KRISTU JAYANTI
(DEEMED TO BE UNIVERSITY)
Under Section 3 of UGC Act 1956
A CMI INSTITUTION | BENGALURU | INDIA

Centre for Research & Development

Research Supervisor (Guide) Profiles
Discipline of Supervision: Biochemistry

Dr. Priya Josson Akkara

Associate Professor
Department of Life Sciences
School of Biological and Forensic Sciences

Areas of Specialisation:

Environmental Biochemistry, Bio-nanotechnology, Pharmacology, Toxicology

Dr. Priya Josson Akkara is a distinguished biochemist with over 27 years of multidisciplinary experience across academia, research, and industry. Her research prominently focuses on the protective bioactivity of natural antioxidants, notably beta-carotene, against bromobenzene-induced hepato- and nephrotoxicity, as demonstrated through rigorous biochemical and in silico studies. This work highlights beta-carotene's antioxidant, anti-inflammatory, and antiapoptotic properties, positioning it as a promising agent for therapeutic interventions in environmental toxin exposure. With an extensive publication record exceeding 20 peer-reviewed articles in high-impact journals indexed by Scopus, Web of Science, and Springer Nature, Her research spans biochemistry, bio-nanotechnology, antimicrobial and wound-healing agents from plant sources, and sustainable biochemical applications. She has also secured a patent on IoT-based plant trait improvement, reflecting her innovative approach. In academic governance, she serves as Head of the Department of Life Sciences at Kristu Jayanti University, actively promoting green initiatives and sustainability education. Her leadership contributed to the university's Platinum band Green Ranking in 2025. Recognized with several prestigious awards, including the Distinguished Researcher Award (2025) and Lilavati Award for Women Empowerment (2022), She exemplifies excellence in research, mentorship, and institutional governance, significantly impacting scientific advancement and societal well-being.

Selected Publications:

1. Nadar, N. R., Deepak, J., Sharma, S. C., Krushna, B. R. R., **Akkara, P. J.**, Babu K, S., … Nagabhushana, H. (2025). Europium-Doped Zirconium Oxide Electrodes: Advancements in uric acid detection for biosensor applications. Microchemical Journal, 214, 114069. https://doi.org/10.1016/j.microc.2025.114069

2. Akkara, P. J., Martin, S. A., Thiagarajulu, N., Bisht, A. B., Mishal, A., and Mathew, C. M. (2025). Green synthesised Catharanthus roseus-mediated iron oxide nanoparticles demonstrates enhanced antibacterial, antioxidant, and anti-diabetic properties. Journal of Applied Biology & Biotechnology. https://doi.org/10.7324/jabb.2025.220729

3. Nadar, N. R., Deepak, J., Sharma, S. C., Krushna, B. R. R., **Akkara, P. J.**, Ponnazhagan, K., … Nagabhushana, H. (2025). Bismuth doped spinel CoCr2O4 nanocrystals for dual application on supercapacitor and dopamine detection. Materials Science and Engineering: B, 319, 118346. https://doi.org/10.1016/j.mseb.2025.118346