

Dr. J. RAJENDHRAN

Lecturer
School of Biological Sciences
Madurai Kamaraj University
Madurai - 625 021, India
Tel : +91 452 245 8209
E mail: jrajendhran@gmail.com



EDUCATION

Ph.D in Microbiology	Madurai Kamaraj University, Madurai, India	2001 to 2006
M.Phil in Zoology	Madurai Kamaraj University, Madurai, India	1997 to 1998
M.Sc. in Zoology	Madurai Kamaraj University, Madurai, India	1995 to 1997

HONOURS AND AWARDS

1. **Young Scientist Award** - Association of Microbiologists of India (AMI) – 2007.
2. **Best Oral Presentation Award** – Origene 2007, International Conference on Recent Trends in Biotechnology, Kalasalingam University, Krishnankoil, India. 5-6th January 2007.
3. **SRF-2004** (Senior Research Fellowship by Council of Scientific and Industrial Research, New Delhi, India.)
4. **SLET-1999** (State Level Educational Test for lectureship, Bharathidasan University, Tiruchirapalli, India)
5. **GATE -1998** (Graduate Aptitude Test in Engineering)
6. **M. Phil academic prize** – 1998 for proficiency in Research Methodology, The American College, Madurai, India.
7. **A. K. R. Thilagar prize** – 1997 for proficiency in Immunology, The American College, Madurai, India.

ONGOING RESEARCH PROJECTS

1. Circulating Human Microbiome and Cardiovascular Diseases, Department of Biotechnology, India. 2009-2012
2. Marine Metagenomics – Antimicrobial Drug Development from Marine and Estuarine Metagenome, Department of Science & Technology, India. 2008-2011.

MEMBERSHIP IN SCIENTIFIC SOCIETIES

- Life Member – Association of Microbiologists of India (AMI)
- Life Member – Biotechnology Research Society of India (BRSI)

PUBLICATIONS

1. **Rajendhran J.** and Gunasekaran P. (2009) Human Microbiomics. *Indian Journal of Microbiology* (Accepted)
2. **Rajendhran J.** and Gunasekaran P. (2009) Human Genomics and Microbiomics: the post-genomics scenario. *Current Science*. 97: 140-141
3. Senthilkumar V., **Rajendhran J.**, Busby S.J.W. and Gunasekaran P (2009) Characterization of multiple promoters and transcript stability in the *sacB-sacC* gene cluster in *Zymomonas mobilis*. *Archives of Microbiology*. 191: 529–541
4. **Rajendhran J.** and Gunasekaran P. (2008) Strategies for accessing soil metagenome for desired applications. *Biotechnology Advances*. 26: 576-590.
5. Geetha K., Rajnish K. N. **Rajendhran J.** and Gunasekaran P. (2008) Synthesis of bacterial polysaccharides as a limiting factor for biofuel production. In: Microbial Polysaccharides (Ed: Ullrich M) Horizon Scientific Press, Norwich, UK.
6. **Rajendhran J.** and Gunasekaran P. (2007) Cloning, expression and characterization of penicillin G acylase from *Bacillus badius*. *Journal of Bioscience and Bioengineering*. 103, 457-463.
7. **Rajendhran J.** and Gunasekaran P. (2007) Application of Cross-linked Enzyme Aggregates of *Bacillus badius* penicillin G acylase for the production of 6-aminopenicillanic acid. *Letters in Applied Microbiology*. 44, 43-49.
8. **Rajendhran J.** and Gunasekaran P. (2004) Recent Biotechnological Interventions for Developing Improved Penicillin G Acylases. *Journal of Bioscience and Bioengineering*. 97, 1-13.
9. **Rajendhran J.**, Krishnakumar V. and Gunasekaran P. (2003) Production of Penicillin G acylase from *Bacillus* sp.: Effect of medium components. *World Journal of Microbiology and Biotechnology*. 19, 107-110.
10. **Rajendhran J.**, Krishnakumar V. and Gunasekaran P. (2002) Optimization of a fermentation medium for the production of Penicillin G acylase from *Bacillus* sp. *Letters in Applied Microbiology*. 35, 523-527.
11. **Rajendhran J.** and Pandian RS. (2003) Microbial flora isolated from an urban population of non-biting vector, *Musca domestica* and their susceptibility to antibiotics. *Asian journal of Microbiology, Biotechnology and Environmental Science*. 5, 101-105.
12. Ramasamy S., Manoharan AC. and **Rajendhran J.** (2001) Antibacterial effect of various plant extracts on human pathogens. *Indian Journal of Environment and Ecoplanning*. 5, 317-319.
13. Pandian RS. and **Rajendhran J.** (1999) Vector competence of *Musca domestica* in an urban area. *Insect Environment*. 5, 36-37.

14. **Rajendhran J.**, Mani MA. and Navaneethakannan K. (1998) Antibacterial activity of some selected medicinal plants. *Geobios.* 25, 280-282.

