Dr. Jaison Jeevanandam – Curriculum vitae

Phone (Cell): +351 913103736, Whats app - +91 7401039626

E-mail: jaison.jeevanandam@staff.uma.pt; jaison.jeevanandam@gmail.com

Leadership experience (3 years)

2021-2023: Lab manager, Lab for nanomedicine, Madeira Chemistry Centre (CQM), Portugal.

2016-2017: Lab manager, Nanoparticle synthesis lab, Curtin University Malaysia.

Research experience (10+ years)

2020-present: Senior researcher, Centro de Química da Madeira, Universidade da Madeira, Portugal.

2018-2020: Research consultant (remote), MKD labs, USA.

Project: *In silico* methods for the evaluation of nanomedicines

2014-2018: Doctoral scholar, Department of Chemical Engineering, Curtin University.

Project: Enhanced synthesis and delivery of MgO nanoparticles for reverse insulin resistance in Type 2 Diabetes Mellitus

2014: National Centre for Nanoscience and Nanotechnology (NCNSNT) department, University of Madras

Project: Morphology dependent anti – cancer activity of MgO Nanoparticles

2013: National Center for Nanoscience & Nanotechnology, University of Madras

Project: Synthesis and characterization of MgO nano particles through sol – gel method.

2013: Central Leather Research Institute (CLRI), Microbiology department

Project: Synthesis and characterization of gold nanoparticles using fungi *Aspergillus sps.*

Completed projects and funding received

1. **Grant:** Curtin Sarawak Postgraduate Research Funds (**Project title:** Nanomedicine for diabetes treatment); **Funding agency:** Curtin University, Malaysia; **Length:** 2015-2017 (2 years); **Amount:** 200000 AUD.
2. **Grant:** Tennessee state research fund (**Project title:** In silico analysis of cell-nanoparticle interaction); **Funding agency:** Tennessee state (USA); **Length:** 2018-2020 (2 years); **Amount:** 125000 USD
3. **Grant:** Postdoctoral research funds (**Project title:** Dendrimer nanoformulations for biomedical applications); **Funding agency:** ARDITI, Portugal; **Length:** 2020-2021 (1 year); **Amount:** 800000 Euros

4. **Grant:** Postdoctoral research funds (**Project title:** Nanocellulose from invasive plants for biomedical applications); **Funding agency:** INV2MAC, European union. **Length:** 2021-2023 (2 years); **Amount:** 560000 Euros

Academic Qualifications

2014-2018: Doctor of Philosophy (PhD), Curtin University, Malaysia.

2012-2014: Master of Science (M. Sc), Nanoscience and Nanotechnology, National Center for Nanoscience & Nanotechnology, University of Madras, India. Grade – 8/10.

2012-2014: Master of Business Administration (MBA) specialized in Human Resource Management (Distance education), Pondicherry University-Loyola College Twinning Program. Grade – 7/10

MBA Project: Organizational psychology as an HR practice and its impact on employees Performance. (A study undertaken at RBS-The Royal Bank of Scotland- Chennai)

2009-2012: Bachelor of Science (B. Sc) in Advanced Zoology & Biotechnology, Loyola College, Chennai, India. Grade – 7.4/10

Scientific skills

- **Nanoparticle synthesis** - Chemical synthesis (gold, silver), poly-ol synthesis, sol-gel synthesis, sonication synthesis, green synthesis using natural sources (plants and agro-waste), microwave and ultrasound synthesis techniques of nanoparticles (MgO), wet chemical, precipitation synthesis of TiO_2 nanoparticles, and electrospinning of nanofibers.
- **Nanoparticle characterization** - Experience in sample analysis and interpret data from SEM, FESEM, HRTEM, H-NMR, XPS, FTIR, XRD, TGA, Zeta potential, DSC and UV-Visible spectrophotometer.
- Trained in **microbial culture techniques** (fungi, bacteria)
- **Greenhouse management** for plant growth analysis, seed proliferation assay and plant growth studies.
- Cellulose extraction and nanocellulose **preparation**
- Gelatin gel and novel sodium polyacrylate gel **formulation**
- Dendrimer **nanoformulation** for drug delivery applications
- **Experimental optimization** via Design expert® software
- **Google® certified data analyst** with experience in R program, SQL, machine learning platforms
- Certified **computational image processing analyst using machine learning** from Duke University, United Kingdom

