

Faculty Profile

1. Name : Dr.A.S.**Ruby Celsia**
2. Designation : Assistant Professor
3. Date of Joining : 07.02.2022
4. Nature of Association : Regular
5. E mail : rbycelsia@ksrct.ac.in
6. Mobile no. : +91 7708603793
7. Academic Qualifications:



Course	Name of the Institution / University	Year of Passing	% of Marks	Class
Ph.D Biotechnology	Mepco Schlenk Engineering College (Autonomous)/ Anna University	2022	-	-
M. Tech Biotechnology	Mepco Schlenk Engineering College (Autonomous)/ Anna University	2016	70	I
B. Tech Biotechnology	Mepco Schlenk Engineering College (Autonomous)/ Anna University	2014	68	I

7. Teaching Experience

- Assistant Professor, K.S.Rangasamy college of Technology, Tiruchengode, from 07.02.2022 to till date

8. Projects :

Under Graduate

Title: "Fabrication of PGPR mediated Slow release Nanofertilizer for *Vigna radiata*"

Post Graduate

Thesis title: "Catheter Associated Urinary Tract Infection (CAUTI) and its Control by Nanocomposites"

Ph.D

Thesis title: "Inhibition of Encrustation in Urinary Catheter By Nano particles And Phytoactive compounds"

DST Nanomission JRF -SRF Project

Titled: "Fabrication and characterization of hybrid nanosponge dressing for healing of infectious burn wound",
Sanction details : SR/NM/NS-01/2015(G) & 30.05.2016.

9. Publications

9.1 INTERNATIONAL JOURNALS

1. Dr.R.Mala, Ms.A.S.**Ruby Celsia**, Mr.Hari Prasath, Miss.Keerthana R, Miss.Gopika Shri Published "Susceptibility Of Biofilm Forming Pseudomonas Aeruginosa And Staphylococcus Aureus To Antibiotic-Adjuvants, " Malaysian Journal Of Microbiology, Vol.16, Issue.5, Pp.1-8, October-2020

2. Dr.R.Mala, Ms.A.S.**Ruby Celsia**, Mr.Karthikeyan, Miss.Keerthana R Published "Chemical Composition Antioxidant And Anti-Inflammatory Activity Of Ficus Racemosa Fruit, " International Journal Of Pharmaceutical Research, Pp.1-10, October-2020

