



RAIDIGHI COLLEGE

(A NAAC Accredited College)

P.O. & P.S. -Raidighi, South 24 Parganas, Pin- 743383

Phone No. 9735340005

Website – www.raidighicollege.in

Email – principal.raidighi@gmail.com, raidighicollege95@gmail.com



Date: 16/04/2022

NOTICE

This is to inform all the concerned that the following event will take place in the premises of Raidighi College. You are requested to comply and oblige. The details of the event are given below:

Title: National Seminar Exposure to Students

Date: 23.04.2022

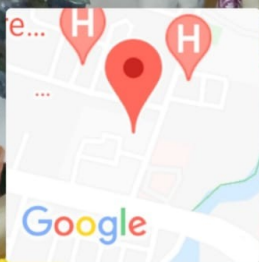
Time: 11:00 AM

Venue: Sister Nivedita University

Type of Event: Extensional & Outreach Activity



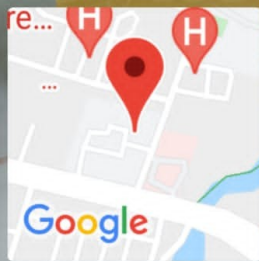
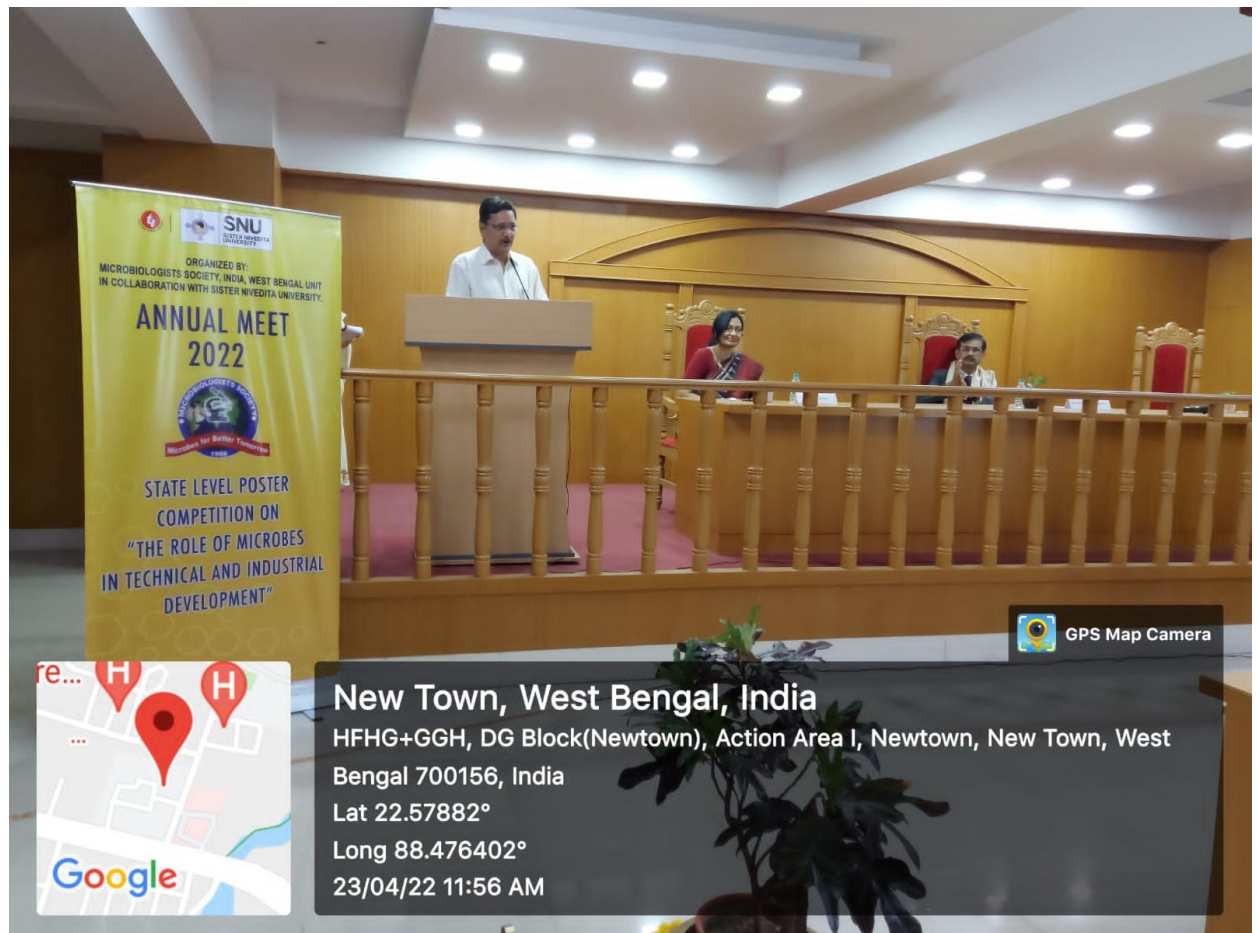

