

## Dr. P. GUNASEKARAN



2 July 1954  
Senior Professor & Head, Department of Genetics  
Coordinator  
Center for Excellence in Genomic Sciences  
School of Biological Sciences  
Madurai Kamaraj University  
Madurai 625 021 Tamil Nadu, INDIA

Tel: 91-452-2458478; 2459873; 2458209  
Fax: 91-452-2459139; 2458478  
E-mail: [pguna@eth.net](mailto:pguna@eth.net); [gunagenomics@gmail.com](mailto:gunagenomics@gmail.com)  
Web: [www.genomicsmku.org](http://www.genomicsmku.org)

### ACADEMIC

Ph.D Microbiology 1980, Haryana Agricultural University, Hisar  
M.Sc Biology, 1976, Madurai Kamaraj University, Madurai  
B.Sc Chemistry, 1974, Madurai Kamaraj University, Madurai

### POSITIONS HELD

1. Chairperson, School of Biological Sciences, Madurai Kamaraj University – Since July 2008
2. Special Officer, Madurai Kamaraj University, Madurai - Since April 2008.
3. Senior Professor and Head, Department of Genetics, Madurai Kamaraj University, Madurai - Since 2007.
4. Head, Department of Genetics, Madurai Kamaraj University, Madurai, India, since 2001.
5. Professor of Microbiology, Department of Microbiology, Madurai Kamaraj University, Madurai, India, since 1991
6. Invited Professor and Divisional Chair, Department of Biotechnology, Division of Biological and Health Sciences Universidad Autonoma Metropolitana, México, 1995-97
7. Invited Professor, Faculty of Sciences at Luminy, University of Provence, Marseille, France. 1994
8. Reader in Microbiology, Department of Microbiology, Madurai Kamaraj University, Madurai, India, 1987
9. Invited Associate Professor, Faculty of Sciences at Luminy, University of Provence, Marseille, France, 1987
10. Lecturer in Microbiology, Department of Microbiology Madurai Kamaraj University, Madurai, India, 1981

11. Lecturer cum Curator in Microbiology, Department of Microbiology, Punjab University, Chandigarh, India, 1980

#### INTERNATIONAL VISITS

1. Indo-US Visiting Professor, Texas A&M University, College Station, Texas, USA, 2007
2. Exchange visiting Scientist, Indo-Hungarian exchange programme, University of Budapest, Hungary, 2006.
3. Exchange Visiting Scientist, Indo-UK Project, School of Biosciences, Birmingham University, UK, 2001
4. Exchange Visiting Scientist, Indo-UK Project, School of Biosciences, Birmingham University, UK, 2000
5. Invited Professor and Divisional Chair, 1995(Jan)-1997(Jan) Department of Biotechnology, Division of Biological and Health Sciences, Universidad Autonoma Metropolitana, México.
6. "Prof. Alfredo Sánchez Marroquin" Cátedra Divisional in Biotechnology at Universidad Autonoma Metropolitana- Iztapalapa, México and Patrimonial excelencia Nivel II fellowship from CONACyT, México during 1995-96.
7. Panel member: miembro del jurado calificador, Area de Ciencias Biologicas y de la Salud, Cuarto Concurso Annual al Premio a la Invetigation 1995, Universidad Autonoma Metropolitana, México.
8. Invited Professor, Faculty of Sciences at Luminy, University of Provence, Marseille, France. 1994
9. Exchange Visiting Scientist, Indo-French project, Laboratory for Microbial Biochemistry, Central National de la Recherch Scientifique (CNRS), Marseille, France, 1992.
10. Overseas Associate, DBT program, Department of Biochemical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, USA. 1990
11. Research Associate, Laboratory for Microbial Biochemistry, Central National de la Recherché Scientifique (CNRS), Marseille, France. 1988
12. Invited Associate Professor, Faculty of Sciences at Luminy, University of Provence, Marseille, France, 1987
13. Post-Doctoral Fellow, Laboratory for Microbial Biochemistry, Central National de la Recherché Scientifique (CNRS), Marseille, France, 1984

