

## Curriculum Vitae

**Name:** Dr. Mahashweta Mitra Ghosh

**Designation:** Associate Professor

**Department:** Post Graduate and Research Department of Microbiology

**Organization/Institution name:** St. Xavier's College, Kolkata (Autonomous)

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**Sex (M/F) :** Female

**Category (Gen/SC/ST/OBC) :** General

### **Academics:**

Sl. No.	Institution Place	Degree awarded	Year	Field of Study
1	Department of Microbiology, Bose Institute, Kolkata Registration Under Jadavpur University	<i>Ph.D.</i> in Life Sciences	1998-2005	Title of Thesis - "Investigation into the developmental expression of genes during the intracellular growth of a bacteriophage, using proteome analysis tools."
2.	Ballygunge Science College Calcutta University Campus	M.Sc	1996-1998	Biochemistry with specialization in Advanced Microbiology with 63.8% marks
3.	Barasat Govt. College Under Calcutta University	B. Sc	1993-1996	Chemistry (Honours) with Physics and Mathematics (Pass) with 53.8% marks

**Position and Employment (Starting with the most recent employment):**

<b>Sl. No.</b>	<b>Institution Place</b>	<b>Position</b>	<b>From (Date)</b>	<b>To (date)</b>
1.	Post Graduate Department of Microbiology, St. Xavier's College, Kolkata	Associate Professor	01.09.2020	Till Date
2..	Post Graduate Department of Microbiology, St. Xavier's College, Kolkata	Assistant Professor (Stage –III)	01.09.2017	30.08.20
3	Post Graduate Department of Microbiology, St. Xavier's College, Kolkata	Assistant Professor (Stage –II)	01.09.2012	30.08.17
4.	Post Graduate Department of Microbiology, St. Xavier's College, Kolkata	Assistant Professor (Stage –I)	01.09.2008	30.08.12
5.	Post Graduate Department of Microbiology Barrackpore Rastraguru Surendranath College, Barrackpore	Lecturer	14.08.07	30.8.2008
6.	Institute of Genetic Engineering, Badu, Madhyamgram	Lecturer	01.11.2004	13.08.2007

## HONOURS AND AWARDS

1) Qualified in **GATE-1998** in LIFESCIENCE.

2) **CSIR- Senior Research Fellowship** in 2001.

## INVITED LECTURES (ORAL & POSTER)

- Poster presented in 69<sup>th</sup> annual meeting of society of biological Chemists (INDIA), December 7<sup>th</sup>-9<sup>th</sup>, 2000, Kolkata. The title of the presentation is “A high yielding Mutant of Mycobacteriophage L1 and its application as a diagnostic tool.”
- Oral presentation in Symposium on Challenges of Teaching Microbiology in Undergraduate College organized by Centre for Modern Biology, University of Calcutta 25<sup>th</sup> September, 2010. The title of the presentation is: “Isolation & Characterization of bacteria from the root and rhizospheric soil of *Typha* growing in heavy metal rich mine tailings”
- Oral presentation in UGC sponsored National conference on Inclusive growth, Business and Environment in India’s Emerging Economy organized by Department of Commerce and Business Administration, St Xavier’s College, Kolkata in collaboration with Shri Shikshayatan college Kolkata, 6<sup>th</sup>-7<sup>th</sup> September, 2013. The title of the presentation is: “Role of bacteria in Plant Growth Promotion under heavy metal stress”
- Oral presentation in Seminar organized by Social Environmental and Biological Association on Aquaresources: care and concern held in Chemical Technology department Jadavpur University on 14.02.2015. The title of the presentation is: “Rhizospheric iron oxidizing bacteria from *Typha angustifolia* growing in heavy metal enriched wetlands of jaduguda uranium mine tailings, India assist phytoremediation by the plant”
- Oral presentation in the two-day International Seminar on Relooking at Nations: Reenergizing and reframing strategies for sustainable development organized by Institute of Management Study, The Institute of Cost Accountants of India and Gaeddu College of Business studies, Royal University of Bhutan, 18<sup>th</sup>-19<sup>th</sup> July 2015. The title of the presentation is: “Sustainable approach towards Arsenic free lower Bengal”