Dr. Sasabindu Jana
Principal
PRINCIPAL
RAIDIGHI COLLEGE



New Town, West Bengal, India

HFHG+GGH, DG Block(Newtown), Action Area I, Newtown, New Town, West Bengal 700156, India
Lat 22.578936°
Long 88.476493°
23/04/22 12:30 PM

GPS Map Camera



New Town, West Bengal, India

HFHG+GGH, DG Block(Newtown), Action Area I, Newtown, New Town, West Bengal 700156, India
Lat 22.57882°
Long 88.476402°
23/04/22 11:56 AM

GPS Map Camera

PRODUCTION AND APPLICATION OF MICROBIAL BIOPLASTIC

PARAMESHWAR SARDAR
SEMESTER 6 HONS
DEPARTMENT OF MICROBIOLOGY
RAIDIGHI COLLEGE
24 PARGANAS (SOUTH)
WEST BENGAL

Harmful Effects of Conventional Plastics

It is estimated that there is a stock of 66 million tons of plastic waste in the world. In the year 2013, with an assumption that 1.4% of global plastics are produced from 1950 to 2013 has entered the ocean and has accumulated there. Some researchers suggest that by 2050 there could be more plastic than fish in the ocean. Living organisms, particularly marine animals, can be harmed either by mechanical effects such as entanglement in plastic debris, or by ingestion of plastic. Some plastic waste can directly affect humans through their physiology. Organized indirect consumption by organisms with plastic that interferes with their physiological processes (by eating animals) and disruption of critical hormonal mechanisms. The amount of plastic waste produced increased during COVID-19 due to increased demand for protective equipment and packaging materials. Higher amounts of plastic ended up in the ocean, especially plastic from medical waste and masks.

POLYLACTIC ACID

Polylactic acid is one of the most promising biodegradable and biocompatible aliphatic thermoplastic with extensive medical property profile. PLA is obtained from lactic acid (LA) which is naturally occurring and produced by microbial fermentation from renewable resources such as sugar, starch, corn, cane sugar, and sugarcane. On hydrolysis, PLA produces LA. PLA can be produced from various materials with potential low in reducing packaging or as biodegradable medical devices. PLA is biodegradable and its manufacturing is amenable and can adapt for conventional plastic for production of medical parts, films, and fibers. LA is a five-carbon molecule with two L and D isomers. These monomers can be polymerized into poly(L-LA) (PLLA), poly(D-LA) (PDLA), or LA, giving high-molecular-weight crystalline, or amorphous polymers.

polylactic acid (PLA) production from lactic acid by ring-opening polymerization (ROP) and direct condensation

