

## Saswati Mishra, Ph.D.

### Assistant Professor | Department of Medical Biotechnology

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### Research Interest

Biomaterials, Tissue Engineering, 3D Cell Culture Platforms, Micro and Nanofabrication, Drug Delivery, Protein Chemistry, Bone Tissue Regeneration, Bio ceramics, Hydrogel, Development, Electrospinning, Scaffold Development

### Research Summary & Highlights

A result-oriented professional with 10 years of combined experience in research and academics; specialized in biomaterials science and tissue engineering with a strong foundation in nanofabrication and 3D cell culture technologies. Highly proficient in interfacing and testing data acquisition equipment, computational analysis, and collection of high-quality data in biomaterial studies. With proven expertise in managing DBT-based projects and extensive experience in publishing international journals, I am a dedicated researcher and educator committed to advancing biomedical science through innovative approaches.

### Education

2020 Ph.D. in Biotechnology, Siksha 'O' Anusandhan (S'O'A) University, Bhubaneswar, India

2010 Masters in Biotechnology, KIIT School of Biotechnology

2008 B.Sc. in Biotechnology, Utkal University, Odisha, India

### Experience (Academic – 4 Yrs; Research – 6 Yrs, Total – 10 Years)

11.2022-PRESENT

Assistant Professor, School of Allied Healthcare Sciences, Malla Reddy University, Hyderabad, India

10.2021-10.2022

Assistant Professor, Department of Biotechnology, GIET University, Odisha, India

01.2013-10.2020

Junior Research Fellow, Biomaterial and Tissue Regeneration Laboratory, S'O'A University, Bhubaneswar, India

### Publications (Papers:7 Citations: 566, h-index: 5, i-10 index: 4, Corresponding author: 1)

- Bukke, S. P. N., **Mishra, S.**, Thalluri, C., Reddy, C. S., Chettupalli, A. K., & Kumar, G. A. (2024). Transformative Approaches in Bone Pathology Treatment: The Efficacy of Alendronate-Infused Hydroxyapatite Microspheres. *Journal of Biochemical Technology*, 15(4), 9-16. <https://doi.org/10.51847/Zab2Kbi6A9>
- Swain, S., **Mishra, S.**, Das, S., & Rautray, T. R. (2024). Magnesium-Substituted Hydroxyapatite/Spider Silk fibroin/N-Carboxymethyl Chitosan Based Microsphere: A potential template for bone regeneration. <https://doi.org/10.21203/rs.3.rs-4198253/v>
- Jagyanseni, S., **Mishra, S.**, & Sahoo, S. N. (2023). A Study on Genotoxic Potential of Acepate in *Clarias batrachus*. *Journal for Research in Applied Sciences and Biotechnology*, 2(1), 22–25. <https://doi.org/10.55544/jrasb.2.1.5>
- Mishra, S.**, & Rautray, T. R. (2020). Silver-incorporated hydroxyapatite–albumin microspheres with bactericidal effects. *Journal of the Korean Ceramic Society*, 57, 316-324. <https://doi.org/10.1007/s43207-020-00018-z> (SPRINGER)
- Mishra, S.**, & Rautray, T. R. (2020). Fabrication and characterization of Xanthan assisted hydroxyapatite microsphere and their effect on human lymphocyte in vitro. *Materials Technology: Advanced Performance Materials*, 35(5), 317-327. <https://doi.org/10.1080/10667857.2019.1685245> (TAYLOR AND FRANCIS)
- Mohanty, S., **Mishra, S.**, Jena, P., Jacob, B., Sarkar, B., & Sonawane, A. (2012). An investigation on the antibacterial, cytotoxic, and antibiofilm efficacy of starch-stabilized silver nanoparticles. *Nanomedicine: Nanotechnology, Biology*

### Book Chapters

- Mishra, S.**, & Rautray, T. R. (2025). Advanced bio-implant nanomaterials for flexible applications: Case studies.
- Mishra, S.**, & Rautray, T. R. (2024). Functional Surfaces for Biomaterials. In *Surface Engineering of Biomaterials* (pp. 579-597). CRC Press, Taylor & Francis.
- Mishra, S.**, & Rautray, T. R. (2023). Bioceramics for adhesive applications. In *Advanced Ceramic Coatings for Biomedical Applications* (pp. 323-345). Elsevier.
- Mishra, S.**, & Behera, A. (2023). Applications of Biodegradable Polymeric Biomaterials in Biomedical Science. In *Advances in Green and Sustainable Nanomaterials* (pp. 229-277). Apple Academic Press.

### Patent

Indian Patent A61B17/04: "Multifunctional Coating Formulation and a Method of Preparation Thereof", March 1, 2019

### Awards

- Cleared Ph.D. entrance exam conducted by the Utkal University (State University) in November-2011
- Received Best Presenter in 3rd International Conference on Processing and Characterization (ICPCM 2021) organized by NIT Rourkela
- Received award in 3D modeling designing competition conducted on "High End workshop and Hands Training on 3D printing" organized by NIPER, Hyderabad