- Oral presentation in National level seminar entitled Frontiers of Microbiology: Prospects and Challenges organized by the Department of Microbiology, Ramkrishna Mission Vidyamandira, in collaboration with CSIR-IICB, Kolkata, during 20<sup>th</sup> -21<sup>st</sup> November 2014. The title of the presentation is: “Study of plant growth promoting potential of bacteria isolated from rhizosphere of *Typha angustifolia*”
- Oral presentation in international seminar entitled Recent Trends in Microbiology organized by the Department of Microbiology, Ramkrishna Mission Vidyamandira on 14<sup>th</sup> January 2017. The title of the presentation is: “Diversity of rhizospheric bacterial community of *Typha angustifolia* varies on heavy metal contamination in soil”
- Oral presentation in an international seminar Frontiers in Biological Science organized by Department of Microbiology, St. Xavier’s College, Kolkata held on 30<sup>th</sup> January 2018. The title of the presentation is: “Biotic Intervention in increasing the shelf life of vegetables”
- Poster Presentation entitled: “Biochemical and Antimicrobial Evaluation of crude extracts of *Christella* and *Diplazium* species collected from Lepchakha village (3500 ft) and computational studies of their active principles against targets from multidrug resistant *E.coli*, *P. aeruginosa*, *K. pneumoniae* and *S. aureus* – common pathogens found in hospital effluents” at International Seminar on Recent Trends in Science towards sustainable development at APC College, Barrackpore 3rd and 4th August 2018
- Poster Presentation entitled: “Antibacterial Screening of some native ferns against multidrug resistant organisms isolated from hospital effluents” at International Conference on Contemporary Antimicrobial Research (ICCAR) at IIT Kharagpur, 15th to 17th December 2018
- Oral presentation in an International Seminar Frontiers in Biological Science organized by Department of Microbiology, St. Xavier’s College, Kolkata held on 30<sup>th</sup> January 2018. The title of the presentation is: “Study on rhizospheric community of *Typha angustifolia*: A genome-based approach”
- Oral presentation in National Seminar on Urban Biodiversity: Documentation and Conservation organized by P.G. Department of Botany, Bethune College, Kolkata in

collaboration with West Bengal Biodiversity Board on 6<sup>th</sup> and 7<sup>th</sup> March 2018. The title of the presentation is “Biochemical evaluation of different altitude grown tea (*Camellia sinensis* L. (O) Kuntze) clones under UV radiation stress”

- Presented Oral paper entitled “Biochemical and Antimicrobial evaluation of Plant extracts on Microbes Isolated from Hospital Effluents” in a DBT Sponsored Two day International Seminar On Recent Trends in Science Towards Sustainable Development Organized by APC College, New Barrackpore and IICB on 6<sup>th</sup>-7<sup>th</sup> August 2018
- Oral presentation in a DBT Sponsored Two-day International Seminar on Recent Trends in Science Towards Sustainable Development organized by APC College, New Barrackpore and IICB on 6<sup>th</sup>-7<sup>th</sup> August 2018. The title of the presentation is “Biochemical and Antimicrobial evaluation of Plant extracts on Microbes Isolated from Hospital Effluents”
- Oral Presentation in National Seminar on Water Conservation and Harvesting: Focusing Biodiversity issues and management Organized by Social Environmental and Biological Association (SEBA), Kolkata on 8<sup>th</sup> February 2020. The title of the presentation is “Study of antibiotic resistance patterns across bacteria isolated from environmental wastewater”
- Poster Presentation at a symposium of the Society of Biological Chemists (I), Kolkata Chapter in Sister Nivedita University (9<sup>th</sup>- 10<sup>th</sup> April, 2022). The title of the presentation is “Dietary intake and uniformity of the gut microbiome - A case study from a Bhutia Tribal Family of West Bengal”
- Poster Presentation at One-day international seminar on “Recent Trends in Microbiology” organized by Department of Microbiology, Vijaygarh Jyotish Ray College in collaboration with Microbiologists Society of India on 18<sup>th</sup> May, 2022
- Participated at “International Conference on Climate Change: Global Cooperation” organized by St. Xavier’s College (Autonomous), Kolkata held on the 26<sup>th</sup> & 27<sup>th</sup> of August, 2022.
- Participated at “Modern Trends in Microbiology, Chapter XIX” held at St. Xavier’s College (Autonomous), Kolkata on 23<sup>rd</sup> and 24<sup>th</sup> September, 2022

