

CURRICULUM VITAE

1. **Name:** Dr Sanmitra Ghosh

2. **Address:** i. Permanent: 2/3, K.P. Roy Lane, P.O. - Haltu, Kolkata-700078

3. **Mobile No:** +917890211426

4. **Email:** sanmitrabasu@gmail.com

5. **Date of birth:** 13/08/1984

6. **Marital status:** Married

7. **Nationality:** Indian

Religion/ Denomination: Hinduism

8. **Career Objective:** I am an academic person with interest in research on human genetics and microbiology. I enjoy teaching and aspire to be in full-fledged teaching profession.

8. Education qualification:

Exam Passed	Year	Institution studied	Board/ University	Class/ Division	% of Marks	Subjects Studied
Madhyamik Examination	2001	Nava Nalanda High School, Kolkata	West Bengal Board of Secondary Education	1st	85.6	Bengali, English, Mathematics, Physical science, Life science, History, Geography, Book keeping (Additional)
Higher Secondary (10+2) Examination	2003	St. John's Diocesan Girls' H.S. School, Kolkata	West Bengal Council of Higher Secondary Education	1st	77.3	Bengali, English, Physics, Chemistry, Mathematics, Biology
B.Sc 3 year Honours	2006	Dinabandhu Andrews College, Kolkata	University of Calcutta	1st	67.12	Honours: Microbiology Pass: Physics, Chemistry Bengali and English
M. Sc	2008	Lady Brabourne college, Kolkata	University of Calcutta	1st	79.8	Microbiology
Ph.D	2017	University of Calcutta		Awarded on 31 st March 2017		



9. Research Experience:

In course of my Ph.D program in University of Calcutta under the supervision of Dr. Sanghamitra Sengupta, I am working as a research fellow from 2009 till 2016. I was initially involved in CSIR-sponsored project entitled “Impact of Polymorphisms in the Candidate Genes on Prostate Cancer: Association & Functional Analyses” from 2009 to 2012. This work on genetics and epigenetics of prostate cancer comprises a significant part of my Ph.D work and has been published in a peer-reviewed journal of International fame, PLOS ONE. As an extension of the work done in this project, I have elaborated my research further on genetics and molecular biology of prostate cancer from 2012 to 2016 to complete my dissertation and this work has been communicated. During this period I got the opportunity to avail diverse instrumental facilities and gather practical experiences as parts of my research work in a number of laboratories from renowned institutes apart from my own institute, namely, IICB, Kolkata, IIT, Kharagpur, ISI, Kolkata, NIBMG, Kalyani, Jadavpur University, and IPGME&R which was helpful in making me technically sound. My research allowed me to gain proficiency in several techniques of microbiology, molecular biology, recombinant DNA technology and cell line based work which are summarized as follows:

Microbiology	Microbial culture and preservation techniques; haemocytometry and cell count; competent cell preparation and transformation; isolation of microbial genomic and plasmid DNA, RNA; microscopy; staining, etc.
Molecular Biology & RDT	Isolation of DNA, RNA and protein from human tissue/blood and cells; estimation of purity and concentration of DNA, RNA and protein, estimation of cell survival, PCR, sequencing, real-time PCR, western blot, immunohistochemistry, Immunocytochemistry
Cell line based work	Human cell culture, transfection, luciferase assay, cell cytotoxicity and cell viability assay, motility assay.

10. A] Number of Research Publications:

International: 11

1. Majumder, R., **Ghosh, S.**, Singh, M. K., Das, A., Roy Chowdhury, S., Saha, A., & Saha, R. P. (2023). Revisiting the COVID-19 Pandemic: An Insight into Long-Term Post-COVID Complications and Repurposing of Drugs. *COVID*, 3(4), 494-519.
2. Majumder, R., **Ghosh, S.**, Das, A., Singh, M. K., Samanta, S., Saha, A., & Saha, R. P. (2022). Prokaryotic ncRNAs: Master regulators of gene expression. *Current Research in Pharmacology and Drug Discovery*, 100136.
3. Deborupa Paul, **Sanmitra Ghosh**. (2022) An overview of heat-stress response regulation in Gram-negative bacteria considering *Escherichia coli* as a model organism. *Journal of Experimental Biology and Agricultural Sciences*, February-2022; Volume –10(1-BIONEXT-2021) page 190–200.
4. **Sanmitra Ghosh**, Abinit Saha, Saikat Samanta and Rudra P. Saha. (2021) Genome Structure and Genetic Diversity in the Ebola Virus. *Current Opinion in Pharmacology*. 60:83-90.
5. Chiranjib Chakraborty, Ashish Ranjan Sharma, Manojit Bhattacharya, Rudra P. Saha, **Sanmitra Ghosh**, Soham Biswas, Saikat Samanta, Garima Sharma, Govindasamy Agoramoorthy, Sang-Soo Lee. (2021) SARS-CoV-2 and other human coronaviruses: Mapping of protease recognition sites,

antigenic variation of spike protein and their grouping through molecular phylogenetics. *Infection, Genetics and Evolution*.89: 104729.

