

Dr. J. RENUKA

For Communication:

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OBJECTIVE

To enhance educational and professional skills in a stable and dynamic workplace and to secure a challenging position to expand my knowledge and research skills.

EDUCATIONAL QUALIFICATION

- Doctoral of Philosophy Microbiology **Ph. D** : Completed 2021– Madurai Kamaraj University, Madurai, Tamil Nadu, India
- Thesis submitted : Physico – Chemical and Microbiological analysis of water using selected seed extracts.
- Master of Philosophy Microbiology (**M. Phil**) : 2007 – 2011 - Bharathidasan University, Trichy, Tamil Nadu, India
- Project Submitted :” A Comparative study on the isolation and partial purification in serine alkaline protease in *Bacillus subtilis* and *Aspergillus niger*”
- Master of Science Microbiology (**M.Sc.**) : 2000-2003 - Dr. A. L. Mudaliar Post Graduate Institute of Basic Medical Sciences (IBMS), University of Madras, Chennai, Tamil Nadu, India
- Project Submitted : “Isolation of *Mycoplasma pneumonia* from HIV/AIDS patients with pulmonary complications in Chennai, Tamil Nadu, India
- Bachelor of Science in Botany (**B.Sc.**) : 1997 – 2000 - Madras Christian College, University of Madras, Chennai, Tamil Nadu, India

PROFESSIONAL EXPERIENCE

TEACHING EXPERIENCE

- Working as Assistant Professor since 30th of Jan 2008, to the present in the Department of Microbiology, The American College, Madurai 625 002. Courses taught: (Biomolecules, Clinical Microbiology, Plant Microbiology, Cell Biology, Molecular Biology, Bioinstrumentation Techniques, Human physiology, Medical Microbiology, Pharmacology & Toxicology, Endocrinology, Animal cell culture.) both in the theoretical and practical aspect for Bachelor degree students and Post graduate degree students.
- Worked as a Lecturer in the Department of Microbiology, Prince Shri Venkateshwara Arts & Science College, Chennai for a period of two years.(2005- 2007)
- Worked as a Tutor in the Department of Microbiology, Konaseema Institute of Medical Sciences & Research Foundation, Andhra Pradesh for a period of six months. June - Nov (2004).
- Worked as a Lecturer in the Dept of Microbiology, Tagore Arts & Science College, Chennai for a period of one year.(2003 – 2004)

EXTERNAL EXAMINER

- External examiner, Microbiology Department, New Prince College of Arts & Science, Chennai.
- External examiner, Biochemistry Department, SVN College, Nagamalai Pudukottai. Madurai, Tamil Nadu, India.
- External Examiner, Biochemistry Department, AVG College of Arts & Science, Mayiladuthurai.,Tamilnadu, India.
- External examiner for Mother Teresa Women's University, Kodiakanal.
- External Examiner for practical exam for UG Biochemistry, Sourashtra College, Madurai.

RESOURCE PERSON

- Resource person for the Young Student Scientist Program in science and technology conducted by the Human Resource Development (HRD), Govt. of India and TNSCST (Tamil Nadu State Council for Science and Technology) Chennai, Tamil Nadu, India.
- Resource person for the Pharmaceutical Marketing Orientation program conducted by the Placement cell, The American College, Madurai, Tamil Nadu, India.

- Resource person and delivered a talk on “Open Defecation – Health Impacts Program on Awareness of Health, at Virathanoor, Madurai organized by department of social work, The American College, Madurai .

MEMBERSHIP IN PROFESSIONAL BODIES

PROFESSIONAL SKILLS

- Underwent training in Basic Laboratory techniques and Vaccine production (BCG) at King Institute, Chennai.
- Underwent training in Molecular Diagnostic techniques at YRG Health Care, Chennai.
- Underwent Hands on Training in Tissue Culture & Stem Cell Research at Madras Medical Mission, Chennai.
- Underwent training in Automation (BACTEC), Sensitivity Pattern study, Vaccine Production for Tuberculosis in Tuberculosis Research Centre, Chennai.
- Underwent training in Immunotechnology Lab ELISA Techniques – Types, Flow Cytometry, Western Blot Techniques, PCR, Agarose Gel Electrophoresis, Animal Cell Culture , Primary Chicken Embryo Fibroblast Culture, Propagation & Maintenance of Vero cell line, Cell Counting & Viability testing, Egg Inoculation Technique, Cytopathic effect of viruses, Micro Titration Assay at Christian Medical College, Vellore.
- Underwent on the job training programme on Clinical Biochemistry Techniques at Thembhavani Hospital, Madurai.
- One Day First Aid Training Program organized by the Department of Biochemistry in association with St.John Ambulance, India .