- Oral Presentation of the paper at 5th Regional Science and Technology Congress, 2022-2023 held on 4th and 5th January, 2023 at Maulana Azad College, Kolkata. The title of the presentation is “Rapid Wastewater Surveillance- Comparative Insights”
- Oral presentation at 3rd International Workshop on “Biodiversity and Climate change- Sustainable Development Perspective” organized by IIT Kharagpur on 16th to 19th February, 2023
- Poster presentation on the topic at International Symposium on Biotechnology organized by Postgraduate and Research Department of Biotechnology on 12th and 13th October, 2023. The title of the presentation is “Transitional Bacterial Abundance in Community Wastewaters – A Metagenomics Based Survey Across West Bengal, India”
- Oral presentation at an international conference of Translating Human Evolutionary History to Precision Medicine (ADNAT 2023) in Banaras Hindu University (10th-12th March, 2023). The title of the presentation is “Correlating Diet Practices and Gut Bacterial Profiles from a few Ethnic Tribal groups of West Bengal, India”
- Poster Presentation at an International conference of Student Conference on Conservation Science (SCCS 2023) in University of Cambridge (28th -30th March, 2023). The title of the presentation is “Insights into the Gut, Dietary Practices and Subsistence patterns from an Indian Foothill Tribe”
- Poster Presentation at an International conference of Modern Perspectives of Chemistry in Biology (MPCB,2024) in St. Xavier’s College (Autonomous), Kolkata (6th January, 2024). The title of the presentation is “A Nutrigenomics Perspective into the Ancient Gut – Role of Non-Timber Forest Products”
- Poster Presentation at an International conference of 21st All India Congress of Genetics and Genomics (AICGG,2024) in Jadavpur University (5th -7th February, 2024). The title of the presentation is “Insights into the therapeutic potential of Non-Timber Forest Products across the Ethnic Tribes, West Bengal, India”
- Poster presentation on the topic “Evaluating Bacterial Dynamics in West Bengal: A Community Genomics Guided Surveillance” at 21st All India Congress of Genetics and Genomics & International Special Symposium on “Environmental

Toxicogenomics: Ecosystem Health and Sustainability-Challenges and way forward”  
on February 5-7, 2024

- **Awarded First Prize** in poster presentation in FIBS Chapter VI held in St. Xavier’s College, Kolkata on 14<sup>th</sup> Feb 2025. The title of the presentation is “Metagenomic insights into bacterial abundance and community dynamics at Titagarh Sewage treatment Plant, West Bengal”
- **Awarded Second Prize** in poster presentation in FIBS Chapter VI held in St. Xavier’s College, Kolkata on 14<sup>th</sup> Feb 2025. The title of the presentation is “Assessing the dynamicity of Microbial load in waste water niches under impact of climate change using community Genomics approaches”

**Professional Affiliations:**

1. LIFE MEMBER OF The Indian Science Congress Association (ISCA)
2. LIFE MEMBER OF Social Environmental and Biological Association (SEBA)
3. LIFE MEMBER OF Barasat Government College Alumni Association (BGCAA)

**Ph.D. Guidance:**

**Six** students have already been awarded Ph.D. and **Three** are presently registered for their PhD degree in the PG and Research Department of Microbiology, St. Xavier’s College (Autonomous) Kolkata

**Ph.D. Degree Awardees:**

1. Dr. Upal Das Ghosh awarded Ph.D. degree from Department of Biotechnology, Calcutta University on **05.05. 2015** Title of the thesis “Isolation and characterization of the bacterial consortium associated with the roots of *Typha*, growing on Heavy metal enriched wetlands”
2. Dr. Chinmay Saha awarded Ph.D. degree from Department o Biotechnology, Calcutta University on: **27.03.2017**. Title of the thesis: “Host-endophyte interaction contributing to metal tolerance in *Typha angustifolia*” Department of Biotechnology, University of Calcutta,
3. Dr. Meesha Singh awarded Ph.D. degree from PG and Research Department of Microbiology St. Xaviers’ College, Kolkata (Autonomous) on **05.08.2023** Title of the thesis: “Identification and Analysis of Antibiotic-Resistant Strains from Environmental Effluent; Virtual Screening of Natural Compounds to Propose Potent Leads”

