

Resume

V.Rajalakshmi

E-102, Pranav Block, Chitra Township-Phase1, Dharga Road,ZaminPallavaram, Chennai-600043
Ph No: +91 8220245359, Mail ID: raji.ajjii@gmail.com

- To explore the new areas and work for an organization which provides me the opportunity to improve my skills and knowledge to growth along with the organization.
- Highly self-motivated candidate with demonstrated research expertise, looking for a responsible position to gain good experience.

EDUCATION

- Ph.D** 2019 Microbiology, PSG College of Arts & Science, Coimbatore
- M.Phil** 2012 Microbiology, PSG College of Arts & Science, Coimbatore
- M.Sc** 2011 Microbiology, Amrita VishwaVidyapeetam, Kollam, Kerala.
- B.Sc** 2009 Microbiology, NadarSaraswathi college of Arts and Science, Theni

M.Sc., Dissertation

Studies on the Bacterial Endosymbionts of Cardamom Thrips, *Sciothripscardamomi*, (Ramk.) Thripidae: Thysanoptera

Under Dr.T.K.Jacob, Principal Scientist, Division of Crop Protection, Indian Institute of Spices Research (IISR), ICAR institute, Calicut, Kerala.

Duration Period: Jan 2011-May 2011.

M.Phil., Dissertation

Synthesis and Characterization of *V.negundo* loaded Nanoparticles for the Fabrication of Antimicrobial Textiles

Under Dr. R.Rajendran, Principal, PSG college of Arts and Science, Coimbatore, Tamilnadu.

Duration Period: Sep 2011-Oct 2012

Ph.D., Dissertation

A Study on Bioconversion of Cellulosic Cotton Waste to Ethanol through Pretreatment, Saccharification and Microbial Fermentation

Under Dr. R.Rajendran, Principal, PSG college of Arts and Science, Coimbatore, Tamilnadu.

Duration Period: Sep 2013-Dec 2016

PROFESSIONAL EXPERIENCE

Industry

Worked as Project Analyst at B-Sustain Energy Projects PVT LTD, Arumbakkam, Chennai-600106 (August 2018- September 2020).

Teaching

Currently Working as Assistant Professor in PG & Research Department of Microbiology at DG Vaishnav College, Chennai (August 2021- Till Date)

Worked as an Assistant Professor in Microbiology at Prof. Dhanapalan College of Arts and Science, Kelambakkam, Chennai- 603 103 (Jan 2021- July 2021)

Worked as a Part time Biology Staff in TIME Institute, Tirupur (Jan 2017- June 2017).

Research

JRF – DBT Sponsored project entitled “Economic Utilization of Cotton Wastes from Textile Mills for Bioethanol Production through Microbial Fermentation. BT/PR4267/PBD/26/294/2012 & 19-06-2013. (2013-2016).

During this research, I have been experienced in working in small scale prototype to large scale biomethenation plants. I have scaled up the ethanol production under optimized parameters. The enzyme production and purification also performed for the further process.

Research Supervision

M.Sc Candidate

Fabrication of Mosquito repellent textiles coated with nanoparticle loaded with *Rosmarinus Officinalis* leaf extract and its Antimicrobial Property by Mrs S. Lavanyashree(2021) Key Supervisor.

WORKSHOPS AND INDUSTRIAL TRAINING

Participated in Online FDP on “**MOOCS Preparation and its Importance**” held on 19th March 2021 organized by Centre for Web Based Learning and Department of Computer Science, IDE, University of Madras, Chennai.

Attended training course on recent techniques in Molecular Microbiology organized by Agri Biotech Foundation, P.J.T.S Agricultural University Campus, Rajendranagar, Hyderabad, Telangana State (20th – 25th June 2016).

Participated in the Training Program on “**BIOFUELS**” Organized by Department of Tree Breeding, Forest College and Research Institute, Tamilnadu Agricultural University, Mettupalayam.

Participated in the National Seminar on The Applications of Chromatography for Bioscience Explorations Related to Defence Research Organized by the School Biosciences, Dr.G.R.Damodaran College of Science, Coimbatore during Dec 5-7 2012.

PUBLICATION IN JOURNALS

Rajendran R, Radhai R **Rajalakshmi V** (2014) Development of Mosquito Repellent Fabrics using *Vitexnegundo* loaded Nanoparticles, Malaya Journal of Biosciences, 1(1):19–23.

