



DR. D. PRABAHARAN

Professor and Head - *Department of Marine Biotechnology*

Director - *National Facility for Marine Cyanobacteria*

Coordinator - *Sub DIC – Bioinformatics Centre*

Contact

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Academic Qualifications:

M.Sc., - Botany - 1986

M.Phil., - Botany Microbial technology - 1988

Ph.D. – Botany Microbial Technology - 1993

Teaching Experience: 26 Years

Research Experience: 26 Years

Additional Responsibilities

1. **Head of the Department** – Department of Marine Biotechnology
2. **Coordinator** – NAAC
3. **Deputy warden** – Research Scholars Hostel (Vaigai & Porunai)
4. **Store-in-Charge** – University Departmental Stores
5. **Senate Member** – Bharathidasan University

Areas of Research

- ∞ **Cyanobacterial Biotechnology**
- ∞ **Biofuel**
- ∞ **Protein Engineering**
- ∞ **Hydrogen Production**

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	5	4
	M.Phil.	5	-
Project	PG	20	3

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
30	33	3	10	5

Cumulative Impact Factor (as per JCR) :	31.926
h-index	8
i10 index	8
Total Citations	172

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	DBT, GoI	2015	2018	Establishment of National Repository for Microalgae and Cyanobacteria	84.22
2	DBT, GoI	2012	2015	Molecular diversity of Indian freshwater and marine cyanobacterial isolates from 'Hot Spots' and their biotechnological potents as biosurfactants.	32.75

3	DBT, GoI	2009	2013	Repository of marine cyanobacteria as biodiesel feed stock	70.35
4	DBT, GoI	2006	2009	Marine Cyanobacteria - A Potential Target for Hydrogen Photo Production	27.03
5	DBT, GoI	2003	2007	Over expression of engineered SOD enzyme in marine cyanobacteria for bioremediation purposes	27.57

Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	DBT,GoI	2003	2020	Bioinformatics Centre	235.58
2	DBT,GoI	2016	2019	Indo-US Advanced Bioenergy Consortium (IUABC)	49.91

Consultancy Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1					
2					

Others

Patents

1. NIL

Distinctive Achievements / Awards

1. **Best Oral presentation award** - International Conference on Microalgae and Cyanobacteria (MACB), Bharathidasan University, 29 - 31, August 2016
2. **Best poster presentation award** - International Conference on Microalgae and Cyanobacteria (MACB), Bharathidasan University, 29 - 31, August 2016
3. **Best paper award** National conference in Frontiers in Bioprocess Technology and Microbial Ecology - Periyar University, Salem - 29 January 2016
4. **Best poster presentation award** - 3rd International Conference on Hydrology and Meteorology, Hyderabad International Convention Centre, 15 - 16, September 2014
5. **33 ISEA Antarctic Expedition** - 2014 - in South Pole - Maitri, India Station

6. Pre-Antarctic Snow Ice Acclimatisation training, Mountaineering & Skiing Institute, ITBP, Auli – 8- 19 September 2013
7. **Indian Arctic Expedition** – Summer Batch II, Himadri Station, NY-Alesund (2011 & 2014)
8. **Best poster presentation award** - 3rd International Conference on Hydrology and Meteorology, Hyderabad International Convention Centre, 15 – 16, September 2014
9. **Best oral presentation award**, - IR spectroscopic and electron microscopic analysis of uranium uptake phenomenon evidenced in marine cyanobacterium *synechococcus elongatus*. International conference on impact of physical sciences on biology, Queen Mary's college, Chennai, July 7-9, 2011
10. **Best oral presentation award**, - Decolourisation of textile dye using cyanobacterial exopolysaccharide (EPS) as a biosorbent. International conference on impact of physical sciences on biology, Queen Mary's college, Chennai, July 7-9, 2011.
11. **Best oral presentation award**, - Marine cyanobacteria a potential source for biodiesel. International conference on impact of physical sciences on biology, Queen Mary's college, Chennai, July 7-9, 2011.
12. **Best poster presentation award**, - Suggestive synergistic roles of marine cyanobacterial oxidases, oxygenases/oxidants in lignin model dye decolourization. International conference on Applied Phycology, Dept. of Botany, University of Delhi, New Delhi, Feb. 14-15, 2006.
13. **Best poster presentation award**, International Conference of Association of Microbiologists of India, Mysore. 1994.
14. **Long term Overseas Associate ship** - 99 visit to Department of Medicinal Chemistry, University of Washington, Seattle, USA.
15. **Young Scientist award** to attend the IUMS Congress '96 - 8th International Congress of Bacteriology and Applied Microbiology division, 8th International congress of Mycology division, Jerusalem, Israel.

