Springer Nature**, Switzerland AG, pp. 301-321 [ISBN 978-3-030-24630-3]
7. Vahedi M, Karimi R, Panigrahi J, **Gantait S** (2019) Salient biotechnological interventions in saffron (*Crocus sativus* L.): a major source of bioactive

apocarotenoids. In: MS Akhtar, MK Swamy (eds.), *Natural Bio-active Compounds*, Volume 3, **Springer Nature**, Singapore, pp. 205-223 [ISBN 978-981-13-7437-1]

8. **Gantait S**, Sarkar S, Verma SK (2019) Marker-assisted selection for abiotic stress tolerance in crop plants. In: A Roychoudhury, DK Tripathi (eds.), *Molecular Plant Abiotic Stress: Biology and Biotechnology*, First Edition, John **Wiley** & Sons Ltd, UK, pp. 335-368 [ISBN: 978-1-119-46369-6]
9. **Gantait S**, Panigrahi J, Verma SK (2019) Transgenic ornamentals for phytoremediation of metals and metalloids. In: MNV Prasad (ed.), *Transgenic Plant Technology for Remediation of Toxic Metals and Metalloids*, Academic Press **Elsevier**, UK, pp. 477-497 [ISBN 978-0-12-814389-6]
10. Kundu S, Salma U, **Gantait S** (2018) Cryopreservation of medicinal herbs: major breakthroughs, hurdles and future. In: N Kumar (ed.), *Biotechnological Approaches for Medicinal and Aromatic Plants*, **Springer Nature**, Singapore, pp. 353-381 [ISBN 978-981-13-0535-1]

C. RESEARCH PAPERS (Best 10 out of 132)

1. Chettri T, Majumder J, Mahanta M, Mitra M, **Gantait S** (2024) Genetic diversity analysis and molecular characterization of tropical rose (*Rosa* spp.) varieties. *Scientia Horticulturae* 332: 113243 [IF 4.3] (**NAAS 10.3**)
2. Chettri T, Majumder J, **Gantait S** (2024) Callus induction and elicitation for enhanced cyanidin accumulation coupled with antioxidant activities in tropical roses (*Rosa* spp.). *Plant Cell Tissue and Organ Culture* 157: 43 [IF 3.0] (**NAAS 9.0**)
3. Laha S, Subrahmanyeswari T, Kamble SN, Singh S, Bhattacharyya S, **Gantait S** (2023) Biogenic synthesis, characterization and application of silver nanoparticles as biostimulator for growth and rebaudioside-A production in genetically stable stevia (*Stevia rebaudiana* Bert.) under *in vitro* conditions. *Industrial Crops and Products* 197: 116520 [IF 5.9] (**NAAS 11.9**)
4. Char M, Subrahmanyeswari T, Bhattacharyya S, **Gantait S** (2023) *meta*-Topolin-induced in vitro propagation, field evaluation, flow cytometry and molecular marker-based genetic stability assessment of potato cv. Badami alu. *Plant Cell Tissue and Organ Culture* 155: 485–493 [IF 3.0] (**NAAS 9.0**)
5. Subrahmanyeswari T, **Gantait S**, Kamble SN, Singh S, Bhattacharyya S (2023) Radio-sensitivity assessment of *in vitro* tissues of stevia (*Stevia rebaudiana* Bert.) for induced mutagenesis. *Sugar Tech* 25: 1520-1530 [IF 1.9] (**NAAS 7.9**)
6. Subrahmanyeswari T, **Gantait S**, Kamble SN, Singh S, Bhattacharyya S (2023) *meta*-Topolin-induced regeneration and ameliorated rebaudioside-A production in genetically uniform candy-leaf plantlets (*Stevia rebaudiana* Bert.). *South African Journal of Botany* 159: 405–418 [IF 3.1] (**NAAS 9.1**)
7. Mahanta M, **Gantait S**, Sarkar S, Sadhukhan R, Bhattacharyya S (2023) Colchicine-mediated in vitro autopolyploidization in gerbera hybrid. ***3 Biotech*** 13: 74 [IF 2.8] (**NAAS 8.8**)
8. Mahanta M, **Gantait S**, Mukherjee E, Bhattacharyya S (2023) *meta*-Topolin-induced mass propagation, acclimatization and cyto-genetic fidelity assessment of gerbera (*Gerbera jamesonii* Bolus ex Hooker f.). *South African Journal of Botany* 153: 236–245 [IF 3.1] (**NAAS 9.1**)
9. Suranthran P, **Gantait S**, Sinniah UR (2023) Water content significantly influences post-cryopreservation survival of air-desiccated oil palm (*Elaeis guineensis* Jacq.) zygotic embryos: A thermal and ultrastructural study. *Industrial Crops and Products* 204: 117343 [IF 5.9] (**NAAS 11.9**)
10. **Gantait S**, Mukherjee E, Bandyopadhyay P, Bhattacharyya S (2022) M-brigde- and elicitor-assisted enhanced post-storage germination of *Rauvolfia serpentina* synthetic seeds, their genetic fidelity assessment and reserpine estimation. *Industrial Crops and Products* 180: 114732 [IF 5.9] (**NAAS 11.9**)

SGantait 6th May'24

(Dr. Saikat Gantait)