

Dr. P. GUNASEKARAN Ph.D., D.Sc., FAMI, FBRs, FNABS, FTAS

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Prof. P. Gunasekaran is a Senior Professor of Microbiology in India and former President of Association of Microbiologist of India (AMI). He has 32 years of teaching and research experience in Microbiology, Biotechnology and Genomics. He is occupying the position of the **Vice Chancellor**, Thiruvalluvar University, Vellore since July 2012. Currently, he is the President of Biotechnology Society of India (BRSI) and Member in the Tamil Nadu State Council for Higher Education (TANSCH).

The profile of Dr. P. Gunasekaran can be accessed with the following links:
thiruvalluvaruniversity.ac.in/vc's_profile.php
www.nabsindia.org/profiles/gunasekaran.html
www.genomicsmku.org/facultyprofile.html
scholar.google.co.in/citations?user=_HcdzcIAAAAJ&hl=en
en.wikipedia.org/wiki/Gunasekaran_Paramasamy

EDUCATIONAL QUALIFICATION

- 1) **Doctor of Science**, Madurai Kamaraj University, Madurai, India, 2012
- 2) **Ph.D. Microbiology**, Haryana Agricultural University, Hisar, India, 1980
- 3) **M.Sc. Biology**, Madurai Kamaraj University, Madurai, India, 1976

POSITIONS HELD

Positions held by him are listed here in reverse chronological order.

ACADEMIC POSITIONS

1. **Senior Professor**, Department of Genetics, Madurai Kamaraj University - Since 2007.
2. **Chairperson**, School of Biological Sciences, Madurai Kamaraj University, July 2008- June 2010
3. **Professor & Head**, Department of Genetics, Madurai Kamaraj University, July 2001 - June 2012.
4. **Professor of Microbiology**, Department of Microbial Technology, Madurai Kamaraj University, July 1991-June 2001
5. **Reader in Microbiology**, Department of Microbiology, Madurai Kamaraj University, July 1987-June 1991
6. **Lecturer in Microbiology**, Department of Microbiology Madurai Kamaraj University, Madurai, India, July 1981-June 1987
7. **Lecturer cum Curator in Microbiology**, Department of Microbiology, Punjab University, Chandigarh, India, July 1980- June 1981

ADMINISTRATIVE POSITIONS

1. **Member, Syndicate Committee** to look after the University administration in the absence of Vice Chancellor – from April 2011 to March 2012
2. **Convener, Syndicate Committee** to look after the University administration in the absence of Vice Chancellor –April 4th -9th 2011
3. **Member, DST- PURSE Program Working Committee** – June 2011 to June 2012
4. **Member, Syndicate** (2010-2013), Madurai Kamaraj University, Madurai -nominated by His Excellency, The Chancellor of Tamil Nadu.
5. **Member, Syndicate** (2004- 2007), Madurai Kamaraj University, Madurai elected from the Senate, MKU, Madurai.
6. **Special Officer (SO)** (2007-2010), Planning and Development, Madurai Kamaraj University, Madurai.
7. **Special Officer - Additional Charge**, Planning and Development, Madurai Kamaraj University, Madurai - October 2011 to June 2012
8. **Member, Senate** (2008 -2011), Alagappa University, Madurai Kamaraj University, Madurai -nominated by His Excellency, The Chancellor of Tamil Nadu
9. Member Selection committee for the appointments in Periyar University (2011-2013), Nominated by His Excellency, The Chancellor of Tamil Nadu
10. Member, Selection committee for the appointments in Tamil Nadu Teachers Education University Chennai (2013-15), Nominated by His Exceelency, The chancellor of Tamil Nadu.

11. **Member, Academic Standby Committee** (2007-2008), Bharathidasan University, Thiruchirapalli.
12. **Member, Finance Committee**, Madurai Kamaraj University, Madurai, (2010- 2013); (2004-2007).
13. **Convener, Purchase Committee**, Madurai Kamaraj University, Madurai, 2010 to July 2012
14. **Convener, Accounts, Audit Committee**, Madurai Kamaraj University, Madurai, 2010 to July 2012
15. **Coordinator, UPE Review Committee Meeting**, Madurai Kamaraj University, 13th -15th December 2010.
16. **Coordinator, UGC XI plans visiting committee meeting**, Madurai Kamaraj University, during June, 2008.
17. **Member, Research Committee**, Madurai Kamaraj University (2004 to 2007).
18. **Member, Building Committee**, Madurai Kamaraj University (2004 to 2007; 2010-2011).
19. **Chairperson**, School of Biological Sciences, Madurai Kamaraj University (2008-2010).
20. **Coordinator, University with Potential for Excellence (UPE)**, Madurai Kamaraj University - October 2010 to June 2012
21. **Coordinator, UGC Centre for Excellence in Genomic Sciences (CEGS) Programme** - 2002 to June 2012
22. **Coordinator, UGC Networking Resource Centre in Biological Sciences (NRCBS) Programme** – 2008 to June 2012
23. **Coordinator, DBT Integrated Programme in Life Sciences (IPLS) for Advanced Research and Education** – 2010 to June 2012
24. **Coordinator, Fund for Improvement of S&T Infrastructure in Higher Educational Institutions (DST FIST – Level II)** – 2009 to June 2012
25. **Coordinator, MHRD Centre for Excellence in Biomedical Sciences Programme** - 2011 to June 2012
26. **Member, Steering Committee**, UPE, Madurai Kamaraj University, Madurai – 2010 to June 2012
27. **Member, UGC expert committee** for the evaluation of Major Research Projects - 2009 to June 2012
28. **Member, Expert Committee - Assessment of University with Potential for Excellence (UPE) scheme in NEHU, Shillong** -2011
29. **Member, Selection committee** for the Appointment of Principals in several Colleges
30. **Member, Selection Committee for the Appointment of Professors, Associate Professors and Assistant Professors** in Madurai Kamaraj University, Madurai, Bharathidasan University, Tiruchirappalli, Bharathiar University Coimbatore, Alagappa University, Karaikudi, University of Madras, Chennai, Anna University, Chennai and several other Universities and Colleges.
31. **University nominee** to Governing body, Administarive Council, Board of Studies, Managing Committee, Finance Committee, Award Committee, Planning and Evaluation Committee for,

Madurai Kamaraj University College, Madurai, Madura College, Madurai, N.M.S.S.V.N. College, Madurai, Lady Doak College for Women, Madurai, Sri Meenakshi College for Women, Madurai, Kodaikanal Christian College, Kodaikanal.

32. **Member, Senate**, Madurai Kamaraj University, Madurai
- **Member, Academic Council**, Madurai Kamaraj University, Madurai

POSITION HELD IN INTERANTIONAL INSTITUTES

He visited several countries worldwide including USA, UK, France, Japan, Hungary and Mexico to conduct collaborative research programs. The positions held by Prof. P. Gunasekaran at various International Institutes are

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, 2000 and 2001.
4. **Invited Professor and Divisional Chair**, 1995(Jan)-1997(Jan) Department of Biotechnology, Division of Biological and Health Sciences, Universidad Autonoma Metropolitana, México.
5. **Invited Professor**, Faculty of Sciences at Luminy, University of Provence, Marseille, France. 1994
6. **Exchange Visiting Scientist**, Indo-French project, Laboratory for Microbial Biochemistry, Central National de la Recherche Scientifique (CNRS), Marseille, France, 1992.
7. **Overseas Associate**, DBT program, Department of Biochemical Engineering, Massachusetts Institute of Technology (MIT), Cambridge, USA. 1990
8. **Research Associate**, Laboratory for Microbial Biochemistry, Central National de la Recherche Scientifique (CNRS), Marseille, France. 1988
9. **Invited Associate Professor**, Faculty of Sciences at Luminy, University of Provence, Marseille, France, 1987
10. **Post-Doctoral Fellow**, Laboratory for Microbial Biochemistry, Central National de la Recherche Scientifique (CNRS), Marseille, France, 1984

HONOURS AND AWARDS

He has received several medals, awards and honours in India and Abroad for his immense research contributions. The major recognitions are

1. Member, Tamil Nadu State Council for Higher Education
2. State Government nominee as Member to the Search Committee for panel for the appointment of Vice-chancellor, Annamalai University, Annamalai Nagar
3. **Member**, Twelfth Five year Plan Working Group of Higher Education - Government of Tamilnadu - 2012-2017.

