

CURRICULUM VITAE

PRASANTHKUMAR S, Ph. D, M. Sc | Botany

Telephone: +91-9746414687

Email: prasanths01@gmail.com

ORCID id: 0000-0001-8260-9634; Scopus Author ID: 57203967149



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Professional profile

A dynamic, versatile, and accomplished researcher looking forward to leverage 7 years of detail-oriented research experience in algal technology and instrumentation. Looking forward to serve the best interests of students and contribute to humanity. Have research publications in high impact journals, book chapters, and the discovery of two species of green algae to credit.

Field of Research Interest

- Freshwater Ecology
- Hydrobiology
- Algal technology
- Nutraceuticals and biofuel

Educational qualification

PhD	Doctoral degree in Botany - 2020 School of Biosciences, Mahatma Gandhi University, Kottayam, Kerala, India <i>Thesis:</i> Nutritional Value of Freshwater Green Algae of Kerala
NET	Life Sciences (25 th Rank)- 2014 CSIR-UGC
M. Sc	Botany (83.63%, Distinction) - 2011 St. Berchman's College, Changancherry, Kottayam, Kerala
B. Sc	Biotechnology & Botany (83.75%, Distinction) - 2009 St. Berchman's College, Changancherry, Kottayam, Kerala
Higher Secondary	Science (76.66%, Distinction)- 2006 NSS Higher Secondary School, Karukachal
SSLC	82.33%, Distinction – 2004

CMS High School, Nedungadappally

Teaching experience

Assistant Professor St. Dominic's College, Kanjirappally

(Feb 07, 2022- present)

Guest Lecturer SVR NSS College, Vazhoor, Kottayam, Kerala

(Aug 01, 2012 to Dec 07, 2012)

(Jan 04, 2021 to Feb 04, 2022)

Outline

Working alongside assistant professors in the department of botany and delivering lectures in various subjects in Botany to graduate and postgraduate students

List of Publications

International/National Journal Papers

1. MA Sunil, Vasudevan Sunitha, **Prasanthkumar Santhakumaran**, Mohind C. Mohan, Midhun Sebastian Jose, Radhakrishnan E.K, Mathew Jyothis, 2021. Protective Effect of (+)-Catechin Against Lipopolysaccharide Induced Inflammatory Response in RAW 264.7 Cells through Downregulation of NF- κ B and p38 MAPK. **Inflammopharmacology** 29, 1139–1155. <https://doi.org/10.21203/rs.3.rs-265638/v1>. **Impact factor: 3.238**
2. **Prasanthkumar Santhakumaran**, Ayyapan, S.A, Ray, J.G., 2020. Nutraceutical applications of twenty-five species of rapid-growing green-microalgae as indicated by their antibacterial, antioxidant and mineral content. **Algal Research** 47, 101878. <https://doi.org/10.1016/j.algal.2020.101878>. **Impact factor: 4.401**
3. Ray, J.G., **Prasanthkumar Santhakumaran**, Kookal, S.K., 2020. Phytoplankton communities of eutrophic freshwater bodies (Kerala, India) in relation to the physicochemical water quality parameters. **Environment, Development and Sustainability**, 23, 259–290. <https://doi.org/10.1007/s10668-019-00579-y>. **Impact factor: 3.219**
4. **Prasanthkumar Santhakumaran**, Kookal, S.K., Mathew, Linu, Ray, J.G., 2020. Experimental evaluation of the culture parameters for optimum yield of lipids and other nutraceutically valuable compounds in *Chloroidium saccharophilum* (Kruger) comb. Nov. **Renewable Energy** 147, 1082-1097. <https://doi.org/10.1016/j.renene.2019.09.071>. **Impact factor: 8.001**