4. Dr. Biswajit Biswas awarded Ph.D. degree from PG and Research Department of Microbiology St. Xavier's College, Kolkata (Autonomous) on **02.07.2024**. Title of the thesis: "Study of mangrove root architecture, anatomical adaptation and mangrove microbe interactions in the rhizosphere contributing to the soil environment under degraded and non-degraded mangrove habitats"
5. Dr. Souradip Basu awarded Ph.D. degree from PG and Research Department of Microbiology St. Xavier's College, Kolkata (Autonomous) on **29.11.2024**. Title of the thesis: "A longitudinal study to gain insights into the gut bacterial abundances and associated diet practices of important ethnic tribes of West Bengal"
6. Dr. Mayurakshi Nag awarded Ph.D. degree from Department of Biotechnology, Calcutta University. on **19.02.2025**. Title of the thesis: "Study of a tripartite interaction between a yeast *Rhodotorula mucilaginosa* JGTA-S1 and its endosymbiont diazotrophs in improvement of rice nutrition"

#### **PROFESSIONAL EXPERIENCE:**

1. Acted as a **Resource person** on DST sponsored topics "**Skills and Training Programme in Science and Technology (STST)**" in 2011 held in St. Xavier's College, on selected topics on Molecular Biology and Recombinant DNA technology
2. Served as **Board of Studies Member** in Microbiology West Bengal State University since 2012
3. Acted as a **Resource Person** in DST sponsored 4 weeks EDP on Plant Tissue culture and Mushroom cultivation organized jointly by EDC-SXC and Department of Microbiology, St. Xavier's College, Kolkata (March 1<sup>st</sup>-31<sup>st</sup> March 2016)
4. Acted as a **Resource Person** in the Ph.D. course work on Research methodology of the Department of Biochemistry, West Bengal State University on 28<sup>th</sup> June 2016
5. Acted as **Programme Coordinator** and **Resource Person** for MOOC 6, Molecular Biology program: 4 modules, 9-week course for B.Sc. Microbiology students in 2018
6. Teaching as **Guest Faculty** in Department of Botany, Murshidabad University since 2018
7. **Organizing Secretary** in International Seminar "Frontiers in Biological Science" organized by Department of Microbiology, St. Xavier's College, Kolkata, Sponsored



by Department of Science & Technology, Govt. of West Bengal held on 30th January 2018

8. Engaged as a **Technical Resource Person** Two-day workshop and training program in light of the National Project “Gut Microbiome” for personnel of Anthropological Survey of India (ANSI), Government of India on Gut Microbial Analysis, organized by the Postgraduate and Research Department of Biotechnology, St. Xavier’s College, Kolkata, 2023
9. Acted as **Resource Person** in Life Sciences Sector Skill Development Council on Bioinformatics (LSSSDC) topics, April-May 2024
10. Acted as a **Resource Person** in Diagnostic Devices (IVD) topics, April-May 2024
11. Acted as a **Convenor of FIBS** Chapter VI, an International Seminar organized by PG and Research Department of Microbiology, St. Xavier’s College, Kolkata on 14<sup>th</sup> Feb 2025
12. Acted as a **Resource Person** in the Ph.D. course work on Research Methodology of the Department of Microbiology, St. Xavier’s College, Kolkata (Autonomous) from 2016-2025
13. Acted as a **Coordinator of staff sports** in sports day celebration in St. Xaviers College for last 6 years
14. Acted as a **Departmental coordinator** of DBT Star College Program from 2015-2022

## PUBLICATIONS

### *Selected Book Chapters*

1. Ganguli, S., Karmakar, R., Singh, M., **Ghosh, MM.** (2021). Metagenomics-Guided Assessment of Water Quality and Predicting Pathogenic Load. *Handbook of Research on Monitoring and Evaluating the Ecological Health of Wetlands* (21). <https://www.igi-global.com/chapter/metagenomics-guided-assessment-of-water-quality-and-predicting-pathogenic-load/295741>
2. Ganguli, S., Karmakar, R., Singh, M., & **Ghosh, M. M.** (2022). Metagenomics-guided assessment of water quality and predicting pathogenic load. *In Handbook of*

*Research on Monitoring and Evaluating the Ecological Health of Wetlands (pp. 71-91).* IGI Global