3. Dr.R.Mala, Miss.N.Maheswari, Ms.A.S.**Ruby Celsia** Published "Effect of Integrated Plant Nutrients on Soil and Nodule Microbe of *Arachis hypogea*, " Ecology, Environment and Conservation, Vol.25, Issue.4, Pp.1784-1788, December-2019
4. Rajendran, M., Iraivan, G., Ghayathri B.L., Mohan, P., Chandran, K., Nagaiah, H., & **Ruby Celsia** A.S. (2021). Antibiotic Loaded Nano Rod Bone Cement for the Treatment of Osteomyelitis. *Recent Patents On Nanotechnology*, 15(1), 70-89.
5. Rani, D., Mala, R., Mohan, P., Keerthana, R., Prasath, N., & **Ruby Celsia**, A. (2020). Chitosan nanoparticle-mediated delivery of curcumin and phycocyanin for photodynamic therapy against biofilm forming bacteria. *Materials Express*, 10(11), 1854-1870. doi: 10.1166/mex.2020.1861
6. Mala Rajendran,Sudeep Roy,Keerthana Ravichandran, Bagdevi Mishra , Deepak K. Gupta, Subash Nagarajan, **Ruby Celsia** Arul Selvaraj and Ivo Provaznik (2020). In silico screening andmolecular dynamics of phytochemicals from Indian cuisine against SARS-CoV-2 MPro. *Journal Of Biomolecular Structure And Dynamics*, 1-15. doi: 10.1080/07391102.2020.1845980
7. Mala, R., Jansi Rani, M., Hari Prasath, N. and **Ruby Celsia**, A. (2019). A review on nanomaterial based drug delivery for burn injury. *AIP Conference Proceedings*,p.020012.
8. Mala, R., Jansi Rani, M., Hari Prasath, N. and **Ruby Celsia**, A. (2019). Nano composite materialof chitosan for wound healing: A review. *AIP Conference Proceedings*, 2105,p.020013.
9. Mala, R., Hari Prasath, N. and **Ruby Celsia**, A., 2019. Bactericidal Activity of Zinc Oxide Nanoparticles. *IOP Conference Series: Materials Science and Engineering*, 561(1), p.012065.
10. **Ruby Celsia**, A., Mala, R. and Hari Prasath, N. (2019). Re-Potentialion of β -Lactam Antibiotic by Synergistic Combination with Biogenic Copper Oxide Nanocubes against Biofilm FormingMultidrug-Resistant Bacteria. *MDPI Molecules*, 24(17).
11. R.Mala And A.S.**Ruby Celsia**., (2017) Isolation And Identification Of Burn Wound Superbugs By Molecular Technique And Their Susceptibility To Silver Nanoparticles. *Iop Conference Series:Materials Science And Engineering*. <https://doi.org/10.1088/1757-899X/310/1/012146>
12. Mala, R., **Ruby Celsia**, A., Mahalakshmi, R. and Rajeswari, S. (2017). AgronomicBiofortification of *Amaranthus dubius* with Macro Nutrients and Vitamin A. *IOP ConferenceSeries: Materials Science and Engineering*, 225, p.012214.
13. Mala, R., **Ruby Celsia**, A., Malathi Devi, S. and Geerthika, S. (2017). Comparison on Bactericidal and Cytotoxic Effect of Silver Nanoparticles Synthesized by Different Methods.*IOPConference Series: Materials Science and Engineering*, 225,p.012155.
14. Mala R, **Ruby Celsia**, A, Sundaram V,Rajan R, Gurusamy U. (2017) Evaluation of Nano StructuredSlow Release Fertilizer on the Soil Fertility, Yield and Nutritional Profile of *Vigna radiata*. *Recent Patents on Nanotechnology*.;11(1):50-62.
15. Mala R, Annie Aglin A, **Ruby Celsia** A, Geerthika S, Kiruthika N, VazagaPriya C et al.Foley catheters functionalized with a synergistic combination of antibiotics and silver nanoparticles resist biofilm formation. *IET Nanobiotechnology*. 2017, 11 (5), p. 612 – 620, DOI:10.1049/iet-nbt.2016.0148.
16. Mala R, **Ruby Celsia** A. Influence of Solution and Process Parameters on theFabrication ofE-Spun Nano Fiber for Wound Healing: A Review. *Recent Patents on Nanomedicine*. 2015;4(2):102-115.
17. **Ruby Celsia** A, Mala R. Fabrication of Nano Structured Slow Release Fertilizer Systemand itsInfluence on Germination And Biochemical Characteristics of *Vigna radiata*. *International Journal of ChemTech Research*.

2014;6(10):4497-4503.

9.2 National & International Conferences

1.R.Mala.,N Hari Prasath, A.S.**Ruby Celsia** Size Dependent Bactericidal Activity Of Zinc Oxide Nanoparticles International Conference on Nanoscience and Nanotechnology ICONN- 2019

2.A.S.**Ruby Celsia**, R.Mala Surface Modification of Urinary Catheter by Impregnation of Silver Nanoparticles to Prevent Swarming and Biofilm Formation by Clinical Isolates 5th International Conference on Nanoscience and Nanotechnology PageNo: 1194-1194

3.R.Mala, A.S.**Ruby Celsia**, N Hari Prasath, N.Subash Emergence of Extensive Drug Resistance in Burn Wound Pathogens and their Susceptibility to Zinc Oxide Quantum Dots 5th Jan-2019 International Conference on Nanoscience and Nanotechnology (ICONN 2019) ; PageNo: 1194- 1194