PUBLICATIONS IN NATIONAL & INTERNATIONAL JOURNALS

- Published a paper entitled “A study on Clarification of water and antibacterial activity of selected seed extracts”.2013 ISBN NO- 978-81-928661-0-9.
- Published a paper entitled “Assessment of antibacterial activity and water clarification using selected seed extracts”.2014 ISBN NO - 978 -93-82323-26-6.
- Published a paper entitled “A Comparative study on isolation and partial purification of Serine alkaline protease from Bacillus subtilis and Aspergillus niger ISBN No – 9789381723326
- Published a paper entitled “Impact of NGO on the empowerment of rural poor women in Tamilnadu: A case study of Usilampatti Block, Madurai District”, Social Sciences International Research Journal, Volume I, Issue I, ISSN – 2395 – 0544.
- Published a paper entitled “Barriers for Women to Positions of Power, Societal & Corporate structures perception of Leadership & Discrimination restrict women advancement to authority” in Roots - International Journal of Multidisciplinary Researches, Vol 3, January 2017, 19, ISSN 2349 – 8684.

- Published a paper entitled “A Study on the assessment of water quality treated with selected plant species” in the **International Journal of Innovative Research In Science Engineering & Technology, (IJIRSET)**, Volume 6, Issue 2, February 2017, 2225, ISSN 2319 -8753, Impact Factor – 6.209.
- Published a paper entitled “Analysis of antibacterial activity and water clarification using selected seed extracts in the **World journal of Pharmaceutical Research** Volume 7, Issue 16, 1544- 1557, 2018. ISSN 2277 - 7105, Impact Factor – 8.074.

PAPERS PRESENTED IN INTERNATIONAL/NATIONAL CONFERENCES/ SYMPOSIA

- Presented a paper entitled “Isolation of *Mycoplasma pneumoniae* in HIV/AIDS patients with Pulmonary Complications in Chennai at 26th Annual Conference of Indian Association of Medical Microbiologists, Bangalore.
- Presented a paper entitled “A study on Clarification of water and antibacterial activity of selected seed extracts” in National Conference on Frontier Vistas in Modern Biotechnology, The American College, Madurai on 12th December 2013 and received the best paper award for oral paper presentation.
- Presented a paper on “A Comparative study on isolation and partial purification of Serine alkaline protease from *Bacillus subtilis* and *Aspergillus niger*” in the UGC sponsored National conference on Biological sciences “The Amalgamation and advancements of multidisciplinary life sciences” on 18th & 19th of December 2014 organized by the Department of Biochemistry, V.V. Vaniaperumal college for women, Virudhunagar.
- Presented a paper on “Impact of NGO on the empowerment of rural poor women in Tamilnadu: A case study of Usilampatti Block, Madurai District”, in the International Conference on Women empowerment & Social Sciences - 2015 on 5th - 7th March 2015, organized by The American College, Madurai in collaboration with International Multidisciplinary Research Foundation, Andhra Pradesh .
- Presented a paper entitled “Assessment of antibacterial activity and water clarification using selected seed extracts” in Proteofest 2014 of Rev Jacob Christian College, Ambilikai and received the best paper award for oral paper presentation.
- Presented & published a paper on:”Clarification and purification of water using seeds of selected plant species” on the Botanicals & Phytochemicals – The Challenges & Promise for Health Care & Drug Development on 4th February 2016.
- Presented a paper entitled “A study on the isolation and characterization of Uropathogenic *Escherichia Coli* (UPEC) in UTI patients” in the International Conference on New Horizons Emerging Challenges and recent paradigms in food mediated immunity & their role in human health & longevity organized by Dept of Zoology, The American College, Madurai, 31st August – 1st September 2016.