3. Singh, M., Karmakar, R., Ganguli, S., & **Ghosh, M. M.** (2023). Metagenomics-Based Characterization of Microbial Diversity across Industrial Waste Dumping Sites. *In Biohydrometallurgical Processes (pp. 90-107)*. CRC Press
4. Mukhopadhyay, S., Karmakar, R., Chakrabarti, S., **Ghosh, M. M.**, & Ganguli, S. (2024). Evaluating the Impact of Climate Change on Antimicrobial Resistance and Rise in Dysentery Using Next Generation Sequencing Based Approaches. *Microbiology-2.0 Update for a Sustainable Future*, 373
5. Basu, S; Bhattacharyya, S., De, S., **Ghosh, MM.**, Ganguli, S (2024). Data Sources and Data Integration in Reproductive Health. *Systems Biology and Machine Learning Methods in Reproductive Health*, CRC Press, Taylor & Francis Group, ISBN 9781003487548. DOI: 10.1201/9781003487548-2
6. Dhar, GA., Karmakar, R., Mukhopadhyay, S., Basu, S., **Ghosh, MM.**, Ganguli, S (2025). Insights into Natural Product-Based Drug Discovery Using a Systems Biology Approach. *Bioactive Ingredients for Healthcare Industry Volume 1*, Springer, ISBN 978-981-96-3662-4. DOI: [https://doi.org/10.1007/978-981-96-3663-1\\_7](https://doi.org/10.1007/978-981-96-3663-1_7)

#### ***Selected Peer reviewed publications***

1. Karmakar, R., **Ghosh, M.M.**, & Ganguli, S. (2025). Temporal dynamics in the bacterial abundances in Indian Sundarbans: unveiling the influence of reverse migration under the effects of the COVID-19 pandemic. DOI: [10.71336/jabs.1410](https://doi.org/10.71336/jabs.1410)
2. Basu, S., Dhar, GA., Das, K., **Ghosh, MM.**, Banerjee, R., Bagchi, SS., & Ganguli, S (2024). Comparative Analysis of gut bacterial abundance and dietary habits of two Ethnic Tribes of West Bengal, India - A pilot study. *Applied Biological Research*, 26(4), 482-492. <https://doi.org/10.48165/abr.2024.26.01.56>
3. Karmakar, R., Mondal, K., **Ghosh, M. M.** (2024). Metaanalysis of Public Wastewater Metagenomes: Revealing the Influence of Climatic Variations on the Abundance of the Bacterial Members. *Current World Environment*, 19(1), 124-136. <http://dx.doi.org/10.12944/CWE.19.1.11>
4. Basu, S., Das, K., **Ghosh, M. M.**, Banerjee, R., Bagchi, S. S., & Ganguli, S. (2022). First report of gut bacterial dataset of a tribal Bhutia family from West Bengal, India. *Data in brief*, 41, 107859. <https://doi.org/10.1016/j.dib.2022.107859>

5. Girigoswami, A., **Ghosh, M. M.**, Pallavi, P., Ramesh, S., & Girigoswami, K. (2021). Nanotechnology in detection of food toxins–focus on the dairy products. *Biointerface Res Appl Chem*, 11(6), 14155-14172
6. Singh, M., Karmakar R., Ganguli S., **Ghosh, MM.** (2021). Report of Antibiotic Resistance in Urban and Rural Wastewaters from West Bengal, India. *Journal of Pharmaceutical Research International*, 33(53A):274-285. DOI: 10.9734/jpri/2021/v33i53A33660
7. Singh, M., Ganguli, S., & **Ghosh, M. M.** (2019). Comparative metagenomic dataset of hospital effluent microbiome from rural and urban hospitals in West Bengal. *Data in brief*, 25, 104264
8. Ghosh, U. D., Singh, P. K., Ganguli, S., Saha, C., Chandra, A., Seal, A., & **Ghosh, M. M.** (2019). Rhizospheric soil of *Typha angustifolia* L. from heavy metal contaminated and free sites: Comparative profiling reveals selective abundance of  $\gamma$ -proteobacteria and  $\beta$ -proteobacteria. *Indian Journal of Experimental Biology* Vol. 57, October 2019, pp. 733-740
9. Ghosh, U. D., Saha, C., Maiti, M., Lahiri, S., Ghosh, S., Seal, A., & **Ghosh, M.M.** (2014). Root associated iron oxidizing bacteria increase phosphate nutrition and influence root to shoot partitioning of iron in tolerant plant *Typha angustifolia*. *Plant and soil*, 381, 279-295
10. Bhattacharya, B., Giri, N., **Mitra, M.**, & Das Gupta, S. K. (2008). Cloning, characterization and expression analysis of nucleotide metabolism-related genes of mycobacteriophage L5. *FEMS microbiology letters*, 280(1), 64-72
11. Chatterjee, S., **Mitra, M.**, & Das Gupta, S. K. (2000). A high yielding mutant of mycobacteriophage L1 and its application as a diagnostic tool. *FEMS microbiology letters*, 188(1), 47-53