Rajendran R, **Rajalakshmi V**, Radhai R (2014) Fabrication of Antimicrobial Medical Textiles using *V.negundo* loaded Nanoparticle, WJPPS, 3(8): 1394- 1406.

Rajalakshmi V, Rajendran R, Radhai R (2013) Poly herbal ayurvedic formulation for the development of anti-miliaria cotton fabrics, Ancient Science of Life, 32 (s2):18.

Rajendran. R, Radhai. R, Karthik Sundaram. S, **Rajalakshmi. V** (2015) Utilization of cellulosic biomass as a substrate for the production of bioethanol. International journal of Environmental Sciences. 5 (4) 743-753.

Rajalakshmi. V, Karthik Sundaram. S, Poornima R Rajendran. R (2016) Biotransformation Of C-5 and C-6 Sugars of Cellulosic Cotton Wastes to Bioethanol through Physical and Enzymatic Modes, Applied Ecology and Environmental Research 14(2): 411-420 (**0.55 Impact factor**).

Kongarasi K., Rajendran R., Radhai R., Karthik Sundaram S., **Rajalakshmi V.**, Manikandan A. and Geethadevi C. (2016) Antimicrobial Property of Plasma Treated Bamboo Fabric Imparted with Combinatorial Herbal Extract Int. J. Pure App. Biosci. 4 (6): 76-87.

R. Rajendran, R. Radhai, R. Savitha, S. K. Sundaram, K. Kongarasi, C. Geethadevi and **V. Rajalakshmi** (2017) A study on the Antimicrobial property of the cotton fabric imparted with *Michaeliachampaca* leaf extract loaded nanoparticles IJPSR, 8(3): 1235-1244.

Rajalakshmi V, Rajendran R, Geethadevi C, Karthiksundaram S (2021) Optimization of Fermentation parameters for Bioethanol production from Hard cotton waste. Advances in Environmental Research (Under review)

PUBLICATIONS IN SEMINARS/ CONFERENCE PROCEEDIN

V.Rajalakshmi, R.Rajendran. Fabrication of Antimicrobial Textiles with *Scopariadulcis* Extract Loaded Chitosan Alginate Nanoparticles, International e-Conference on Polymeric Biomaterials & Bioengineering, Organized by the APABiofourm, on August 27-28, 202.

V. Rajalakshmi, R. Rajendran, S. Karthik Sundaram, R. Radhai, and R. Tharani. Optimization of Driving Parameters for Laccase Enzyme Production in the Pretreatment of Cotton Wastes – An Innovative Initiation for the Production of Bioethanol. Proceedings of International Symposium on New Perspectives in Modern Biotechnology, organized by the Society for Applied Biotechnology at The Accord Hotel, Puducherry, between 23rd and 25th of March 2015.

Rajalakshmi V, Rajendran R, Tharani R, and Poonima S. “Bioethanol production from waste cotton using batch fermentation”. Proceedings of the National Seminar on “Contemporary Molecular Techniques and their Potential Applications in Current Applied Biology” organized by the Research Department of Microbiology, M. R. Government Arts College, Mannargudi, in association with the PG & Research Department of Microbiology, PSG College of Arts & Science, on 30th of January 2015.

Kongarasi K, Rajendran. R, Radhai. R and **Rajalakshmi. V**. “Development of Antimicrobial Bamboo Fabric using Combinatorial Herbal Extract”. Proceedings of the National Seminar on “Contemporary Molecular Techniques and their Potential Applications in Current Applied Biology” organized by the Research Department of Microbiology, M. R. Government Arts College, Mannargudi, in association with the PG & Research Department of Microbiology, PSG College of Arts & Science, on 30th of January 2015.

Tharini R, Rajendran R, **Rajalakshmi V**, and Poornima S. “Isolation and Characterization of Cellulolytic Fungi for the Biological Pretreatment of Cotton Wastes. Proceedings of the National Seminar on “Contemporary Molecular Techniques and their Potential Applications in Current Applied Biology” organized by the Research Department of Microbiology, M. R. Government Arts College, Mannargudi, in association with the PG & Research Department of Microbiology, PSG College of Arts & Science, on 30th of January 2015.