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 13

1. Workshop on Research Techniques in Cyanobacteriology, Workshop on Bioinformatics for Cyanobacteriologist, (WORTIC & WOBIC) - 15th - 24th March 2004
2. Workshop on Research Techniques in Cyanobacteriology, Workshop on Bioinformatics for Cyanobacteriologist, (WORTIC & WOBIC) - 21st February- 4th March 2005
3. Workshop on Research Techniques in Cyanobacteriology, Workshop on Bioinformatics for Cyanobacteriologist, (WORTIC & WOBIC) - 20th February- 3rd March 2006

4. Workshop on Research Techniques in Cyanobacteriology, Workshop on Bioinformatics for Cyanobacteriologist , (WORTIC & WOBIC) 19th – 30th March 2007
5. Workshop on Research Techniques in Cyanobacteriology, Workshop on Bioinformatics for Cyanobacteriologist , (WORTIC & WOBIC) 3rd – 7th March 2008
6. Workshop on Research Techniques in Cyanobacteriology, Workshop on Bioinformatics for Cyanobacteriologist , (WORTIC & WOBIC)) 2nd – 11th March 2009
7. Short term training on Advances Research Techniques(START) - 8th - 19th February 2010
8. Short term training on Advances Research Techniques(START) - 14th- 25th March 2011
9. Cyanobacterial Advanced Research Techniques (CART) - 27th February- 9th March 2012
10. Short term training on Advances Research Techniques (START) -9th – 18th April 2013
11. National Workshop on Bioinformatics Techniques for Modeling and Analysis - 10th – 11th March 2016
12. International Conference on Microalgal and Cyanobacterial Biotechnology – 29th - 31st August 2016
13. Eye Awareness Camp – 14.03.2017
14. National Workshop on Bioinformatics Techniques for Modeling and Analysis - 21st -22nd March 2017
15. Short term training course on Advanced Research Techniques on Genomics Proteomics and Bioinformatics - 07th – 21st November 2017

Events Participated

Conferences / Seminars / Workshops:

1. Seminar on Emerging Trends in Bioinformatics, University of Pune, Pune– 18 December 2003
2. Training programme on “Linux Applications on Bioinformatics” CPCRI, Kasargod – 26 April 2004 – 01 May 2004
3. International conference on Applied Phycology - 2006, Department of Botany, University of Delhi, New Delhi, February 14-15, 2006.
4. Training Programme on Perspective and current trends in Bioinformatics, CCMB, Hyderabad – 12 -18, September 2007
5. Training programme on perl scripting for genome analysis, CPCRI, Kasargod – 10 -17, August 2009
6. UGC SAP Seminar on "Agrobiotech", Jalgon, North Maharashtra University. Training Workshop. 05 - 06 March 2010.
7. International Conference on Association of Microbiologists of India, Panjab University, Chandigarh 03-06, November 2011

8. International Bioenergy summit 2012 – TERI – 5-6, November 2012
9. Indo-US workshop on Cyanobacteria: Molecular Networks to biofuels, Lonovala, India.16 – 22 December, 2012.
10. 24th BTISNet- Coordinators meeting – Lucknow - 3 February 2013
11. XXVII BTISnet Annual Coordinators meet 3rd & 4th March, 2016
Bioinformatics Infrastructure Facility, Dept. of. Biotechnology, Kumaun University, Bhimtal Campus, Bhimtal, Uttarakand.
12. First India workshop on Mission Challenge and converting sunlight– ICGEB, New Delhi – 9 October 2017
13. 2 days workshop on UGC-Sponsored Academic Administrators on “Institutional Assessment and Accreditation” 2018
14. 29th Annual Bioinformatics Coordinators Meeting – 2018, Manonmaniam Sundaranar University, Tirunelveli - 3-4 February 2018
15. UGC – Innovative programmed, Dept. of Botany, Jamal Mohamed College, 13 March 2018