**RESEARCH SUPPORT:****Completed Research Projects (As Principal Investigator):**

Sl No.	Title of Project	Name of Funding Agency	Amount	Date of Initiation & Duration
1.	Isolation of bacterial consortium from the roots and rhizosphere zone of metal tolerant wetland plant Typha and establishing the role of this bacterial consortium in Iron plaque formation and imparting heavy metal tolerance to the wetland plant Typha growing in heavy metal enriched Uranium mine tailings	CSIR 38/1192/08-EMR-II	14.5 lakhs	05.06.2009-04.06.2012 (3 Years)
2.	“Investigating the role of rhizospheric bacteria in promoting the growth of <i>Typhaangustifolia</i> involved in heavy metal detoxification”	UGC (Minor) PHW-095/11-12 (ERO)	2 lakhs	September 2011- August 2013 (2 Years)
3.	Identification of major pathogenic microbes in hospital effluents using metagenomic screening and design of potent inhibitors using virtual screening of medicinal plant library against them	WBDST236 (Sanc./ST/P&T/1G-39/2017)	14 lakhs	August 2018-running
4.	Evaluation of the Antibiotic Resistance Load in Urban Wastewaters of Gangetic Alluvial Plain of West Bengal, India	IMSXC2022-23/010	1 lakh	25.03.2023 to 13.03.2024

**Completed Inter-Departmental Research Projects:**

Sl No.	Title of Project	Name of Funding Agency	Amount	Date of Initiation & Duration
1.	DBT Star College Scheme	DBT Star College Scheme 102/IFD/SAN/4501/2014-15 & 102/IFD/SAN/371/2015-2026	15 lakhs	2015- 2016
2.	DBT Star College Scheme	DBT Star College Scheme 102/IFD/SAN/5214/2018-19	63 lakhs	2019-2022

**Ongoing Inter-Departmental Research Projects (One of the Principal Investigators):**

Sl No.	Title of Project	Name of Funding Agency	Amount	Date of Initiation & Duration
1.	Isolation and Identification of Major antibiotic-resistant microbes from environmental wastewater samples using metagenomics screening and design potent inhibitors using virtual screening of medicinal plant library against them	DBT-Builder Grant “DBT-Boost to University Interdisciplinary Life science Departments for Education and Research (DBT-BUILDER) programme” BT/INF/22/SP41296/2020	2,67,26826	25.03.2021 (2021-2026)

**SUBMISSION TO CULTURE COLLECTION:**

Three Bacterial strains submitted in BCCM/LMG Bacteria Culture Collection:

1. *Pseudomonas jaduguda* strain R2 = LMG 25820 is maintained in the BCCM/LMG Bacteria Collection.
2. *Bacillus jaduguda* strain R9=LMG 28176
3. *Paenibacillus jaduguda* strain R8=LMG 28177

**ACCESSION NUMBERS (NCBI SUBMISSIONS):**

<b>Bio Project</b>	<b>SRA Accession Number</b>	<b>Description</b>
PRJNA883026: Metagenomics of Wastewater of West Bengal	SRX17674869	Effluent from uninhabited island of Indian Sundarbans
	SRX17675582	Domestic Wastewater Sample from inhabited island of Indian Sundarbans
	SRX17734450	Healthcare facility wastewater sample from inhabited island of Indian Sundarbans
	SRX22845025	Community Wastewater Sample from inhabited island of Indian Sundarbans
	SRX27221942	Community Wastewater Samples from Kolkata, India
	SRX27221757	Community Wastewater samples form Siliguri, India
	SRX27221484	Community Wastewater sample from Siliguri, India
PRJNA525343: Gut Microbiome Sabar Metagenome	SRX5459403	Gut Microbiome of Savar Kid
	SRX5459389	Gut Microbiome from Savar Adult Female
	SRX5459385	Metagenome Profiling of Adult Savar Male Gut
PRJNA723462: Homo sapiens Metagenome	SRX10655654	Gut Microbiome analysis of Bhutia Kid
	SRX10651311	Gut Microbiome analysis of Bhutia Male
	SRX10650646	Gut Microbiome analysis of Bhutia Female
PRJNA726860: Homo sapiens Metagenome	SRX10752763	Gut Microbiome analysis of Mech Kid
	SRX10766711	Gut Microbiome analysis of Mech Male
	SRX10759329	Gut Microbiome analysis of Mech Female

