
Sanjeevani Sahu

Currently pursuing Master's degree at Texas A&M University (TAMU) in the field of biomedical engineering specialising in microfluidics, biomaterials and tissue engineering. I did my bachelor's in Biomedical Engineering from National Institute of Technology Rourkela (NIT-R), India, where I had worked on development and characterization of biodegradable films.

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ACADEMIC DETAILS

Degree	Institute	Year	CGPA/%
Master's in Biomedical Engineering	TAMU	2021-present	N/A
Undergraduate in Biomedical Engineering	NIT-R	2015-2019	7.81/10

FIELDS OF INTEREST

- Implantable devices
- Bio-materials for tissue engineering
- Organs-on-a-chip

TECHNICAL SKILLS

- **Languages:** C, C++
- **Tools:** \LaTeX , Origin, Microsoft Office, Labview
- **Numerical Environment:** MATLAB

EXPERIMENTAL SKILLS

- UV-Spectroscopy
- Centrifuge operation
- Cell culture
- Fourier transform infra-red (FTIR) spectroscopy

PROFESSIONAL EXPERIENCE

- **Hospital Internship**
(Internship)
(Company: *Steel Authority of India Ltd (SAIL), Ispat general hospital, India, May 2018-July 2018*)
 - Trained and operated an immuno-assay analyzer.
 - Performed RT-PCR tests for patients
- **Hospital Training**
(Internship)
(Company: *Harvey Biomedical, India, May 2017- July 2017*)
 - Trained and operated patient monitor, defibrillator, ultrasound and Electrocardiogram (ECG) machines.
 - Trained in electro-surgery techniques.
- **Industrial Management**
Classroom training, India, January 2018- June 2018

- Studied application of scientific and engineering principles to manage the processes and infrastructure of industries.
- Central focus was on quality management and inventory control.
- Applied design thinking approach to identify and solve the existing problems.

RESEARCH EXPERIENCE

- **Tissue Engineering and vascularization strategies for microfluidic and Organ-on-chip devices**
(Master's Project)

(Guide: [Dr. Abhishek Jain](#), TAMU, September 2021- Ongoing)

- Fabricated microfluidic device using polydimethylsiloxane (PDMS) .
- Cultured epithelial cells using fibroblast growth medium (FGM).
- Future plans involve creating the physical micro-environment of human tissues and organs as a replacement for animal testing.

- **Preparation of bio-plastic films**

(Undergraduate thesis Project)

(Guide: [Dr. Subhankar Paul](#), NIT-R, July 2018- June 2019)

- Successfully synthesised nano-particles of Graphene Oxide (NGO).
- Isolated starch, prepared and characterized NGO-incorporated bio-plastic films.
- Incorporated and analyzed of Curcumin inclusion in the bioplastic film.
- Evaluated anti-microbial and blood coagulating potential of bioplastic film.

- **Designing a stress meter (point-of-care device)**

(Product development laboratory)

(Guide: [Dr. Bibhukalyan Prasad Nayak](#), NIT-R, May 2018- July 2018)

- Implemented a functioning stress meter using Arduino UNO chip.
- Stress was measured using a galvanic skin response circuit which determined the conductance level of the skin.

- **Analysis of anti-cancer properties of Betanin**

(Undergraduate Project)

(Guide: [Dr. Shirsendu Sekhar Ray](#), NIT-R, May 2018- July 2018)

- Extracted betanin pigment from bougainvillea gabra and analysed its anti-cancer properties.
- Performed UV-spectroscopy and high performance liquid chromatography (HPLC).

REFERENCES

1. **Dr Abhishek Jain (PI)**

Assistant Profesor,
Bioinspired translational microsystems laboratory (BioinSyst),
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2. **Dr. Subhankar Paul**

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