5. **Prasanthkumar Santhakumaran**, Kookal, S.K., Mathew, Linu, Ray, J.G., 2019. Bioprospecting of Three Rapid-Growing Freshwater Green Algae, Promising Biomass for Biodiesel Production. **BioEnergy Research** 12, 680-693. <https://doi.org/10.1007/s12155-019-09990-9>. **Impact factor: 2.814**
6. **Prasanthkumar Santhakumaran**, Kookal, S.K., Ray, J.G., 2018. Biomass yield and biochemical profile of fourteen species of fast-growing green algae from eutrophic bloomed freshwaters of Kerala, South India. **Biomass and Bioenergy** 119, 155–165. <https://doi.org/10.1016/j.biombioe.2018.09.021>. **Impact factor: 5.061**
7. Santhoshkumar, K., **Prasanthkumar Santhakumaran** and Ray, J.G., 2017. Biomass yield, oil productivity and fatty acid profile of *Chlorella lobophora* cultivated in diverse eutrophic wastewaters. **Biocatalysis and Agricultural Biotechnology**, 11, 338-344. <https://doi.org/10.1016/j.bcab.2017.08.006>
8. Santhoshkumar, K., **Prasanthkumar Santhakumaran** and Ray, J.G., 2016. Experimental assessment of productivity, oil-yield and oil-profile of eight different common freshwater-blooming green algae of Kerala. **Biocatalysis and Agricultural Biotechnology**, 8, 270-277. <https://doi.org/10.1016/j.bcab.2016.10.007>
9. Santhoshkumar, K., **Prasanthkumar Santhakumaran** and Ray, J.G. (2016) *Chlorococcum humicola* (Nageli) Rabenhorst as a Renewable Source of Bioproducts and Biofuel. **Journal of Plant Studies**, 5, 48-57. <https://doi.org/10.5539/jps.v5n1p48>
10. Santhoshkumar, K., **Prasanthkumar Santhakumaran** and Ray, J.G. (2015) Biomass Productivity and Fatty Acid Composition of *Chlorella lobophora* V M Andreyeva, a Potential Feed Stock for Biodiesel Production. **American Journal of Plant Sciences**, 6, 2453-2460. <https://doi.org/10.4236/ajps.2015.615247>.

Books/book chapters

1. **Prasanthkumar Santhakumaran** and Ray, J.G. (2020). **Nutraceutical prospects of green algal resources in sustainable development**. In J. Manuel and S. Arockiasamy (Eds.), *Sustainable Bioprocessing for a Clean and Green Environment: Concepts and Applications*. Florida: CRC Press.
2. **Prasanthkumar Santhakumaran** and Ray, J.G. (2022). **The Prospects and Challenges of Microalgae as a Novel Nutraceutical Resource**. In E. Jacob-Lopes (Ed), *Handbook of Food and Feed from Microalgae*. Elsevier (**In press**)
3. **Prasanthkumar Santhakumaran** and Ray, J.G. (2022). Microalgae as the novel nutraceutical biomass resource. In N. Motohashi and J G Ray (Eds.), *A Literature Review on Nutraceuticals*. Nova publishers. (**In press**)

Conference Presentations/Proceedings

1. Harishma Haridas, **Prasanthkumar Santhakumaran**, and Sruthi C C (2021) **Metabolomic profiling of Earliella scabrosa, Daedalopsis confragosa, Ganoderma sp, Trametes betulina and Nigroporous by GCMS approach**. Online national

conference on recent trends in biology held on 27th and 28th September 2021 at Newman College, Thodupuzha, Kerala

