PRATHYUSHA COTA

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EDUCATION

University of Georgia, Athens 2022 - Present
M.S. in Cell Biology

SRM Institute of Science and Technology, Chennai 2018 - 2022
B.Tech in Biotechnology
CGPA: 9.01

EXPERIENCE

University of Georgia, Athens Aug 2022 - Present
Graduate Student, PI: Dr. Arthi Kanthasamy

- Investigating neuroinflammatory markers of microglia in Parkinson's disease models.
- Gained exposure and experience with Drosophila, Molecular cloning, embryonic chick treatments, and western blot, immunohistochemistry and protein estimations.

SRM Institute of Science and Technology, Chennai July 2021 - May 2022
Undergraduate Researcher, PI: Dr S Sahabudeen

- Working on acrylamide-induced toxicity in Drosophila Melanogaster to study neurotoxicity and developmental changes. The study focused on various therapeutic agents attenuating toxicity.
- Performed behavioural and developmental assays of Drosophila Melanogaster. Maintained and bred populations.
- Investigated effects induced by low and medium molecular weight chitosan to attenuate acrylamide toxicity.

Indian Institute of Science, Bangalore July 2021 - Feb 2022
Research Intern, PI: Dr Yagnaseni Roy

- Developed a ranking of sustainability criteria for Biofuels using the MCDM approach in the automobile sector for the Indian scenario.
- Networked with many experts from the industry to gain insight on the project.
- Acquired knowledge on basic research skills.

HackBio Aug 2021 - Sept 2021
Bioinformatics Intern

- Gained Experience in Bioinformatics tools, Programming and Data Interpretations. Lead a team with a new project every week.

PROJECTS

Drug Targets of SARS-CoV-2

- Identified and visualised drug targets of SARS-CoV-2.
- The targets were identified using autodock, cygwin and chimera.

NGS Data Analysis of SARS-CoV-2 Genome and SNP Analysis

- Quality check, pre-processing, sequence alignment and variant calling was performed with selected datasets.
- Variants were annotated, visualised and analysed using computational and bioinformatic tools.

Microbial Diversity and detection of AMR genes

- Investigated presence and function of AMR genes using MEGAHIT and ABRIcate

· Compared, analysed and visualised inferences obtained from different datasets using MetaPhlAn2 and Krona.

SKILLS

Laboratory Skills	PCR, qPCR, Gel electrophoresis, Purify nucleic acids Breed and maintain a population of Drosophila, Western Blot, Molecular cloning, Mice handling, Intraperitoneal Injections, stereotaxic surgery, Brain Dissections
Knowledge of Genomic Databases and Tools	NCBI, Ensembl, BLAST, FASTA,PDB, UniProt, Autodock, PyMOL
Programming Languages	C, Java, MATLAB, AWK

PUBLICATIONS

Cota, P., Saha, S., Tewari, S., Sasikumar, A., Saran, M. Y. , Senthilkumar, S., Mohideen, S. S. (2022). Acrylamide: A Neurotoxin and a Hazardous Waste. In R. B. Jeyakumar, K. Sankarapandian, Y. K. Ravi (Eds.), Hazardous Waste Management. IntechOpen. https://doi.org/10.5772/intechopen.102607

VB A., Dixit M., **Cota P**., Patki G., Arun Kumar T. Analysis of Neural and Mesenchymal Stem Cell Therapy for Post-Ischemic Stroke. Int J All Res Educ Sci Methods. 2022;10(5):2455–6211.

ACHIEVEMENTS

Recieved scholarship for achieving 8th rank in 3rd year of undergraduate degree

Delegated in SRM Model united nations 2020

Was part of the organizing committee for Rariora, Biotechnology fest

Won 1st place in Physics Model Building Project

CERTIFICATIONS

Forensic Investigation Workshop - Indian Forensic organization

Quantitative Biology Workshop - MITx

Functional Genomics - IIT Kanpur

Demystifying the Brain - IIT Madras

The Addicted Brain - Emory University

Introduction to the Biology of Cancer (with Honors) - John Hopkins University

Genomics: Decoding the Universal Language of Life - University of Illinois at Urbana-Champaign

VOLUNTEERING

Teach For India July 2021 - Nov 2021

· Teach For India is a nationwide movement of leaders dedicated to providing an excellent education for all children.
· Conducted classes for middle school students who did not have access to online classes during the pandemic. Taught 6th, 7th and 8th Grade mathematics and mentored these students for overall development.