6. **Basu S**, Chaudhary A, Chowdhury P, Karmakar D, Basu K, Karmakar D, Chatterjee J, Sengupta S.(2019) Evaluating the role of hsa-miR-200c in reversing the epithelial to mesenchymal transition in prostate cancer. *Gene*. doi: 10.1016/j.gene.2019.144264.
7. Bhowal A, Majumder S, Ghosh S, **Basu S**, Sen D, Roychowdhury S, Sengupta S, Chatterji U. (2017) Pathway-based expression profiling of benign prostatic hyperplasia and prostate cancer delineates an immunophilin molecule associated with cancer progression. *Sci Rep*. 2017 Aug 29;7(1):9763.
8. MicroRNAs In Pathogenesis of Diabetic Retinopathy. **Sanmitra Basu**. *Intl. J. Bioinformatics and Biological Sci.*: (V. 5 n.1, p. 27-33): June 2017
9. Majumder S, Bhowal A, **Basu S**, Mukherjee P, Chatterji U, Sengupta S. (2016) Deregulated E2F5/p38/SMAD3 Circuitry Reinforces the Pro-Tumorigenic Switch of TGF β Signaling in Prostate Cancer. *J Cell Physiol*. doi: 10.1002/jcp.25361.
10. **Basu S**, Majumder S, Bhowal A, Ghosh A, Naskar S, Nandy S, Mukherjee S, Sinha RK, Basu K, Karmakar D, Banerjee S, Sengupta S. (2015) A study of molecular signals deregulating mismatch repair genes in prostate cancer compared to benign prostatic hyperplasia. *PLoS One*. 10(5):e0125560.
11. L Das, **S Basu**, Sanghamitra Sengupta, Soumen Das, Jyotirmoy Chatterjee. (2014) Differential Effect of Isooctane Doses on HaCaT and HeLa: A Multimodal Analysis. *Advances in Toxicology*: Article ID 371497.

National: 3

1. Aditi Sarker, Rajib Majumder, **Sanmitra Ghosh** (2023). Gestational Diabetes Mellitus: Risk Factors & Genetic Predispositions. *Journal of Sustainable Science and Transformative Research - Reviews & Letters*, 2 (1), 67-70.
2. Souvik Dutta, Poulami Sarkar, Rajib Majumder, **Sanmitra Ghosh** (2023). Fundamental methods to eliminate organic nitrogen from sewage water: A comprehensive analysis. *Journal of Sustainable Science and Transformative Research - Reviews & Letters*, 2 (1), 83-89 (2023)
3. **Basu S**, Roy R. (2011) Mode of Action of Killing of Microorganisms with Vasaka Leaf Extract. *Science and Culture*. 77 (5-6) 217-221

B] BOOK CHAPTER

1. Swarna Shaw, Chiranjeeb Puthal, Riyanka Shil, Rudra Prasad Saha, Rajib Majumder and Sanmitra Ghosh. (2024) Geographic distribution of forest fungi and their associated plant taxa. *Forest Fungi: Biodiversity, Conservation, Mycoforestry and Biotechnology*. 63-76, Academic Press, Elsevier.
2. Roy, B. S., Nath, P., Ghosh, S., Das, A., & Majumder, R. (2024) Biofuel from Algae: The Long Road to Commercial Viability. In *Biofuels* (pp. 361-382). CRC Press.
3. Shil, R., Ghosh, S., Majumder, R., Saha, R.P. (2023). An Overview of MicroRNA Mediated Regulation of TAM and EMT Pathway in Progression of Breast Cancer. In: Szymanski, J.R., Chanda, C.K., Mondal, P.K., Khan, K.A. (eds) *Energy Systems, Drives and Automations*. ESDA 2021. Lecture Notes in Electrical Engineering, vol 1057. Springer, Singapore. https://doi.org/10.1007/978-981-99-3691-5_37

4. Chiranjeeb Puthal, Rajib Majumder, Sanmitra Ghosh (2023). Elucidating the contribution of social, environmental and molecular factors in prognosis of diabetic retinopathy in Indian population. Environment and health - frontiers ahead. ISBN 978-81-930691-4-0.

5. Sanmitra Ghosh, Megha Dutta, Shatarupa Biswas, Saptarshi Chatterjee (2021). Understanding the components of EMT proteome and their regulations to identify biomarkers for cancer prognosis. Lecture Notes in Bioengineering. 2020-21. ISSN No. 2195-271X. doi: 10.1007/978-981-33-6915-3_47.

6. Sanmitra Ghosh, Saptarshi Chatterjee (2021). Exploring non-pharmaceutical intervention for combating covid-19. Advances in Medical Physics and Healthcare Engineering, pp 473-487.

