

ANNUAL REPORT

(2020-21)

Department of Microbiology
St. Xavier's College (Autonomous), Kolkata

The Department of Microbiology, St. Xavier's College Kolkata, had begun its journey almost seventeen years ago. Since the very opening day, invincible enthusiasm, curiosity and an impregnable zeal to prosper have been the core qualities portrayed by the faculty as well as the students. The light of knowledge has never been blown out till date and this very trait has enabled our Department to gain a strong foothold in the areas of research in our college.

Achievements of the Faculty members:

- Dr. Arup Kumar Mitra has received a major DBT project in collaboration with Dr. Satadal Das of Peerless Hospital.
- Dr. Arup Kumar Mitra, Prof. Debjani Dutta and Prof. Lopamudra Roy have published a comprehensive book on Microbiology named “Comprehensive Microbiology.”
- Dr. Sudeshna Shyam Choudhury has published the book “Fundamentals of Biochemistry.”
- Dr. Mahashweta Mitra Ghosh has received a major WB DST project.
- Along with six other professors of the department, Dr. Mitra is associated with a national level education programme titled “SWAYAM” which disseminates multi-online open access courses (MOOC).
- The entire faculty is involved in various publications for referred national and international journals.
- Dr. Madhumita Maitra, Dr. Mahashweta Mitra Ghosh, Dr. Kasturi Sarkar, Dr. Anindita Banerjee, Dr. Jaydip Ghosh and Dr. Arup Kumar Mitra have Ph.D. scholars working under their guidance.
- The department has received a Rs. 50 lakh project grants in 2020 from Department of Biotechnology, Government of West Bengal, as a part of the **BOOST** (Biotechnology based Opportunities Offered to Science & Technology Departments) programme for augmenting teaching and research. Dr. Mitra is the project coordinator.
- The department of Microbiology (along with department of Biotechnology) of our college has received a Rs. 2.96 crore project grant in 2020 from Department of Biotechnology, Government of India, as a part of the **BUILDER** (Boost to University Interdisciplinary Life Science Departments for Education and Research) programme. Dr. Mitra is the coordinator of this interdisciplinary project.

Achievements of Ph.D. research scholars:

- Dr. Ritun Chakraborty Chaudhury has received her PhD degree from St. Xavier's College, Calcutta University under the guidance of Dr. Kasturi Sarkar. She is now working as a Research associate III at PG Hopsital (IPGMER), Kolkata.
- Puja Agnihotri working under the guidance of Dr. Madhumita Maitra and Dr. Arup Kumar Mitra won the 'Outstanding Paper' Award in the 26thth West Bengal State Science and Technology Congress, 2019. The original research work was entitled as "Low cost arsenic mitigation strategy in paddy cultivation using plant-microbe interaction."
- Debanjana Sengupta working under the guidance of Dr. Arup Kumar Mitra and Dr. Sudeshna Shyam Choudhury, reported a novel bacterial strain *Exiguobacterium indicum* DSAM 62 and published a whole genome sequence in NCBI on July 2019. She also published a paper in the journal Advances in Zoology and Botany in July, 2020.
- Saurav Sett has been awarded the PhD degree from University of Calcutta in August 2019. He had been working under the supervision of Dr. Arup Kumar Mitra at SXC.
- Suhana Datta won the Young Scientist Award at Indian Science Congress 2019, held at LPU, Jalandhar. She has also submitted her 5000 words PhD report under the supervision of Dr. Arup Kumar Mitra.
- Tamanna Sultana working under the guidance of Dr. Satadal Das and Dr. Arup Kumar Mitra, has published a paper in Asian Journal of Pharmaceutical and Clinical Research in 2019. She secured the 3rd position in oral presentation in the seminar on 'Women in Science & Technology-Present Scenario' organised by Indian Association for the Cultivation of Science (IACS) and Kolkata Nivedita Shakti, on 8th March, 2020. She has published a research article in New Journal of Chemistry (Royal Society of Chemistry) in May 2020. In September 2020, she has published a research article in Asian Food Science Journal.
- Meesha Singh working under the supervision of Dr. Mahashweta Mitra Ghosh and Dr. Sayak Ganguli, has published a paper in the journal 'Data in Brief' (Elsevier Publishing House) on August 2019. She has also published a paper in Journal of Environment & Sociobiology in July, 2020.
- Bikram Dhara working under the supervision of Dr. Arup Kumar Mitra has published a book chapter in "Recent Trends in Plant Disease Mangement", Today and Tomorrow printer and publishers 2019. He also won 1st prize in national seminar orgnaised by T.M. Bhagalpur University, Bihar. in 2020, he has a book chapter published in the proceedings of Today and Tomorrow Printers and Publishers. His work has been published in Australasian Plant Pathology, Springer and a paper in Cell and Tissue Biology, Springer.
- Debapriya Maitra, working under the guidance of Dr. Sudeshna Shyam Choudhury and Dr. Arup Kumar Mitra has published a book chapter in "Precision Agriculture and Sustainable Crop Production", Today and Tomorrow printer and publishers 2019. She also won the Dr. Bilgrami Memorial best paper prize at T.M. Bhagalpur University, Bihar, in 2019.