4.R.Mala, N.HariPrasath,I.Gazana, BL.Ghayathri, A.S.**Ruby Celsia** Antibiotic loaded nano hydroxyapatite beads as bone cement for the treatment of osteomyelitis International Conference On Nanoscience and Nanotechnology Jan-2019 PageNo: 718-718

5.A.S. **Ruby Celsia**, R. Mala ,N. Hari Prasad, Prevalence of lactam resistant pathogens in burn wound and their susceptibility to Zinc oxide nanoparticles, 10th Bengaluru India Nano 2018, Bengaluru, Karnataka Dec-2018

6.R.Mala, A.S.**Ruby Celsia**, Varalakshmi Multi functional nano fibrous mat for diabetic wound healing BioMET 2018 Jul-2018 Paper Online Link: <http://info.vit.ac.in/biomet/finaleproceeding.pdf>

7.A. S. **Ruby Celsia** and R. Mala, "Inhibition of Swarming Mobility and Biofilm Formation of Clinical Isolates by Phytochemicals and Silver Nanoparticles" in the conference BIOPROCESSING INDIA 2017, Recent Trends in Bioprocessing for Healthcare, Energy and Environment organized by IIT Guwahati, Assam 9th Dec – 11th Dec, 2017, p142

8.A.S. **Ruby Celsia**, N. Subash and R. Mala, " Toxic Effect of Silver Nanomaterial on Adult Zebrafish", in the International Symposium on Nanomaterials for Clean energy and Health Applications organized by Coimbatore Institute of Technology - India and Western Norway University of Applied Sciences, Norway, 6th Dec – 8th Dec, 2017, p96

9.A.S. **Ruby Celsia**, N. Subash and R. Mala, "Burn Wound Healing activity of Composite Nano Fiber Loaded with Curcumin and *Mimosa pudica* and *Lawsonia inermis* Extract", in the International Symposium on Nanomaterials for Clean energy and Health Applications organized by Coimbatore Institute of Technology - India and Western Norway University of Applied Sciences, Norway, 6th Dec – 8th Dec, 2017, p84

10.R Mala and A S **Ruby Celsia**, Isolation and identification of Burn wound superbugs by molecular technique and their susceptibility to silver nanoparticles, organized by International Conference on Advances in Materials and Manufacturing Applications IConAMMA 2017, p603

11.R.Mala and A.S.**Ruby Celsia**, "Fabrication, Characterization and Wound healing activity of Chitosan Gelatin Composite nanofiber loaded with Curcumin and phytochemicals, Fourth International Conference on Nanostructured Materials and Nanocomposites (ICNM 2017), 2017 Feb 10-12, Mahatma Gandhi University, Kottayam, Kerala, India

12. Vaishnavi S., Shurekha M., Soundaryaa N., **Ruby Celsia** A.S. and Mala R., "Influence of Spirulina mediated Zinc oxide nano particles on germination, growth and photosynthetic pigment of *Coriandrum sativum*", Fourth International Conference on Nanostructured Materials and Nanocomposites (ICNM-2017), 2017 Feb 10-12, Mahatma Gandhi University, Kottayam, Kerala, India.

13. Mala R. and **Ruby Celsia** A.S., "Effect of *Ananas cosmosus* fruit on crystalline biofilm formation in foley catheter" Section of medical sciences, Proceedings of the 104th Indian Science Congress, Sri Venkateshwara

