



KANTA CHAKRABORTY

Kolkata 700150

9903403851

Kantachakraborty96@gmail.com

Summary

PhD candidate with five years of experience in biomaterials and tissue engineering at IIT Kharagpur. Specializes in extracting bioactive peptide cocktails from aquatic biowaste and assessing their applications in tissue engineering. Proven ability to conduct innovative research and contribute to advancements in the field.

Skills

- Peptide extraction from biowaste source
- SDS-PAGE
- Western blot
- ELISA
- Antimicrobial study
- Biochemical antioxidant assay
- Physicochemical characterization – FTIR, CD, UV-Vis, XRD
- Stem cell isolation
- Cell culture

Experience

Intern, Jun 2022 - Aug 2022

Jadavpur University

- Explored curcumin's effects on Unfolded Protein Response in *Saccharomyces cerevisiae* to enhance understanding of cellular stress responses

Education

M.sc: Biochemistry (80%), Ballygunge Science college, 2019

B.sc: Biochemistry (73.9%), Asutosh college, 2017

Research Interests

- Biomaterials
- Tissue Engineering
- Immunology

Conferences And Workshops Attended

- BIO-Remedi 2022, International Conference on Biomaterials, Regenerative Medicine and Devices, IIT Guwahati
- RAdMed-2025, International Conference on Recent Advances in Medical Science and Technology, IIT Kharagpur
- Bharat Tirtha-II, 06/01/22, An international conference focusing on integrating ancient Indian knowledge systems with modern applications, IIT Kharagpur

Personal Information

- Date of Birth: 07/12/96
- Gender: Female

Hobbies and interests

Baking, art and craft

Other qualifying examinations

1. GATE XL 2019 (AIR 1507)
2. GATE XL 2020 (AIR 1093)
3. GATE XL 2022 (AIR 631)
4. GATE BT 2022 (AIR 112)
5. CSIR-UGC NET 2020 JRF (AIR 106)
6. DBT NET JRF 2021

Languages

Bengali, English, Hindi

Publications

1. Ghosh, S., Manna, K., Chakraborty, K., Dhara, S., & Pal, S. (2025). Site-Specific Drug Delivery Using Injectable pH-Responsive Biopolymeric Hydrogel: Instant Crosslinking and Shear Thinning. *ACS Applied Polymer Materials*, 7(7), 4166-4176.
2. Roy, A., Manna, K., Dey, S., Chakraborty, K., Dhara, S., & Pal, S. (2025). Functionalized amino acid-based injectable hydrogels for sustained drug delivery. *Soft Matter*, 21(15), 2836-2848.
3. Chowdhury, S. N., Chakraborty, K., Attry, I., Pal, A., Nayak, J., Dhara, S., ... & Das, N. C. (2025). Integrated approach to the synthesis and enhanced therapeutic efficacy of SPIONs for magnetic hyperthermia. *Materials Today Communications*, 45, 112319.
4. Biswas, A., Dogra, N., Rajasekaran, R., Biswas, B., Vaidya, P. V., Biswas, S., ... & Dhara, S. (2025). Mechanically compliant Catla catla scales gelatin hydrogels promote myogenic differentiation and skeletal muscle loss regeneration. *International Journal of Biological Macromolecules*, 148771.
5. Mukherjee, S., Pandey, A. K., Mishra, S., Das, P., Singh, U. K., Chakraborty, K., ... & Dhara, S. (2025). Sodium-Entrapped Carbon Nanodots from Silk Wastewater for Combating Multidrug-Resistant Bacteria in Healthcare Settings. *ACS Applied Bio Materials*, 8(7), 5788-5804.
6. Das, S., Mishra, M., Chakraborty, K., Das, S., Saha, B., & Dhara, S. (2024). Synthetic Bone Analogue Materials and Design for Skeletal Tissue Healing. In *Emerging Materials and Technologies for Bone Repair and Regeneration* (pp. 39-63). CRC Press.