Rajalakshmi V, Rajendran R, Radhai R, Kongarasi K. Ecofriendly mosquito repellent and Antimicrobial fabrics using herb loaded nanoparticle Poster Presented at International conference on “Polymeric biomaterials, bioengineering and biodiagnostics”, New Delhi. BIOMATERIALS Oct 27th to 30th – 2014

Kongarasi.K, Rajendran. R, Radhai. R, **Rajalakshmi. V**. Fabrication of antimicrobial baby diapers in plasma pretreated bamboo fabrics post-treated with *aloe vera* and *rose damascena* extracts. Proceedings of the International conference on “Polymeric biomaterials, bioengineering and biodiagnostics”, New Delhi. BIOMATERIALS – 2014.

Rajalakshmi V, R. Rajendran, R. Radhai. “Production of Cellulosic Bioethanol from Textile Cotton waste – An Alternative Fuel for diesel Engines”. Proceedings of the TEQIP-II International Conference on Modern Progress in Biotechnology held during 9th -10th October 2014 organized by the Department of Biotechnology, Bharathidasan Institute of Technology, Anna University, Tiruchirappalli-24

Kongarasi. K, Rajendran. R, Radhai. R, **Rajalakshmi. V**. Development of antimicrobial diapers and wipes using the combinatorial herbal extract loaded nanoparticles coated on the plasma pretreated bamboo fabrics. Proceedings of the International conference on “Innovations and future research dimensions on Nano biopharmaceutical Technology” Anna University, BIT campus, Tiruchirappalli 7-8 Oct 2014.

Rajalakshmi V, R. Rajendran, R. Radhai, Josena George. Entrapment of *Scopariadulcis* extract in chitosan alginate nanoparticles for development of antimicrobial medical textiles, proceedings of the International conference on “Innovations and future research dimensions on Nano biopharmaceutical Technology” Anna University, BIT campus, Tiruchirappalli 7-8 Oct 2014.

Rajalakshmi V, Rajendran R, Radhai R (2014) Utilization of Cellulosic Biomass as a Substrate for the Production of Bioethanol proceedings of the International Conference on Green Technology for Environmental Pollution Prevention and Control (ICGTEPC 2014) held at National Institute of Technology, Tiruchirappalli, Tamilnadu India at 27th to 9th Sep 2014.

Kongarasi K, Rajendran R, Radhai R, **Rajalakshmi V** “ Synthesis and Characterization of Nanoparticles loaded with Herbal Extract” in international conference on Materials and Characterization Techniques held at Vellore Institute of Technology on 10th- 12th March, 2014.

Rajalakshmi V, Rajendran R, Radhai R, Karthik Sundaram S (2014) Bioconversion of cotton based waste textiles- A step towards the production of bioethanol fuel using microbial fermentation, proceedings of the International conference on environmental earth Sciences : Accomplishments, Plans and Challenges University of Madras, March 19-22, 2014.

Rajalakshmi V, Rajendran R, Radhai R (2014) Innovative medical textiles at International conference on Current trends in medical textiles research held at SITRA, 1st March.

Kongarasi K, Rajendran R, Radhai R, **Rajalakshmi V** (2014) Investigation of plasma pre-treatment on the polycotton fabrics post treated with Anti-microbial finishes at International conference on Current trends in medical textiles research held at SITRA, 1st March.

Kongarasi K, Rajendran R, Radhai R, **Rajalakshmi V**, Manikandan A. Ecofriendly Diapers- A potent solution for the irritation diaper rash, Proceedings of the IInd conference on Collaborative Research in Ayurveda & modern biology 2014 held at Coimbatore, Tamilnadu from 03rd to 04th February 2014.

Rajalakshmi V, Rajendran R, Radhai R “Development of Anti Miliarial Fabrics using Poly herbal Extract” in the 11th IAAM National conference on “Recent Development in Microbiology, Biochemistry and Biotechnology” held on 29th and 30th November 2013.

Rajalakshmi V, Rajendran R, Radhai R (2013) Ecofriendly Mosquito repellent Fabrics an *In vitro* Study, Proceedings of the International Conference on Biotechnology for Innovative Applications, held at Amrita University, Amritapuri, Kerala, Aug 10-14, 2013.