Bio Project	Bio Sample	Description
PRJNA922074: Whole Genome sequence of <i>Shigella flexneri</i> MMGSG_23	SAMN32641642	Whole Genome Sequence of <i>Shigella flexneri</i> MMGSG_23, isolated from municipal waste water
PRJNA1050018: <i>Pichia kudriavzevii</i> strain: ATCC 6258	SAMN38724434	MIGS Eukaryotic sample from <i>Pichia kudriavzevii</i>
PRJNA1041055: <i>Escherichia coli</i> strain: MMGSG_23 Genome sequencing	SAMN38273633	One Health Enteric sample from <i>Escherichia coli</i>
PRJNA1132400: <i>Mammaliicoccus sciuri</i> strain	SAMN42341848	Whole genome sequence of <i>Mammaliicoccus sciuri</i> strain isolated from Mech tribal subjects
PRJNA1132389: <i>Bacillus safensis</i> strain	SAMN42341731	Whole genome sequence of <i>Bacillus safensis</i> strain isolated from Bhutia tribal subjects
PRJNA1132388: <i>Bacillus aerius</i> strain	SAMN42341730	Whole genome sequence of <i>Bacillus aerius</i> strain isolated from Sabar tribal subjects

<b>GenBank Accession</b>	<b>Description</b>
MW380614.1	<i>Klebsiella pneumoniae</i> strain MMG_02 16S ribosomal RNA gene, partial sequence
MW380613.1	<i>Shigella flexneri</i> strain MMG_01 16S ribosomal RNA gene, partial sequence
MW380615.1	<i>Escherichia coli</i> strain MMG_03 16S ribosomal RNA gene, partial sequence
MW380616.1	<i>Lysinibacillus fusiformis</i> strain MMG_04 16S ribosomal RNA gene, partial sequence
MW380617.1	<i>Bacillus australimaris</i> strain MMG_05 16S ribosomal RNA gene, partial sequence
MW380618.1	<i>Bacillus pumilus</i> strain MMG_06 16S ribosomal RNA gene, partial sequence
MW380619.1	<i>Comamonas aquatica</i> strain MMG_07 16S ribosomal RNA gene, partial sequence
MW380620.1	<i>Bacillus safensis</i> strain MMG_08 16S ribosomal RNA gene, partial sequence
MW380621.1	<i>Terribacillus halophilus</i> strain MMG_09 16S ribosomal RNA gene, partial sequence
MW380622.1	<i>Citrobacter freundii</i> strain MMG_10 16S ribosomal RNA gene, partial sequence
MW380623.1	<i>Escherichia coli</i> strain MMG_11 16S ribosomal RNA gene, partial sequence
MW380624.1	<i>Oceanobacillus caeni</i> strain MMG_12 16S ribosomal RNA gene, partial sequence
MW380625.1	<i>Escherichia coli</i> strain MMG_13 16S ribosomal RNA gene, partial sequence
MW380626.1	<i>Comamonas aquatica</i> strain MMG_14 16S ribosomal RNA gene, partial sequence



16SRNA sequences of metagenome samples in sequence data to GenBank and got the GenBank accession numbers for the nucleotide sequences:

BankIt1915672	Seq1	KX170864
BankIt1915672	Seq2	KX170865
BankIt1915672	Seq3	KX170866
BankIt1915672	Seq4	KX170867
BankIt1915672	Seq5	KX170868
BankIt1915672	Seq6	KX170869
BankIt1915672	Seq7	KX170870
BankIt1915672	Seq8	KX170871
BankIt1915672	Seq9	KX170872
BankIt1915672	Seq10	KX170873
BankIt1915672	Seq11	KX170874
BankIt1915672	Seq12	KX170875
BankIt1915672	Seq13	KX170876
BankIt1915672	Seq14	KX170877
BankIt1915672	Seq15	KX170878
BankIt1915672	Seq16	KX170879
BankIt1915672	Seq17	KX170880
BankIt1915672	Seq18	KX170881
BankIt1915672	Seq19	KX170882
BankIt1915672	Seq20	KX170883
BankIt1915672	Seq21	KX170884

**Orientation, Refresher Courses and Faculty Development Programmes attended :**

1. Attended Orientation Programme-90 in Academic Staff College, Calcutta University from 11<sup>th</sup> June-9<sup>th</sup> July, 2011 organized by Academic Staff College, Calcutta University, UGC
2. Attended Workshop & hands on training on Research methodologies of Plant DNA Fingerprinting organized by Bose Institute Kolkata from 15<sup>th</sup> April-30<sup>th</sup> April, 2013

