



DR. ROSHMI THOMAS

ASSISTANT PROFESSOR
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P.O, Thiruvalla,
Pathanamthitta, Kerala,
India- 689 549

EDUCATION

PH.D MICROBIOLOGY 2011- 2016

Mahatma Gandhi University

Title : Biomedical applications of microbially fabricated silver and gold nanoparticles

MSC MICROBIOLOGY 2004 - 2006

Bharathiar University

Title : Biosorption of textile azo dyes and decolourisation of textile effluents by Fusarium species, a phytopathogen.

EXPERTISE

FOOD MICROBIOLOGY

MICROBIAL NANOTECHNOLOGY

CLINICAL MICROBIOLOGY

MOLECULAR BIOLOGY

BIOINFORMATICS

ABOUT ME

To be a part of an educational institution, that believe in imparting knowledge through theoretical as well as practical base in accordance to its students. I would give my best in its correspondence with the institution in achieving its organizational credits

WORK EXPERIENCE

2018- Present

SANATANA DHARMA COLLEGE, ALAPPUZHA

ASSISTANT PROFESSOR

- Member in the Board of Examiners of S.B College Changanacherry, Kottayam.
- Chief Examiner for B.Sc degree CBCS Examination conducted by Assumption College Changanacherry, Kottayam
- Member of Board of Question setters of S.B College Changanacherry, Kottayam , Kerala, India
- Member of Board of Studies in Zoology, Assumption College (Autonomous), Changanacherry for a period of 3 years from June 2022.

2017 - 2018

ASSUMPTION COLLEGE, CHANGANASSERY

ASSISTANT PROFESSOR

2015 - 2017

Indian Council of Medical Research,
New Delhi

SENIOR RESEARCH FELLOW

2006 - 2010

ST. BERCHMANS COLLEGE, CHANGANASSERY

ASSISTANT PROFESSOR

- Member of Board of Question setters of S.B College Changanacherry, Kottayam , Kerala, India
- Incharge of Water Aanalysis Laboratory of Kerala Pollution Control Board, Kerala