Presentations in International Conferences

1. **Rajendhran J.** and Gunasekaran P. Improved production of *Bacillus badius* penicillin G acylase in *Escherichia coli* by the coexpression of tRNA genes. International Conference on New Horizons in Biotechnology & 4th convention of BRSI, Trivandrum, India. 26-29th November 2007.
2. **Rajendhran J.** and Gunasekaran P. Strategies for the improved production of *bacillus badius* penicillin G acylase. Origene 2007, International Conference on Recent Trends in Biotechnology, Kalasalingam University, Krishnan Kovil, India. 5-6th January 2007 (**Conferred Best Oral Presentation Award**).
3. **Rajendhran J.** and Gunasekaran P. Independent expression of *Bacillus badius* penicillin acylase subunits improves the expression in *Escherichia coli*. 3rd convention of BRSI & International Conference on exploring horizons in Biotechnology - a Global venture, Sardar Patel University, Vallabh Vidyanagar, India. 2-4th November 2006.
4. **Rajendhran J.** and Gunasekaran P. Cloning and partial sequencing of *pac* gene of *Bacillus* sp. International Conference on Interface of Chemistry and Biology, Regional Research Laboratory, Trivandrum, India. 28-30th April 2003.
5. Gunasekaran P. and **Rajendhran J.** Biochemical engineering of bacterial penicillin acylases. International Conference on Interface of Chemistry and Biology, Regional Research Laboratory, Trivandrum, India. 28-30th April 2003.
6. **Rajendhran J.** and Pandian RS. Vector potential of *Musca domestica* in an urban area. Fourth International Symposium on Vectors and Vector borne Diseases. Defense Research and Development Establishment, Gwalior, India. 18-20th February 1999.

Presentations in National Conferences

7. **Rajendhran J.** Metagenomics and its environmental applications. National Seminar on "Current Advances in Applied Genetics & Bioethics", Nirmala College for Women, Coimbatore, Sep 18th & 19th, 2009.
8. **Rajendhran J.** Development of recombinant penicillin acylase for 6-aminopenicillanic acid production. 48th Annual Conference of Association of Microbiologists of India, Indian Institute of Technology, Bhopal, India. 18-21, December 2007 (**AMI-Young Scientist Award Lecture**).
9. Prabhu P., **Rajendhran J.** and Gunasekaran P. Cloning and overexpression of penicillin G acylase (*pac*) gene of *Thermus thermophilus* in *Escherichia coli*. Aqua-Terr Annual Symposium. Madurai Kamaraj University, Madurai. 10th March 2007.
10. Divya R., **Rajendhran J.** and Gunasekaran P. Expression of *Bacillus badius pac* gene in *Bacillus megaterium* for the production of extracellular penicillin G

Acylase. Aqua-Terr Annual Symposium. Madurai Kamaraj University, Madurai. 10th March 2007.

11. **Rajendhran J.** and Gunasekaran P. Extracellular production of *Bacillus badius* penicillin G acylase using *Pichia pastoris* expression system. 47th Annual Conference of Association of Microbiologists of India, Barkatullah University, Bhopal, India. 6-8 December 2006.
12. **Rajendhran J.** and Gunasekaran P. Molecular cloning and characterization of gene coding for penicillin G acylase from *Bacillus badius*. First conference of Biotechnology Research Society of India, North Maharashtra University, Jalgaon, India. 25-27th November 2004.
13. **Rajendhran J.**, Krishnakumar V. and Gunasekaran P. Application of immobilized cells of *Bacillus* sp. for the production of 6-aminopenicillanic acid. 43rd Annual Conference of Association of Microbiologists of India, CCS Haryana agricultural University, Hisar, India. 11-13th December 2002.
14. **Rajendhran J.** and Pandian RS. Occurrence of spatial variation in the pathogens isolated from the houseflies. Symposium on Vectors and Vector borne diseases, The American College, Madurai, India. 29-30th January 1999.
15. **Rajendhran J.** and Pandian RS. Determination of antimicrobial effectiveness of antibiotics against bacterial pathogens isolated from urban houseflies. 39th Annual Conference of Association of Microbiologists of India, Mangalore, India. 5-6th December 1998.
16. Pandian RS. and **Rajendhran J.** Occurrence of Biodiversity among microbial pathogens isolated from urban houseflies. 39th Annual Conference of Association of Microbiologists of India, Mangalore, India. 5-6th December 1998.
17. **Rajendhran J.** and Pandian RS. Rhythm in the foraging behaviour of *Musca domestica nebulosa* (FABR.). Third Symposium on Vectors and Vector borne Diseases. Puri, India. 30th May-1st June 1998.
18. **Rajendhran J.** and Pandian RS. Isolation of bacterial pathogens from the proboscis of *Musca domestica*. Third Symposium on Vectors and Vector borne Diseases. Puri, India. 30th May-1st June 1998.
19. **Rajendhran J.** and Navaneethakannan K. Antibacterial activity of some selected medicinal plants. Aqua-Terr Annual Symposium. Madurai Kamaraj University, Madurai. 27-28th February 1998.

RESEARCH INTEREST

- Human Microbiomics and Cardiovascular Diseases
- Marine Metagenomics for novel drug discovery
- Mobile Metagenomics and Environmental Genomics

- Genomic diversity of bacterial pathogens and host interaction
- Role microorganisms in non-infectious diseases