4. **Member**, Monitoring Committee of Distance Education Programme - Government of Tamilnadu - 2012
5. **Visitors Nominee** - Central University of Patiala - **Nominated by President of India** - 2012
6. **Member**, Monitoring Committee of Government of Tamilnadu - Unapproved Institutions offering / awarding degree / diploma certificates without the prior approval of UGC, AICTE and DEC - 2011.
7. **Government of Tamilnadu Nominee** - UGC Expert Committee to evaluate the academic performance of SFR College for women, Sivakasi - 2011
8. **Outstanding Service Award** - International Board of the American Society for Microbiology (ASM) - 2011
9. **One Time Grant Award**, UGC - 2011
10. **President**, Biotech Research Society of India - 2011
11. Invited as **Chair Professor of Biosciences at Indian Institute of Technology Madras**, Chennai – 2011
12. **Alagappa Centenary Excellence Award for Pure and Applied Sciences -2010 Fellow of Tamil Nadu Academy of Sciences (FTNAS)** - 2010
13. **President 2009**, Association of Microbiologists of India - 2009
14. **76th Indian Science Congress-Madurai Kamaraj University Eminent Scientist Award** (Natural Sciences) - 2009
15. **International Editor**, Journal of Microbiology and Biotechnology – 2009
16. **Associate Editor**, Applied Biochemistry and Biotechnology – 2009
17. **Editor**, Indian Journal of Microbiology - 2009
18. **Life Time Achievement Award**, Indian Association of Applied Microbiologists – 2009.
19. **Fellow of the National Academy of Biological Sciences (FNABS)** – 2008.
20. **American Society of Microbiology (ASM) International Professorship** – 2007.
21. **AMI-Prof.S.R.Vyas Award**, Association of Microbiologists of India – 2006.
22. **Fellow of Association of Microbiologists of India (FAMI)** – 2006.
23. **Fellow of Biotechnology Research Society of India (FBRSI)** – 2004.
24. **Tamil Nadu Scientist Award (TANSA)** - 1999.
25. **Louis Pasteur Award**, Association of Microbiologists of India - 1998
26. **Visiting Professor**, Sri Venkateshwara University, Tirupathi - 1998.
27. **Invited Professor and Divisional Chair**, 1995(Jan)-1997(Jan) Department of Biotechnology, Division of Biological and Health Sciences, Universidad Autonoma Metropolitana, México.
28. **“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.
29. **Panel member: miembro del jurado calificador**, Area de Ciencias Biologicas y de la Salud, Cuarto Concurso Annual al Premio a la Investigación 1995, Universidad Autonoma Metropolitana, México.
30. **Invited Professor** 1994 (April-July), Faculty of Sciences at Luminy, University of Provence, Marseilles, France.

31. **J.V. Bhat Memorial Award**, Association of Microbiologists of India - 1992.

INVITED PROFESSORSHIPS

1. **Chair Professor of Biosciences**, Indian Institute of Technology Madras, Chennai- 2011
2. **Visiting Professor**, Swiss Federal Institute of Technology, Lausanne Swidzerland – December 2010
3. **Visiting Professor**, Manipur University, Imphal – May, June, 2009
4. **Visiting Professor**, University of Okinawa, Japan – June 2006

ACADEMIC ACHIEVEMENTS

COURSES TAUGHT

Prof. Gunasekaran was teaching Microbiology and related subjects for more than 32 years. He taught M.Sc. Courses in Biology, Integrated Biology, Microbial Gene Technology, Biochemical Technology and Genomics. Subjects that he taught include

- Industrial Microbiology
- Fermentation Technology
- Genetics and Molecular Biology
- Recombinant DNA Technology
- Microbial Genomics
- Proteomics
- Research Methodology

COURSES INTRODUCED

1. Introduced a new postgraduate course, **M.Sc. Genomics**, for the first time in India Under the UGC-supported Centre for Excellence in Genomic Sciences (CEGS) programme.
2. Introduced a new **Integrated M.Sc. – Ph.D. in Genomics** course for the first time in India from 2011 onwards under the support of DBT-supported Interdisciplinary Programme of Life Sciences(IPLS).

INFRASTRUCTURE CREATED

He has developed a state-of-the-art laboratory by his own projects. His lab is equipped with almost all sophisticated instruments need for research in Microbiology, Molecular Biology and related subjects.

After establishing his laboratory, he established the Central Instrumentation Facility for the School of Biological Sciences under **Centre for Excellence in Genomic Sciences** and **UGC-Networking Resource Centre in Biological Sciences and DST-FIST facility** (Phase II).

The central facility has following facility: Cell Culture facility, MicroArray facility, 2-D Electrophoresis systems, Atomic Absorption Spectrophotometer, Li-cor Photosynthesis system, Analytical and Preparative HPLC Systems, Elix3-MilliQ water system; Digital Autoclave; Gel documentation system; -86°C freezers; UV-Vis spectrophotometers; Table top refrigerated and non-refrigerated centrifuges; Ice machines; PCR thermocyclers; Sonicator, Real Time-PCR, Automated Liquid Handling System, Atomic Force Microscope, Cryo preservation system, Fluorescence microscope, CHN Auto analyzer, Eddy Co-variance system, Ultra Centrifuges, Cold Room Facilities.

He has created Smart Class Room facility, Conference Hall with Video Conference facility, Library with recent books related to Genomics and Life Sciences and major Research Journals.

CENTRES CREATED

Centre for Excellence in Genomic Sciences (CEGS):

The area of Genomics is becoming very important in biological, biomedical, industrial and agricultural sciences by providing newer tools in gathering information on genome diversity of organisms. This new field is also expected to provide solutions in biomedical research by creating possibilities to new therapies for genetic and microbial diseases including AIDS and tuberculosis. Because of its immediate and considerable impact, there is demand for highly qualified and trained manpower in this field. This program is supported by UGC with grant of **5 Crores** during 2002-2007 and another **5 Crores** for the period from 2007-2012. In addition to the M.Sc. Genomics programme, he is coordinating more than 10 research projects under this scheme conducted by various Principal Investigators.

This centre is involved in high quality teaching and research activities in the area of Genomic Sciences.

I. Teaching in Genomic Sciences:

M.Sc. Genomics is offered since 2002 from the School of Biological Sciences, Madurai Kamaraj University. Students with high academic standards are selected through a national level entrance test conducted by the University. A maximum of 16 students are admitted to M.Sc. Genomics each year and 40 % of the seats are reserved for other state students. The course is offered under Choice Based Credit System (CBCS) according to the UGC's recommendations.

