

Ms. UPASHANA GHISSING

Assistant Professor

M.Sc. (Botany)

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Overview

Ms. Upashana Ghissing is currently employed by Trivenidevi Bhalotia College, Raniganj, West Bengal, as an Assistant Professor of Botany. She has submitted her thesis at the Indian Institute of Technology Kharagpur for the fulfillment of her doctoral degree. Throughout her academic career, Ms. Ghissing has had multiple research papers published in reputable International journals. Her academic background is in Plant Physiology and Biochemistry, focusing on Plant Specialized Metabolism governing floral color and scent volatiles biosynthesis in ornamental plants.

Date of appointment to the present job

18th December, 2023

Other Academic/ Administrative posts

NA

Academic background

- Thesis submitted for fulfillment of doctoral degree at the Indian Institute of Technology Kharagpur
- M.Sc. in Botany (2013-2015), Darjeeling Government College, Darjeeling, (affiliated with the University of North Bengal)
- B.Sc. (Hons) in Botany (2010-2013), Darjeeling Government College, Darjeeling, (affiliated with the University of North Bengal)
- Higher Secondary (WBCHSE; 2008) Saint Alphonsus' Higher Secondary School, Kurseong
- Secondary (WBBSE; 2006) Saint Joseph's Girls Higher Secondary School, Kurseong

Information about Ph.D.

Ms. Ghissing has submitted her thesis for the fulfillment of her doctoral degree at the Indian Institute of Technology Kharagpur. Her thesis focuses on understanding fine coordination among anthocyanin accumulation, scent emission and nectar secretion in *Combretum indicum* flowers.

Professional Qualifications

NA

Publications

- Ghissing U, Kutty N, Bimolata W, Samanta T, Mitra A, 2023. Comparative transcriptome analysis reveals an insight into the candidate genes involved in anthocyanin and scent volatiles biosynthesis in color changing flowers of *Combretum indicum* (L.) DeFilipps. *Plant Biology*. 25:85-95
- Ghissing U, Goswami A, Mitra A, 2023. Temporal accumulation of pigments during colour transformation from white to red in *Combretum indicum* (L.) DeFilipps (syn. *Quisqualis indica* L.) flowers. *Natural Product Research*, 37:529-533
- Ghissing U, Jayanthan K, Bera P, Bimolata W, Mitra A, 2022. Targeted profiling and temporal expression of a few key genes revealed an apparent coordination among the metabolites contributing to the volatiles internal pool in *Jasminum sambac* (L.) Aiton flowers. *Brazilian Journal of Botany*. 45:587-597
- Mitra M, Venkatesh P, Ghissing U, Biswas A, Mitra A, Mandal M, Mishra HN, Maiti MK. 2023. Fruity-scented antifungal volatiles from endophytic *Geotrichum candidum* PF005: Broad-spectrum bioactivity against stored grain pathogens, mode of action and suitable formulation for mycofumigation. *Biological Control*.177:105129. <https://doi.org/10.1016/j.biocontrol.2022.105129>
- Mitra M, Singh R, Ghissing U, Das AK, Mitra A, Maiti MK, 2022. Characterization of an alcohol acetyltransferase GcAAT responsible for the production of antifungal volatile esters in endophytic *Geotrichum candidum* PF005. *Microbiological Research*. 260:127021. <https://doi.org/10.1016/j.micres.2022.127021>
- Kutty NN, Ghissing U, Mitra A, 2021. Revealing floral metabolite network in tuberose that underpins scent volatiles synthesis, storage and emission. *Plant Molecular Biology*. 106: 533-554
- Muravnik LE, Mosina AA, Zaporozhets NL, Bhattacharya R, Saha S, Ghissing U, Mitra A, 2021. Glandular trichomes of the flowers and leaves in *Millingtonia hortensis* (Bignoniaceae). *Planta*. 253:1-7
- Barman M, Ghissing U, Dey PK, Agarwal A, Bera B, Kotamreddy JNR, Karmakar P, Mitra A, 2021. Specialized metabolites contributing to colour and scent volatiles in *Uvaria hamiltonii* flowers. *Natural Product Research*, 35:140-143
- Kutty NN, Ghissing U, Kumar M, Maiti MK, Mitra A, 2020. Intense Floral Scent Emission in *Polianthes tuberosa* L. (Tuberose) Variants Sprouted from γ -Irradiated Tubers. *Journal of Plant Growth Regulation*, 39:112-121

Books and Chapters

- Ghissing U, Mitra A, 2022. Biology of floral scent volatiles in ornamental plants. Floriculture and Ornamental Plants, Datta SK, Gupta YC (eds.), *Handbooks of Crop Diversity: Conservation and Use of Plant Genetic Resources*, Springer Nature Singapore Pte Ltd.777-817. https://doi.org/10.1007/978-981-15-3518-5_27

Seminars, Conferences, Webinars and Workshops attended

- Seminars/ Conferences / Workshops: 6

Life Membership

NA

Awards/ Academic Achievements

- Received SERB-International Travel Support to travel to Bonn, Germany for an Oral presentation at the International Conference of the German Society for Plant Sciences held from 28th August to 1st September 2022
- Qualified GATE-2019 (National level test for admission to the post-graduate program with fellowship)
- Qualified WBSET-2018 (State Eligibility Test for Assistant Professor accredited by University Grants Commission, New Delhi)
- Qualified ASRB-NET-2018 in the discipline of Plant Biochemistry (National level test for Lectureship in Agricultural Universities)
- Qualified CSIR-JRF NET-2015 (National level eligibility test for awarding individual research fellowship for pursuing Ph.D.)
- Received Gold Medal (1st Rank) in the University of North Bengal, M.Sc. (2013-2015)
- Received Silver Medal (2nd Rank) in the University of North Bengal, B.Sc. (2010-2013)

Professional Courses

NA

Others/ Miscellaneous

NA