11. Details of previous and current employment:

Employer(s)	Post held	From	To	Nature of work
Dinabandhu Andrews College, Kolkata	Part-time teacher, Department of Microbiology	November 2008	July 2009	Teaching Microbiology (Hons.) 3yr course
University of Calcutta	Research fellow in CSIR-sponsored project	September 2009	October 2012	Research as part of Ph.D curriculum
University Of Calcutta	University research fellow, Department of Biochemistry	June 2013	-	Research as part of Ph.D curriculum
Guru Nanak Institute of Pharmaceutical Science and Technology	Part-time lecturer, Department of Life Science	July 2016	July 2019	Teaching Microbiology, Biotechnology and genetics (Hons.) 3yr course, M.Sc Biotechnology
Adamas University	Assistant Professor, (Microbiology) Department of Biological Sciences, School of Life Science & Biotechnology	August 2019	Till date	Teaching Microbiology UG and PG courses, NAAC related jobs, Social Responsibility, Other Administrative jobs like subject regulation, time table, laboratory management, Planning & monitoring, etc.
Total teaching experience: 9 years 2 months				

12. Additional Information if any:

Achievements and Awards:

- Received **Teaching Excellence Award** from Adamas University, 2021
- Received the award of **third prize** in poster presentation at the 3rd International Cancer Research symposium 2012: Defining and Translating Science for Disease Prevention and Therapy.
- Received the **University Research Fellowship** from University Grant Commission (**UGC-URF**) in Department of Biochemistry, University of Calcutta in 2013.
- Qualified in **GATE 2009**: GATE Score: 511
GATE Percentile score: 97.94 and **All India Rank: 264**
- Secured **3rd position** in M.Sc Examination, 2008.
- Secured **25th position** in B.Sc Examination, 2006 from University of Calcutta
- Won **Vidyasagar Scholarship** and **Certificate of Merit from National Scholarship Scheme** for Madhyamik Examination, 2001.

13. Seminars and workshops attended:

International

- Participated in the workshop on Genetic Epidemiological Methods for Dissection of Complex Human Traits organized by TCG-ISI Centre for Population Genomics (CpG), Kolkata, India and University of Pittsburgh, Pittsburgh, U.S.A. during February 17-24, 2010.
- Participated in the International Symposium on Challenges in Modern Biology organized by the Centre for Modern Biology and Dr B C Guha Centre for Genetic Engineering and Biotechnology (GCGB), University of Calcutta on 28th December, 2010 in Kolkata.
- Participated and presented poster in the International Conference on “Genes, Genetics and Genomics: Today and Tomorrow-Human Concerns and XXXVII Annual Conference of the Indian Society of Human Genetics (ISHG-2012)” held at Panjab University, Chandigarh from 3rd-5th March, 2012.
- Participated and presented poster in the 3rd International Cancer Research symposium 2012: Defining and Translating Science for Disease Prevention and Therapy held in Kolkata from 18th-21st December, 2012.
- Participated and gave platform presentation in the 2nd International Meet on Advanced Studies on Cell Signaling Network (CeSiN 2014) held in IICB, Kolkata from 13-15th December 2014.
- Participated and presented poster in International Symposium on Chemical Biology and Drug Discovery (ISCBDD 2016) 2016 held in Taj Bengal, Kolkata from 1st-3rd March 2016.
- Participated and presented paper in International E Conference on Environment and Health-Frontiers Ahead, Feb 25th and 26th, 2022 organized by Department of Geography, SOBAS, Adamas University.
- Participated and presented paper in International Cancer Conference 2022 by Adamas University, ACT and Netaji Subhash Chandra Bose Cancer Hospital on 6th-7th March 2022.
- Participated and presented paper in Two days Symposium “ When Science Meets Life” by Society of Biological Chemists, Kolkata chapter from 9th -10th April 2022

National

- Participated in the National workshop with hands-on training on “Genomics and Proteomics” organized by the DBT-BIF Centre, Department of Bioinformatics, West Bengal University of Technology on 15th-16th March, 2011.
- Participated in the workshop on “Intellectual Property and Innovation Management in Knowledge Era” organized by NRDC, New Delhi and Department of Biochemistry, University of Calcutta held on 7th June, 2012 in Kolkata.
- Participated and presented poster in the 81st Annual Meeting of the Society of Biological Chemists (India) and National Symposium on Chemistry and Biology: Two Weapons against Diseases during November 8-11, 2012 in Kolkata.
- Participated and gave platform presentation in the IPLS CONFERENCE, 2015 held in Calcutta University Rowing Club on 31st January 2015.
- Participated in the National Seminar on Biodiversity “ Conservation of Biodiversity and Sustainable Use of Biological Resources” held in Guru Nanak Institute of Pharmaceutical Science and Technology on 1st September 2017.

14. Memberships:

- Life member in Society of Biological Chemists (India)
- Annual member of Calcutta Consortium of Human Genetics, Kolkata.
- Annual member of Microbiologist Society, Kolkata
- Annual member of BRSI, India.

I confirm that all the details given above are correct.

Sanmitra Ghosh.

Date: 19.12.2024

Sanmitra Ghosh