- Presented a paper on “Biodegradation of Cyanide Waste by *Pseudomonas putida*” in DBT sponsored National Conference on Biotechnology – New Horizons & Hope (BNHH 2016) organized by School of Biotechnology, Madurai Kamaraj University, Madurai, on 20th & 21st October 2016.
- Presented a paper on “A Review of the Therapeutic VLCK diet beyond Weight loss in UGC sponsored State Level Seminar on Therapeutic Potential of Low Carb High Fat Diet organized by the Dept of Home Science, Sri Meenakshi Govt Arts College for Women, Madurai, on 7th January 2017.
- Presented a paper on “Barriers for Women to Positions of Power, Societal & Corporate structures perception of Leadership & Discrimination restrict women advancement to authority in the 2nd International Womens Conference organized by the Centre for Gender studies, The American College, Madurai on 6th & 7th January 2017. And received best paper presentation award.
- Presented a paper on entitled “Analysis of active principles in selected plant species using GCMS” in International Conference on Functional materials for Energy, Environment and Biomedical Applications organized by the Madurai Kamaraj University, Madurai on 11 & 12 December 2017.
- Presented a paper on “Assessment of Physico-chemical parameters in water using selected plant extracts” on the National Conference organized by the Department of Zoology and Department of Microbiology & Immunology on 2 & 3 February 2018.
- Presented a paper on the Biosynthesis, Phytochemical Characterization and Antibacterial Activity of Silver Nano Particles using *Avicennia marina* in the National conference on "Recent Trends in Biological Sciences" (RTBS-2020) organized by the Department of Zoology, The American College
- Presented a paper on the Biosynthesis and antibacterial activity of silver nanoparticles using *Amaranthus tender* and *Sesbania grandiflora* in the International conference on "Recent Advances in Bioscience, organized by the Indian Medicine Research and St. Bonnie White College of Nursing, Salem.

SEMINARS/SYMPOSIUM/CONFERENCES/WORKSHOPS ATTENDED

- Participated in one day conference of Tamilnadu & Pondicherry Indian Association of Medical Microbiologist (IAMM) chapter meeting at Christian Medical College, Vellore.
- Attended IAMM chapter meeting at Madras Medical Mission, Chennai.
- Participated in 25th National Conference of Indian Association of Medical Microbiologists (IAMM), AIIMS, New Delhi.
- Participated in 26th Annual Conference of Medical Microbiologists, NIMHANS,

Bangalore.

- Participated in International conference on Stem cell & Regenerative medicine organized by NCRM, Chennai 2009 held at the Nichi – In centre for Regenerative Medicine, Chennai.
- Participated in National Conference on Frontier Vistas in Modern Biotechnology, The American College, Madurai.
- Participated in National Conference on Global Opportunities for Recent Developments in Science and Technology, Proteofest 2014, Rev Jacob Memorial Christian College, Amblikkai, Dindigul.
- Participated in the International Conference on Stem cells and Regenerative Medicine N.I.C.H.E 2015, organized by National Centre for Stem Cells and Regenerative Medicine Chennai on 10th October 2015.
- Participated in “MedLab 2015” - National Conclave on Laboratory Medicine organized by Meenakshi Mission Hospital and Research Centre, Madurai on 5th & 6th December 2015.
- DBT sponsored National Conference on Community Microbial Consortia and the Human Holobiont – Implications of yet – Uncultured Microorganisms in Systemic Health, Disease & Personalized Medicine, organized by department of Immunology & Microbiology, The American College, Madurai on 7th & 8th December 2015.
- Academies Lecture workshop on Recent Trends in Biological Sciences organized by PG & Research Department of Zoology, The American College, Madurai on 21st & 22nd January 2016.
- Participated in the International Conference on Biomolecules & their Prospects, Biomolecules – 2016 organized by Selvamm Arts & Science College, Namakkal on 8th July 2016.
- Participated in Academies Lecture workshop on Recent Trends in Biological Sciences organized by PG & Research Department of Zoology, The American College, Madurai on 21st & 22nd January 2016.
- Participated in the Science Academies Lecture workshop on Introduction to Modern Biology organized Dept of Zoology, The American College, Madurai. On 19th -21st Jan 2017.
- Participated in the International workshop on Statistics using Excel & SPSS, organized by Department of Zoology, Jayaraj Annpackiam College for women, Periyakulam, Theni on 5 & 6 September 2017.
- Participated on the Science Academies Lecture Workshop organized by the department of Zoology, The American College, Madurai on 23 - 25 January 2018.