#### HONORS AND AWARDS

1. 76<sup>th</sup> Indian Science Congress-Madurai Kamaraj University Eminent Scientist Award (Natural Sciences) - 2009
2. International Editor, Journal of Microbiology and Biotechnology – 2009
3. President, Association of Microbiologists of India - 2009
4. Life Time Achievement Award, Indian Association of Applied Microbiologists, India - 2008.
5. Chairman, Advisory Monitoring Committee, Centre for Biofuels, Technology Information, Forecasting and Assessment Council (TIFAC), DST, India - 2008
6. Fellow of the National Academy of Biological Sciences (FNABS) – 2008.
7. American Society of Microbiology (ASM) International Professorship – 2007.
8. AMI-Prof.S.R.Vyas Award for the contribution in Microbiology – 2006.

9. Fellow of Association of Microbiologists of India (FAMI) – 2006.
10. Fellow of Biotechnology Research Society of India (FBRSI) – 2004.
11. Taskforce Member, Department of Biotechnology, New Delhi (2004-2007).
12. Tamil Nadu Scientist Award (TANSA), 1999 recognition of the contribution in the field of Microbial Biotechnology (for the year 1998).
13. Member, Editorial Board, Indian Journal of Microbiology, 1989-1994; 1997-2000 and 2009 onwards.
14. Louis Pasteur Award for the year 1995-1998 for the contribution in the area of fermentation technology.
15. Visiting Professor for the year 1998, Sri Venkateshwara University, Tirupathi.
16. Invited Professor and Divisional Chair, 1995(Jan)-1997(Jan) Department of Biotechnology, Division of Biological and Health Sciences, Universidad Autonoma Metropolitana, México.
17. “Prof. Alfredo Sánchez Marroquin” Cátedra Divisional in Biotechnology at Universidad Autonoma Metropolitana- Iztapalapa, México and Patrimonial excelencia Nivel II fellowship from CONACyT, México during 1995-96.
18. Panel member: miembro del jurado calificador, Area de Ciencias Biologicas y de la Salud, Cuarto Concurso Annual al Premio a la Invetigation 1995, Universidad Autonoma Metropolitana, México.
19. Invited Professor 1994 (April-July), Faculty of Sciences at Luminy, University of Provence, Marseilles, France.
20. J.V. Bhat memorial award for the best paper publication in Indian Journal of Microbiology during 1991-1992.
21. Exchange Visiting Scientist, Indo-French project, CNRS (1992 Sep-Dec), Marseilles, France.
22. Overseas Associate 1990 (May-Aug), DBT Programme, MIT, Cambridge, USA.

#### MEMBERSHIP IN PROFESSIONAL SOCIETIES

1. Member, Senate of Alagappa University from July 2008.
2. Member, Task Force in Basic Science, Department of Biotechnology, Government of India, New Delhi.
3. Coordinator, Centre of Potential in Genomic Sciences, Madurai Kamaraj University (UGC).
4. Member, Standing Committee for Academic Affairs, Bharathidasan University, Trichy
5. Chairman, Technical Committee, Centre for Research in Medical Entomology (ICMR), Madurai.
6. Member, Academic Council, Lady Doak College (Autonomous), Madurai.
7. Member, Board of Studies in Biotechnology, Pondicherry University, Pondicherry.
8. Member Board of Studies in Microbiology, Padmavadhi Mahila University, Tirupathi.
9. Member Board of Studies in Biotechnology, University of Madras.
10. Member, Board of Studies in Biotechnology, Cochin University of Science & Technology, Cochin.
11. Member, Board of Studies in Microbiology, Manonmaniam Sundaranar University, Tirunelveli.