Rajalakshmi V, Rajendran R, Radhai R (2013) Poly herbal ayurvedic formulation for the development of anti-miliaria cotton fabrics, Proceedings of the International Research Conference on Ayurvedic Research and Education held at AVP Research Foundation, Coimbatore, May 24- 25 2013.

Rajalakshmi V, Rajendran R, Radhai R (2013) Development of Mosquito Repellent Fabrics using *V.negundo* loaded Nanoparticles, National Conference on Biological Sciences (NCBS-2013) held at PSG College of Arts and Science, Coimbatore, 13-14 March, 2013.

Rajalakshmi V, Rajendran R, Radhai R (2013) Nanoparticle loaded with *V.negundo* leaf extract-a step towards production of ecofriendly hygienic textiles, Proceedings of the National Conference on Advanced Materials and Applications (NCAMA-2013) at National Institute of Technology (NIT), Trichy, during April 04th and 05th .

Manikandan.A, Rajendran.R, Prabhavathi.P, KarthikSundaram.S, Radhai. R, **Rajalakshmi.V**,GeethaDevi.C and JelinShopia.E. “Antimicrobial activity and Phytochemical evaluation of selected South Indian (Coimbatore district) medicinal plants Against Nosocomial Pathogens” Proceedings of the International Conference on Phytochemicals in health and diseases challenges and future opportunities, organized by Department of Biochemistry and Biotechnology, Annamalai University, Chidambaram between 23rd and 25th of February 2013.

Rajalakshmi V, Rajendran R, Radhai R (2013) Antimicrobial Finishes of Cotton Fabrics Using Quercetin Loaded Nanoparticles, Proceedings of the National Conference on implication and intervention of Phytomedicine in Disease Management (IIPDM 2013) at Periyar University, Salem, during Feb 18th and 19th.

Rajalakshmi V, Rajendran R, Radhai R Geethadevi C (2013) Characterization And Fabrication Of Antimicrobial Cotton Textiles Using Nanoparticle Loaded With *V.Negundo*, Proceedings of the International Conference on Nano electronics and Nano devices (ICNEND 2013) at Saveetha University, Chennai, during Jan 21st and 22nd

Geethadevi C, Rajendran R, Radhai R, **Rajalakshmi V**, Anna joice P (2013) Eco-Friendly Wound Dressing Using Herbal Nanoparticles, Proceedings of the International Conference on Nano electronics and Nano devices (ICNEND 2013) at Saveetha University, Chennai, during Jan 21st and 22nd .

Rajalakshmi V, Rajendran R, Radhai R (2012) Characterization and Optimization of *VitexNegundo* Nanoparticles for the Development of Antimicrobial Textiles, Proceedings of the International Symposium on Macro and Supramolecular Architectures and Materials (MAM -12) organized by KSR college of Engineering at Hotel Le MERIDIEN Coimbatore during Nov 21st to 25th .

Rajalakshmi V, Rajendran R, Radhai R (2012) Probing The Use Of Herbal Extracts In Antimicrobial Activity After Entrapment Into Alginate/Chitosan Nanoparticles, Proceedings of the National Conference on Phytomedicine (NCPM 2012) Organized by Department of Botany, Bharathiyar University, Coimbatore during Oct 4th and 5th

Manikandan A, R.Rajendran, P.Prabhavathi, **V.Rajalakshmi**,K.Tulasi, and R.Radhai. “In vitro phytochemical screening and antimicrobial activity of *TephrosiaPurpurea*, *hygrophilashulli*, and *cleome gynandra* against mastitis casusing bacterial pathogens” at national conference on phytomedicine, organized by the Department of Botany Bharathiar University, Coimbatore, during 4th and 5th October 2012.

Rajalakshmi V, Rajendran R, Radhai R, Savitha R, LekshmiA.S.Nair (2012) Ethanomedical analysis of *VitexNegundo* leaf exatrct using Antimicrobial and Phytochemical

studies , Proceedings of the National conference on microbiological research in 21st century (NCOMRIT 2012) organized by Department of Microbiology, Bharathidasan University, Trichy during Feb 27 & 28th.

Rajalakshmi V, Rajendran R, Radhai R, Anna joice P (2011) Fabrication of Antimicrobial wound dressing using *OcimumSantum*loaded alginate nanoparticles (ICAM 2011) Organized by Department of Physics, PSG college of Technology, Coimbatore during Dec 21st to 25th.