- Participated in UGC sponsored National Level seminar on “Recent Trends in Food Processing Technology” organized by Department of Food Science and Technology, Arul Anandar College, Madurai on 30 January 2018.
- Participated in International symposium on “Biomedical Research: Challenges & Opportunities” organized by the Research advisory committee of the Fatima College, Madurai on 7 February, 2018.
- Participated in One day symposium on “Celebrating Womenhood” organized by Apollo Hospitals, Madurai on 7 March, 2018.
- Participated in National conference on Coral reefs: Threats and conservation CRTC – 2019 organized by the PG & Research Department of Zoology , The American College, Madurai on 12 February, 2019.
- Participated in International Seminar on Waste Management organized by the National Centre of Excellence (MHRD), Thiagarajar College and Nottingham Trent University, United Kingdom on 3rd September 2019.
- Participated in International Seminar on Recent Trends in Food Processing Technology (RTFPT – 2019) organized by the Department of Food Science and Technology, Arul Anandar College on 19th January 2019.
- Participated in National Conference on Western Ghats: Threats and Conservation (WGTC-2018) organized by the PG & Research Department of Zoology in association with Save Western Ghats Movement (SWGM), The American College, Madurai on 17th October 2019.
- Participated in National Seminar on Biopolymers: Threats and Conservation (WGTC-2018) organized by the Research Department of Microbiology, Sadakathullah Appa College, Rahamathnagar, Tirunelveli on 19th September 2018.
- Participated in National conference on Recent Trends in Modern Immunology organized by the Department of Microbiology & Immunology, The American College, Madurai on 23rd January 2019.
- Participated in International webinar on Biodiversity , 22 May 2020
 - Participated in International webinar series on Biodiversity - 18 May - 22 May 2020
 - Participated in International virtual conference of Covid - 19 recent updates and current advances 3 and 4 June 2020
 - Participated in International Technical webinar on Advancements on Biotechnology, 22 - 24 June 2020
 - Participated in International virtual conference on Immune Boosting Diet for covid - 19, 21 May 2020
 - Participated in international webinar on functional nanobiomaterials in Biomedical field, 1st June 2020

- Participated in International webinar on omics and Disease markers , 9 June 2020
- Participated in International webinar on Modern enhancement in Life sciences, 3 & 4 June 2020
- Participated in International webinar on Research avenues in Biochemistry, 11 &12 June 2020
- Participated in National Faculty Development programme on Grant writing in Biomedical Research, 8, 9 & 12th June 2020
- Participated in National webinar on Face Mask - Life Mask , 2 July 2020
- Participated in National webinar on optimism in the time of covid - 19, 27 June 2020
- Participated in National webinar on The Yin and Yang of viruses , 1 July 2020
- Participated in National webinar on what did we learn from the genomes of SARS co - V -2 isolates, 2 July 2020
- Participated in National webinar on comparative genomics of *Pseudomonas aeruginosa* ocular isolates from keratitis patients ,6th July 2020
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- Participated in National webinar on Research to Publication - and expert view, 9 May 2020
- Participated in National webinar on stem cell therapy, 5 June 2020
- Participated in National webinar conference on Life sciences, 29 June 2020
- Participated in Three Day online national level workshop on DNA Barcoding, 22 - 24 May 2020
- Participated in National webinar series on covid - 19 awareness , nature science foundation , 17 May 2020
- Participated in National webinar on Molecular Diagnostics of Infectious Diseases - An Introduction ,3 July 2020
- Participated in National webinar on women at Risk Blossom, 9 June 2020
- Participated in National webinar on Ladies club , 27 May 2020
- Participated in National level E- quiz on NAAC Assessment & Accreditation process, 28 June 2020
- Participated in National level E- quiz on UGC /NTA, NET paper - 1, 22 June 2020
- Participated in National level E-quiz on Biotechniques, 20 June 2020
- Participated in National level E - Quiz on Awareness, Daignosis & therapeutics of Covid -19 , 14 May 2020
- Participated in National level E - quiz on corona and its impact on teaching, 3 July 2020
- Participated in National level e - quiz on Covid - 19 awareness quiz, 16 May 2020
- Participated in National level e - quiz on covid 19 pandemic awareness - IQAC, 16 May 2020
- Participated in National webinar on Voyage of pathogens - A journey of unwelcomed guests, 7th July 2020.
- Participated in National webinar on Impact of multidrug resistance in burn injuries , 8 July 2020.
- Participated in five days national level webinar knowledge series on Horizons in Research organized by Tamilnadu Teachers Education University from 13th to 17th July 2020.
- Participated in three days international webinar series on Forensic science for society organized by G.T.N. Arts and science college, Dindugul from 3 – 5th July 2020.