University, Tirupathi, p125, 2017 Jan3-7

14. **Ruby Celsia** A.S. and Mala R., "Influence of Silver nanoparticles on Swarming mobility of *Proteus mirabilis*" Section of New biology, Proceedings of the 104th Indian Science Congress, Sri Venkateswara University, Tirupathi, P184, 2017 Jan3-7
15. **Ruby Celsia** A.S. and Mahalakshmi R., Rajeswari S. and Mala R., "Agronomic Biofortification of *Amaranthus dubius* with macronutrients and Vitamin A" International Conference on Advanced material technologies (ICAMT 2016), Dadi institute of Engineering and Technology, Visakhapatnam, 2016 Dec 27-28, P268.
16. **Ruby Celsia** A.S., Geerthika S., Mala R. and Malathi Devi S., "Comparison on bactericidal and cytotoxic effect of silver nanoparticles synthesized by different methods" International conference on Advanced material technologies (ICAMT 2016), Dadi Institute of Engineering and Technology, Visakhapatnam, 2016 Dec 27-28, p276
17. **Ruby Celsia** AS, Geerthika and Mala R, "Antibiofilm Property of *Zingiber officinale* and *Piper nigrum*", Proceedings of 103rd Indian Science Congress, section of New biology, University of Mysore, Mysuru, Karnataka, 2016 Jan 3-7.
18. **Ruby Celsia** AS and Mala R, "Control of Crystalline Biofilm by Nanocomposite", Proceeding in the Conference of Microbial Biofilm, SASTRA University, Tanjore, 2016. Jan29- 30.
19. Vidhya Bharathi S, **Ruby Celsia** AS, Raja Blessina S, Uma Maheswari G and Mala R. "Influence of Slow release Nanofertilizer System on Germination and Biochemical Characteristics of *Vigna radiata*", Proceeded in the Souvenir of International Conference on Nanomaterials and Nanotechnology (NANO-2015), KS Rangasamy College of Technology, Tiruchengode (Tk), 2015 Dec 7-10, P286
20. **Ruby Celsia** AS and Mala R. "Susceptibility of Catheter Associated Uropathogens to Silver and Copper Nanocomposite" in the International Conference on Nanostructured Polymeric Materials and Polymer Nanocomposites, ICNPM 2015" Organized by International and Inter university Centre for Nanoscience and Nano technology, Mahatma Gandhi University, Kottayam, Kerala, 2015 Nov 13-15.
21. Vidhya Barathi S, **Ruby Celsia** AS and Mala R. "Fabrication of nanostructured slow release fertilizer system as a carrier of PGPR and its influence on germination of *Vigna radiata*. Proceedings of Bangalore India Bio, Organized by the Government of Karnataka, Bangalore, Feb 9-11, 2015, POS-06
22. **Ruby Celsia** AS and Mala R. "Fabrication of Nanostructured PGPR mediated Slow release fertilizer system and its influence on germination of *Arachis hypogea*", Proceedings of International Conference on Agriculture and Horticulture, Organized by OMICS, Hyderabad, Andhra Pradesh, Oct 27-29, P41.
23. **Ruby Celsia** AS and Mala R. "Supersorbable polymer sponge for 3D culture and delivery of PGPR. Proceeding of International Conference on polymer processing and characterization- ICPPC 2014, Organized by International and Inter University centre for Nanoscience and Nanotechnology, Kottayam, Kerala, Oct 11-13, 2014, P87.
24. **Ruby Celsia** AS and Mala R. "Fabrication and Characterization of Nano-structured slow release fertilizer system and its influence on germination on *Vigna radiata*. Proceedings in Recent advances in Chemical Engineering Technology, Annamalai University, Chidambaram, July 14-17, 2014.
25. **Ruby Celsia** AS, Raja Blessina S, Uma Maheswari G and Mala R. "Influence of IPNS on germination of *Vigna radiata*, Proceedings in Integrated Approaches for Sustainable Agriculture, Annamalai University, Chidambaram, Mar27, 2014, P.20

26. Mala R.,2014, **Ruby Celsia**, Slow release of CAPNG from neem cake and its influence on germination of *Arachis hypogea*, Proceedings of International Conference on Agri2014, Organized OMICS,Hydrabad, AndhraPradesh, October 27-29, P 213.
27. Mala, **Ruby Celsia** “Poster –Walkway of Discovery,Banglore India Bio 2015- India’s Biggest Biotech Show”,Organized by Government of Karnataka,Banglore,Karnataka,2015 Feb 9-11.
28. **Ruby Celsia** AS and Mala R, “Control of Crystalline Biofilm by Nanocomposite”, Proceeding in the Conference of Microbial Biofilm,SASTRA University,Tanjore, 2016.Jan29- 30.
29. **Ruby Celsia** A.S. and Mala R., "Influence of Silver nanoparticles on Swarming mobility of *Proteus miriabilis*" Section of New biology, Proceedings of the 104th Indian Science Congress, Sri Venkateshwara University, Tirupathi, P184, 2017 Jan 3-7.