The course is framed to render a balanced teaching in theoretical, practical and computational aspects. Molecular Biology, Molecular Genetics, Biochemistry, Cell Biology, Computational Biology and Immunology are the basic courses offered in the first year. Bioinformatics, Microbial Genomics, Human Genomics, Proteomics, Plant Genomics, Structural Biology and Neurogenetics are the courses offered in the third semester. Final semester is designed for a dedicated project work in Genomic Sciences.

II. Research in Genomic Sciences:

CEGS investigates different target areas of genomic sciences. In this phase II programme, research activities are continued in three broad areas, namely Microbial Genomics, Animal Genomics and Plant Genomics.

UGC-Networking Resource Centre in Biological Sciences (NRCBS):

He was the **Coordinator** of the **UGC-Networking Resource Centre in Biological Sciences (UGC-NRCBS)**, which is supported by UGC with the grant of **10 Crores**. UGC has recognized School of Biological Sciences, Madurai Kamaraj University to establish a Networking Resource Centre in Biological sciences. UGC-NRCBS is serving as the resource centre for collaborative research and training for faculty, scientists and research students of other universities, colleges and institutions, with state-of-the-art infrastructural facilities. The major activities of the Networking Centre are:

- I. Organizing summer/winter schools for young faculty members and research students
- II. Imparting training in frontier areas of research to faculty and research students
- III. Strengthening joint research projects and Networking projects across the country
- IV. Support for Ph.D. students from other institutes those who are deprived of equipment/laboratory facilities

- V. Guidance of Ph.D. students of other institutes on experimental trouble shooting & research methodology
- VI. Providing other mentoring activities to researchers from other Universities and Research Institutes
- VII. Providing e-publications. Over 12 different Summer/Winter Schools were conducted and more than 25 short tern Visiting Fellows were trained in this centre so far.

DST-FIST Facility:

He was the **Coordinator** of the **Fund for Improvement of S&T Infrastructure in Higher Educational Institutions** (FIST – Level II) supported by Department of Science & Technology with **2.3 Crores**. This fund is to upgrade the instrumentation facility of School of Biological Sciences more sophisticated instruments. An excellent Fluorescent Activated Cell Sorter and Analyzer (FACSaria) facility has been set up. A **Centre of Excellence in Flow Cytometry** has been established in collocation with **Becton Dickinson, India Ltd.**

DBT-MKU Interdisciplinary Program of Life Sciences (IPLS):

He was the **Coordinator for the IPLS programme** at School of Biological Sciences, Madurai Kamaraj University with the support of **12 Crores** from the Department of Biotechnology, Government of India, New Delhi. Under this programme, an Integrated M.Sc. – Ph.D. programme in Genomics is introduced first time in India. Selected candidates will be supported with a monthly scholarship of Rs.1,200 for the first two years. After completion of two years course requirements, University will confer M.Sc. (Genomics) degree to the students. Thereafter, top fifteen meritorious students will be admitted for Ph.D. in Genomics. During this period they will be supported with the monthly fellowship of Rs.14,000. Admission and enrolment for this part will be as per the regulation of UGC, DBT and Madurai Kamaraj Under this programme, Research Projects in the focused area of **Disease Diagnostics and Therapeutics** will be conducted for a period of five years.

MHRD Centre of Excellence in Advanced Research and Education

Recently, he has received sanction of about **10 Crores** from the **Ministry of Human Resource Development** to establish a **Centre of Excellence in Biomedical Sciences and Modern Biology** at School of Biological sciences, Madurai Kamaraj University.

SIGNIFICANT CONTRIBUTIONS AT THE SCHOOL LEVEL AND UNIVERSITY LEVEL

a) Projects & Grants received / Funds generated in the University

Level	Number	Quantum of Funds Sanctioned ₹ (In Crores)
Co-ordinator	7	49.50
Principal Investigator	28	5.60

AS COORDINATOR

Project	Year	Quantum of Funds Sanctioned ₹ (In Crores)
Centre for Excellence in Genomic Sciences (Phase I) – UGC	2002-2007	5.00
Centre for Excellence in Genomic Sciences (Phase II) – UGC	2007-2012	5.00
UGC-Networking Resource Centre in Biological Sciences –UGC	2008-2013	14.00
Fund for Improvement of S&T Infrastructure in Higher Educational Institutions (FIST – Level II) – DST	2010-2015	2.50
University with Potential for Excellence - UGC	2010-2012	5.00
Interdisciplinary Program of Life Sciences (IPLS): - DBT	2011 – 2016	12.00

AS PRINCIPAL INVESTIGATOR

S.No	Title of the Project	Durarian	Funding Agency	Quantum of Funds Sanctioned ₹ (in Lakhs)
1.	RICEFUEL: Engineering enzymes, bacteria and bioconversion processes for advanced biofuels from waste grain straw	2013-2016	Department of Biotechnology (DBT), India & Biotechnology and Biological Sciences Research Council (BBSRC), UK	140.00
2.	Production and improvement of bacterial keratinase and Demonstration of feather waste management by keratin hydrolyzing bacteria at pilot scale	2013-2016	Department of Biotechnology (DBT), India	26.70
3.	DBT Network Project on Brucellosis	2012-2015	Department of Biotechnology (DBT), India	120.00
4.	Bioremediation of heavy metals	2010-2012	(DST)	28.00
5.	Metagenomics of Andaman Sea: the underexplored 'rare biosphere'	2009-2012	Department of Biotechnology (DBT)	25.15

6.	Functional genomics of <i>Zymomonas mobilis</i> .	2008-2011	DST	32.23
7.	Metagenomics of Skin and hide and spoilage.	2007-2010	DBT	49.95
8.	Cloning and expression of cellulase genes from <i>Penicillium funiculosum</i> NCL in yeast.	2007-2010	Council of Scientific and Industrial Research (CSIR)	49.50
9.	Development of Antifungal drug.	2007-2009	Strides Arcolab Ltd, Bangalore	20.00
10.	Development of Processes for production and downstream processing of food enzymes and their applications.	2006-2009	DBT	17.15
11.	Biotechnology for leather Phase II	2006-2009	CSIR	54.16
12.	Application of Microorganisms in Agriculture and Allied Sectors (AMAAS).	2006-2012	Indian Council for Agricultural research (ICAR)	35.30
13.	Development and Application of food enzymes. Protein engineering approaches for the improvement of food grade alpha amylase.	2004-2007	DBT	17.00
14.	Construction of recombinant strains for ethanol production from lignocellulosics	2003-2006	DBT	28.00
15.	Biotechnology for leather Phase I	2002-2006	CSIR	40.07
16.	Development of transgenic phosphate solubilizing bacteria (PSB) with cloned ACC deaminase and catalase genes	2002-2005	DBT	22.35
17.	Cloning of xylanase gene and production of alkaline xylanase from recombinant <i>Aspergillus niger</i>	2002-2005	DST	11.13
18.	Mushroom cultivation and training program	2000-2003	DBT	7.42