12. Member, Board of Studies in Marine Microbiology, Manonmaniam Sundaranar University, Tirunelveli.
13. Member, Board of Studies in Microbiology, Bharathiar University, Coimbatore.
14. Member, Board of Studies in Sub-aqua Marine Ecology and Toxicogenomics, Madurai Kamaraj University.
15. Chairman, Board of Studies, UG/PG Microbiology, Bharathidasan University, Trichy.
16. Chairman, Board of Studies, UG Microbiology, Alagappa University, Karaikudi.
17. Member, Board of Studies in Microbial Gene Technology (PG), Madurai Kamaraj University.
18. Member, Board of Studies in Biology (PG), Madurai Kamaraj University.
19. Member, Board of Studies in Microbiology (PG), Ayya Nadar Janaki Ammal College (Autonomous), Sivakasi.
20. Member, Board of Studies in Microbiology, Gulbarga University, Gulbarga (Karnataka).
21. Member, Advisory Committee, Department of Biochemistry, Sourashtra College, Madurai.
22. Member, Board of Studies in M.Sc. Microbiology, Thiagarajar College, Madurai
23. Member, Board of Studies in Zoology and Biochemistry, Holy Cross College (Autonomous), Trichy.
24. Member, Board of Studies in microbiology, Madurai College (Autonomous), Madurai
25. Life member, Association of Microbiologists of India
26. Member, Editorial Board, Indian Journal of Microbiology, 1989-1994 and 1997-2000.
27. Member, Nutrition Society of India.
28. Member, New York Academy of Sciences, USA.

## RESEARCH PROJECTS ON GOING / COMPLETED

### INTERNATIONAL

1. Levan productions and its application in food industry, Indo-UK project, Department of Science and Technology and British Council, New Delhi funded project (2000-2002).
2. Molecular characterization of levansucrase gene of *Zymomonas mobilis*. Indo-French Centre for the Promotion of Advanced Research funded project (1990-1993).
3. Potentials of the improvement of nutrient qualities of cassava fermented end products- International Atomic Energy agency, Austria funded project (1990-1992).

### NATIONAL

4. Metagenomics of the Andaman Sea: the under-explored 'rare biosphere'

5. 2008-2011 Functional genomics of *Zymomonas mobilis*. Department of Science and Technology, New Delhi funded project.
6. 2007-2010 Metagenomics of Skin and hide and spoilage. Department of Biotechnology, New Delhi funded project.
7. 2007-2010 Cloning and expression of cellulase genes from *Penicillium funiculosum* NCL in yeast. Council of Scientific and Industrial Research, New Delhi funded project.
8. 2007-2009 Development of Antifungal drug. Strides Arcolab, Bangalore funded project.
9. 2006-2009 Development of Processes for production and downstream processing of food enzymes and their applications. Department of Biotechnology, New Delhi funded project.
10. 2006-2009 Biotechnology for leather (Council of Scientific and Industrial Research / Centre for Leather and Research Institute funded project (Phase II).
11. 2006-2009 Application of Microorganisms in Agriculture and Allied Sectors (AMAAS). Indian Council for Agricultural Research, New Delhi funded project.
12. 2004-2007 Development and Application of food enzymes. Protein engineering approaches for the improvement of food grade alpha amylase. Department of Biotechnology, New Delhi funded project
13. 2004-2007 Vermiculture and vermicomposting training programme for the self-employment of SC/ST and other weaker sections. Department of Biotechnology, New Delhi funded project (as CO-PI)
14. 2003-2006 Construction of recombinant strains for ethanol production from lignocellulosics, Department of Biotechnology, New Delhi funded project
15. 2002-2006 Biotechnology for leather (Council of Scientific and Industrial Research / Centre for Leather and Research Institute funded project
16. 2002-2005 Development of transgenic phosphate solubilizing bacteria (PSB) with cloned ACC deaminase and catalase genes. Department of Biotechnology, New Delhi funded project
17. 2002-2005 Cloning of xylanase gene and production of alkaline xylanase from recombinant *Aspergillus niger*. Department of Science and Technology, New Delhi funded project
18. 2000-2003 Mushroom cultivation and training program, Department of Biotechnology, New Delhi funded project
19. 2000-2003 Penicillin acylase production by *Bacillus* sp. Council of Scientific and Industrial Research, New Delhi funded project
20. 2000-2003 Production and Application of Neem and other plant based biopesticides for Insect Control. Department of Biotechnology, New Delhi funded project
21. 2000-2002 Levan production and its application in food industry, Indo-UK project, Department of Science and Technology and British Council, New Delhi funded project
22. 1999-2001 Role of plant growth promoting rhizobacteria in integrated nutrient management, Department of Biotechnology, Government of India funded project
23. 1998-2001 Genetic regulation of sucrase genes in *Zymomonas mobilis* - Department of Science and Technology, Government of India funded project.