Other Training Programs

Overseas Exposure / Visits

1. 1996 -Participate in 8th International congress of Mycology division, **Jerusalem, Israel.**
2. 1999 -Visit to Department of Medicinal Chemistry, **University of Washington, Seattle, USA.**
3. 2015 & 2017 - Collaborated Research Visit to
 1. **University of Sheffield, Sheffield,**
 2. **University of Cambridge,**
 3. **Scottish Association of Marine Science, Scotland.**
4. 2016 - Training Course for Developing Countries on Microbial Resources Information Management and Utilization, **World Data Centre for Microorganisms, Beijing, China**
5. 2017 - Industrial Visit to **Shannon ABC, Limerick, Ireland**

Membership in

Professional Forms

1. Member, Project Monitoring unit, RUSA

Editorial Board

1. Reviewer, Energy Conversion and Management
2. Reviewer, Engineering and Applied Science Research
3. Reviewer, Bioresource Technology

4. Reviewer, Journal of Cleaner Production.
5. Reviewer, Applied Energy
6. Reviewer, Journal of Microbiology
7. Reviewer, International Journal of Green Energy
8. Reviewer, Biomass and Bioenergy
9. Reviewer, Current Pharmaceutical Biotechnology
10. Reviewer, Ecological Indicators.

Advisory Board

1. Advisor Committee, NSS, Bharathidasan University
2. Academic Council Member, National College, Tiruchirappalli
3. Academic Council Member, Periyar E.V.R College, Tiruchirappalli
4. Academic Council Member, Holy Cross College, Tiruchirappalli
5. Academic Council Member, AVVM Pushpam College, Poondi

Academic Bodies (such as Board of Studies etc.,)

1. Member, Association of Microbiologists of India
2. Member, ASM- American Society for Microbiology
3. Member, Seaweed utilization of India
4. Member, Biotech Research Society of India
5. Member, Phycology
6. Board of Studies, Gandhigram University, Gandhigram

Other Committees

1. Physical verification committee, Nehru memorial college
2. Doctoral Committee Member (Ms. Gracy Angel), Dept. of Biotechnology, Anna University, Tiruchirappalli
3. Selection Committee Member(JRF) - CENTRE, Anna University, Tiruchirappalli
4. Purchase Committee Member – Dept. of Pharmaceutical Technology, Anna University, Tiruchirappalli
5. Selection Committee Representative – AVVM Pushpam College, Poondi

Resource persons in various capacities

Number of Invited / Special Lectures delivered:

1. Interdisciplinary Refresher Courses on Life Sciences - Department of

Microbiology, Bharathidasan University – 29 June 2018

2. Invited for Two days Workshop on “Data analysis in Vibrational Spectroscopy and Mass spectrometry based metabolic profiling” – 22-23 August 2017
3. Invited lecture - UGC Sponsored Refresher Course – Environmental Sciences (Multi-disciplinary) – UGC Academic Staff College, Kajamalai Campus, Bharathidasan University – 09 March & 16 March 2015

Others

1. Articles published in Newspapers / Magazines : NIL
2. Products developed : xx
3. No. of PhD Thesis evaluated : 4
4. No. of PhD Public Viva Voce Examination conducted : 5
5. Sequences submitted in GenBank: 24

Recent Publications (Last Five years)