19.	Penicillin acylase production by <i>Bacillus</i> sp	2000-2003	CSIR	3.16
20.	Production and Application of Neem and other plant based biopesticides for Insect Control	2000-2003	DBT	15.02
21.	Levan production and its application in food industry	2000-2002	DST-British Council (Indo-UK Project)	7.14
22.	Role of plant growth promoting rhizobacteria in integrated nutrient management	1999-2001	DBT	31.90
23.	Genetic regulation of sucrose genes in <i>Zymomonas mobilis</i>	1998-2001	DST	15.78
24.	Molecular differences in extra-cellular enzyme production by filamentous fungi <i>A. niger</i> in solid state and submerged fermentation	1998-2001	University Grants Commission (UGC)	3.60
25.	Microbial polysaccharide (levan) production by <i>Zymomonas mobilis</i>	1997-2000	CSIR	13.50
26.	Molecular characterization of levansucrase gene of <i>Zymomonas mobilis</i>	1990-1993	Indo-French Centre for the Promotion of Advanced Research	4.20
27.	Potentials of the improvement of nutrient qualities of cassava fermented end products	1990-1992	International Atomic Energy agency, Austria	3.20
28.	Development of bioprocess for conversion of tapioca starch into ethanol using <i>Z. mobilis</i>	1988-1991	DST	7.00
29.	Studies on ethanol production by <i>Zymomonas</i> from starch based substrates	1987-1990	UGC	3.25
30.	Genetic improvement of <i>Zymomonas mobilis</i> for bioethanol production	1995-1998	CSIR	11.18
31.	Isolation and mass cultivation of mycorrhizal fungi associated with leguminous plants	1984-1987	ICAR	3.60

b) Manpower- List of the total numbers of manpower requested from the funding agencies, sanctioned and appointed:

Positions	Numbers
Reader / Associate Professor	2
Lecturer / Assistant Professor	9
Lab Technicians	7
System Administrator	1
Lab Assistants	10
Junior Research Fellow	45
Administrative Officers (part time)	3
Teaching Assistants	10

ENDOWMENT CREATED

He has established an endowment at Madurai Kamaraj University in the name of “First International Conference on Genomic Sciences 2010”. This fund will support to conduct one day Annual Conference in Genomic Sciences at School of Biological Sciences. In addition, the first rank holder of M.Sc Genomics students will be honored with Gold Medal with this endowment fund.

NATIONAL LEVEL CONTRIBUTIONS

National Scientific Societies

- He has been elected as the **President of Biotechnology Research Society of India (BRSI)**, India (2011- 2013). He has conducted its 7th Annual Convention at Madurai Kamaraj University in 2010. BRSI is associated with the International Organization for Biotechnology and Bioengineering (IOBB).
- He has been elected as the **President of Association of Microbiologists of India (AMI)**, India for the year 2008-2009. The AMI has tie-up with international societies such as **American Society for Microbiology (ASM)** and **International Society for Microbial Ecology (ISME)**. The official journal of the AMI, Indian Journal of Microbiology is currently published by Springer.

He has chaired the following Committee, Councils and Boards in India.

- **Chairman**, Advisory Monitoring Committee, Centre for Biofuels, Technology Information, Forecasting and Assessment Council (TIFAC), DST, India – 2008
- **Chairman**, Technical Committee, Centre for Research in Medical Entomology (ICMR), Madurai.
- **Chairman**, Board of Studies in Microbiology (UG & PG), Madurai Kamaraj University, Madurai
- **Chairman**, Board of Studies, UG/PG Microbiology, Bharathidasan University, Trichy.

- **Chairman**, Board of Studies, UG Microbiology, Alagappa University, Karaikudi.

In addition, he is/was a member of the following committee, councils and boards

- Chairman, Taskforce on biotechnology resources, facility, platforms, Department of Biotechnology, Government of India, New Delhi
- Member, Taskforce on Environmental Biotechnology, Department of Biotechnology, Government of India, New Delhi
- Member, Taskforce on Bioenergy and biofuel, Department of Biotechnology, Government of India, New Delhi
- Member, Task Force in Biotechnology Products & Process Development, Department of Biotechnology, Government of India, New Delhi.
- Member, Task Force in Biological Agents for Agriculture, Department of Biotechnology, Government of India, New Delhi.
- Member, Task Force in Basic Science, Department of Biotechnology, Government of India, New Delhi.
- Scientific Advisory Committee (SAC), Institute of Bioresources and Sustainable Development (ISBD), Imphal, Manipur.
- Member, Advisory Committee, Centre of Excellence in Life Sciences, Bharathidasan University, Trichirappalli
- Member, Standing Committee for Academic Affairs, Bharathidasan University, Trichirappalli
- Member, Scientific advisory committee, Centre for Biotechnology, Anna University, Chennai.
- Member, Board of Studies in Biotechnology, Pondicherry University, Pondicherry.
- Member Board of Studies in Microbiology, Padmavadhi Mahila University, Tirupathi.
- Member Board of Studies in Biotechnology, University of Madras.
- Member, Board of Studies in Biotechnology, Cochin University of Science & Technology, Cochin.
- Member, Boards of Studies in Microbiology and Marine Microbiology, Manonmaniam Sundaranar University, Tirunelveli.
- Member, Boards of Studies in Microbiology and Biotechnology, Bharathiar University, Coimbatore.
- Member, Board of Studies in Microbiology, Gulbarga University, Gulbarga (Karnataka).
- Member, Advisory Board, Centre for Biotechnology, Anna University, Chennai.
- Member, Board of Studies in Microbiology, Karpagam University, Coimbatore.
- Member, Doctoral Committee, VIT University, Vellore.
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INTERNATIONAL/NATIONAL CONFERENCES ORGANIZED

He had organized an International Conference and two National Level Conferences at Madurai Kamaraj University. In addition, he had chaired more than 100 Scientific Sessions in various National and International Symposia and Conferences.

- **Convener, International Conference on Genomic Sciences (ICGS2010), VII Annual Convention of Biotechnology Research Society of India (BRSI) and Indo-Italian Workshop on Industrial and Pharmaceutical Biotechnology** from 12th – 14th, November 2010 at School of Biological Sciences, Madurai Kamaraj University, Madurai.
- **Organizing Secretary, National Symposium on Functional Genomics**, 15th-17th February 2002 at School of Biological Sciences, Madurai Kamaraj University, Madurai.
- **Organizing Secretary, 32nd Annual conference of Association of Microbiologists of India** at Madurai, 9-11 January 1992.

NATIONAL LEVEL WINTER SCHOOLS, SUMMER SCHOOLS, WORKSHOPS AND ACADEMIC STAFF COLLEGES CONDUCTED

- UGC-NRCBS Summer School on Writing Research Proposal (May 20, 2012 to May 30, 2012)
- UGC-NRCBS Second On-Site on Advances in Computational Genomics (February 13, 2012 to February 20, 2012)
- UGC-NRCBS winter School on Writing Scientific Manuscript (December 01, 2011 to December 14, 2011)
- UGC-NRCBS winter School on Epigenetics I: DNA Methylation Analysis (November 16, 2011 to November 30, 2011)
- UGC-NRCBS winter School on Plant Viruses ss Tools in Biotechnology (November 01, 2011 to November 14, 2011)
- UGC-NRCBS winter School on Clinical Molecular Immunology (October 11, 2011 to October 24, 2011)
- UGC-NRCBS winter School on Neurobiology with a Focus on Auditory System (September 19, 2011 to October 04, 2011)
- UGC-NRCBS first On-site workshop-Computational genomics (September 19- 28, 2011September 19, 2010 to September 28, 2010)
- UGC-NRCBS winter School on Recent trends in applied ecology (25th August to 8th September 2011)
- UGC-NRCBS winter School on Plant Tissue culture applications (August 25, 2010 to September 8, 2010)
- UGC-NRCBS winter School on Human Cellular Functional Assays (August 08, 2010 to August 22, 2010)
- UGC-NRCBS Summer School on Comparative Genomics and Proteomics in Drug Discovery (May 30, 2010 to July 13, 2010)
- UGC-NRCBS Summer School on Immunotechnology (May 09, 2010 to May 23, 2010)
- UGC-NRCBS Summer School on Bioacoustics (March 14, 2010 to March 26, 2011)
- UGC-NRCBS Winter School on Environmental Genomics (Dec 27, 2010 to Jan 10, 2011)
- UGC-NRCBS Summer School on Gene Cloning and Expression in Bacteria (Sep 16 to Oct 1st 2010)
- UGC-NRCBS Summer School on PCR Applications (17-31 March 2010)

