Priyanshu Sinha

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Summary

I am an aspiring individual with great interest in life science research. I recently graduated from Goethe University Frankfurt am Main with a master's degree in Physical Biology of Cells Cell Interactions (Cell Biology). Previously held an industry trainee position in the field of Microbiology but shifted his focus to pursue research in translational medicine. My MSc thesis is focused on modelling adapting immune response in patient derived colorectal cancer organoids where my goal was to establish an allogenic CD8+ T cell cocultures system for physiological T cell expansion, and tumor cytotoxicity.

Experience

Academic Assistant (Hiwi)

Max Planck Institute for Brain Research, Frankfurt am Main

Apr 2019 - Mar 2021 (2 years)

Computational reconstruction of 3D electron microscopy data (Brain Images) using online software tool (Webknossos). This involve identifying and tracing of specialised cellular components.

Internship, Hiwi and Master thesis position

Georg-Speyer-Haus - Institute of Tumor Biology and Experimental Therapy

Feb 2020 - Feb 2021 (1 year 1 month)

Carried out internship and Master thesis at George Speyer Haus, Frankfurt am Main

Project Title: Modeling Adaptive Immune responses in patient derived colorectal cancer organoids

Also held a Hiwi Position (July 2020 -Jan 2020) alongside master thesis position.

3D Cell/Organoid Culture; Flow Cytometry panel design and analysis; PBMC isolation and culture; Immunophenotyping; T Cell Organoid Coculture; Lentiviral Transduction; Luciferase Assay

Academic Assistant (HiWi/Minijob)

Goethe University

Oct 2019 - Nov 2019 (2 months)

Assisted in cell culture practical course by mentoring first year master students in their laboratory work.

Also planned and prepared the required reagents required for the cell culture practical course

Internship Student

Max Planck Institute for Heart and Lung Research

Mar 2019 - Apr 2019 (2 months)

Carried out internship in Cell Polarity and Organogenesis Lab

Principle of Tube Morphogenesis- Transplantation of Human-induced PluripotentStem Cell-derived Cardiomyocytes Is Superior toSomatic Stem Cell Therapy for Restoring CardiacFunction in a PorcineModel of Myocardial Infarction.

Main Task: Immunohistochemistry (Masson Trichome staining) and Immunocytochemistry (macrophage polarisation (M2 and M1)staining with the aim to identify fibrosis in MI Porcine model. Quantified M2 Levels in the infarct region

Microbiologist Trainee

Paxchem Ltd.

Apr 2018 - Oct 2018 (7 months)

Carry out experimental investigation and validation test to determine the efficacy of preservatives, and disinfectants against multiple strains of bacteria, fungi, and algae as per the American standard testing method guidelines for specific antimicrobial application.

• Carried out tests for Water and Surface Contamination. Also carried out identification test to determine the contamination strain.

• Maintenance of Bacterial, Fungal and Algae culture by carrying out subculture on a monthly basis. Also made specific strain inoculum for further experimental use

• Calibration of laboratory equipment, report maintenance issue and maintain a register for all required reagents (placing order as required).

iGEM Team Manchester-Graz 2015

Manchester Institute of Biotechnology

Dec 2014 - Sep 2015 (10 months)

Lab planning and excecution of scientific investigations that includes performing standard lab techniques for preparation, transformation and characterization of engineered bacterial plasmids.

Developed HPLC methods to separate compounds involved in metabolic pathway of Dopamine in engineered bacteria.

Modeling Team leader where the objective was to quantitatively determine effects of diet sources on the synthesis of Dopamine and its derivative by genetically engineered bacteria via computational method.

Successfully Carried out outreach activitiesto engage and spread awareness about numerous neurological conditions in a life science career fair.

Work Experience

Cell Matrix Research Laboratory

Apr 2014 - Apr 2014 (1 month)

#The experience provided me a good overview of most advanced protein characterization technique such as ultracentrifugation and column chromatography, western blots and advanced immunodetection techniques.

Learn about the Good Lab practice which emphasizes on the importance of maintaining a safe laboratory environment by all lab users. Further observed the critical administrative procedures required for the smooth-running of the lab.

Education

Goethe University

Master's degree, Physical Biology of Cells Cell Interaction (International Masters Program in Cell Biology)

2018 - 2021
The two-year Master's programme Physical Biology of Cells and Cell Interactions (PBioC) takes place at an international level and promotes the acquisition of an in-depth research-oriented education in the fields of cell biology and physical biology. The Master's programme provides students with an understanding of fundamental life processes from cell growth, cell-cell communication and differentiation to inflammatory, angiogenic signalling and aging. These processes are studied in different animal in context of cells, tissues and entire model organisms. The experimental and conceptual approaches of the programme include cutting-edge methods in cell and molecular biology, biochemistry, bioinformatics, immunology and genetics, combined with various advanced microscopy techniques and applications.

Master thesis topic was "Modeling Adaptive Immune responses in Patient derived colorectal Cancer Organoids"

The University of Manchester

Masters of Engineering With Honours, Biomaterials Science and Tissue Engineering
2012 - 2016
This course entails an understanding of the interactions that occur between different classes of material and the cells and tissues of the human body. This knowledge is the key to the development of new materials for implants, scaffolds for tissue engineering, stem cell differentiation, drug delivery and many other biomedical applications. The course provides valuable insights on materials properties that govern their biocompatibility, and their application for tissue repair and regeneration. Overall, the course would provide valuable insights on how materials are designed, manufactured, processed and manipulated. The courses are also geared to building up all the skills and characteristics; critical thinking, planning, motivation and interpersonal skills.

The Winchester School

Advanced -Levels, Science and Mathematics
2008 - 2012
International General Certificate of Secondary Education (IGCSE) - 7 subjects including English, Mathematics, Sciences and Information and Communication Technology

Advanced Subsidiary Levels(AS-Levels): Mathematics, Physics, Chemistry, Biology

Advanced Levels (A-Levels): Mathematics, Physics, Chemistry, Biology

Skills

Public Speaking • Microsoft Word • Microsoft Office • Teamwork • Research • Molecular & Cellular Biology • Biotechnology • Tissue Engineering • Critical Thinking And Analysis • Scientific Communications