

Dr. Blessy Baby Mathew

Associate Professor

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Specialization:

Environmental Microbiology, Nanomaterials, Bacterial resistance, Biomaterials, Toxicology

Qualification: M.Tech, Ph.D

Teaching Experience: 12 Years



Awards & Recognition:

1. Recipient of "SERB-SIRE" Fellowship Award from the Science and Engineering Research Board (SERB) under DST, Government of India for the year 2023-24.
2. Awarded for my research contribution in the field of "Sustainable environment & Bioengineering" and publications from Vision Group on Science & Technology, Government of Karnataka in 2022.
3. Won the 'Champions Trophy' for the supervised projects at the State Level Exhibition Expo- Srishti, in 2022.
4. Secured the "Best Project Award" from Karnataka State Council for Science & Technology, Government of Karnataka; for the supervised student projects in the year 2017, 2020 and 2022.
5. Recipient of DST sponsorship to be a participant for in-plant training on 'R and D equipment and Material Characterization', conducted by NIT Warangal and Mangalore University in 2023.
6. Recipient of DST sponsorship to be a participant for workshop sessions on "Using Model organisms in Research", organized at IISER, Bhopal in 2022.
7. Selected as 'Bentham Ambassador' by Bentham Science in 2021.
8. "Innovation Ambassador" under AICTE & MoE's Innovation cell, Ministry of Education, Government of India since 2021.
9. Recipient of "Reviewer Recognition Award" from Elsevier in 2020.
10. Recipient of Quality Improvement Program (QIP) sponsorship from AICTE in 2016, 2017 and 2018.
11. Recipient of MHRD sponsorship to be a participant for hands-on training sessions on 'Material Characterization', conducted by NIT Calicut in 2018.
12. Reviewer for Applied Water Science- Springer, Egyptian Journal of Aquatic Research- Elsevier, Issues in Biological Sciences and Pharmaceutical Research, World Journal of Agricultural Sciences and International Journal of Current Biochemistry Research. Associate Editor for the African Journal of Advanced Biotechnology.

Government Funded Projects (as Principal Investigator):

1. Principal Investigator for the project entitled “Drug interactions to enhance the permeability and intracellular accumulation across the cytoplasmic membrane of M. tuberculosis” received from the Science and Engineering Research Board (SERB) under DST, Govt. of India for the year 2023-24, to carry out the research work at the “Center for Global Infectious Disease Research”, Seattle Children’s Research Institute in Seattle, Washington, USA. (Project Sanction order: SIR/2022/001139).
2. Principal Investigator for the project on “Development of a low-cost functional stack and incorporation of photocatalysis-derived column for water purification” received from Karnataka State Council for Science and Technology, Government of Karnataka under the scheme “Faculty Project Program”, in 2022. (Project Sanction order: 7.1.11/FPP/111)
3. Principal Investigator for the project on “Novel design and development of a filtration unit to convert floodwater to drinking resource using graphene-based nanocomposites” received from Vision Group on Science & Technology, Government of Karnataka under the scheme “Research Grant for Faculty” in 2020. (Project Sanction order: VGST/RGS-F/GRD-919/2019-20/2020-21/198)
4. Principal Investigator for the project on “Design & Fabrication of packed bed bioreactor using bio-adsorbents for waste water treatment”, received from Vision Group on Science & Technology (Government of Karnataka), under the scheme “Technology Related Innovation Projects” in 2012. (Project Sanction order: VGST/TRIP/2012-13/242)

Government Funded Projects (as Project Supervisor):

1. Project Supervisor for the project on “Novel bio-composite film made of collagen extracted from tilapia fish skin, to treat open wounds in elderly”, funded by “KSCST” under Student Projects Program, 2021-2022. Won the “**Best Project of the year**” award in 45th series of SPP, conducted by KSCST at the State Level. Secured 2nd place at the State Level Exhibition Expo- Shrishti 2022.
2. Project Supervisor for the project on “Removal of organic pollutants from contaminated water using iron oxide nanocomposite cross links”, funded by “KSCST” under Student Projects Program, 2020-2021.
3. Project Supervisor for the project on “Portable Filtration Unit using Novel Graphene Infused Natural Compounds and Nanofillers: Recent Advancement in Water Purification Technology”, funded by “KSCST” under Student Projects Program, 2019-2020. Won the “**Best Project of the year**” award in 43rd series of SPP, conducted by KSCST at the State Level.
4. Project Supervisor for the project on “Isolation and identification of micro labs for absorption and conversion of ammonia, nitrates and nitrogen using aquaponics system”, funded by “KSCST” under Student Projects Program, 2016-2017. Won the “**Best Project of the year**” award in 40th series of SPP, conducted by KSCST at the State Level.

5. Project Supervisor for the project on “Bioaccumulation of lead metal ions from paint industry effluents by indigenous bacteria”, funded by “KSCST” under Student Projects Program, 2013-2014.

Funded Programs (as Coordinator):

1. Coordinator for NISP-IEDC funded 5 days Student Development Program on “Ideation to Incubation: Steps in Entrepreneurship” in 2024.
2. Coordinator for VTU-VGST funded 4 days Faculty Development Program on “*Current Advances in Bioprocess Engineering*” (Fermentation and Downstream Processing) in 2014.

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Publications in Refereed Journals:

Total Publications : 34
Total Citations : 8277
h-Index : 21

Google scholar link:

<https://scholar.google.co.in/citations?user=9YAsMtYAAAAJ&hl=en>

Patents (Published):

1. Development of PVA-Chitosan based sutures for surgical ligature and other wound healing applications. (Indian Patent: 202341080888; Published in Dec 2023)
2. Development of zirconium doped chitin tetrapods for detoxification of pharmaceuticals. (Indian Patent: 202341080895; Published in Dec 2023)
3. Development of an effective larvicidal formulation. (Indian Patent: 202241069873; Published in Dec 2022)
4. A natural composition of *Salvia plebeia* R. Br. to inhibit SARS-CoV-2. (Indian Patent: 202241052073; Published in Nov 2022).

Areas of Interest:

Nanomaterials, Drug Resistance, Drug delivery, Mycobacterium pathogenesis, ESKAPE pathogens, Bio-composites, Biomaterials, Tissue regeneration and remodelling