- UGC-NRCBS Summer School on Recombinant DNA Technology (13-17, June 2009)
- UGC-NRCBS Winter School on Metagenomics (2-16 March,, 2009)
- UGC-NRCBS Winter School on Microbial Genome Typing (10-24, December, 2008)
- DBT Short Term Training course on “Fermentation Strategies and Bioreactor Selection” Indian Institute of Chemical Technology, Hyderabad, April 15 to May 1 1999.
- 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.
- Short-term training course on “Approaches for improvement of Microbial strains for Industrial enzyme production” (February 1998 - March 1998), Madurai Kamaraj University, Funded by Department of Biotechnology, Government of India.
- Department of Biotechnology workshop on “Immobilization of cells and enzymes” Regional Research Laboratories, Trivandrum, April 1993.
- Academy staff college training course on “Molecular Microbiology” (February-March, 1993), University Grants Commission, Government of India.
- Academy staff college training course on “Molecular Microbiology” (April-May, 1991), University Grants Commission, Government of India.
- Department of Biotechnology workshop on “Biotechnology of Methanogenic anaerobes “Tamil Nadu Agricultural University, Coimbatore 22, October-9, November, 1990.
- 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.
- Department of Biotechnology workshop on “Process Technology in Biotechnology Industries” Anna University Madras, 12-25 April 1989.

Ph.D GUIDANCE:

List of Ph.D students awarded

No.	Name of the Candidate	Title of Thesis	Awarded Year
1.	P. Sundaresan	Factors influencing the symbiosis between host plant (<i>Cowpea-Vigna unguiculata</i>) and the mycorrhizal fungi (<i>Glomus fasciculatum</i>)	1987
2.	T. Karunakaran	Genetics of <i>Zymomonas mobilis</i> : Gene cloning and expression in <i>Escherichia coli</i>	1988
3.	N. Ubalthouse Raja	Studies on Vesicular arbuscular mycorrhizal fungi of cowpea with special reference to its physiology and biochemistry	1990
4.	N.R. Kamini	Bioconversion of lactose to ethanol using <i>Zymomonas mobilis</i>	1991

5.	A.G. Mukundan	Studies on levansucrase of <i>Zymomonas mobilis</i>	1992
6.	H. Nellaiah	Studies on ethanol production from cassava starch using <i>Zymomonas mobilis</i> and <i>Saccharomyces cerevisiae</i>	1993
7.	T.R. Kannan	Cloning and Characterization of extracellular sucrose gene (<i>sacC</i>) of <i>Zymomonas mobilis</i>	1997
8.	R. Amutha	Bioconversion of starch to ethanol using <i>Zymomonas mobilis</i>	1998
9.	G. Sangiliyandi	Cloning Expression and Characterization of Levansucrase (<i>sacB</i>) of <i>Zymomonas mobilis</i>	1999
10.	V.K. Ananthalakshmy	Studies on the levan production by <i>Zymomonas mobilis</i>	2001
11.	N. Lakshmanan	Studies on mycorrhizal association in selected vegetable crops	2002
12.	B. Ashokkumar	Production, Purification and characterization of β -fructofuranosidase from <i>Aspergillus niger</i> in submerged and solid state fermentation	2003
13.	P. Rajendran	Toxicity and bioremediation of electroplating industry effluent	2003
14.	N. Puveneswari	Toxicity assessment and microbial degradation of azodyes of textile industry	2004
15.	N. Ilango	Preparation of bioactive compounds from medicinal plants	2005
16.	A. Ruckmani	Production and characterization of xylanase from <i>Bacillus firmus</i>	2006
17.	J. Rajendhran	Molecular cloning and characterization of penicillin G cclase of <i>Bacillus badius</i>	2007
18.	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
19.	S. R. Senthilkumar	Production, characterization and improvement of alkaline xylanase from	2007

		filamentous fungi	
20.	V. Senthilkumar	Expression analysis of levansucrase (<i>sacB</i>) and invertase (<i>sacC</i>) genes of <i>Zymomonas mobilis</i> -	2007
21.	M. Jeya	Molecular cloning, expression and characterization of xylanase genes of alkali-tolerant fungus	2008
22.	S. Radha	Molecular cloning, expression and characterization of keratinase from <i>Bacillus licheniformis</i>	2008
23.	V. Thirumalai Arasu	Assessment of amelioration of selected Rhizobacteria for the rice plant growth	2008
24.	S. Thiagarajan	Molecular cloning and characterization of xylanase genes from <i>Aspergillus fumigatus</i>	2008
25.	R. Jayakumararaja	Molecular cloning and characterization of α -amylase from of <i>Bacillus subtilis</i>	2009
26.	R. Priyadharshini	Protein engineering approaches for the improvement of α - amylases of <i>Bacillus</i> spp.	2009
27.	N. Kayalvizhi	Cloning, expression and characterization of bacteriocin from <i>Bacillus licheniformis</i>	2010
28.	K.N. Rajnish	Studies on functional genomics of <i>Zymomonas mobilis</i>	2010
29.	T. Rajesh	Screening and characterization of antibacterial peptides from metagenome of animal skin	2010
30.	M.M. Ganesh Babu	Metal nanoparticles: Microbial production, characterization and their application	2011
31.	K. Geetha	Production and characterization of bacterial alkaline xylanase.	2011
32.	P. Lavanya Pushpam	Identification and characterization of alkaline serine protease from goat skin surface metagenome	2012
33.	M.C. Vanitha	Cloning and expression of cellobiohydrolase genes from <i>Penicillium funiculosum</i>	2012
34.	B. Meera	Cloning and expression of endoglucanase genes from fungal species	2012
35.	S. Sheik Asraf	Functional characterization of putative genes of <i>Zymomonas mobilis</i>	2012

36.	M. Shankar	Quorum sensing and cross-kingdom signalling in root colonization by <i>Enterobacter cloacae</i> GS1: A Genomics Perspective	2013
37.	P. Ponraj	Studies on root colonization by plant growth promoting pseudomonads	2013
38.	T. Durai Anand	Superantigen profiles of emm and emm-like typeable and nontypeable pharyngeal streptococcal isolates of South India	2013
39.	M. Anish	Applications of Biomedical Imaging in Cancer detection	2014
40.	M. Pushpanathan	Identification and molecular characterization of a novel antifungal peptide encoding gene (mmgp1) retrieved from marine metagenome	2014

List of Ph.D student submitted thesis

1.	G. Ramani	Cloning and expression of β -xylosidase genes from <i>Penicillium funiculosum</i>
2.	D. Hemalatha	Human oral microbiome for enzyme and antimicrobials
3.	D. Illakkiam	Biocontrol agents from fluorescent pseudomonads
4.	S. Sathyavathi	Application of Microorganisms for Nickel Bioremediation
5.	A. Preeti	Human microbiome and antibiotic resistance

Current Ph.D students

1.	R. Sivakumar	Functional Genomic Analysis of Plant Growth Promoting Rhizobacteria (PGPR): Fluorescent Pseudomonas
2.	S. Santha kalaikumari	Production and improvement of bacterial keratinase and Demonstration of feather waste management by keratin hydrolyzing bacteria at pilot scale

PUBLICATIONS IN JOURNALS

1. J Sankarasubramanian, US Vishnu, J Sridhar, **P Gunasekaran** and J Rajendhran. (2014) Pan-genome of *Brucella* species. *Indian Journal of Microbiology* (Accepted)
2. S Ambardar, N Sangwan, A Manjula, J Rajendhran, **P Gunasekaran**, R Lal, J Vakhlu (2014) Identification of bacteria associated with underground parts of *Crocus sativus* by 16S rRNA gene targeted metagenomic approach. *World Journal of Microbiology and Biotechnology* (Accepted)
3. P Vanitha, C Uma, N Suganya, E Bhakkiyalakshmi, S Suriyanarayanan, **P Gunasekaran**, S Sivasubramanian, and K M Ramkumar (2014) Modulatory effects of morin on hyperglycemia by attenuating the hepatic key enzymes of carbohydrate metabolism and β -cell function in streptozotocin-induced diabetic rats. *Environmental toxicology and pharmacology* 37, no. 1: 326-335.