Research publications

Edited books – 6**; Monograph books** – 2; **Book chapters** – 68; **Journal articles** – 69; **Conference proceedings** – 11

Google scholar - https://scholar.google.co.in/citations?hl=en&user=GUrIPEoAAAAJ&view_op=list_works&authuser=1&sortby=pubdate

Top publications in journals

1. **Jeevanandam, J.**, Goncalves, M., Castro, R., Gallo, J., Banobre-Lopez, M., Rodrigues, J. (2023) Enhanced alpha-amylase inhibition activity of amine-terminated PAMAM dendrimer stabilized pure copper-doped magnesium oxide nanoparticles, Biomaterials Advances, 153, 213535. IF – 8.4
2. **Jeevanandam, J.**, Tan, K. X., Rodrigues, J., Danquah, M. K. (2023) Target-specific delivery and bioavailability of pharmaceuticals via Janus and dendrimer particles, Pharmaceutics, 15 (6), 1614. IF – 6.3
3. **Jeevanandam, J.**, Chan, Y.S., Danquah, M.K. (2020) Cytotoxicity and insulin resistance reversal ability of biofunctional phytosynthesized MgO nanoparticles. 3 Biotech, 10, 489. IF – 2.9
4. **Jeevanandam, J.**, Chan, Y.S., Danquah, M.K. (2017). Calcination-dependent morphology transformation of sol-gel synthesized MgO nanoparticles. Chemistry select, 2 (32): 10393 – 10404. IF – 2.3
5. **Jeevanandam, J.**, Chan, Y.S., Danquah, M.K. (2017). Biosynthesis and characterization of MgO nanoparticles from plant extracts via induced molecular nucleation. New Journal of Chemistry, 41: 2800-2814. IF – 3.6

Invited talks and courses (Total – 26, only significant talks have been listed)

1. Title: **Hands-on training to use Design Expert® (StatEase®) software for designing and optimizing experiments**. Location: CQM, Madeira, Portugal. Participants: Graduate students from Portugal and Spain (Live and online, hybrid mode) on Nov 13-17, 2023.
2. Title: Metal oxide nanomedicines for diabetes treatment, In International hybrid conference on Nanostructured materials and polymers (ICNP 2023), Location: Mahatma Gandhi University, India (online) on 12-14th May, 2023. (**Invited talk and session chair**).
3. Title: **Importance of scientific journal publication in STEM**, Participants: Biotechnology Master's students, Location: Vellore Institution of Technology (VIT - online) on 29th March, 2023.
4. Title: **Nanomedicines as a next generation therapeutic agent for diabetes treatment**, In Curtin Global Campus HDR colloquium 2022, Participants: Higher degree by Research students, Location: Curtin University Malaysia (online) on December, 2022. (**Keynote speech**)
5. Title: **Intellectual property rights in academia**, Participants: Masters students, Location: Kavery arts and science college, India (online) on August, 2022.
6. Title: **Dental applications of Bio-nanomaterials**, Participants: Masters and doctoral students, Location: Saveetha Dental College, India (online) on December, 2021.
7. Title: **How to write a research article**, Participants: B. Sc. and M. Sc. students, Location: Nandha college of arts and science, Tamil Nadu, India (online) on May, 2020.

Journal editor and conference organizer

1. Bio-integration (China)
2. International Archives of Biomedical and Engineering Sciences (India)
3. **Organizer** and scientific committee member, 31st International Materials Research Congress, Mexico (August 2024).
4. **Scientific committee member**, World Summit and Expo on 2D materials and graphene (WSE2DMG-2024), Rome, Italy.
5. **Editorial board member**, Sustainable agriculture and Environment, EnPress Publisher, LLC.