24. 1998-2001 Molecular differences in extra-cellular enzyme production by filamentous fungi *A. niger* in solid state and submerged fermentation- University Grants Commission, Government of India funded project
25. 1997-2000 Microbial polysaccharide (levan) production by *Zymomonas mobilis* Council for Scientific and Industrial Research, Government of India funded project.
26. 1990-1993 Molecular characterization of levansucrase gene of *Zymomonas mobilis*. Indo-French Centre for the Promotion of Advanced Research funded project.
27. 1990-1992 Potentials of the improvement of nutrient qualities of cassava fermented end products- International Atomic Energy agency, Austria funded project.
28. 1988-1991 Development of bioprocess for conversion of tapioca starch into ethanol using *Zymomonas mobilis* - Department of Science and Technology, Government of India funded project.
29. 1987-1990 Studies on ethanol production by *Zymomonas* from starch based substrates- University Grants Commission, Government of India funded project
30. 1995-1998 Genetic improvement of *Zymomonas mobilis* for bioethanol production, Council for Scientific and Industrial Research, Government of India funded project.
31. 1984-1987 Isolation and mass cultivation of mycorrhizal fungi associated with leguminous plants- Indian Council of Agricultural Research, Government of India funded project.

#### SEMINAR/SYMPOSIA/WORKSHOP/CONFERENCES ORGANIZED

1. UGC-NRCBS Winter School on Metagenomics, 2 to 16<sup>th</sup> March 2009 School of Biological Sciences, Madurai Kamaraj University, Madurai.
2. UGC-NRCBS Winter School on Microbial Genome Typing 10-24<sup>th</sup> December 2008 School of Biological Sciences, Madurai Kamaraj University, Madurai.
3. Organizing Secretary, National Symposium on Functional Genomics, 15<sup>th</sup>-17<sup>th</sup> February 2002 at School of Biological Sciences, Madurai Kamaraj University, Madurai.
4. Organizing Secretary, 32<sup>nd</sup> Annual conference of Association of Microbiologists of India at Madurai, 9-11 January 1992.
5. Short-term training course on "Modern approaches in Bioprocess Technology of enzymes and fuels" (December 1990 - January 1991), Funded by Department of Biotechnology, Government of India.
6. Academy staff college training course on "Molecular Microbiology" (April-May, 1991), University Grants Commission, Government of India.
7. Academy staff college training course on "Molecular Microbiology" (February-March, 1993), University Grants Commission, Government of India.
8. Short-term training course on "Approaches for improvement of Microbial strains for Industrial enzyme production" (February 1998 - March 1998), Funded by Department of Biotechnology, Government of India.
9. Department of Biotechnology workshop on "Process Technology in Biotechnology Industries" Anna University Madras, 12-25 April 1989.
10. Department of Biotechnology workshop on "Biotechnology of Methanogenic anaerobes "Tamil Nadu Agricultural University, Coimbatore 22, October-9, November, 1990.

11. Department of Biotechnology workshop on "Immobilization of cells and enzymes" Regional Research Laboratories, Trivandrum, April 1993.
12. Biotechnology Research Centre Short -term school on "Process design and scale up of innovative biopolymer fermentation" Indian Institute of Technology, Madras, May 18 - 23, 1998.
13. Department of Biotechnology Short Term Training course on "Fermentation Strategies and Bioreactor Selection" Indian Institute of Chemical Technology, Hyderabad, April 15 to May 1 1999.