- Participated in three days Faculty Development Programme on Responsibilities of Microbiologists in Combating Diseases organized by K.S. Rangasamy Arts and science college, Tiruchengode from 8 – 10th July 2020.
- Participated in five days Faculty Development Programme on Recent trends in life sciences organized by St. Judes College, Thoothoor from 6 – 10th July 2020.
- Participated in National webinar on Resistant Modulators: A possible solution for AMR, 9th July 2020.
- Participated in National webinar on Zebrafish infectious disease models, 11th July 2020.
- Participated in National webinar on Exposome effects on the Microbiome in the context of covid 19 pandemic, 15th July 2020.
- Participated in National webinar on NGS approaches in combating infectious diseases 10th July 2020.
- Participated in National webinar on CRISPR – A molecular weapon to combat infectious diseases on 13th July 2020.

OTHER RESPONSIBILITIES

- ❖ Project Associate, Service Learning Programme – The American College, Madurai
- ❖ Life time member of Tamilnadu Science Forum (TNSF)
- ❖ Annual Member of Indian Association of Medical Microbiologist (IAMM)
- ❖ President, Microbiology Association, Department of Microbiology, The American College, Madurai, Tamil Nadu, India.
- ❖ Organized One day hands on training program on First Aid , The Department of Biochemistry in association with St. John Ambulance, India organized a on 18th February 2014 for all the students of our college. 118 students from various departments participated in the training program.
- ❖ Organized a field visit to Anatomy Museum at the Madurai Medical College, Madurai on the 13th of March 2015. The students visualized and observed the preserved specimens of Human.
- ❖ Organized a industrial visit to Hatsun Agro Product's Ltd., Madurai on the 19th of March 2015 and Aavin Dairy foundations
- ❖ Organized an industrial visit to the final year students to AVN Ayurveda Formulations Pvt. Ltd, Madurai, on 11th August 2015.
- ❖ Editor of the Newsletter “The Splash” on 15th December 2015. Dr. R.M. Murugappan, Head, Dept. of Zoology & Microbiology, Thiyagaraja College of arts & science, Madurai was the guest of honour.
- ❖ Editor of the Newsletter “The Splash” on 29th March 2016. Dr. Indhu Kannan, Pathologist Meenakshi Mission Hospital and Research Centre, Madurai was the guest of honour.
- ❖ Organized a visit to the Regional Forensic Laboratory, Madurai, on 8 September 2017. 75 students visited the laboratory.

- ❖ Resource person and delivered a talk on “Open Defecation – Health Impacts” Program on Awareness of Health, at Virathanoor, Madurai organized by department of social work, The American College, Madurai on 20 March 2018.
- ❖ Organized a One Day Hands on First Aid Training Program in association with St. John Ambulance, India on 21st March 2018. Mr. Siluvaimani, Honorary Secretary, St. John Ambulance, Madurai was the resource person.
- ❖ Member – Medicinal Plant conservation centre – The American College, Madurai

