

Curriculum Vitae

Shreyasi Ganguly
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Education

Masters in Science, Biomedical Sciences, 2024
Track: Cell and Cancer Biology
The University of Toledo

Masters in Science, Biotechnology, 2017
Pondicherry University

Bachelor of Science, Zoology (Honors), 2015
Minor: Chemistry, Botany
Asutosh College, University of Calcutta

Awards

Recipient of **Satellite Auxiliary Scholarship** from the University of Toledo, 2020.

Recipient of **DBT fellowship** (Department of Biotechnology), Government of India for pursuing post graduate study in Biotechnology, 2015-2017.

Earned **First position** in poster presenting competition at the One Day National Seminar entitled “**To raise public appreciation of scientific issue for development of Nation**” conducted as a part of National Science Day Celebrations organized by Department of Biotechnology, Pondicherry University. (26th February 2016)

Placed **Fourth** in a poster presenting competition at the seminar on “**Impact of Climate Change on Biodiversity**” organised by Asutosh College, Kolkata, PG Student Centre: Environmental Science, Vidyasagar University. (21st December 2013)

Participated in Quiz Competition under University of Calcutta in collaboration with West Bengal Biodiversity Board for three consecutive years (2013, 2014, 2015). My **team placed second** in the Quiz Competition in the year 2015.

Teaching Experience

(2021) Worked as a facilitator for Pathology Book Club (Genetics Session) for Medical M1 students.

Presentations

Presented poster titled “**Effect of proton pump inhibitors in Triple Negative Breast Cancer**” in the Graduate Research Forum, The University of Toledo, 2021 and 2022.

Presented an oral presentation titled “**Targeting the thioesterase domain of FASN using lansoprazole derivatives in triple negative breast cancer cells**”, in the Graduate Research Forum, The University of Toledo, 2023.

Presented an oral presentation titled “**Targeting the thioesterase domain of FASN using lansoprazole derivatives in triple negative breast cancer cells**”, in the Larry Gentry Forum, Department of Cell and Cancer Biology, 2021, 2022, 2023.

Participated in 3MT Thesis competition titled “**From Gown to Ribbon to love: Drug Repurposing in TNBC**”, The University of Toledo, 2023

Publication

Published an article in the local newsletter, *The Blade*, titled “**UT researcher investigates new way to treat Triple Negative Breast Cancer**”, 2023.

Cui, Q., Gu, B., **Ganguly, S.**, and Zhang J. T. Targeting Fatty Acid Synthase for Cancer Therapeutic Discovery: retrospective analyses and outlook. (Review in preparation).

Research Experience

The University of Toledo, Toledo, Ohio

August 2019 – May 2024

MSc dissertation done on the topic “**Targeting the thioesterase domain of FASN using lansoprazole derivatives in triple negative breast cancer cells**” under the guidance of Dr. Jian-ting Zhang.

IPGME&R, SSKM Hospital, Kolkata, India

January 2018 – February 2019

Worked as a project trainee under the guidance of Professor (Dr.) Satinath Mukhopadhyay in the Department of Endocrinology and Metabolism. The project titled “**Gene mutations in mitochondrial disease Leber Hereditary Optic Neuropathy (LHON)**”.

Pondicherry University, Puducherry, India

July 2016 – April 2017

MSc dissertation done on the topic “**Isolation and Characterization of secondary metabolites from *Bacillus pumilus***” under the guidance of Dr. Prashanth K.

Biomedical Genomics Center, Kolkata, India

May – July 2016

Worked as a summer intern under the guidance of Professor N. P. Bhattacharyya on the project titled “**Isolation of foetal DNA from mother's plasma**”.

Techniques Learned

Biochemistry

Protein purification using Chromatography techniques.

Affinity Chromatography using **nickel column** (Akta™ Pure Protein Purification System).

High Performance Liquid Chromatography (**HPLC**) using instrument from Shimadzu™ (Reverse phase HPLC with **C18 column**).

Flash Chromatography using instrument from Shimadzu™.

Thin Layer Chromatography (**TLC**).

Protein Activity Assays (Fatty Acid Synthase-**thioesterase domain activity assays**)

Molecular Biology

DNA isolation from **blood** (in-house preparation), **bacteria** whole genome (Thermofisher™ kit), and **plasmid** (Alkaline lysis method and Thermofisher™ kit).

RNA isolation from **bacteria** (Trizol method) and **cells** (Thermofisher™ kit).

Polymerase Chain Reaction (**PCR**) – Real-time qPCR, cDNA preparation (Instrument from Applied Biosystems™).

Bacterial DNA **Cloning**.

Sanger Sequencing for SNP analysis of mtDNA from human blood cells.

Gel electrophoresis – **Agarose gel** for DNA, **native PAGE** and **SDS PAGE** for proteins using Thermofisher guidelines.

Western blot for proteins using BioRad platform with in-house prepared gel.

Cell culture

Bacterial cell culture and biochemical assays for identification of bacteria.

Mammalian cell culture, **siRNA** knockdown, cell **survival assays**.

Flow Cytometry

Annexin V and FITC to identify apoptotic cells from ThermoFisher using FACS CantoII (BD Biosystems™).

Vybrant™ DyeCycle™ **Violet/SYTOX™** AADvanced™ Apoptosis kit from Invitrogen using FACS Aria (BD Biosystems™).

Animal Handling

Animal work using **mice**, can perform **subcutaneous and intraperitoneal injections**.

Bioinformatics

Basic Bioinformatic Analyses (**NCBI**).

Bioinformatics knowledge in **docking** using **PyMol**.

Software Proficiency

Microsoft Office (Word, Excel, Powerpoint)

GraphPad Prism

ImageJ

FlowJo Analysis

Workshops Attended

Completed **International Women's Health and Human Rights** an online non-credit course authorized by Stanford University and offered through Coursera, 2024.

Completed the 'Centre for Animal Research, Training and Services' Nipuna – Skill Development Course on the topic of Laboratory Animal Experimentation for Researchers- Part I of IV. Field of Study: Designing an experimental animal research study. Pondicherry (2016)

Participated in the Dr. Saradha Subramaniam Memorial Pre-Conference Workshop on “Techniques in Pre-Clinical Studies” (in 36th Annual Conference of Indian Association of Biomedical Scientists on Translational Sciences: Bridging Ancient and Modern Biomedicine) organized by Department of Biotechnology, School of Life Sciences, Pondicherry University (December 2015).

Participated in the workshop on “Creation and Nurturing Women Tech Entrepreneurs” organized by the National Academy of Sciences, India, Biotech Consortium India Limited, New Delhi, The Golden Jubilee Biotech Park for Women, Chennai, 2017.

Professional Societies

American Association for the Advancement of Sciences (2019 -present).

Department of Cell and Cancer Biology **Track Representative** (2022-2023) in the Council of Biomedical Graduate Students, University of Toledo.

Participated in Larry Gentry Forum **Organizing Committee** for the year 2023.

Community Service

Participated in the Toledo **Susan G. Komen Race for the Cure**, September 2021.

Work as a **volunteer** in **Ashanti Hospice Center** under Otterbein Sunset Village, Toledo Ohio (2023-2024).