#### CHAIRMAN OF SESSIONS OF IMPORTANT SYMPOSIA/SCIENTIFIC MEETING

1. 49<sup>th</sup> Annual Conference of AMI, International Symposium on Microbial Biotechnology: Diversity, Genomics and Metagenomics, New Delhi, India. 18<sup>th</sup> – 20<sup>th</sup> December 2008.
2. 5<sup>th</sup> convention of BRSI, International Conference on Bioprocesses in Food Industries, Hyderabad, India. 6<sup>th</sup>– 8<sup>th</sup> November 2008.
3. 48<sup>th</sup> Annual Conference of Association of Microbiologists of India, Indian Institute of Technology, Bhopal, India. 18-21, December 2007
4. International Conference on New Horizons in Biotechnology & 4<sup>th</sup> convention of BRSI, Trivandrum, India. 26-29<sup>th</sup> November 2007.
5. International conference on recent trends in biotechnology, Kalasalingam University, Krishnankovil, India 5<sup>th</sup> & 6<sup>th</sup> January 2007.
6. 47<sup>th</sup> Annual conference of AMI held at Barkatullah University, Bhopal. Dec 4-6, 2006.
7. International symposium on biocontrol and biotechnology. Lady Doak College, Madurai, India 27-29<sup>th</sup> November 2006.
8. 3<sup>rd</sup> convention of BRSI & International Conference on exploring horizons in Biotechnology - A Global venture, Sardar Patel University, Vallabh Vidyanagar, India. 2-4<sup>th</sup> November 2006.
9. International conference on Bioprocesses in Food Industries (ICBF-2006) held at UP (University of Patras) Greece, Jun 18-21, 2006
10. 46<sup>th</sup> Annual conference of AMI held at Osmania University, Hyderabad. Dec 8-10, 2005.
11. Fifth International Fructan Symposium (5<sup>th</sup> IFS) - Fructan 2004 to be held at Center for Genetic Engineering and Biotechnology, CIGB, AP 6162, La Habana 10600, Cuba, Dec 5-9, 2004
12. International conference on Bioprocesses in Food Industries (ICBF-2004) held at UBP (University Blaise Pascal), Clermont-Ferrand, Jul 11-13, 2004
13. International conference on Interface of chemistry and biology, Regional Research Laboratory, Trivandrum Apr 28-30, 2003
14. 43<sup>rd</sup> Annual conference of Association of Microbiologists of India, Hisar, 11-13, Dec 2002.
15. National Symposium on Functional Genomics, Madurai. Feb 15-17<sup>th</sup> 2002.
16. 42<sup>nd</sup> Annual conference of Association of Microbiologists of India, Gulbarga Nov 9-11<sup>th</sup>, 2001.
17. 41<sup>st</sup> Annual conference of Association of Microbiologists of India, Jaipur, 25-27, Nov 2000.
18. 4<sup>th</sup> International Symposium on Fructan. Arolla, Switzerland. 16-19 Aug 2000.
19. Annual Biotechnologists Association Conference, Hyderabad. 26-27 Feb 2000.
20. 40<sup>th</sup> Annual conference of Association of Microbiologists of India, Bhubaneshwar, 29 Nov-1 Dec 1999.
21. 39<sup>th</sup> Annual conference of Association of Microbiologists of India, Mangalore, 29 Nov-1 Dec, 1998.