9.3 Book Chapter

1. Mala, R. and **Ruby Celsia**, A. (2018). Crystalline Biofilm Formation on Foley Catheter: A Macro Problem with Microbes and the Nano Weapons to Control Blockage. In: T. Sabu, G. Yves, K. Nandakumar, S. Oluwatobi and K. Praveen, ed., *Nanotechnology-Driven Engineered Materials New Insights*, 1st ed. [online] CRC Press.
Available at: <http://www.appleacademicpress.com/nanotechnology-driven-engineered-materials-new-insights/9781771886345>
2. Mala, R. and **Ruby Celsia**, A. (2018). Toxicity Of Nanomaterials To Biomedical Applications-A Review. In: T. Sabu, G. Yves, K. Nandakumar, S. Oluwatobi and K. Praveen, ed., *Nanotechnology-Driven Engineered Materials New Insights*, 1st ed. [online] CRC Press.
3. Mala, R. and **Ruby Celsia**, A. (2018). Crystalline Biofilm Formation on Foley Catheter: A Macro Problem with Microbes and the Nano Weapons to Control Blockage. In: T. Sabu, G. Yves, K. Nandakumar, S. Oluwatobi and K. Praveen, ed., *Nanotechnology-Driven Engineered Materials New Insights*, 1st ed. [online] CRC Press.
4. Mala, R., Hari Prasath, N. and **Ruby Celsia**, A. (2019). Mechanistic Insights into the Potentiation of Photodynamic Therapy by Nano Weapons. In: K. L. V. A and M. V, ed., *Biological Synthesis of Nanoparticles and Their Applications*, 1st ed. [online] Boca Raton: CRC Press. Available at: <https://www.taylorfrancis.com/books/e/9780429265235>

10. TRAININGS, WORKSHOPS, FDP AND VALUE ADDED COURSES

1. Two week courses GIAN Course entitled “ Nanobiotechnology for Healthcare “ by IIT Kharagpur, West Bengal, 2015 June 29th to 2015 July 8th
2. TEQIP – II sponsored FDP on “Advances in Nanotechnology and Analytical Instrumentation in Health Sciences” by BIT Campus, Anna University Tiruchy, 2016 June 24th to 2016 July 7th.
3. One week course DBT,TNSCST,NCSTC,DST-GOI sponsored National level workshop on Animal Cell Culture Techniques, organized by DBT, Lady Dock College, Madurai, 2017 Sept 4th to 9th.
4. “Workshop on Social Science Research Methodology and use of SPSS software for data analysis” organized by Bharathiyar University, Coimbatore, 2014 May 5th to 9th.
- 3, “National level workshop on Modern Scientific Techniques for Indian system of medicine and Natural products development ” organized by AU-KBC Research centre, MIT Campus of Anna University, Chennai, 2014 June 17th to 21st.

4. Workshop on “ Computer aided drug design and pharmacogenomics” by Amirtha Vishwa vidhyapeetham, Coimbatore, 2014 July 23rd to 27th

3. Short Term Workshop

1. ICMR Sponsored National workshop on Nanoscience and Nanotechnology, organized by Pondicherry University, Pondicherry, 2016 March 3rd to 5th.

2. National Level workshop on Theory and Practice of X-ray diffraction techniques, organized by ACCET, Karaikudi, 2017 May 25th to 27th.

3. Continuous Education Program on “Workshop on Medical Biomaterials”, organized by IIT Madras, 2017 June 23rd & 24th.

4. DBT Sponsored Hands on workshop on Recent research on trends in computing techniques for bioinformatics, organized by MCA, Mepco Schlenk Engineering College, Sivakasi, 2015 July 24th & 25th.