3. Attended 1<sup>st</sup> National Workshop for college Teachers on Application of Flow Cytometry, Cell sorting & Imaging in Biological Research, from 18<sup>th</sup>-24<sup>th</sup> December 2011, Organized by CRNN, Kolkata Centre for Modern Biology & Centre for Research in Nanoscience and Nanotechnology University of Calcutta
4. Attended Refresher Course in Life Science in the Department of Zoology, Ballygunge Science College, Calcutta University from 22<sup>nd</sup> November -13<sup>th</sup> December, 2013 Organized by Academic Staff College, Calcutta University, UGC
5. Participated in Human Value Development Programme organized by All India Association for Christian Higher Education on 18<sup>th</sup> November 2015
6. Participated in the seminar on Matlab and Simulink held at St. Xavier's College, Kolkata on 18<sup>th</sup> December 2015 Organized by the Department of Computer Science in association with Elmax Projects and Services Private Limited.
7. Participated in a one day DBT sponsored one day Workshop on Bioinformatics organized by Department of Microbiology, St. Xavier's College Kolkata on 21<sup>st</sup> December 2015
8. Participated in a Seminar on Cyber Law held at St. Xavier's College on 21<sup>st</sup> December 2016 organized by the Department of Computer Science
9. Participated in a Two-day National Seminar and Workshop on Scientific Devices, Technology applications and community Linkage on the 18<sup>th</sup> and 19<sup>th</sup> March 2017, organized by TEQIP and Centre of Excellence, University of Calcutta
10. Participated in a five day Course on "Basic Principles in Biosafety" based on the "Laboratory biosafety manual" –World Health Organization (2004) and CWA 15793 "Laboratory biorisk management standard" (2008) held in St. Xavier's College, Kolkata from 5<sup>th</sup> September-9<sup>th</sup> September, 2016 organised by University De Namur Belgium and St. Xavier's College, Kolkata
11. Attended a DBT sponsored two day National level Workshop on Advances in Condensed Matter Physics with special emphasis on Biological Systems for Faculty Development held on 9<sup>th</sup> and 10<sup>th</sup> December 2016

12. Seminar on Enterprise digitizationon cyber security organized by Department of Computer Science and Department of Informaion Technology in association with Academic Council and Internal Quality Assessment Cell of St. Xavier's College (Autonomous) Kolkata.(21<sup>st</sup> December 2017)
13. Attended an International seminar on Emerging Issues on the Interface of **Science and religion** organized by The Goethals Indian Library and Research society, Physics and EVS Departments, St. Xavier's College, Kolkata (19th Feb 2018)
14. Participated in the Seminar on Intellectual Property Law and Internet Organized by Department of Computer Centre and Central Computing Facilities St. Xavier's College, Kolkata on 10<sup>th</sup> October 2018
15. Attended two day Faculty Development Programme funded by DBT STAR college grant Organized by Physics Department St. Xavier's College, Kolkata-10.1.20 and 11.1.20
16. Participated in the Interdisciplinary Refresher Course on Emerging areas of Life Science (IDC) from 2th January to 8<sup>th</sup> February 2020 organized by UGC HRDC Jadavpur University Kolkata.
17. Participated in five days **Faculty Development Programme** on “ Teaching, Research and Innovation in India: A biologist's View during **4<sup>th</sup> July to 8<sup>th</sup> July 2020** Organized by Amity Institute of Biotechnology, Amity University, Kolkata
18. Participated in five days **Faculty Development Programme** on An approach towards the development of Human resources in Life and Allied Life Sciences organised by The Neotia University , WB , from 22ndto 27th March 2021
19. Participated in two days International Conference on Climate Change: Global Cooperation on 26<sup>th</sup> and 2th August 2022 organized by St. Xavier's College, Kolkata (Autonomous)
20. Participated in one day Faculty development Program on Integrating Artificial Intelligence in Higher Education on 5<sup>th</sup> October 2023, Organized by IQAC, St. Xaviers College, Kolkata and Rastriya Uchchatar Shiksha Abhiyan(RUSA)
21. Participated in 5 day FDP organized by All India Association for Christian Higher Education (AIACHE) on “Generative AI tools for Smart Teaching”from 9<sup>th</sup> June to 23<sup>rd</sup> June 2025
- 22.