22. 2<sup>nd</sup> international conference on contaminants in soil environment in Australasia-Pacific region. Indian Agricultural Research Institute, New Delhi. 12-17 Dec 1998.
23. National conference on Biotechnology: Hitherto and Henceforth, The American college, Madurai. 28-30. Dec 1998.
24. 38<sup>th</sup> Annual Conference of the Association of Microbiologists of India, New Delhi, India, Dec 1997.
25. 2<sup>nd</sup> International mini symposium on removal of contaminants from water and soil, Mexico, D.F. 1995.
26. 6<sup>th</sup> National conference on Biotechnology and Bioengineering. Ixtapa, Mexico 1995.
27. 34<sup>th</sup> Annual conference of Microbiologists of India, Panjab Agricultural University, Ludhiana, India, Dec. 1994.
28. National seminar on application of Biotechnology in molasses based and allied industries. Trends and prospects. Harcourt Butler Technological Institute, Kanpur, 1994.
29. 62<sup>nd</sup> Annual conference of Societies of Biological Chemists, India, Madurai Kamaraj University Madurai, 1993.
30. 32<sup>nd</sup> Annual conference of Association of Microbiologists of India, Madurai Kamaraj University, Madurai. India, 1992.
31. 31<sup>st</sup> Annual conference of Association of Microbiologists of India, Tamil Nadu Agricultural University, Coimbatore, India, 1991.
32. 30<sup>th</sup> Annual conference of Association of Microbiologists of India, Annamalai University, Annamalai nagar, India, 1990.

#### RESEARCH INTERESTS:

- Metagenomics and bioprospecting
- Molecular biology and Genomics of *Zymomonas mobilis* and filamentous fungi
- Bioprocess technology for enzymes and biofuel production: Recombinant strains
- Enzyme engineering and enzyme technology
- Bioremediation of industrial effluents
- Genetic diversity of Plant growth promoting rhizobacteria

#### Ph.D. AWARDED TO STUDENTS

P. Sundaresan	Factors influencing the symbiosis between host plant (Cowpea- <i>Vigna unguiculata</i> ) and the mycorrhizal fungi ( <i>Glomus fasciculatum</i> )-1987
T. Karunakaran	Genetics of <i>Zymomonas mobilis</i> : Gene cloning and expression in <i>Escherichia coli</i> -1988
N. Ubalthoose Raja	Studies on Vesicular arbuscular mycorrhizal fungi of cowpea with special reference to its physiology and biochemistry-1990
N.R. Kamini	Bioconversion of lactose to ethanol using <i>Zymomonas mobilis</i> -1991
A.G. Mukundan	Studies on levansucrase of <i>Zymomonas mobilis</i> -1992
H. Nellaiah	Studies on ethanol production from cassava starch using <i>Zymomonas mobilis</i> and <i>Saccharomyces cerevisiae</i> -1993
T.R. Kannan	Cloning and Characterization of extracellular sucrase gene ( <i>sacC</i> ) of

R. Amutha	<i>Zymomonas mobilis</i> -1997
G. Sangiliyandi	Bioconversion of starch to ethanol using <i>Zymomonas mobilis</i> -1998 Cloning Expression and Characterization of Levansucrase ( <i>sacB</i> ) of <i>Zymomonas mobilis</i> -1999
V.K. Ananthalakshmy	Studies on the levan production by <i>Zymomonas mobilis</i> - 2001
N. Lakshmanan	Studies on mycorrhizal association in selected vegetable crops-2002
B. Ashokkumar	Production, Purification and characterization of $\beta$ -fructofuranosidase from <i>Aspergillus niger</i> in submerged and solid state fermentation-2003
P. Rajendran	Toxicity and bioremediation of electroplating industry effluent-2003
N. Puvaneswari	Toxicity assessment and microbial degradation of azodyes of textile industry-2004
N. Ilango	Preparation of bioactive compounds from medicinal plants-2005
A. Ruckmani	Production and characterization of xylanase from <i>Bacillus firmus</i> -2006
J. Rajendhran	Molecular cloning and characterization of penicillin G Acylase of <i>Bacillus badius</i> -2007
N. Rameshkumar	Diversity of PGPR fluorescent Pseudomonas from the rhizosphere of rice ( <i>Oryza sativa</i> L) and sugar cane ( <i>Saccharum officinarum</i> L)-2007
S. R. Senthilkumar	Production, characterization and improvement of alkaline xylanase from filamentous fungi-2007
V. Senthilkumar	Expression analysis of levansucrase ( <i>sacB</i> ) and invertase ( <i>sacC</i> ) genes of <i>Zymomonas mobilis</i> -2007
M. Jeya	Molecular cloning, expression and characterization of xylanase genes of alkali-tolerant fungus-2008
S. Radha	Screening, production and characterization of protease and amylase from animal skin deteriorating bacteria - 2008
V. Thirumalai Arasu	Assessment of amelioration of selected Rhizobacteria for the rice plant growth- 2008
S. Thiagarajan	Production, characterization of xylanase from alkali-tolerant fungus-2008
R. Jayakumararaja	Development of novel amylase for food processing-2009