- Meenakshi Mukhopadhyay, working under the supervision of Dr. Sudeshna Shyam Choudhury and Dr. Arup Kumar Mitra has published a book chapter in “Precision Agriculture and Sustainable Crop Production”, Today and Tomorrow printer and publishers 2019.
- Debapriya, Bikram, Bedaprana made around 300 litres of sanitiser for masses including college campus and for distribution in amphan effect areas of Kakdwip. They also trained farmers for sustainable agriculture and composting at Farmer's meet in Sultanganj, Bhagalpur.
- Debapriya, Bikram, Tamanna, Bedaprana trained college students on solid waste management, composting, mushroom cultivation, use of booster dosage for PGPR improved, art from waste at St. Xavier's College Ragabhpur Campus.
- Debapriya, Bikram, Bedaprana, Suhana attended an industry academia meet on solid waste management, mushroom cultivation, art from waste, composting at various places like Guru Nanak Institute of technology, Techno India university.

Achievements of UG and PG students:

- Srijan Bhattacharya secured 1st runners up position in the oral paper presentation in the 21st National Conference on Aerobiology hosted by Department of Botany, Visva-Bharati, Shantiniketan. (2019).
- Srijan Bhattacharya presented poster and secured 1st runners up position, in the One-day DBT-CTEP sponsored Science Popularization Program, hosted by Maulana Azad College, Kolkata (2020)
- Srijan Bhattacharya gave an oral presentation and won 1st prize in an UGC-STRIDE sponsored National Webinar on ‘Biodiversity conservation – prospect and challenges’, organized by K.L.E.s S. NIJALINGAPPA College, Bengaluru. (June 2020).
- Srijan Bhattacharya presented poster and won 1st Best Presentation award, in A -day National Virtual Conference, on Current Global Pandemic and ongoing change, organized by Department of Botany, Shri Shikshayatan College and South Asian Institute for Advanced Research and Development (SAIARD) on 17th and 18th of July 2020.
- Souvik Banerjee was the semi-finalist of the MIT \$100K Entrepreneurship Competition 2020 organized by the Massachusetts Institute of Technology.
- Souvik Banerjee received the EMBL Advanced Training Centre Corporate Partnership Program Fellowship and presented a digital poster at EMBO Chemical Biology Workshop organized by the European Molecular Biology Laboratory (EMBL).
- Souvik Banerjee participated and presented a poster at COVID-19 Symposium organized by the American Society of Gene and Cell Therapy and he is also selected for an internship at Harvard Medical School.
- Jyotsna Pandey has published three research articles in peer-reviewed journal.
- Rohini Bhattacharjya (MSc 2nd year) secured 2nd position along with Srijan Bhattacharya (Msc 1st Year) and received cash award at DBT-CTEP sponsored Science Popularisation Program poster presentation competition held at Maulana Azad College, Kolkata on the 13th February 2020.
- Rohini Bhattacharjya 3rd position for paper presentation of paper entitled “Study of Extremophilic Characteristics of Bacteria isolated from Yamunotri and their

Importance in Industry” at the 2nd Global Summit on Education, India organised by GEIST in association with Adamas University, Kolkata on 7th December 2019.

- MSc. Students: Sharan Sarawgi, Shrey Sarawgi, Jyoti Dubey, Shreyasi Pahari, Swarnali Basu, Anindita Thakur, Shreya Das and Soumali Sadhukan have been hired under Pharmacovigilance process at Cognizant.
- Shweta Gupta, Satashree Paul and Sayani Basu have been hired under editorial process at Intelmetic.
- Cinderella Biswas has been hired as a microbiologist by Dr. Lal Path Labs.
- Mongistha Ghoshal has been hired at Aakash Educational Services Ltd. (Zoology).
- Sharan Sarawgi, Shrey Sarawgi, Shweta Gupta, Jyoti Dubey, Anish Chakraborty, Tamanna Sultana and Arup Kumar Mitra, published an original research article in Asian Food Science Journal in 2020
- Sharan Sarawgi, Jyoti Dubey, Sahesta Ekram and Sumanta Pal, postgraduate 2nd year, qualified GATE 2020 examinations
- Ankur Chattopadhyay, Saswata Ganguly, Liana Mukherjee, Somdutta Maitra and Pallab Ghosh are selected for the prestigious DST Inspire Scholarship.
- The entire first year, presently in second year, won the 2nd prize at the SN Bose Science Fair, 2020.
- Saswata Ganguly along with Mallar Dasgupta, Niti Chowdhury and Shreejit Saha secured the 2nd position in Eureka, Sigma 2020.
- Ishan Bose, Ritushree Ganguly and Baivabi Bhattacharya bagged the 3rd prize in Eureka, Sigma 2020.
- Baivabi Bhattacharya and Adrija Banerjee won the JBNSTS scholarship.
- Suhana Sultana (BSc 3rd year) secured 3rd position in oral presentation in seminar on "WOMEN IN SCIENCE AND TECHNOLOGY- PRESENT SCENARIO" organised by IACS and Kolkata Nivedita Shakti.
- Abhishek Goswami and Shreya Chakraborty, secured AIR 2 and AIR 10 in IIT-JAM 2020 respectively, currently studying at IIT-Bombay.
- Two of the UG students have been selected in TIFR.
- Students have also made into IISER, JNCASR and IIT-Kharagpur.