5. Two days workshop on Hands on training in composites perform formation techniques and its characterization, organized by PSGTECHS COE INDUTECH, Coimbatore, 2017 June 8th & 9th.

6. One day National level workshop on Writing Scientific Research Paper – Phase II, SSN College of Engineering, Chennai, 2016 Sep 23rd.

4. Seminar

1. National Seminar on “To start a start up in Biotechnology”, organized by DBT, Mepco Schlenk Engineering College, Sivakasi, 2019 March 15.

2. National Seminar on “Understanding Biology through large scale data analysis”, organized by DBT, Mepco Schlenk Engineering College, Sivakasi, 2018 March 17.

3. National Seminar on “Recent advances in Biochemical Engineering”, organized by DBT, Mepco Schlenk Engineering College, Sivakasi, 2016 Sep 30.

4. National Seminar on “Paradigms of Plant microbe interactions”, organized by DBT, Mepco Schlenk Engineering College, Sivakasi, 2016 Feb 26.

5. National Seminar on “Molecular virology”, organized by DBT, Mepco Schlenk Engineering College, Sivakasi, 2014 Sep 27.

6. National Seminar on “Application of proteomic technologies in Clinical Biochemistry”, organized by DBT, Mepco Schlenk Engineering College, Sivakasi, 2014 Feb 28.

7. National Seminar on “Advances in Agricultural Biotechnology”, organized by DBT, Mepco Schlenk Engineering College, Sivakasi, 2013 March 16.

8. National Seminar on “Advances in Medical Biotechnology”, organized by DBT, Mepco Schlenk Engineering College, Sivakasi, 2012 Sep 29.

9. Attended an international webinar series on “Herbal biomolecules: Novel food technologies in the wake of corona pandemic” organized by AFSTI- Chennai chapter, TANUVAS and FSSAI. 27-28, August 2020

11. Awards and Achievements

1. Second Prize with Cash award Rs 75000 in National level Nanotechnology competition “PSG NANOCHALLENGE -2017” organized by PSG College of Technology Coimbatore, 2017
2. Best Poster award in the Thematic area ”Biomaterial” in the conference BIOPROCESSING INDIA 2017 in IIT Guwahati, Assam.
3. Award as Young researcher award in the conference “Recent trends in clean Technology and sustainable environment” organized by SSN college of engineering, Chennai, 15th Sep, 2017
4. First prize in My Idea Presentation in the National Conference on Microbial Biofilms, organized by SASTRA University, Tanjore, Tamilnadu, Jan 29-31, 2016.
5. Secured “BEST PROJECT AWARD” organized by the Department of Biotechnology, MepcoSchlenk Engineering College, Sivakasi, 2014.
6. Secured “FIRST Prize in National Conference on Sustainable agriculture” organized by the Department of Agronomy, Annamalai University, Chidambaram, 2014.
7. Best-Brightest Inspirational-Talented Woman, Expert Committee report and Apex Committee, Venus International foundation, Chennai, 2017.
8. Secure Second Rank in M.Tech Biotechnology, DBT, Mepco Schlenk Engineering College, Sivakasi, 2015-2016.

12. Patents ;

1. Process for preparing Nano foliar spray fertilizer with micronutrient to fortify food with iron, zinc, carotenoids and vitamin A. Application Number: 201741013728 (Awaiting Examination)
2. Extraction of urease inhibitor from Tamarind fruit pulp and the coating of urinary catheter with the bioactive formulation to inhibit encrustation. Application number: 201741013729 (Awaiting Examination)
3. A Process for The Extraction and Stabilization of Mucilage from *Cocculus Hirsutus* Using Nanoparticle. (Awaiting Examination) Application Number 201841040921
4. Cool Heal Nano Care, Application Number: 201941014512 A (Awaiting Examination)

13. Personal Details

Fathers Name	:	Mr.V.Arul Selvaraj
Date of Birth & Age	:	25.04.1993 & 30
Gender	:	Female
Marital Status	:	Married
Permanent Address	:	Avudai Sivan Patti, Avudayanoor, Tenkasi Dt - 627808