#### Ph.D. THESIS SUBMITTED

2009	Ms. R. Priyadharshini	Protein engineering approaches for the improvement of $\alpha$ -amylase in <i>Bacillus</i> sp.
2009	Ms. N. Kayalvizhi	Production and characterization of bacteriocin in control of spoilage bacterium

#### CURRENT Ph.D STUDENTS:

2005	Mr. K.N. Rajnish	Studies on functional genomics of <i>Zymomonas mobilis</i>
2006	Ms. K. Geetha	Production and characterization of bacterial alkaline xylanase.
2007	Mr. P. Ponraj	Studies on root colonization by plant growth promoting pseudomonads
2007	Mr. T. Rajesh	Screening and characterization of antibacterial peptides from metagenome of animal skin
2007	Mr. M. M. Ganesh Babu	Metal nanoparticles: Microbial production, characterization and their application
2007	Ms. M.C. Vanitha	Cloning and expression of cellobiohydrolase genes from <i>Penicillium funiculosum</i>

2007	Ms. B. Meera	Cloning and expression of endoglucanase genes from <i>Penicillium funiculosum</i>
2007	Ms. P. Lavanya Pushpam	Screening and characterization of proteases from metagenome of animal skin
2008	Mr. Durai Anand	Applications of microbial xylanases.
2008	Mr. Anish	Applications of Biomedical Imaging.
2009	Mr. Sheik Asraf	Functional characterization of putative genes of <i>Zymomonas mobilis</i>
2009	Mr. M. Shankar	Molecular characterization of plant-microbe interaction

#### PUBLICATIONS:

1. Ganesh Babu M.M. and Gunasekaran P. (2009) Production and structural characterization of crystalline silver nanoparticles from *Bacillus cereus* isolate. Journal of colloids and surface B:Biointerface (Accepted) (U.S.A)
2. Rajendhran J. and Gunasekaran P. (2009) Human Microbiomics. *Indian Journal of Microbiology* (In Press)
3. Rajendhran J. and Gunasekaran P. (2009) Human Genomics and Microbiomics: the post-genomics scenario. *Current Science* 97:140-141 (India)
4. 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* 19: 529-541 (Germany)
5. Jeya M, Thiagarajan S, Lee JK, Gunasekaran P (2009) Cloning and Expression of GH11 Xylanase Gene from *Aspergillus fumigatus* MKU1 in *Pichia pastoris*. Journal of Bioscience and Bioengineering 108: 24-29. (Japan)
6. Manoharan Shankar, Ramachandran Priyadharshini and Paramasamy Gunasekaran (2009) Quantitative digital image analysis of chromogenic assays for high throughput screening of  $\alpha$ -amylase mutant libraries. *Biotechnology Letters* 31: 1197-1201 (UK)
7. Joo AR, Jeya M, Lee KM, Sim WI, Kim JS, Kim IW, Kim YS, Oh DK, Gunasekaran P, Lee JK. (2009) Purification and characterization of a  $\beta$ -1,4-glucosidase from a newly isolated strain of *Fomitopsis pinicola*. *Applied Microbiology and Biotechnology* 83: 285-294 (Germany)
8. Jeya M, Lee KM, Tiwari MK, Kim JS, Gunasekaran P, Kim SY, Kim IW, Lee JK. (2009) Isolation of a novel high erythritol-producing *Pseudozyma tsukubaensis* and scale-up of erythritol fermentation to industrial level. *Applied Microbiology and Biotechnology* (83: 225 - 231) (Germany)
9. K. Geetha, K. N. Rajnish, J. Rajendhran and P. Gunasekaran (2009) Synthesis of bacterial polysaccharides as a limiting factor for biofuel production. In: *Bacterial polysaccharides: current Innovations and future trends*. Ed: M. Ullrich. Caister Academic Press, Norfolk, UK.
10. Jeya M, Thiagarajan S, Lee JK and Gunasekaran P (2009) Identification of New GH 10 and GH 11 Xylanase Genes from *Aspergillus versicolor* MKU3 by Genome-Walking PCR. *Biotechnology and Bioprocess Engineering*. 14: 13-19. (South Korea)
11. S. Radha and P. Gunasekaran (2009). Purification and characterization of Keratinase from recombinant *Pichia* and *Bacillus* strains. *Proteins Expression and Purification* 64:24-31. (USA)
12. T. Anthony, T. Rajesh, N. Kayalvizhi and P. Gunasekaran (2009) Influence of medium components and fermentation conditions on the production of bacteriocin(s) by *Bacillus licheniformis* AnBa9. *Bioresour Technol* 100: 872-877. (USA)
13. N. Kayalvizhi and P. Gunasekaran (2008) Production and characterization of a low molecular weight bacteriocin from *Bacillus licheniformis* MKU3. *Letters in Applied Microbiology* 47:600-607. (UK)