2003 - 2004

MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY
(MPEDA), COCHIN

QUALITY CONTROLLER

PAPER PUBLICATIONS

1. Roshmi Thomas, Aswathy Viswan, Jyothis Mathew, Radhakrishnan EK. (2012). Evaluation of antibacterial activity of silver nanoparticles synthesized by a novel strain of marine *Pseudomonas* sp. *Nano Biomedicine and Engineering* 4(3), 139-143. DOI: 10.5101/nbe.v4i3.p139-143 (Impact Factor: 0.78)
2. Roshmi Thomas, Jasim B, Jyothis Mathew, Radhakrishnan EK. (2012). Extracellular synthesis of silver nanoparticles by endophytic *Bordetella* sp. isolated from *Piper nigrum* and its antibacterial activity analysis. *Nano Biomedicine and Engineering* 4(4), 183-187 (Impact Factor: 0.78)
3. Anju Janardhanan, Roshmi Thomas, Rintu T Varghese, Soniya EV, Radhakrishnan EK. (2013). Biosynthesis of silver nanoparticles by a novel *Bacillus* strain of marine origin. *Material science Poland*. 31, 173-179 (Impact Factor: 0.91)
4. Vidhya Lakshmi Das, Roshmi Thomas, Rintu T Varghese, Soniya EV, Jyothis Mathew, Radhakrishnan EK. (2013). Extracellular synthesis of silver nanoparticles by the *Bacillus* strain CS11 isolated from industrialised area. *3 Biotech*. 4:121-126. DOI 10.1007/s13205-013-0130-8 (Impact Factor: 1.8)
5. Roshmi Thomas, Anju Janardhanan, Rintu T Varghese, Soniya EV, Jyothis Mathew, Radhakrishnan. (2014). Antibacterial properties of silver nanoparticles synthesized by marine *Ochrobactrum* sp. *Brazilian Journal of Microbiology*, 45, 1221-1227 (Impact Factor: 2.43)
6. Roshmi Thomas, Aswathi P. Nair, Soumya KR, Jyothis Mathew, Radhakrishnan EK. (2014). Antibacterial activity and synergistic effect of biosynthesized AgNPs with antibiotics against multi drug resistant biofilm forming Coagulase Negative Staphylococci isolated from clinical samples. *Applied Biochemistry and Biotechnology*, 173, 449-460 (Impact Factor: 2.28)
7. Roshmi Thomas, Soumya KR, Jyothis M, Radhakrishnan EK. (2015). Inhibitory effect of silver nanoparticle fabricated urinary catheter on colonisation efficiency of Coagulase Negative Staphylococci. *J photochemistry Photobiology B: Biology*, 149:68-77 (Impact Factor: 4.38)
8. Roshmi Thomas, Soumya KR, Jyothis Mathew and Radhakrishnan EK. (2015). Electrospun polycaprolactone membrane incorporated with biosynthesized silver nanoparticles as effective wound dressing biomaterial. *Applied Biochemistry and Biotechnology*, 176:2213-2224 (Impact Factor: 2.28)
9. Roshmi Thomas, Soumya KR, Jyothis Mathew and Radhakrishnan EK. (2015). Effect of biofabricated gold nanoparticle-based antibiotic conjugates on minimum inhibitory concentration of bacterial isolates of clinical origin. *Gold Bulletin*, 48:63-71 (Impact Factor: 1.7)
10. Jishma P, Roshmi Thomas, Rakhie Narayanan, E. K. Radhakrishnan. (2016). Exploration of photocatalytic properties of microbially designed silver nanoparticles on *Victoria blue B*. *Bioprocess Biosyst Eng* 39:1033-1040 (Impact Factor: 2.42)
11. Roshmi Thomas, Jishma P, Radhakrishnan EK. (2016). Photocatalytic and antibacterial effects of silver nanoparticles fabricated by *Bacillus subtilis* SJ 15. *J Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry* (Impact Factor: 0.83)
12. Jasim B, Roshmi Thomas, Jyothis Mathew, Radhakrishnan EK. (2016). Plant growth and diosgenin enhancement effect of silver nanoparticles in Fenugreek (*Trigonella foenum-graecum* L.). *Saudi Pharmaceutical Journal*. (Impact Factor: 2.9)
13. Roshmi Thomas, Shiji Mathew, Soumya KR, Jyothis M, Radhakrishnan EK. (2017). Microbially and phytofabricated AgNPs with different mode of bactericidal action were identified to have comparable potential for surface fabrication of central venous catheters to combat *Staphylococcus aureus* biofilm. *J photochemistry Photobiology B: Biology* (Impact Factor: 4.38)
14. Vidyalakshmi N, Roshmi Thomas, Gayatri G.P, Radhakrishnan E.K, Remakanthan A. (2017). Comparative analysis of the effect of silver nanoparticle and silver nitrate on morphological and anatomical parameters of banana under in vitro conditions. *J Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry* (Impact Factor: 0.83)

15. Jishma P, Rakhie N, Snigdha, Roshmi Thomas, Radhakrishnan EK. (2018). Rapid Degradative Effect of Microbially Synthesized Silver Nanoparticles on Textile Dye in Presence of Sunlight. *Biocatalysis and Agricultural Biotechnology*. 14: 410-417. (Impact Factor: 2.8) Jishma P, Roshmi Thomas, Rakhie
16. Narayanan, E. K. Radhakrishnan. (2018). Kinetic Study of Gold Nanoparticles Mediated Photocatalytic Degradation of Victoria Blue. *3 Biotech* (Impact Factor: 1.8)
17. Roshmi Thomas, S. Snigdha, K. B. Bhavitha, Seethal Babu, Anjitha Ajith, E. K. Radhakrishnan. (2018). Biofabricated silver nanoparticles incorporated polymethyl methacrylate as a dental adhesive material with antibacterial and antibiofilm activity against *Streptococcus mutans*. *3 Biotech* (Impact Factor: 1.8)
18. Jishma P, Roshmi Thomas, Jimtha C. John, Radhakrishnan E. K. (2019). Biogenic Gold Nanoparticle Supplementation to Plant Beneficial *Pseudomonas monteilii* was Found to Enhance its Plant Probiotic Effect. *Current Microbiology* (Impact Factor: 1.75)
19. Roshmi Thomas, P. Jishma, S. Snigdha, K. R. Soumya, Jyoths Mathew, E. K. Radhakrishnan. (2020). Enhanced antimicrobial efficacy of biosynthesized silver nanoparticle based antibiotic conjugates. *Inorganic Chemistry Communications* (Impact Factor: 1.94)

BOOK CHAPTERS

1. Roshmi Thomas, Jyoths Mathew and Radhakrishnan EK. "Recent Advances in Microbial Synthesis of Metal Nanoparticles" in the book "RECENT DEVELOPMENTS IN BIOTECHNOLOGY" published by Studium Press LLC, USA, 2013 (Volume 10).
2. Aswani R, Roshmi Thomas, Radhakrishnan E.K. "Induction of plant defense response by endophytic microorganisms" in the book *BIOCONTROL MECHANISMS OF ENDOPHYTIC MICROORGANISMS* published by Elsevier, 2021.

