Curriculum Vitae

Designation: Assistant Professor (Stage III)

Official Address: St. Xavier's College
Microbiology Dept
30, Park Street
Kolkata-700016

Contact details: **anindita.banerjee@sxccal.edu**

Ph.D dissertation:

Title of the Thesis: Evaluation of a medicinal plant- *Phyllanthus amarus* and its improvement at the genetic level.

National Level Examinations Qualified:

Graduate Aptitude Test for Engineering (GATE): 2003 (93.42 percentile)

National Eligibility Test (NET): June 2003, qualified both for Junior Research Fellow under Council of Scientific and Industrial Research (CSIR) as well as for lectureship.

Honors and Awards:

- Obtained merit card in English in Class- XII for scoring high marks in English.
- Awarded fellowship from West Bengal Government for scoring high marks in Hindi.
- Awarded medal from Bethune College for obtaining high 1st class in B.Sc.
- Awarded fellowship from West Bengal Government for scoring high marks in B.Sc.

Publications:

Ghanta, S.; **Banerjee, A**.; Poddar, A.; Chattopadhyay, S (2007). Oxidative DNA Damage Preventive Activity and Antioxidant Potential of *Stevia rebaudiana* (Bertoni) Bertoni, a Natural Sweetener. J. Agric. Food Chem., 55 (26), 10962–10967.

Banerjee, A.; Poddar, A.; Ghanta, S.; Chakraborty, A.; Chattopadhyay, S (2007). *Nyctanthes arbor-tristis* Linn. – Spectrum of its bioactivity potential. Planta Med. 73:9. DOI: 10.1055/s-2007-986724.

Poddar, A.; **Banerjee, A**.; Ghanta, S.; Chattopadhyay, S (2008). In vivo efficacy of calceolarioside A against experimental visceral leishmaniasis. Planta Med., 74: 503-508.

Banerjee, A.; Chattopadhyay, S (2009). Genetic transformation of a hepatoprotective plant, *Phyllanthus amarus.* In Vitro Cell. Dev. Bio. Plant., 45: 57-64.

Bhattacharyya, D.; Ghanta, S.; **Banerjee, A**.; Chattopadhyay, S (2009). *Stevia rebaudiana*, a novel source of phytoceuticals with anticancer potential. Planta Med. 01/2009; 75(09). DOI: 10.1055/s-0029-1234301.

Banerjee, A.; Chattopadhyay, S (2009). *"Phyllanthus amarus***:** a versatile plant for therapeutic interest" in: Prospective in Cytology & Genetics, (Proce. of XIV AICCG) (Eds. AK Giri, A Mukherjee & M Mukherjee), Vol. 14, pp. 251-260, 2009**.**

Banerjee, A.; Chattopadhyay, S (2010). Effect of over-expression of *Linum usitatissimum* PINORESINOL LARICIRESINOL REDUCTASE (LuPLR) gene in transgenic *Phyllanthus amarus*. Plant Cell Tiss Org Cul., 103: 315-323.

Darukhshan, M.; Bhattacharyya, D.; **Banerjee, A**.; Chattopadhyay, S (2010). Oxidative DNA damage preventive activity and antioxidant potential of plants used in Unani system of medicine. BMC Complemen Altern Med.

Ghanta, S.; Bhattacharyya D.; Sinha, R.; **Banerjee, A**.; Chattopadhyay, S (2011). Nicotiana tabacum overexpressing γ-ECS exhibits biotic stress tolerance likely through NPR1-dependent salicylic acid-mediated pathway. Planta 233: 895-910.

Chatterjee, D.; **Banerjee, A**.; Bhattacharjee, P (2012). Phytochemical analyses and food applications on clove bud extracts obtained by liquid and supercritical carbon dioxide extraction technologies. Proceedings of the 2012 International Conference on Engineering and Applied Science, Beijing, pp.605.

Pal, R.; **Banerjee, A**.; Kundu, R (2013). Responses of Castor Bean (*Ricinus communis* L.) to Lead Stress. Proc. Natl. Acad. Sci. India 83; 643-650.

Kumar, V.T.; Vishalakshi, M.; Gangaraju, M.; Das, P.; Roy, P.; **Banerjee, A**.; Dutta Gupta, S. (2017). Evaluation of antibacterial, antioxidant and nootropic activities of Tiliacora racemosa Colebr. leaves: In vitro and in vivo approach. Biomedicine & Pharmacotherapy 86: 662-668.

Pal, A.; Banerjee, A.; Kundu, R. (2022). Phytochemical analysis and bioactivity reports of ethnomedicinal plants from West Bengal, India, Natural Product Research, 1-6. DOI: 10.1080/14786419.2022.2099388.

Moktan, N., Seal, T. and Banerjee, A. 2024. Unlocking Bioactive Potential: A Comparative Analysis of Solvent Extraction on Phytochemicals and Antimicrobial Efficacy in *Eupatorium glandulosum* and *Eupatorium odoratum*. *Journal of Natural Remedies*. 24, 5 (May 2024), 1061–1073. DOI:https://doi.org/10.18311/jnr/2024/35727.