4. C Anitha, K Sujatha, N Rajinish, AS Kumar, K Padma, R Illaikiam, S Senthilkumar, S Vincent, S Senthamarai, S Sivasanakrai, **P Gunasekaran**, R Sikhamani and M Pushkala. (2014) Molecular characterization of *Pseudomonas* sp. isolated from lower respiratory tract infection in HIV and non-HIV population by 16S rDNA and ARDRA. *BMC Infectious Diseases* 14, no. Suppl 3: P17.
5. KM Ramkumar, RS Vijayakumar, P Vanitha, N Suganya, C Manjula, P Rajaguru, S Sivasubramanian, and **P Gunasekaran**. (2014). `Protective effect of gallic acid on alloxan-induced oxidative stress and osmotic fragility in rats. *Human & experimental toxicology* 33, no. 6 : 638-649.
6. K Rajendran, S Mahadevan, J Rajendhran, **P Gunasekaran** and AB Mandal (2014) Investigations to enhance production of penicillin G acylase from recombinant *Bacillus badius pac* expressed in *Escherichia coli* DH5 α . *Chemical Engineering Communications* (Published online: DOI:10.1080/00986445. 2013.845750)
7. S Sathyavathi, A Manjula, J Rajendhran and **P Gunasekaran** (2014) Extracellular synthesis and characterization of nickel oxide nanoparticles from *Microbacterium* sp. MRS-1 towards bioremediation of nickel electroplating industrial effluent. *Bioresource Technology* 165: 270–273 (USA)
8. A Manjula, S Sathyavathi, M Pushpanathan, **P Gunasekaran** and J Rajendhran (2014) Microbial diversity in termite nest. *Current Science* 106: 1430-1434 (India)
9. A Preeti, D Hemalatha, P Mullany, J Rajendhran and **P Gunasekaran** (2014) Cloning, expression and characterization of a lipase encoding gene from human oral metagenome. *Indian Journal of Microbiology* (54: 284–292) (India)
10. K Rajendran, S Sekar, S Mahadevan, B Kumar Shanmugam, J Rajendhran, **Gunasekaran P**, AB Mandal (2014) Biological Real-Time Reaction Calorimeter Studies for the Production of Penicillin G Acylase from *Bacillus badius*. *Applied Biochemistry and Biotechnology* 172: 3736–3747 (USA)
11. M Krishnan, C Bharathiraja, J Pandiarajan, VA Prasanna, J Rajendhran and **P Gunasekaran** (2014) Insect gut microbiome - An unexploited reserve for biotechnological application. *Asian Pacific Journal of Tropical Biomedicine* 4(Suppl 1): S16-S21
12. D Illakkiam, P Ponraj, M Shankar, S Muthusubramanian , J Rajendhran and **P Gunasekaran** (2013) Identification and structure elucidation of a novel antifungal compound produced by *Pseudomonas aeruginosa* PGPR2 against *Macrophomina phaseolina*. *Applied Biochemistry and Biotechnology* (Published online; DOI 10.1007/s12010-013-0469-7) (USA)
13. S Sathyavathi, A Manjula, J Rajendhran and **P Gunasekaran** (2013) Biosynthesis and characterization of mercury sulphide nanoparticles produced by *Bacillus cereus* MRS-1. *Indian Journal of Experimental Biology* 51:973-978 (INDIA)
14. D Illakkiam, NL Anuj, P Ponraj, M Shankar, J Rajendhran and **P Gunasekaran** (2013) Proteolytic enzyme mediated antagonistic potential of *Pseudomonas aeruginosa* against *Macrophomina phaseolina*. *Indian Journal of Experimental Biology* 51: 1024-1031 (INDIA)
15. J Rajendhran, M Shankar, V Dinakaran, A Rathinavel and **P Gunasekaran** (2013) Contrasting circulating microbiome in cardiovascular disease patients and healthy individuals. *International Journal of Cardiology* 168:118–5120 (USA)
16. R Shome, N Krithiga, RB Muttannagouda, BM Veeregowda, S Swati, BR Shome, U Vishnu, J Sankarasubramanian, J Sridhar, **P Gunasekaran**, H Rahman, J Rajendhran (2013) Draft genome sequence of *Brucella melitensis* strain ADMAS-G1, isolated from placental fluids of an aborted goat. *Genome Announcements*. 1: e00809-13(USA)

17. S Jayashree, S Pooja, M Pushpanathan, U Vishnu, Sankarasubramanian J, J Rajendhran, **P Gunasekaran** (2013) Genome sequence of *Lactobacillus fermentum* strain MTCC 8711, a probiotic bacterium isolated from yogurt. *Genome Announcements*. 1: e00770-13 (USA)
18. R Karthikeyan, M Surianarayanan, J Rajendhran, **P Gunasekaran**, BM Asit (2013) Strategies for enhancing the production of Penicillin G acylase from *Bacillus badius*: influence of phenyl acetic acid dosage. *Applied Biochemistry and Biotechnology* 171:1328–1338 (USA)
19. M Pushpanathan, **P Gunasekaran** and J Rajendhran (2013) Mechanisms of the antifungal action of marine metagenome-derived peptide, MMGP1, against *Candida albicans*. *PLOS ONE* 8(7): e69316 (USA)
20. M Pushpanathan, J Rajendhran and **P Gunasekaran** (2013) Proteolytic activity of the MMGP1 antifungal peptide derived from marine metagenome. *International Journal of Peptide Research and Therapeutics* 19:331–336 (USA)
21. S Jayashree, M Pushpanathan, J Rajendhran and **P Gunasekaran** (2013) Analysis of microbial diversity and phylogeny of bacterial population in buttermilk, a fermented milk product, employing 16S rRNA-based pyrosequencing. *Food Biotechnology* 27:213–221 (USA)
22. D Hemalatha, J Rajendhran and **P Gunasekaran** (2013) A simple method for selective removal of human DNA from oral microbiome for functional metagenomic applications. *Journal of Scientific and Industrial Research* 72: 572-576 (INDIA)
23. M Pushpanathan, **P Gunasekaran** and J Rajendhran (2013) Antimicrobial peptides: Versatile biological properties. *International Journal of Peptides* 2013: 675391 (USA)
24. P Ponraj, M Shankar, D Ilakiam, J Rajendhran and **P Gunasekaran** (2013) Influence of periplasmic oxidation of glucose on pyoverdine synthesis in *Pseudomonas putida* S11. *Applied Microbiology and Biotechnology* 97: 5027–5041 (USA)
25. M Shankar, P Ponraj, D Ilakiam, J Rajendhran and **P Gunasekaran** (2013) Inactivation of the transcriptional regulator encoding gene *sdjA*, enhances rice root colonization and biofilm formation in *Enterobacter cloacae* GS1. *Journal of Bacteriology* 195: 39–45 (USA)
26. B Sundararishnan, M Pushpanathan, S Jayashree, J Rajendhran, N Sakthivel, S Jayachandran and **P Gunasekaran** (2012) Assessment of Microbial Richness in Pelagic Sediment of Andaman Sea by bacterial tag encoded FLX titanium amplicon pyrosequencing (bTEFAP). *Indian Journal of Microbiology* 52: 544–550 (INDIA)
27. V Dinakaran, M Shankar, S Jayashree, A Rathinavel, **P Gunasekaran** and J Rajendhran (2012) Genome Sequence of *Staphylococcus arlettae* strain CVD059 isolated from the circulation of a cardiovascular disease patient. *Journal of Bacteriology* 194: 6615–6616 (USA)
28. M Pushpanathan, J Rajendhran, S Jayashree, B Sundararishnan, S Jayachandran and **P Gunasekaran** (2012) Direct cell penetration of the antifungal peptide, MMGP1, in *Candida albicans*. *Journal of Peptide Science* 18: 657–660 (USA)
29. M Pushpanathan, J Rajendhran, S Jayashree, B Sundararishnan, S Jayachandran and **P Gunasekaran** (2012) Identification of a novel antifungal peptide with chitin-binding property from marine metagenome. *Protein & Peptide Letters* 19: 1289-1296 (UK)
30. P Ponraj, M Shankar, D Ilakiam, J Rajendhran and **P Gunasekaran** (2012) Genome sequence of the plant growth-promoting rhizobacterium, *Pseudomonas putida* S11. *Journal of Bacteriology* 194: 6015 (USA)
31. M Shankar, P Ponraj, D Ilakiam, J Rajendhran and **P Gunasekaran** (2012) Genome sequence of the plant growth promoting bacterium *Enterobacter cloacae* GS1. *Journal of Bacteriology* 194: 4479 (USA)