14. P. Prabhu, M. K. Tiwari, M. Jeya, P. Gunasekaran, I. Kim and J. Lee (2008) Cloning and characterization of a novel L-arabinose isomerase from *Bacillus licheniformis*. *Appl Microbiol Biotechnol* 81:283-890. (Germany)
15. J. Rajendhran and P. Gunasekaran (2008) Strategies for accessing soil metagenome for desired applications. *Biotechnology Advances* 26: 576-590. (USA)
16. N. Kayalvizhi, T. Anthony and P. Gunasekaran (2008). Characterization of predominant bacteria associated with goat skin. *J American Leather Chem. Assoc.* 103: 182-187 (USA)
17. K.N. Rajnish, G.M. Chowdry and P. Gunasekaran (2008) Functional characterization of a putative endoglucanase gene from the genome of *Zymomonas mobilis*. *Biotech. Letters.* 30: 1461-1467. (UK)
18. S.R. Senthilkumar, M. Dempsey, C. Krishnan, P. Gunasekaran (2008). Optimization of biobleaching of paper pulp in an expanded bed bioreactor with immobilized alkali stable xylanase by using response surface methodology. *Bioresour Technol* 99: 7781-7787 (USA)
19. S. Radha and P. Gunasekaran (2008). Sustained expression of keratinase gene under P<sub>xyl</sub>A and P<sub>amy</sub>L promoters in the recombinant *Bacillus megaterium* MS941. *Bioresour Technol.* 99: 5528-5537.
20. R. Priyadarshini and P. Gunasekaran P. (2007). Site-directed mutagenesis of the calcium-binding site of  $\alpha$ -amylase of *Bacillus licheniformis*. *Biotechnology Letters* (UK) 29: 1493-1499.
21. S. Radha and P. Gunasekaran (2007). Cloning and expression of keratinase gene in *Bacillus megaterium* and optimization of fermentation condition for the production of keratinase by recombinant strain. *Journal of Applied Microbiology* (UK) 103: 1301-1310.
22. J. Rajendhran and P. Gunasekaran P. (2007) Molecular cloning and characterization of thermostable  $\beta$ -lactam acylase with broad-spectrum activity. *Journal of Bioscience and Bioengineering* (Japan) 103: 457-463.
23. V. Senthilkumar, K.Geetha and P. Gunasekaran (2007). Strategies for the improvement of levan and fructo-oligosaccharides production by *Zymomonas mobilis*. In *Advances in Bioprocessing in Food Industry*, Haworth Press, 2007:187-208
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