Moktan, N., Gajbhiye, R. L., Sahithi, T. V. V. S., Roy, D. N., Kundu, R., & Banerjee, A. (2025). Antibacterial and antibiofilm activities of extract and bioactive compounds from *Bergenia ciliata* (Haw.) Sternb. flowers against *Streptococcus mutans* through cell membrane damage. *Journal of Ethnopharmacology*, *339*, 119144.

Review Article:

Dutta Gupta, S.; Bommaka, M.K.; **Banerjee, A.** (2019). Inhibiting protein-protein interactions of Hsp90 as a novel approach for targeting cancer. European Journal of Medicinal Chemistry 178: 48-63.

Bose Mazumdar Ghosh, A., Banerjee, A., Chattopadhyay, S. (2022). An insight into the potent medicinal plant Phyllanthus amarus Schum. and Thonn. *The Nucleus*, 1-36.

Mokhtan, N., Banerjee, A. (2024). Polypharmacological constituents and potential activities of *Bergenia ciliata*:A review. Innovation of Chemistry and Materials for Sustainability, 1(1), 058-065.

Books:

Plant tissue culture In: Mitra,A.K. and Sarkar,K (2013) Practical Manual of Modern Microbiology. Himalaya Publishing House. New Delhi. Pp.221.

Dutta Gupta S and Banerjee A (2018). Polio Virus Polymerase: An effective target for design and development of Anti-Polio Drugs in Viral Polymeraes: Structure, functions and Roles as Antiviral Drug Targets. Accepted in Press. Publish by Elsevier in 1st Nov 2018.

Paul, D., Verma, J., Banerjee, A., Konar, D., & Das, B. (2022). Antimicrobial Resistance Traits and Resistance Mechanisms in Bacterial Pathogens. Antimicrobial Resistance: Underlying Mechanisms and Therapeutic Approaches, 1-27. Publish by Springer on 3rd Jan, 2022.

Mokhtan N, Roy, D.N., & **Banerjee A**. (2024). Role of GMOs in biodegradation and detoxification-challenges and perspectives in Microbiome-Assisted Bioremediation, edited by Javid A. Parray and Wen-Jun Li, Published by Elsevier, pp. 221-234.

Mokhtan N., Panigrahi, S., Pal, A., **Banerjee, A.,** Nath Roy, D (2025). Zirconia nanoparticle in dentistry: An update report and further prospect. Accepted in press. Elsevier Publication.

Ph.D scholars details:

Number of research scholars registered: 3

Thesis submitted: 1

Title of the thesis: A comparative account of reproductive biology of mangroves with an emphasis to variability in gene expression of the self-incompatibility (SI) related genes.

Resource Person:

- Was a resource person in 3 weeks long Technology based Entrepreneurship Development Program in Mushroom Cultivation and Plant tissue culture from 1st to 25th September 2023.
- Resource Person in Life Sciences Sector Skill Development Council on Bioinformatics and In-vitro Diagnostic Devices (IVD) topics, April-May 2024.
- Resource person in the internship program on Food testing, Quality Assurance and Product Development on 11th and 17th April 2025 conducted by Incubation Centre, University of Kalyani, West Bengal, India.

Refresher Course/FDP programs

- Completed Scientific Development Programme sponsored by DBT-Star College Scheme of St. Xavier's College from 23 to 30th November 2022.
- Engaged as a Research Assistant from the period of 1 May 2024 to 7 June 2024 under the supervision of Dr. Jani Bolla, Department of Biology, Oxford University, UK.
- Completed UGC Sponsored FDP/STC in Research methodology Innovation held by CU from 24th to 30th Jan 2025.
- Completed a short term Course in "Research Methodology and Innovation" conducted by MMTTC, University of Calcutta from 24th to 30th Jan 2025.

Research grants

- Project entitled “Screening of tribal medicinal plants from Paschim Medinipur for their antioxidant and antimicrobial properties” sanctioned by UGC for the year 2015-2017. Total fund sanctioned- Rs, 3, 60, 000/-
- Research participant in DBT Builder- St. Xavier’s College, Interdisciplinary Life Science Programme for Advance Research and Education (Level I)- BT/INF/22/SP41296/2020 for the period of 2020-25.
- Completed Intramural Project (Project No:IMSXC/2022-23/0006) on Evaluation of antibiofilm potential of *Bergenia ciliata* (Haw.) Sternb. Against oral pathogens in April 2024.
- Participated under DBT Star College Scheme Sanction No.102/IFD/SAN/5214/2018-19 dated 18.03.2019. The total sanctioned amount is Rs. 63 lakhs (Rupees sixty three lakhs only) for a period of three from 2019 to 2022.

Yours faithfully

Dr. Anindita Banerjee