2. **Prasanthkumar Santhakumaran** and J.G. Ray (2019) “**Industrially valuable indigenous freshwater green algae of Kerala**”. XLII All Indian Botanical Congress held on 26th and 28th November 2019, at Calicut University, Kerala.
3. J.G. Ray and **Prasanthkumar Santhakumaran** (2019) “**Nutraceutical prospecting of freshwater green-microalgae**”. National Conference on Bioprospecting of algae-Resources conservation and utilization (NCBPA19) held on 01st and 02nd August 2019, at Department of Plant Sciences, Central University of Kerala.
4. **Prasanthkumar Santhakumaran**, Santhoshkumar K, J.G. Ray (2017) “**Ecotechnological perspectives of green algae for sustainable development**”. National seminar on Ecotechnological Perspectives for Sustainable Development, on 27th and 28th July 2017, at School of Biosciences, Mahatma Gandhi University, Kottayam.
5. Santhoshkumar K, **Prasanthkumar Santhakumaran**, J.G. Ray (2017) “**Ecotechnological prospects of common freshwater green algae of Kerala as resources for food and fuel**”. National seminar on Ecotechnological Perspectives for Sustainable Development, on 27th and 28th July 2017, at School of Biosciences, Mahatma Gandhi University, Kottayam.
6. Santhoshkumar K, **Prasanthkumar Santhakumaran**, J.G. Ray (2017) “***Chlorococcum humicola* (Nageli) Rabenhorst as a Renewable Source of Bioproducts and Biofuel**”. Kerala Science Congress, Thiruvalla.
7. **Prasanthkumar Santhakumaran**, Santhoshkumar K, J.G. Ray (2017) “**Diversity of fast growing algae of bloomed temple ponds in Kerala**”. National Biodiversity Congress, Thiruvananthapuram.

DNA sequence submission in GenBank - 17

Professional service

1. **As resource person**, “**Nutraceutical Prospecting of Freshwater Green-Microalgae**”. National Webinar held on 8th May 2021, at Department of Botany, St Joseph University, Nagaland.
2. **As resource person**, “**Online training for CSIR-NET in Life Science**” held on 15th May 2021, at Department of Botany, SVR NSS College, Vazhoor, Kerala
3. Organized Indo-Japanese National workshop on “Sustainable Water Resources Management” held on 02nd and 03rd November 2018 at School of Biosciences, Mahatma Gandhi University, Kottayam.

4. Organized Indo-Japanese National workshop on “Global Environmental Sustainability” held on 13th September 2019 at School of Biosciences, Mahatma Gandhi University, Kottayam.

Career advancements

1. Participated online **one week Faculty Development Programme** on “**ICT-ENABLED TEACHING AND LEARNING**” from 20 to 26 September, 2021 conducted by Teaching Learning Centre, Ramanujan College University of Delhi in collaboration with Dhing college Nagaon, Assam under the aegis of Ministry of Education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching.
2. Participated online **one week Faculty Development Programme** on “**Teaching-Learning Methods: From Micro-Teaching to Peer Learning**” from 05 to 11 October, 2021 conducted by Teaching Learning Centre, Ramanujan College University of Delhi under the aegis of Ministry of Education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching.
3. Participated online **one week Faculty Development Programme** on “**Developing MOOCs: Concepts and Tools**” from 16 to 22 December, 2021 conducted by Teaching Learning Centre, Ramanujan College University of Delhi in collaboration with Shri Shankarlal Sundarbai Shasun Jain College for Women, Tamilnadu under the aegis of Ministry of Education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching.

Editorial services

Reviewer, Biomass and Bioenergy -Elsevier (2020- Present)

Reviewer, Applied Phycology- Taylor and Francis (2021- Present)

Professional involvements

Annual Member, All India Botanical Society, India, 2021- 2022

Core skills

- **Techniques:** Algal isolation, molecular characterization, culturing, biochemical analysis, biofuel, nutraceutical assessment, antibacterial assays and antioxidant assays
- **Instrumentation:** Atomic absorption spectroscopy (AAS), Muffle furnace, Rotary evaporator, Digital Microscope, Perforated algal centrifuge, PCR, Micro-Kjeldahl apparatus, Multiplate reader, HPTLC, HPLC, GC-MS, UV-Visible spectrophotometer and FT-IR

Computer skills

- **Operating system:** Windows
- **Phylogenetic software-** BioEdit, ALTER, NCBI database, RAxML, FigTree
- **Statistical software** – R, SPSS v.20, PAST, GraphPad PRISM v. 5.0, Origin v. 6.0

Other soft skills

- Communication skills
- Leadership
- Compassion
- Problem-solving
- Team working ability
- Perseverance

Languages Known: English, Malayalam, Hindi

Work Style

- Willing to perform basic tasks and move on to solve complex problems
- Able to learn new knowledge and adapt to new environments quickly
- Strong independent work style and excellent teamwork skills
- Well-organized and passionate