ACHIEVEMENTS

Fourth Rank in M.Sc. Microbiology (Bharathiar University, 2006)

Secured best oral presentation award for the paper entitled "Exploration of silver nanoparticle biosynthesis using marine bacteria" on UGC sponsored National seminar; Nanotechnology: Applications of nanomaterials in Agriculture food and medicine (26/07/2012) conducted by B. K College for Women, Amalagiri, Kottayam., Kerala, India.

Awarded Senior Research Fellowship (SRF) - 2015 by Indian Council of Medical Research (ICMR), Delhi for the project entitled 'Studies on antimicrobial, antibiofilm and cytotoxic effects of biosynthesized silver nanoparticles to explore its biomedical applications'.

Appointed as Judge in Voyage - 2015, Intercollegiate Paper Presentation competition held at Assumption College, Changanacherry on 10th December 2015

Invited as a resource person on the topic 'Nanobiotechnology' in the Department of Zoology at Assumption College, Changanacherry (December 2019).

Invited as a resource person in an International webinar on the topic 'Biomedical applications of Nanotechnology' conducted by the Department of Microbiology and Biochemistry, S.B College, Changanacherry (August, 2020).

Presented a paper entitled 'Surface fabrication of urinary catheter using biosynthesized silver nanoparticles to combat colonization efficiency of Coagulase Negative Staphylococci' in National Seminar on Recent Trends in Applied Life Sciences conducted by School of Biosciences, Mahatma Gandhi University, Kottayam, Kerala, India (March 15-16, 2017).

TRAININGS / WORKSHOPS ATTENDED

- Participated in 24th Kerala Science Congress held from 29-31 January 2012 at the Rubber Research Institute of India, rubber Board, Kottayam, Kerala, India
- Two day seminar on 'Coconut, its processing and health effects on consumers' conducted by B.C.M. College, Kottayam, Kerala, India on 19th and 20th October 2006
- Seminar on Organic Farming, Waste Management and Integrated Pest Management held at S.B College, Changanacherry, Kottayam, India on October 22nd 2007.
- Short term training programme in Analytical Instrumentation (Microscopic and Chromatographic Techniques), organized by the Advanced Centre of Environmental Studies and Sustainable Development(ACESSD) - An Inter University Centre, Mahatma Gandhi University, Kottayam held during February 1-3, 2012 at the School, of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala, India
- Participated in the National seminar on Nanotechnology: Applications of nanomaterials in Agriculture, Food and Medicine on 25th and 26th July, 2012, conducted by B. K College for Women, Amalagiri, Kottayam., Kerala, India.
- Participated in the DST-PURSE sponsored workshop on Frontiers of Spectroscopy and Microscopy held at Mahatma Gandhi University, Kottayam, Kerala, India from 10th to 12th September 2012
- Participated in the KSCSTE sponsored two day national seminar on Solid waste management and its impact on ecosystems held at Assumption College, Changanacherry, Kerala, India from 7th & 8th December 2017
- Participated in the "e-DARSHAN Webinar Lecture Series-2020" on "Horizons of Virtual Teaching" organized by Department of Commerce & IQAC, T.K Madhava Memorial College, Nangiarkulangara on 26th May 2020.
- Participated in a Webinar on 'Life and Health - A Microbiome Perspective' organized by Kerala Biotechnology Commission on 24th May 2021.
- Participated in a webinar on "Management Information System - Need of the Hour" organized by Internal Quality Assurance Cell (IQAC), Sanatana Dharma College, Alappuzha on 27/05/2021.
- Participated in a webinar on "Intellectual Property Rights (IPRs)" organized by Research, Consultancy & Innovation Cell", Sanatana Dharma College, Alappuzha on 29/05/2021
- Participated in a webinar on "Academic Leadership" organized by Internal Quality Assurance Cell (IQAC), Sanatana Dharma College, Alappuzha on 31/05/2021.
- Participated in a webinar on 'Detection of SARS CoV2 using RT-PCR' organized by School of Biosciences, Mahatma Gandhi University, Kottayam, Kerala on 31/05/2021.