Book Articles

V.Rajalakshmi,R.Rajendran and R.Radhai (2012). Characterization and Optimization of *Vitexnegundo* nanoparticles for the development of antimicrobial textiles. Advanced nano Materials for Industrial Applications, pp 45-50. Bloomsbury publishing India Pvt. Ltd.

Kongarasi K, Rajendran R, Radhai R, **Rajalakshmi V** (2015) Development of antimicrobial diapers using the combinatorial herbal extract coated on the plasma pretreated bamboo fabrics, Trends, Innovation and Market potential in technical textiles , Shangaverlag publication pg no: 264-269 (ISBN 978-81-923752-9-8).

Faculty development Program Attended

Online Elementary FDP on Five days FDP on Green Technology & Sustainability Engineering from 23/08/2021 to 27/08/2021 at BharathiVidhyapeeth College of Engineering, Navi Mumbai.

International Faculty Development Programme (Virtual) on Recents Trends in Transforming Life Sciences-Focus on Academia & Industry Symbiosis organized by Department of Biotechnology, Nizam College (A), Osmania University in Association with Government City College and Loyola Academy, Hyderabad.

Three Days Faculty Development Programme on “Challenges in Microbiological Invention and Intellectual Property Rights” organized by the Department of Microbiology in association with the IQAC from 23/09/2021 to 25/09/2021 under UGC Paramarsh Scheme

Three Days Faculty Development Programme on intellectual Property Rights in Biotechnology Organized by Department of Biotechnology in association with the IQAC on 22/09/2021 to 24/09/2021 under UGC Paramarsh Scheme.

Online Elementary FDP on Five days FDP on “Achieving Leadership excellence for teachers of Higher Educational Institutions” from 27/09/2021 to 201/10/2021 at Sri Ramakrishna Mission Vidhyalaya College of education (Autonomous).

Awards

First rank holder and gold medalist in B.Sc Microbiology, NadarSaraswathi College of Arts and Science, Theni 2009

Awarded the **best research paper award (oral)** for the poster entitled “Ethnomedical Analysis of the *VitexNigundo* Leaf Extracts Using Antimicrobial and Phytochemical Studies” at the National Conference on Microbiological Research in 21st Century organized by the

Department of Microbiology, School of Life Sciences, Bharathidasan University, Tiruchirapalli, 2012.

Awarded the **Best Research Paper (Oral)** for the paper entitled “Antimicrobial Finishes of Cotton Fabrics Using Quercetin Loaded Nanoparticles” at the National Conference on implication and intervention of Phytomedicine in Disease Management (IIPDM 2013) at Periyar University, Salem, during 18th - 19th of February 2013.

Awarded the **Best Research Paper (Oral)** for the paper entitled “Innovative Hygienic medical textiles” at the International conference on Current trends in medical textiles research held at SITRA,2014.

Awarded the **Best Research Paper(Oral)** for the paper entitled “Optimization of Driving Parameters for Laccase Enzyme Production in the Pretreatment of Cotton Wastes – An Innovative Initiation for the Production of Bioethanol” at the International Symposium on New Perspectives in Modern Biotechnology, organized by the Society for Applied Biotechnology at The Accord Hotel, Puducherry, between 23rd and 25th of March 2015.

PERSONAL PROFILE

Sex : Female
Age & Date of Birth : 32Years, 5th June 1989
Marital Status : Married
Languages Known : Tamil and English (Malayalam only to speak and Hindi only to read and write)
Nationality : Indian

REFERENCES

1. Dr.R.Rajendran,

Associate Professor & Former Principal,
Department of Microbiology,
PSG College of Arts and Science,
Coimbatore.

2. Mr. ParathasarathyArumugam

Director,
B-Sustain Energy Projects Pvt Ltd,
Arumbakkam,
Chennai.

3. Dr. A. Gnanamani,

Sr.Principal Scientist, Head & Professor-AcSIR,
Microbiology Lab,
Central Leather Research Institute,
Adyar,
Chennai.

DECLARATION

I soberly declare that the above furnished particulars are true to my acquaintance.

A handwritten signature in blue ink, consisting of a stylized 'R' followed by a horizontal line and a checkmark-like flourish.

RAJALAKSHMI V