32. G Ramani, B Meera, C Vanitha, M Rao, **P Gunasekaran** (2012) Production, purification, and characterization of a β -Glucosidase of *Penicillium funiculosum* NCL1. *Applied Biochemistry and Biotechnology* (Published online; DOI: 10.1007/s12010-012-9645-4) (USA)
33. MV Ushasree, **P Gunasekaran**, A Pandey (2012) Single-step Purification and Immobilization of MBP–phytase Fusion on Starch Agar Beads: Application in Dephytination of Soy Milk. *Applied Biochemistry and Biotechnology* (Published online; DOI: 10.1007/s12010-012-9598-7) (USA)
34. V Dinakaran, L John, A Rathinavel, **P Gunasekaran** and Rajendhran J (2012) Prevalence of bacteria in the circulation of cardiovascular disease patients, Madurai, India. *Heart, Lung and Circulation*. (Published online; DOI: 10.1016/j.hlc.2012.02.007) (USA)
35. V Thangaviji, M Michaelbabu, SB Anand, **P Gunasekaran** and T Citarasu (2012). Immunization with the *Aeromonas* OMP provides protection against *Aeromonas hydrophila* in goldfish (*Carassius auratus*). *Journal of Microbial and Biochemical Technology* 4: 2. (USA)
36. A Babu, K Jeyasubramanian, **P Gunasekaran**, R Murugesan (2012) Gelatin nanocarrier enables efficient delivery and phototoxicity of hypocrellin B against a mice tumour model. *Journal of Biomedical Nanotechnology* 8: 43-56. (USA)
37. TD Anand, T Rajesh, J Rajendhran and **P Gunasekaran** (2012) Superantigen profiles of emm and emm-like typeable and nontypeable pharyngeal streptococcal isolates of South India. *Annals of Clinical Microbiology and Antimicrobials* 11: 3 (USA)
38. N RameshKumar, N Ayyadurai, N Kayalvizhi, **P Gunasekaran** (2012) Genotypic and phenotypic diversity of pgpr fluorescent pseudomonads isolated from the rhizosphere of sugarcane (*Saccharum officinarum* L.). *Journal of Microbiology and Biotechnology* 22: 17–28 (Korea)
39. K Sujatha, A Mahalakshmi, J Sridhar **P Gunasekaran** (2012) Pseudomonas sp. as a Source of Medium Chain Length Polyhydroxyalkanoates for Controlled Drug Delivery: Perspective. *International Journal of Microbiology* doi:10.1155/2012/317828 (USA)
40. J Sridhar, R Sabarinathan, S Siva Balan, Z A Rafi, **P Gunasekaran**, and K Sekar. (2011) Junker: An Intergenic Explorer for Bacterial Genomes. *Genomics Proteomics Bioinformatics* 9: 179-182 (USA)
41. MM Ganesh Babu, J Sridhar and **P Gunasekaran** (2011) Global transcriptome analysis of *Bacillus cereus* ATCC 14579 in response to silver nitrate stress. *Journal of Nanobiotechnology*, 2011, 9: 49. (USA)
42. M Shankar, P Ponraj, D Ilakkiam, and **P Gunasekaran** (2011) Root colonization of a rice growth promoting strain of *Enterobacter cloacae*. *Journal of Basic Microbiology*, 51: 523-530. (USA)
43. P Lavanya Pushpam, T Rajesh, and **P Gunasekaran** (2011) Identification and characterization of alkaline serine protease from goat skin surface metagenome. *Applied Microbiology and Biotechnology Express*, 2011, 1: 3. (Germany)
44. B Meera, MC Vanitha, G Ramani, A Manjula and **P Gunasekaran** (2011). Cloning and Expression of an Intronless Gene Encoding Endoglucanase from *Aspergillus fumigatus* MKU1. *Indian Journal of Biotechnology* 10: 480-486. (India)
45. Manjula A, Sathyavathi S, Gunasekaran P and **Rajendhran J** (2011) Comparison of seven methods of DNA extraction from termitarium for functional metagenomic DNA library construction. *Journal of Scientific and Industrial Research* 70: 945-951. (India)

