



S N SAMIKSHYA

5TH YEAR INTEGRATED BS-MS
DEPARTMENT OF BIOLOGICAL SCIENCE
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PUBLICATION:

The research article titled “**Dietary infection of *Enterobacter ludwigii* causes fat accumulation and resulted in the diabetes like condition in *Drosophila melanogaster***”, in which I am the third author has been accepted in the journal of **microbial pathogenesis** on 25th may,2020.

RESEARCH EXPERIENCE:

CHARACTERIZATION OF DIFFERENT GLIOBLASTOMA CELL-LINES (GL26, GL261)

Prof. Dr. Jayshree Das Sharma| IISER-Kolkata | Jul 2019 - Present

In this project, I did the morphological analysis. Also checked the qualitative expression of different glial and neuronal markers and different gap junction proteins in these glioblastoma cell lines using Immunofluorescence method. Then the levels of protein expression were quantified by western blot using the same antibody markers. I have already joined Dr. Das Sharma’s lab from January, 2018 and learned different cell culture and molecular biology techniques involved in her different project.

ROLE OF ENTEROBACTER LUDWIGII (A TEETH BLACKENING GRAM NEGATIVE BACTERIA) ON- SETTING TYPE-II DIABETES IN DROSOPHILA MELANOGASTER

Dr. Monalisa Mishra| NIT Rourkela | Jun 2018 - Jul 2018

In this project, the flies were grown in a food media containing the bacteria *Enterobacter ludwigii* and then different methods were used to confirm the type II diabetes as compared with the control flies. Major methods used for this was estimation of glucose, trehalose and triglyceride, observing lifecycle, starvation assay, and the specific kind of staining (Nile-red staining) in larval gut after dissection etc.

THE PREVALENCE OF ANTIBIOTIC RESISTANCE IN THE ENVIRONMENT

Prof. Sharon Gusky (IUSSTF Visiting Professor) organized by the “American Society for Microbiology –IUSSTF Indo-US Teaching Professorship Award program, 2018| IISER Kolkata | Jan 2019

In this short course, we have collected soils from different parts of our campus and plated it under different antibiotic containing agar plate to identify the antibiotic resistance of that particular soil and entered the data in the global PARE project in the website of American Society for Microbiology

DIAGNOSIS OF DIFFERENT TYPES OF CANCER USING CYTOGENETIC AND MOLECULAR METHODS IN PATIENT SAMPLE.

Dr. Birendranath Banarjee | in DNA LIFE SCIENCE pvt. ltd. | Kalinga Institute of Industrial Technology (KIIT) school of Biotechnology | Dec 2019

LABORATORY SKILLS:

cell culture and bacterial culture techniques, **Handling mouse** (Dissection, Intracranial infection, Tissue processing, paraffin embedding and sectioning using microtomes, Tissue staining and Immunohistochemistry, Extracting protein and RNA form different organs of mouse), **Karyotyping**, **Fluorescent in situ hybridization (FISH)**, **microarray techniques**, sequencing techniques, **Drosophila handling** (Development of flies, Different related assays, larval gut and salivary gland dissection, different staining), Different Immunoassays and cell viability assays (**MTT**), Cell fractionation, **Recombinant DNA techniques**, Microscopic techniques (**Real time single cell microscopy**, **live imaging luminescence**), **flow cytometry**, **Mass Spectrometry**, Protein purification techniques. **Bio informatic tools** (Multiple sequence Alignment, Homology Modelling). **Spectroscopy** (UV-Vis, IR, CD, NMR)

EDUCATION:

BS-MS Dual Degree Integrated (Aug 2016 - Present)
IISER Kolkata| **CGPA: 9.05** | Kolkata, India

12th- Higher secondary education (Biology, chemistry, Physics, Maths, English, Physical Education, Sanskrit) (2013 - 2015)
Ravenshaw (Junior) College| 87.3 % | Cuttack, Odisha, India

10th (Science, English, Maths, Odia, Social Science, Sanskrit) (2013)

Govt. Girls’ High School | 95.83 % | Athagarh-754029, Cuttack, Odisha, India

PERSONAL DETAILS:

Room No. A/013, NSCB Hall, IISER Kolkata, Mohanpur, 741246, West Bengal, India

In this project, different patient samples were diagnosed by using different cytogenetic and molecular methods like Karyotyping, Fluorescent in situ hybridization (FISH), micro array techniques and different types of sequencing etc.