Invited editor (special issues)

1. Discover nano (Springer)
2. Frontiers in Nanotechnology
3. Pharmaceutics (MDPI)
4. International Journal of Molecular Sciences (MDPI)
5. Frontiers in bioscience-landmark (IMR Press)
6. Applied sciences (Edition 1 and edition 2) [MDPI]
7. Frontiers in molecular biosciences
8. Frontiers in Nanotechnology

Journal reviewer

1. Acta Biomaterialia (Elsevier)
2. International Journal of Biological Macromolecules (Elsevier)
3. Naunyn-Schmiedeberg's Archieves of Pharmacology (Springer)
4. Journal of Phytopathology (Wiley)
5. Beilstein Journal of Nanotechnology (Beilstein Institute, Germany)
6. Journal of Cluster Science (Springer)
7. Journal of applied microbiology (Wiley)
8. Artificial cells, nanomedicine and biotechnolgy (Taylor & Francis)
9. International Journal of Nanomedicine (Dove press)

Other project supervisions

Undergraduate final year projects – 13
Master's thesis – 1, Early project (Master PIC) - 2
Research internships - 8

Citation Index

Total citations – 7072
H-index – 31; i10 index – 73

Awards and memberships

- Received **Travel grant award** to attend 3rd Journal of Thermal Analysis and Calorimetry Conference and 9th V4 (Joint Czech-Hungarian-Polish-Slovakian) Thermo-analytical Conference, Hungary (2023) and present the results of research.
- Included in the list of **top 2% scientist in the world** with more citations in the year 2020, 2021 and 2022 by Stanford University, USA.
- **Literati highly commended research paper award** from **Emerald publication** for the article 'Evaluation and development of antibacterial fabrics using Pongamia pinnata extracts' for the year 2020.
- Recipient of '**Best Teacher award-2019**' in **Academy of competitive exam and research training (ACERT, Chennai)** for the academic year 2018-2019, for the extraordinary service as a guest faculty.
- Recipient of **Gold** medal in **3rd World Invention Innovation Contest (WiC) 2017** organized by **Korea Invention News (KINEWS)** for the project proposal entitled '**Multi-compartment antimicrobial nanoformulation for food packaging**'.
- Recipient of **Special Honour of Invention** award in **3rd World Invention Innovation Contest (WiC) 2017** from Toronto International Society of Innovation & Advanced skills

(TISIAS) and International Invention and Innovation Competition in Canada (iCAN-Toronto) for the project proposal entitled '**Multi-compartment antimicrobial nanoformulation for food packaging**'.

- Recipient of '**People's choice award**' in 3-minutes thesis competition conducted by Curtin University, Malaysia, 2015.
- "**Loyola Young Environmentalist award**" by **School of Entomology & Centre for Natural Resources Management**, Loyola College, Chennai, in the year 2011 for being the founder, President of a student NGO – SOW, which aims in creating awareness about global warming.
- "**Rev. Fr. A.J. THAMBURAJ S.J Award**" for popularizing environment protection and awareness by **LOYOLA COLLEGE** for the academic year 2011-2012.

Outreach

- **Member of 8+ conference organizing committee** to handle hospitality of invited speakers in Loyola college, India (2010-2012).
- **Founder and President** of 'Save Our World', a student organization (comprised of undergrad students from 7 colleges in India) to produce novel sustainable alternative of plastic from 2010-2012.
- **Organized** science exhibition to popularize nanoscience among school kids in '**Science day festival**', University of Madras, India (2015 and 2016).
- **Member in organization team** of 2nd International symposium of Engineering and technology in Borneo region (Malaysia, 2016). Member of team responsible to handle oral presentations of 262 postgraduate participants from ASEAN countries in 8 parallel sessions.
- **Organized exhibition** for school students to portray research activities in CQM, Portugal (2022 and 2023).

Teaching experience (5+ years)

Role	Subject	Department	University	Period
Tutor (Guest lecturer)	Biotechnology theory	Biotechnology	Loyola college, India	June 2014 – September 2014
Lab instructor	Principles and Processes, Reactioand and Functions in Chemistry	Chemical Engineering	Curtin University, Malaysia	March 2015 – March 2017
Lecturer (Online and Offline)	Plant biotechnology, Applied techniques in biotechnology, Environmental chemistry, Bioprocess Engineering, Bioinformatics	Graduate Aptitude Test in Engineering (GATE) aspirants	Academy of competitive exam and research training (ACERT) – Chennai, India.	May 2018-August 2020