1. Gnanasekaran Dineshbabu, Lakshmanan Uma, **Dharmar Prabaharan** (2018) The differential carbon-fixing and nitrogen- assimilating enzyme activities of Oscillatorian marine cyanobacterium Phormidium valderianum BDU 20041. **Photosynthetica** (Accepted) **(I.F. 1. 740)**
2. Rashmi Vijayaraghavan, Vaishnavi Ellappan, Uma Lakshmanan, Prabaharan Dharmar (2018) Preferential adsorption of uranium by functional groups of the marine unicellular cyanobacterium Synechococcus elongatus BDU130911. 3 Biotech 8(3):170. **(I.F. 1.361)**
3. Thangavel Mathimani, Duraisamy Bhumathi, Tharifkhan Shan Ahamed, Gnanasekaran Dineshbabu, Garlapati Deviram, Lakshmanan Uma, **Dharmar Prabaharan**, (2017) Semicontinuous outdoor cultivation and efficient harvesting of marine Chlorella vulgaris BDUG 91771 with minimum solid co-precipitation and high floc recovery for biodiesel. Energy Conversion and Management 149, 13-25 **(I.F 4.801)**
4. Bhuvaneshwari Thangaraj, Diana Princey Rajasekar, Rashmi Vijayaraghavan, Deviram Garlapati, Arul Ananth Devanesan, Uma Lakshmanan, **Prabaharan Dharmar** (2017). Cytomorphological and nitrogen metabolic enzyme analysis of psychrophilic and mesophilic Nostoc sp.: a comparative outlook. 3 Biotech 7(2):107 **(I.F -0.992)**
5. Thangavel Mathimani, Lakshmanan Uma, **Dharmar Prabaharan** (2017) Optimization of direct solvent lipid extraction kinetics on marine trebouxiophycean

- alga by central composite design – Bioenergy perspective. *Energy Conversion and Management*. 142, 334 – 346. **(IF 4.8)**
6. Thangavel Mathimani, Tamilkolundu Senthil kumar, Murugesan Chandrasekar, Lakshmanan Uma, **Dharmar Prabaharan** (2016) Assessment of fuel properties, engine performance and emission characteristics of outdoor grown marine *Chlorella vulgaris* BDUG 91771 biodiesel. *Renewable energy*. 105, 637 – 646 **(IF -3.4)**
 7. Bhuvaneshwari T, Shylajanaciyar M, Arul Prakasam P, Ezhilmaran K, Karthick L, Subramanian G, Uma L, **Prabaharan D** (2016). Polyphasic analysis for elucidating the taxonomic position of selected unicellular marine cyanobacteria from Indian and Hong Kong coast. *Phytotaxa* 307 (4): 263–277 **(I.F 1.797)**
 8. Gnanasekaran Dineshbabu, Vaithyalingam Shanmugasundaram Uma, Thangavel Mathimani, Garlapati Deviram, Devanesan Arul Ananth, **Dharmar Prabaharan**, Lakshmanan Uma (2016). On-site concurrent carbon dioxide sequestration from flue gas and calcite formation in ossein effluent by a marine cyanobacterium *Phormidium valderianum* BDU 20041. *Energy Conversion and Management*, 0196-8904. **[Impact factor 4.801]**
 9. Karthick L, Arul Prakasam P, Shylajanaciyar M, Sangeetha V, **Prabaharan D**, Uma L (2015). R and Shiny based application platform for cyanobacterial genome analysis. *Bioinformatics* 11(9): 422–425 **(I.F 0.6)**.
 10. Arul Prakasam P, Karthick L, Shylaja Naciyar M, Sangeetha V, Sivasudha T, Kaleel AhamedA, **Prabaharan D**, Subramanian G, Uma L (2015). Cyanobacterial KnowledgeBase (CKB), a compendium of cyanobacterial genomes and proteomes. *PLoS ONE* 10(8): e0316262 **(I.F 3.234)**.
 11. Mathimani T, Uma L, **Prabaharan D** (2015). Homogeneous acid catalysed transesterification of marine microalga *Chlorella* sp. BDUG 91771 lipid - An efficient biodiesel yield and its characterization. *Renewable Energy* 81: 523 - 533 **(I.F 3.361)**.
 12. Shylajanaciyar M, Dineshbabu G, Rajalakshmi R, Subramanian G, **Prabaharan D**, Uma L (2015). Analysis and elucidation of phosphoenolpyruvate carboxylase in cyanobacteria. *The Protein Journal* 34-1: 73-81 **(I.F 1.039)**.