CARRER HIGHLIGHTS:

1. Academic Topper of my school and ranked 5th position of the state in Class 10th by securing 95.83 %.
2. INSPIRE Scholar for a period of five years (2016-2021) from Govt. of India, receiving monthly fellowship of INR 5,000.
3. Received laptop from the honourable chief minister of Odisha due to good performance in 12th board examination.
4. Qualified National Eligibility Entrance Test (NEET) for MBBS in 2016.
5. Qualified Joint Entrance Exam-Mains (JEE) in 2015 and 2016.
6. Qualified National Rural Talent Search (NRTS) exam in 2011 and received scholarship from state govt.
7. Qualified National Means-cum Merit Scholarship (NMMS) Exam in 2011 and received scholarship of INR- 12,000 per annum for 1 year.
9. Qualified All India Pre-Veterinary Test and Qualified Odisha university of agricultural and Technology on 2016.

WORKSHOPS & SEMINARS:

1. Vijyoshi National Science Camp in December 2016 at IISER Kolkata.
2. Attended nobel Laureate by Prof. Harold E. Varmus on "The Transformation of Cancer Research" at 11:30 A.M. on November 11, 2018 (Sunday) in the National Institute of Biomedical Genomics (NIBMG), Kalyani.
3. Attended "The Understanding Behaviour 2019" conference at IISER-KOLKATA, from 11-13 January.
4. Attended colloquium of Prof. Cedrick Villani (Mathematician & field medalist) at IISER Kolkata in August 2016.
5. Attended lecture of Dr. Kallol Gupta (Oxford University) – "The role of interfacial lipids as modulator of membrane protein oligomerization" at IISER Kolkata.
6. Attended lecture of Dr. Kaustabh Kumar Maiti (CSIR-NIIST) – "Emerging Trends in Targeted Drug-Delivery System (TDDS), Diagnostic and Theranostic Nanoprobe for Cancer Treatment" at IISER Kolkata, on Wednesday, Apr 12, 2017.
7. Attended the conference Frontiers in Modern Biology at IISER-Kolkata in 2018.

EXTRA CURRICULAR:

1. Served as the Event organizer of "Biomimetics" Event in Science fest of IISER ACTIVITIES Kolkata, Inquivesta8. Participated and got 3rd position in CSI- Crime Scene Investigation and 4th position in LOST - Land of Secret Treasure held at Inquivesta9, IISER Kolkata.
2. Anchoring for the event - "Department of Biological Sciences – Fresher's Welcome" held at IISER Kolkata.

REFERENCES:

1. Prof. Dr. Jayshree Das Sharma | IISER-Kolkata (dassarmaj@iiserkol.ac.in)
2. Dr. Monalisa Mishra | NIT Rourkela (mishramo@nitrkl.ac.in)
3. Dr. Birendranath Banerjee | in DNA LIFE SCIENCE pvt. ltd. | Kalinga Institute of Industrial Technology (KIIT) school of Biotechnology (bnbanerjee@kiitbiotech.ac.in)

(You can contact the referee Directly but please let me know as well so that I can convey the message beforehand)

OTHER SKILLS:

THEORETICAL BACKGROUND:

Both basic and advanced courses have been done in Cell biology, Micro biology, Immunology, Biophysics, Evolution, Ecology, Gene regulation, Biochemistry, Neurobiology, Developmental biology, plant and animal physiology, frontiers at the chemistry-biology interface, structural biology, biostatistics, cancer biology, marine biology and genetics.

I am good at through reading and have also written short reviews as a part of different courses:

"Complex relationship between glioblastoma and connexin-43"

"Radio resistant Cancer stem cells: A barrier in curative cancer therapy"

"The importance of Argo floats to decipher ocean ecosystem health"

IMAGE ANALYSIS TECHNIQUES:

Image J/FIJI, PyMOL, Chimera

TECHNICAL SOFTWARE:

Gnu-plot, Origin, HTML, Adobe photo-shop, Adobe illustrator.

PROGRAMMING LANGUAGE:

Basic R programming, Basic Python

OPERATING SYSTEM:

Windows, Linux

BASIC UTILITIES:

Microsoft word, Excel, outlook, power point.

LANGUAGES:

Fluent in English, Hindi and Odia.

GENERAL:

Rational thinking, presentation skills, team work.

Presented the science paper "Co-administration of a Tumor-Penetrating Peptide Enhances the Efficacy of Cancer Drugs" in the course "frontiers at the chemistry-biology interface" by Dr Arabinda Chaudhuri.

Presented the topic "Regulation by Wnt signaling" in the course "gene regulation" by Dr. Partha sarathi ray

Presented the work of the winter project in a seminar at in-DNA pvt.ltd.

HOBBIES:

Chess, Badminton, watching movies and tv series, workout, yoga, meditation, paper arts.

Enjoy reading scientific novels related to cancer. The best one that I have read was "The emperor of all Maladies" a biography of cancer by Sidhartha Mukherjee