

Tanishq Tejaswi

Curriculum Vitae

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Education

Master of Science (Biology)

Indian Institute of Science, Bengaluru (2023-present)

Bachelor of Science (Research)

Indian Institute of Science, Bengaluru (2019-2023)

Major: Biology, **Minor:** Chemistry

CGPA: 8.6

CBSE All India Senior School Certificate Examination

St. Michael's High School, Patna (2017-2019)

Marks: 96.8%

CBSE All India Secondary School Examination

St. Michael's High School, Patna (2014-2017)

CGPA: 10

Research Experience

1. **Master's Thesis Project under Dr Medhavi Vishwakarma (Centre for BioSystems Science and Engineering, IISc) (June 2023-Present):-**

I am currently carrying out my master's project in the [Epithelial Mechanobiology Lab](#).

2. **Bachelor's Thesis Project under Dr Sona Rajakumari (Department of Developmental Biology and Genetics, IISc) (September 2022-April 2023):-**

For my bachelor's project in the [Adipocyte Biology Lab](#), I attempted to study the role of RNA Helicase A (DHX9) in GLUT4 expression and translocation to cell membrane, and its effect on glucose uptake rate in brown adipocytes. During this time, I also learnt the process of lentiviral transduction.

3. **Internship under Dr Naiyang Fu (ACRF Cancer Biology and Stem Cells Division, WEHI) as part of the International Student Program in Research Experience (InSPIRE) (May 2022-July 2022):-**

As an InSPIRE student at **Fu Lab**, I investigated the effects of inhibiting β -catenin on the survival and proliferation of two Hepatocellular Carcinoma (HCC) cell lines – HepG2 and Huh7.

In the process, I learnt some mammalian tissue culture techniques such as maintaining cell lines, carrying out in-vitro drug treatment assays and transfections.

4. **Internship under Dr Mohit Kumar Jolly (Centre for BioSystems Science and Engineering, IISc) (July 2020-April 2022): -**

As an intern in the [Cancer Systems Biology Lab](#), I was involved in the analysis of gene datasets of Circulating Tumour Cells (CTCs) and of samples from patients with lung diseases like COPD and IPF.

5. **Project CellOPHane, iGEM IISc 2021: -**

iGEM (International Genetically Engineered Machine) is a synthetic biology competition in which about 350 teams from 40 countries participate. I participated in iGEM 2021 as a member of the undergraduate team from IISc.

In our project [CellOPHane](#), we tried to make a bacterial cellulose filter for pesticide-polluted water. The filter could be functionalised with an organophosphate-degrading enzyme to degrade the organophosphorous pesticides. I was involved in synthesising the enzymes and also in the production of bacterial cellulose.

Publications

1. Mandal S, **Tejaswi T**, Janivara R, Srikrishnan S, Thakur P, Sahoo S, Chakraborty P, Sohal SS, Levine H, George JT, Jolly MK. Transcriptomic-Based Quantification of the Epithelial-Hybrid-Mesenchymal Spectrum across Biological Contexts. *Biomolecules*. **2022**; *12*(1):29. [doi:10.3390/biom12010029](https://doi.org/10.3390/biom12010029)
2. Bocci F, Mandal S, **Tejaswi T**, Jolly MK. Investigating epithelial-mesenchymal heterogeneity of tumors and circulating tumor cells with transcriptomic analysis and biophysical modeling. *Comp Sys Onco*. **2021**; *1*:e1015. [doi:10.1002/cso2.1015](https://doi.org/10.1002/cso2.1015)

Awards and Achievements

- **Gold Medal for Project CellOPHane** as part of Team iGEM IISc in **iGEM 2021**
- **Kishore Vaigyanik Protsahan Yojana (KVPY-SA) Fellowship** awarded by the Department of Science and Technology, Government of India, in **2018**
- **National Talent Search Exam (NTSE) Scholarship** awarded by National Council for Education in Research and Training (NCERT), Government of India, in **2016**

Extra-Curricular Activities

- Coordinator of the **What Would Darwin Do (WWDD) event at Pravega**, the UG Science Fest of IISc, in **2021**. WWDD was a science event in which the participants were tested on their ability to think about problems related to ecology and evolution.
- Volunteered in organising the WWDD event and conducting the Whodunnit event at Pravega in **2020**.
- Volunteered in **Open Day, the Science Fair of IISc, in 2020 and 2023**.

Skills

- Programming Language: R
- Basic molecular biology and biochemical techniques
- Basic microbiological techniques
- Basic mammalian cell culture techniques