

Haldia Institute of Technology

Department of Biotechnology

Faculty Contribution towards Exemplary Innovative Projects

A.Y.	Name of Student(s)	Faculty member(s)	Event details, if any	Topic	Remarks
2025-26	Anisha Sarkar, Disha Biswas, Meghananda Gayen, Supriya	Prof. Subrata Trivedi	Final year capstone project	Study on genetic diversity of Indian cattle using mitochondrial DNA sequences	The innovativeness lies in the comparative bioinformatics analysis of mitochondrial DNA sequences to identify maternal genetic diversity, phylogenetic relationships, and evolutionary patterns among Indian cattle breeds, supporting the scientific conservation and sustainable management of indigenous cattle genetic resources.
	Trisrota Dhar	Dr. Mahesh Kumar Padwal (BARC, Mumbai) Prof. Sugata Manna (Dept. of Biotechnology, HIT Haldia)	Final year capstone project	RT-q PCR based profile of circulating in neuroendocrine tumor patients undergoing part	The project was carried out at Bhabha Atomic Research Centre (BARC), Trombay, Mumbai under the supervision of Dr. Mahesh Kumar Padwal in association with Prof. Sugata Manna.
	Neha Priya, Rani Singh	Mr. Mukund Dargar (National Food Laboratory, FSSAI, Raxaul) Prof. Sugata Manna, Dr. Shamba Chatterjee (Dept. of Biotechnology, HIT Haldia)	Final year capstone project	Quantitative analysis of aflatoxin in spices, antioxidant in oils using HPLC & heavy metal contamination in oils and spices using ICP-MS	The project was carried out at National Food Laboratory (FSSAI), Raxaul under the supervision of Mr. Mukund Dargar in association with Prof. Sugata Manna and Dr. Shamba Chatterjee.

Haldia Institute of Technology
Department of Biotechnology

	Jahanvi Chhajjer	Dr. Murali Dharan Bashyam (BRIC-CDFD, Hyderabad) Dr. Sudip Das (Dept. of Biotechnology, HIT Haldia)	Final year capstone project	Evaluating a possible non- canonical oncogenic cancer behaviour of Aridib in cancer types	The project was carried out at Centre for DNA Fingerprinting and Diagnostics (BRIC-CDFD), Hyderabad under the supervision of Dr. Murali Dharan Bashyam in association with Dr. Sudip Das. The impact of the project helped her to be selected as Project Technical Support Associate at BRIC-CDFD.
	Ankan Naskar, Arkajyoti Mahanta, Poulami Sen, Sampoorna Saha	Dr. Shamba Chatterjee	Final year capstone project	Developing an obesity prediction ML Model based on lifestyle data	The innovativeness lies in developing a machine learning model that integrates lifestyle factors such as dietary habits, physical activity, sleep patterns, and sedentary behaviour to predict obesity risk, enabling early risk identification, personalized preventive interventions, and data-driven healthcare decision-making. Communicated to Bentham Science Publishers.
	Anwiksha Supakar, Aranya Hazari, Debanjana Bardhan, Pratyasha Das, Sarannya Das	Dr. Swati Maiti	Final year capstone project	Sustainable detoxification and energy recovery from wastewater through microbial fuel cell	The innovativeness lies in the application of microbial fuel cell technology to achieve simultaneous wastewater bioremediation and bioelectricity generation through microbial oxidation of organic substrates, promoting sustainable pollutant removal, energy recovery, and resource-

Haldia Institute of Technology
Department of Biotechnology

					efficient wastewater management. Outstanding Paper Award at 8th Regional Science and Technology Congress 2025-2026 (Region 3) in discipline Engineering Science & Technology jointly organized by Debra Thana Sahid Kshudiram Smriti Mahavidyalaya (Autonomous), Paschim Medinipur and Department of Science & Technology and Biotechnology, Government of West Bengal held on 20-21 January, 2026.
	Rajdeep Bose, Sayantan Ghosh	Mrs. Ahana Bhaduri	Final year capstone project	Development of chitosan-starch hydrogel for therapeutic delivery	The innovativeness of this project lies in the development of a biocompatible and biodegradable chitosan–starch hydrogel as a controlled therapeutic delivery system, enabling sustained release of therapeutic agents while minimizing environmental impact and offering potential applications in localized drug delivery and wound management. The idea was awarded ‘Grand Changemaker Award’ for exemplary innovation and transformative impact in Sustainable & Green Solutions at She Innovates 2026 organized by Indian Institute

Haldia Institute of Technology
Department of Biotechnology

					of Technology Kharagpur held on International Women's Day 8th March, 2026.
2024-25	Tanveer	Dr. Swati Maiti	Final year capstone project	Terahertz Time -Domain Spectroscopy for Quantitative Analysis of Glucose in Polystyrene Matrices	Project was carried out at Indian Institute of Science Education and Research (IISER), Kolkata under the supervision of Dr. Kamaraju Natarajan in association with Dr. Swati Maiti.
	Ankan Roy, Chayani Mukherjee, Shristeelata Jana	Dr. Nabanita Roy Chattopadhyay	Final year capstone project	Effects of carbonated beverages on chromosomal integrity	The innovativeness lies in investigating the potential genotoxic effects of carbonated beverages on chromosomal integrity using cytogenetic assessment, providing experimental insights into beverage-associated chromosomal aberrations and their implications for genomic stability and human health. Outstanding Paper Award in 32 nd West Bengal State Science and Technology Congress organized by Department of Science & Technology and Biotechnology, Government of West Bengal held on 28 th February to 2 nd March, 2025 at Biswa Bangla Convention Centre, Kolkata.

Haldia Institute of Technology
Department of Biotechnology

2023-24	Anik Mukherjee, Hoimanti Gupta Bhaya, Ranit Kumar Naskar, Sunandita Maity	Dr. Keya Sau	Final year capstone project	Statistical correlation between heart and dietary habits among adults	The project focussed on promoting predictive based learning using advanced numerical and statistical computation techniques, building the base towards application of Machine Learning in the field of healthcare.
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