

MADHUMITA GANGULI

📍 Prayagraj, India

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Professional Experience

Research Analyst, *Dava Oncology*

02/2024 – present | India

I conduct thorough secondary research, gathering information from internet sources, journals, and public databases. I then compile this research into comprehensive content such as Excel sheets and PowerPoint presentations. Additionally, I interpret, analyze, and compile proprietary data into compelling scientific reports. My work also involves researching, writing, editing, and proofing protocols, reports, and publications for major conferences, webinars, and internal meetings.

Along with this, my technical skills such as Microsoft Office Suite have allowed me to handle the responsibility of composing and editing written materials and explaining technical concepts in non-technical terms to colleagues and counterparts.

Article Writer (Freelance), *Digituala*

12/2023 – 01/2024

I wrote articles across a spectrum of biological topics, including genetics, ecology, molecular biology, evolution, and environmental science. My role included writing content tailored for both academic experts and general readers. To achieve this, I used words and terms that maintained a balance between technical terminology and layman's terms, ensuring broader comprehension. Furthermore, I included important visuals, diagrams, and infographics in all my articles to amplify reader engagement. Additionally, I prioritized SEO optimization in my articles, aiming to boost visibility and drive increased traffic to the publication's website.

Research Assistant, *Indian Institute of Technology {IIT(BHU)}*

07/2021 – 08/2022 | Varanasi, India

I served as a Research Assistant at the Indian Institute of Technology (IIT), Varanasi, contributing to groundbreaking work on hydroxyapatite and hydroxyapatite-perovskite composites for orthopedic implant applications. I was also required to collect and evaluate data from diverse sources to develop a cohesive content strategy for writing projects and papers. During my tenure at IIT, I successfully authored various proposals and book chapters through careful planning, writing, editing, and review processes, ensuring their timely completion. Moreover, my experience includes coordinating expert and scientific reviews, managing reviewer feedback, and preparing final versions with meticulous attention to detail. I also conducted extensive in vitro cell culture and bacterial culture assays to assess biocompatibility with human tissue, emphasizing immune responses.

Research Intern- Regional Centre for Biotechnology,

09/2020 – 06/2021 | Faridabad, India

Dr. Pinky Kain Sharma

During my Master's dissertation, which I pursued from the Regional Centre for Biotechnology, India, I researched the gustatory receptors present in the fly gut primarily, ionotropic receptors, and the role they play in the gut-brain axis. In the field of ionotropic receptors, so far only a few studies have been conducted in the gut-brain circuit avenue and the studies conducted have been solely for odor detection and pheromone detection. Therefore, it was interesting to explore what role these ionotropic receptors played in the intestinal tract and if these receptors affected nutrient adsorption that in turn affected the fly's behavior.

Dissertation Scholar- SHUATS, *Prof. (Dr.) George Thomas*

01/2019 – 05/2019 | Prayagraj, India

I synthesized tin nanoparticles from *Calotropis gigantea* using green synthesis (in aqueous and ethanolic medium) to evaluate the efficiency of the nanoparticles in the reduction of methyl orange. The synthesized tin nanoparticles were characterized using UV- visible spectrophotometer, PSA, and FTIR techniques. The biosynthesis of tin nanoparticles was followed by the investigation of the degradation of methyl orange using the synthesized tin nanoparticles. The degradation of methyl orange for aqueous and ethanolic tin nanoparticles was 83.89% and 93.57%, respectively, and was therefore considered successful.

Summer Intern, *ATG Labs*

2016 | Pune, India

Skills

MS Word

Document Formatting, Incorporation of Styles and Templates, Tables and Graphs creation and formatting, Mail Merge, Track Changes for collaboration and review, Document Review for spelling, grammar, and formatting, Cross-referencing to link different parts of a document

MS Powerpoint

Designing and formatting professional presentations, Creating engaging and visually appealing slides, Incorporating multimedia elements such as images, videos, and audio, Using slide transitions and animations effectively, Organizing content logically and cohesively, Collaborating on presentations with team members, Delivering presentations confidently and effectively

Technical content writing

Research and Data Analysis, Editing and Proofreading, SEO Awareness, Attention to Detail, and Audience Understanding

Nanotechnology

Nanoparticle synthesis and UV spectrophotometer

MS Excel

Data Entry, Data Analysis including sorting, filtering, and data validation, Data Cleaning to clean and format data using Excel's text functions and conditional formatting, Formulas and Functions to analyze data and perform calculations

Zoom, ON24, Google Meet, Constant Contact

Proficient in using these platforms for webinars, meetings, and calls along with creating agendas and campaigns.

Neurobiology

Drosophila handling and dissection, Genetics, Molecular and Cellular biology tools, and GFP Microscope

Cell culture

MTT assay, cell counting and fluorescence microscopy

Education

Masters of Technology, Banasthali Vidyapith
8.0 GPA

07/2019 – 05/2021 | Jaipur, India

Bachelors of Technology, Sam Higginbottom University of Agriculture, Technology and Sciences
8.3 GPA

07/2015 – 05/2019 | Prayagraj, India

Senior Secondary, Army Public School
8.2 GPA

2015 | Prayagraj, India

Publications

Nanomaterials In Clinical Therapeutics (Book Chapter),
Scrivener Publishing [🔗](#)

15/08/2022

Dedicated to advancing knowledge, my recent publication focuses on the applications of nanotechnology in the biological sciences. The book spans 17 chapters, spotlighting diverse nanotechnological approaches applied across various biological domains, with a specific emphasis on nanotechnology's role in drug delivery. The initial three chapters offer a comprehensive overview of nanotechnology's historical evolution and fundamental principles. Subsequent chapters delve into the synthesis, characterization, and applications of nanomaterials, providing in-depth insights across 10 chapters. The final four chapters of the book are dedicated to exploring the utilization of nanomaterials in the realm of clinical research.

Conferences and Workshops

- **Lecture and hands on training on “How can network science help biologists” by Dr. Anup Som from the University of Allahabad, India.**
- **Lecture on “Atal Incubation Centers”.**
- **Lecture and hands on training on “Homology Modelling”.**

Extracurricular Activities

Poster presentation

I presented a poster on the subject of “Role of Bioprocess Technology in the Pharmaceutical Industry” at MNNIT, Prayagraj, India. The poster highlighted the challenges faced by the pharmaceutical industry in terms of investigating new and more resourceful methods to expand output, and reduce outlay whilst still eventually develop new treatments that augment human well-being and how bioprocess technology is one of the most powerful tools that give an economic advantage in the production of biopharmaceuticals and drug discovery.

General Secretary

I organized a lot of events and conferences during my bachelors. I had to build a a team myself and see to that the events were being held in a cordial fashion.

Oration Skills

I received several accolades for my debating and speaking skills in various events organized at the educational institutes I hailed from.

References

Dr. Pinky Kain Sharma, *Welcome trust-DBT Intermediate Fellow(Staff Scientist)*, Regional Centre for Biotechnology
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