Leading Bio-Plastic Manufacturers in India

Envigreen

EcoLife

Plastobags

Earthhood India

Truegreen

REFERENCES

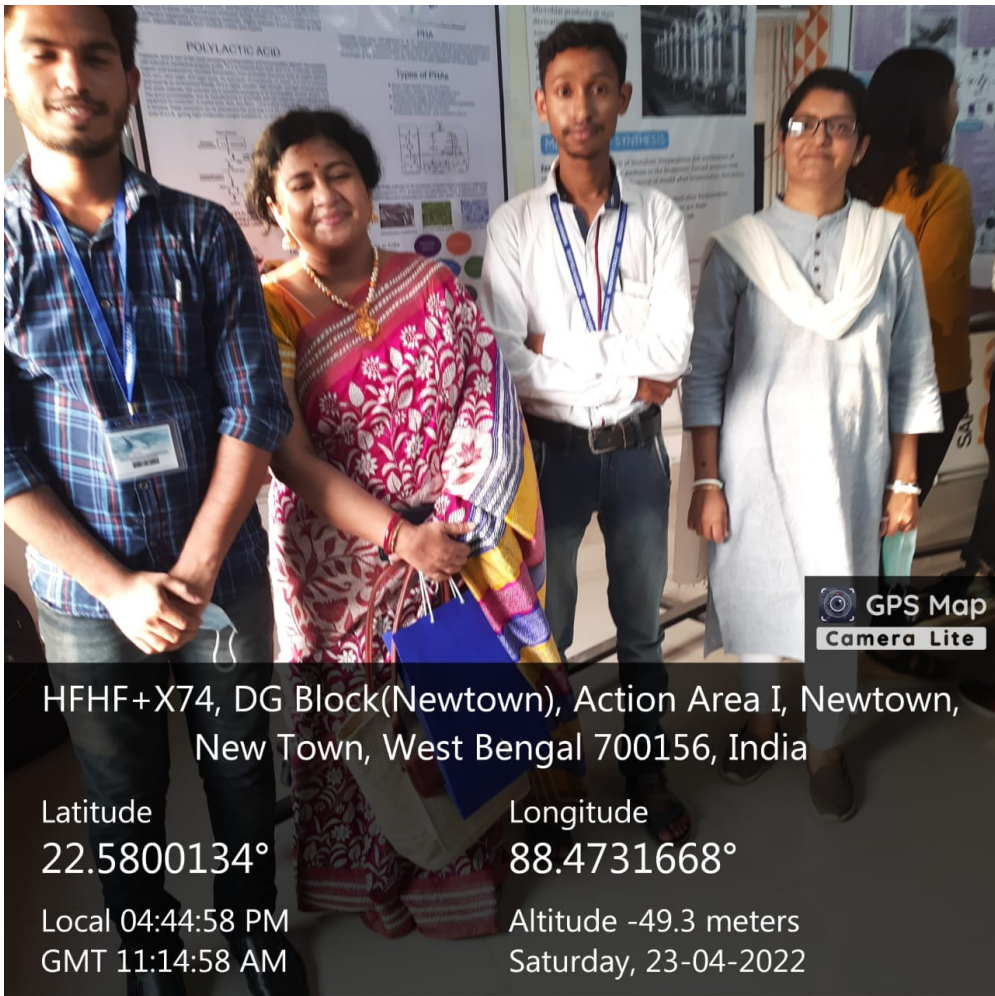
1. S. S. Ghosh, S. Ghosh, K. and T. Ghosh, S. (2019). PLA synthesis and its applications: A review. *Journal of Biotechnology and Bioengineering*, 103, 1123-1141. doi: 10.1007/s12042-019-00304-4

2. Ghosh, J. S., Ghosh, J. A., and Lee, S. Y. (2020). Biodegradable and biocompatible poly(lactide-co-glycolide) (PLGA) microspheres for drug delivery. *Journal of Biotechnology and Bioengineering*, 103, 1123-1141. doi: 10.1007/s12042-019-00304-4

3. Y. Park, S., and Lee, S. Y. (2019). Biocatalytic synthesis of polylactide (PLA) by ring-opening polymerization. *Methods Enzymol.*, 627, 1-15. doi: 10.1016/j.mbs.2019.04.002

4. W. J. Kang, J. E. Lee, H. Shin, J. et al. (2019). One-step synthesis of poly(lactide-co-glycolide) from polyhydroxybutyrate in *Comamonas* sp. *Journal of Biotechnology and Bioengineering*, 103, 1123-1141. doi: 10.1007/s12042-019-00304-4





GPS Map
Camera Lite

HFHF+X74, DG Block(Newtown), Action Area I, Newtown,
New Town, West Bengal 700156, India

Latitude
22.5800134°

Longitude
88.4731668°

Local 04:44:58 PM
GMT 11:14:58 AM

Altitude -49.3 meters
Saturday, 23-04-2022



GPS Map
Camera Lite

HCG EKO Cancer Centre, next to DPS NewTown, DG
Block(Newtown), Action Area 1D, Newtown, Kolkata, West
Bengal 700156, India

Latitude
22.5789088°

Longitude
88.4764783°

Local 05:34:35 PM
GMT 12:04:35 PM

Altitude -54.9 meters
Saturday, 23-04-2022

Microbiology Departmental student Parameshwar Sardar, one of the bright students of the Raidighi College, was exposed in a state level poster competition, organized by Microbiologists Society of India, West Bengal Unit in collaboration with Sister Nivedita University on 23/04/2022. His Poster titled as "Production and Application of Microbial BioPlastic".