LIST OF PROJECT GUIDED FOR UG STUDENTS

- ✓ A study on the prevalence of cancer in and around Madurai
- ✓ A study on isolation and identification of serine alkaline protease from *Bacillus subtilis*.
- ✓ Antimycotic activity of *Aegle marmelos* against *Aspergillus niger*.
- ✓ Isolation and characterization of uropathogenic *Escherichia coli* (UPEC) in urinary tract infections.
- ✓ Phytochemical and antimicrobial activity of *Erythrina variegata* against cariogenic oral bacteria.
- ✓ Phytochemical analysis of flower extracts of *Catharntus roseus*.
- ✓ A Comparative study on antioxidant activity of plant extract containing phenolic compounds
- ✓ A Study on the assessment of water quality treated with selected plant species.
- ✓ Biodegradation of cyanide waste by *Pseudomonas putida*
- ✓ A Comparative study of atopic dermatitis in canines
- ✓ A comparative analysis of phytochemical activity in *Boerhavia diffusa*
- ✓ Phytochemical and antimicrobial activity of *Erythrina variegata* against cariogenic oral bacteria
- ✓ Assessment of clarification and Purification Of Water Using Selected Plant Extracts
- ✓ Development of Novel cosmetic product using extracted essential oil from selected flowers
- ✓ A Study of bacteriological profile of Diabetic foot infections
- ✓ A Comparative study on the biosynthesis of silver nanoparticles using banana peel extract and its antimicrobial activity.
- ✓ Comparative analysis of coagulation of water using selected seeds and its active principle study using Gas Chromatography Mass Spectrometry
- ✓ A Comparative study on the effects of germination on the Physico chemical properties of fresh and dried legumes
- ✓ Banana waste as a substrate for alpha - amylase production by *Bacillus subtilis* under solid state fermentation
- ✓ Biosynthesis and antimicrobial activity of silver nanoparticles using *Avicennia marina*.

LIST OF PROJECT GUIDED FOR PG STUDENTS

- A Study of microbial flora of orodental infections

- Formulation and quality evaluation of Millet Based Composite Flour Enriched With Dehydrated Vegetable
- Development and Standardization of Novel Food Products for a Healthy Life.
- Development and standardization of millet based composite flour (Panchasta)
- Isolation, partial purification characterization of serine alkaline protease from *Bacillus subtilis* and *Aspergillus niger*.
- Isolation and characterization of Uropathogenic *Escherichia coli* in urinary tract infections.
- A study on the Potential of Guar Gum/CuZn nanocomposite film as an active food packaging material.
- Enrichment of refined oil cake by solid state fermentation with enhanced antioxidant activities and nutritional qualities.

SPECIALISATION IN TEACHING

- ❖ Clinical Microbiology
- ❖ Systematic Bacteriology & Virology
- ❖ Nutritional Biochemistry
- ❖ Clinical Biochemistry
- ❖ Cell Biology
- ❖ Immunology
- ❖ Molecular Biology
- ❖ Biotechnology
- ❖ Cancer Biology
- ❖ Human Physiology
- ❖ Animal Cell Culture

LANGUAGE PROFICIENCY

- ❖ English, Hindi, Malayalam – To read, Write and Speak – Fluent

COMPUTER LITERATE

- ❖ Practical basic Computer Knowledge –Microsoft Office & Internet

AREA OF INTEREST

- Clinical Microbiology
- Animal Biotechnology
- Cell Culture techniques
- Stem cell Research
- IVF

REFERENCE LETTERS

Dr. S. Subramanian,
Emeritus Professor,
Dept of Microbiology,
Dr. ALMPGIBMS,
University of Madras,
Chennai.

Dr. S.P. Thiagarajan,
Head of the Dept,
Dept of Medical Microbiology,
Dr. ALMPGIBMS,
University of Madras,
Chennai.

PERSONAL INFORMATION

Father's Name	:	T. V. James
Date of Birth	:	30.04.1980
Sex	:	Female
Religion	:	Christianity
Nationality	:	Indian
Marital Status	:	Married
Self Description	:	Hard working, Sincere & Trust worthy
Permanent Address	:	No 10, 5 th street, Union Bank Colony, New Vilangudi, Madurai - 625 018

DECLARATION

I hereby declare that all the information furnished above is true to the best of my knowledge and belief. I also assure that, if I am given an opportunity to work in your organization. I will be glad to work as a dedicated, sincere and motivated employee.



DATE:

(J.RENUKA)