46. Vanitha M.C., Meera B., Ramani G., Mala Rao, Seeta Laxman and **Gunasekaran P** (2011) Molecular cloning and expression of a family 7 cellobiohydrolase gene *cbhI* from *Penicillium funiculosum* NCL1. *International Journal of Microbiology Research* 3: 90-107. (India)
47. Jayashree S., Rajendhran J, Jayaraman K, Kalaichelvan G and **Gunasekaran P** (2011) Improvement of riboflavin production by *Lactobacillus fermentum* isolated from yoghurt. *Food Biotechnology* 25: 240-251. (USA)
48. KN Rajnish, SS Asraf, N Manju and **P Gunasekaran** (2011). Functional characterization of a putative β -lactamase gene in the genome of *Zymomonas mobilis*. *Biotechnology Letters*, 2011, 33: 2425-2430.
49. S Sheik Asraf, K N Rajnish, and **P Gunasekaran** (2011). Bioinformatics and biosynthesis analysis of cellulose synthase operon in *Zymomonas mobilis* ZM4. *IIOAB Journal* 2: 1-7. (USA)
50. T Rajesh, T Anthony, S Saranya, PL Pushpam and **P Gunasekaran** (2011). Functional characterization of a new holin-like antibacterial protein coding gene *tmp1* from goat skin surface metagenome. *Applied Microbiology and Biotechnology* 89: 1061-1073 (Germany)
51. J Rajendhran and **P Gunasekaran** (2011). Microbial phylogeny and diversity: Small subunit ribosomal RNA sequence analysis and beyond. *Microbiological Research* 166: 99-110 (Netherlands)
52. R Priyadharshini, D Hemalatha and **P Gunasekaran** (2010). Repeated random mutagenesis of α -amylase from *Bacillus licheniformis* for improved pH performance. *Journal of Microbiology and Biotechnology*. 20: 1696–1701
53. G Dhanya, R Priya, **P Gunasekaran**, A Pandey and KM Nampoothiri (2010). Molecular cloning, overexpression and characterization of the raw-starch-digesting α -amylase of *Bacillus amyloliquefaciens*. *Biologia* 65: 392-398. (Slovakia)
54. T Anthony, T Rajesh, S Chellappa and **P Gunasekaran** (2010). Functional genomics of *Bacillus licheniformis* AnBa9: efficacy of YshB and derivatives as potent antibacterial peptides. *Medicinal Chemistry Research*. 19:S130-S131 (USA).
55. M Gobi and **P Gunasekaran** (2010). Effect of butachlor herbicide on earthworm *Eisenia fetida* – Its histological perspicuity. *Applied and Environmental Soil Science*. doi:10.1155/2010/850758 (USA)
56. J Rajendhran and **P Gunasekaran** (2010) Human Microbiomics. *Indian Journal of Microbiology* 50: 109-112. (India)
57. R Priyadharshini, D Hemalatha and **P Gunasekaran** (2009). Role of Val289 residue in the α -amylase of *Bacillus amyloliquefaciens* MTCC 610: An analysis by site directed mutagenesis. *Journal of Microbiology and Biotechnology* 20: 563-568 (South Korea)
58. T Anthony, S Chellappa, T Rajesh and **P Gunasekaran** (2009). Functional analysis of a putative holin-like peptide coding gene in the genome of *Bacillus licheniformis* AnBa9. *Archives of Microbiology*. 192:51-56 (Germany).
59. M G Babu and **P Gunasekaran**. (2009). Production and structural characterization of crystalline silver nanoparticles from *Bacillus cereus* isolate. *Journal of colloids and surface B:Biointerface* 74: 191-195 (USA)
60. J Rajendhran and **P Gunasekaran**. (2009). Human Genomics and Microbiomics: the post-genomics scenario. *Current Science* 97:140-141 (India)
61. V Senthilkumar, J Rajendhran, SJW Busby and **P Gunasekaran** (2009). Characterization of multiple promoters and transcript stability in the *sacB-sacC* gene cluster in *Zymomonas mobilis*. *Archives of Microbiology* 19: 529-541 (Germany)

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63. M Shankar, R Priya and **P Gunasekaran** (2009). Quantitative digital image analysis of chromogenic assays for high throughput screening of α -amylase mutant libraries. *Biotechnology Letters* 31: 1197-1201 (UK)
64. AR Joo, M Jeya, KM Lee, WI Sim, JS Kim, IW Kim, YS Kim, DK Oh, **P Gunasekaran**, JK Lee (2009). Purification and characterization of a β -1,4-glucosidase from a newly isolated strain of *Fomitopsis pinicola*. *Applied Microbiology and Biotechnology* 83: 285-294 (Germany)
65. M Jeya, KM Lee, MK Tiwari, JS Kim, **P Gunasekaran**, SY Kim, IW Kim, JK Lee (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)
66. M Jeya, S Thiagarajan, JK Lee and **P Gunasekaran** (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)
67. 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)
68. 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. *Bioresource Technology* 100: 872-877. (USA)
69. 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)
70. P Prabhu, MK Tiwari, M Jeya, **P Gunasekaran**, I Kim and J Lee (2008). Cloning and characterization of a novel L-arabinose isomerase from *Bacillus licheniformis*. *Applied Microbiology and Biotechnology* 81:283-890. (Germany)
71. J Rajendhran and **P Gunasekaran** (2008). Strategies for accessing soil metagenome for desired applications. *Biotechnology Advances* 26: 576-590. (USA)
72. N Kayalvizhi, T Anthony and **P Gunasekaran** (2008). Characterization of predominant bacteria associated with goat skin. *Journal of American Leather Chemistry Association*. 103: 182-187 (USA)
73. KN Rajnish, GM Chowdry and **P Gunasekaran** (2008). Functional characterization of a putative endoglucanase gene from the genome of *Zymomonas mobilis*. *Biotechnology Letters*. 30: 1461-1467. (UK)
74. SR 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. *Bioresource Technology* 99: 7781-7787 (USA)
75. S Radha and **P Gunasekaran** (2008). Sustained expression of keratinase gene under P_{xylA} and P_{amyL} promoters in the recombinant *Bacillus megaterium* MS941. *Bioresource Technology*. 99: 5528-5537. (USA).
76. R Priya and **P Gunasekaran** (2007). Site-directed mutagenesis of the calcium-binding site of α -amylase of *Bacillus licheniformis*. *Biotechnology Letters* (UK) 29: 1493-1499.
77. 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.

78. J Rajendhran and **P Gunasekaran** (2007). Molecular cloning and characterization of thermostable β -lactam acylase with broad-spectrum activity. *Journal of Bioscience and Bioengineering* (Japan) 103: 457-463.
79. J Rajendhran and **P Gunasekaran** (2007). Application of cross-linked enzyme aggregates of *Bacillus badius* penicillin G acylase for the production of 6-aminopenicillanic acid. *Letters in Applied Microbiology* (UK). 44: 41-47
80. N Puvaneswari, J Muthukrishnan and **P Gunasekaran** (2006). Toxicity assessment and microbial degradation of azo dyes. *Indian Journal of Experimental Biology*. 44: 618-26
81. S Thiagarajan, M Jeya, and **P Gunasekaran** (2006). Purification and characterization of a high molecular weight endoxylanase from the solid state culture of an alkali tolerant *Aspergillus fumigatus* MKU1. *World Journal of Microbiology and Biotechnology* (Netherlands). 22: 487-492.
82. S Thiagarajan, M Jeya, and **P Gunasekaran** (2006). Purification and characterization of endoxylanase solid-state culture of an alkali tolerant *Aspergillus fumigatus* MKU1. *Indian Journal of Biotechnology* (India). 5: 351-356.
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1. **Associate Editor**, Applied Biotechnology and Biotechnology – since 2009 (USA)
2. **International Editor**, Journal of Microbiology and Biotechnology – since 2009 (South Korea)
3. **Editor**, Indian Journal of Microbiology – since 2009 (India)

In addition, he served as the **Guest Editor** for the following Special Issues

1. **Guest Editor, Journal of Scientific Research**, Special Issue on International Conference on Genomic Sciences - November 2011
2. **Guest Editor, Indian Journal of Biotechnology**, Special Issue on International Conference on Genomic Sciences - 2011
3. **Guest Editor, Indian Journal of Experimental Biology**, Diamond Jubilee Special issue on Bioremediation / Biodegradation. Volume 41, No. 9, Sep 2003.
4. **Guest Editor, Current Science**, Special Section: Fermentation – Science and Technology, Volume 77, No.3, 10 July 1999.

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7. G Ramani, B Meera, C Vanitha, M Rao and **P Gunasekaran** Production, Purification and Characterization of a β -glucosidase of *Penicillium funiculosum* NCL1. International Conference on New Horizons in Biotechnology, Trivandrum, Kerala, India. 21-24th November, 2011.
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