

**UNIVERSITY OF CALICUT  
(IQAC)**

**INFORMATION FOR  
ACADEMIC AND ADMINISTRATIVE AUDIT OF THE DEPARTMENT  
Year: 2020 - 21**

(Provide information for last five years from 2016-17 to 2020-21)

1. **Name of the Department: Botany**
2. **Year of establishment: 1968**
3. **Courses offered: PG, M. Phil., Ph.D., Others**

<b>Year</b>	<b>PG</b>	<b>M.Phil</b>	<b>Ph.D.</b>	<b>Others</b>
2016-17	√	√	√	
2017-18	√	√	√	
2018-19	√	√	√	
2019-20	√	√	√	
2020-21	√	√	√	

4. **Courses introduced during last 5 years: 1. M.Sc. Applied Plant Science,**

**2. M.Phil Botany**

**3. Ph. D Botany**

5. **Does the department have Academic flexibility? If yes since when? Yes, 1968**
6. **Interdisciplinary programs offered and departments involved: Nil**
7. **Courses conducted in collaboration with other universities and Institutions: Nil**
8. **Details of programmes discontinued, if any, with reasons: Nil**
9. **Examination System: Annual/ Semester/Choice Based Credit System/ Credit and Grading system/ any other system, specify: Choice Based Credit Semester System.**
10. **Participation of the department in the curriculum development for courses offered by the Departments. Yes**
11. **Does the department have different syllabus than the one used by university for PG courses?: Yes**
12. **Number of teaching posts sanctioned, filled and vacant.:**

Designation	Sanctioned	Filled	Filled under CAS
Professor	2	1	4
Associate Professor	4	2	--
Assistant Professor	10	9	--
Total	16	12	4

**13. Faculty profile with name, qualification, designation, experience, nature of appointment (confirmed/ probation/temporary):**

**a) Appointed on Government Sanctioned Post.**

Name	Designation	Qualifications	Teaching/Research Experience	Nature of appointment,.
Dr. John E.Thoppil	Professor	Ph.D	26	Permanent
Dr.SanthoshNampy	-do-	Ph.D	30	-do-
Dr.V.V.Radhakrishnan	-do-	Ph.D	11	-do-
Dr. Jos T.Puthur	-do-	PhD and Post doctorate	19	-do-
Dr. C.C. Harilal	-do-	Ph.D	19	-do-
Dr.Sunojkumar P	Asst. Professor	BLISc., Ph.D	11	-do-
Dr.A Yusuf	-do-	Ph.D	16	-do-
Dr.Shamina M	-do-	Ph.D	10	-do-
Dr. A.K. Pradeep	-do-	Ph.D	9	-do-
Dr.Resmil L	-do-	MSc, MPhil, UGC-JRF, PhD	6 Months as Asst. Professor, CU; 13 years at Christian College, Kattakadasffiliated to Kerala University.	-do-
Dr.DeepnaLatha	-do-	BSc, MSc, MPhil, NET, JRF, Ph.D.	1 year & 8 months	-do-
Dr.Pramod C	-do-	Ph.D	14	-do-

**b) Appointed from University Fund (Ad-hoc/Guest/contract Faculty).**

Name	Designation	Qualifications	Teaching/Research Experience	Nature of appointment,.
Nil				
Nil				

14. List of Visiting Fellows/Teachers, Adjunct and Emeritus Professors, (for last 5 years): Nil
15. Percentage of classes taken by temporary/visiting faculty (programme- wise information): Nil
16. Programme-wise Student Teacher Ratio: (Average of 5 Years): PG 0.52 M.Phil 1.25
17. Number of academic support staff (technical) and administrative staff sanctioned, filled and vacant:

Sr. No.	Posts	Sanctioned posts	Filled	Actual
1	Laboratory Assistant	1	1	1
2	Assistant	2	1	2
3	Laboratory Attendant	1	Nil	1
4	Peon	1	1	1
5	Computer Assistant	1	1	1
6	Librarian	1	1	1
7	Section Officer	1	1	1
Other				
	Store keeper	1	Nil	1
	Technical Officer	1	Nil	1
	Specimen Collector	1	Nil	1
	Sweeper cum Scavenger	1	Nil	1
	Herbarium Assistant	1	Nil	1
	Herbarium Curator	1	Nil	1
	Field Assistant	3	Nil	3
	CUBG Gardeners	7	1	7
	Garden Mastery	2	1	2
	Assistant Superintendent	1	Nil	1

18. Thrust areas of research as identified by the department: 7 divisions
19. Information about research grants, projects completed and ongoing during the period of last 4 years
- a) From National funding agencies (like UGC, CSIR, DST, DBTetc):

Sr. No.	Name of the Principle Investigator (C0-investigator)	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in Lakh)	Remarks if any
1	Head of the Department	Molecular phylogeny and conservation of the genus <i>Aeschynanthus</i> Jack (Gesneriaceae) in India.	DST	Rs. 9700000	

2	Prof. SanthoshNampy	Molecular phylogeny and conservation of the genus <i>Aeschynanthus</i> Jack (Gesneriaceae) in India.	DST-SERB	2834040	
3	Dr.Sailas Benjamin / Dr. C.C. Harilal	A pilot study for the bioconversion of hazardous DEHP plasticizer in plastics into a drug by <i>Achromobacterdenitrificans</i> SP1	DBT, New Delhi	Rs. 2810000	
4	Dr. A. Yusuf	UGC- MRP project	UGC	11,81,500	
5	Dr.Ajayan KV / Dr. C.C. Harilal	Identification and characterization of lipid resultant Fatty Acid Methyl Esterase (FAME) hyperproducing algal species from marine, coastal and freshwater environments of Kerala	DST - SERB	3242500	
6	Dr. A. Yusuf	KSCSTE -SRS project	KSCSTE	24,57,800	
7	Prof. SanthoshNampy	Angiosperm diversity of Idukki district, Kerala.	KSCSTE-SRS	3245554	
8	Prof. Jos T Puthur	Ecophysiological studies of Mangroves in KadalundiVallikunnu Community Reserve with Special Reference to <i>Acanthus ilicifolius</i> L. (2017-20)	KSCSTE	21,32,000/-	
9	Prof. SanthoshNampy	Taxonomy, Molecular Phylogeny and conservation of the genus <i>Aeschynanthus</i>	SERB	28,34,040/-	
10	Prof. C.C. Harilal	Eco restoration of PonnaniKole Wetlands through Community Participation	State Wetland Authority of Kerala	3,50,000/-	
11	SERB, DST New Delhi	Dr.Sunojkumar. P	Government of India	32,08,830.00	

**b) From International funding agencies:**

Sr. No.	Name of the Principle Investigator (C0-investigator)	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in Lacs)	Remarks if any
	Nil				
	Nil				

20. Funds received at Departmental level through DST-FIST; CSIR, UGC-SAP/CAS, DAE, DBT, BRNS, ICSSR, AICTE, etc

Scheme and Funding Agency	Non- Recurring (Rs.)	Recurring	Project Fellow	Total (Rs.)
DST-FIST (2016-17)	21,71,794			97,00,000/-
2017-18	Nil	Nil	Nil	Nil
2018-19	Nil	Nil	Nil	Nil
2019-20	Nil	Nil	Nil	Nil

21. Research facilities available in the department and recognition received, if any? DST-FIST

Well established herbarium, Green House, Sophisticated instruments, CUBG

22. Special research laboratories sponsored by / created by industry or corporate bodies. Nil

23. Publications:

Sl. No.	Papers published in peer reviewed journals	Monographs, Books, Chapters in books	Citations	h-index	Impact factor range/Average Impact factor
	286	53			

24. Details of patents filed & granted and income generated: Nil

25. Consultancy services provided, name of the teacher/s and income generated: Nil

Sr. No.	Year	Name of the teacher	Nature of consultancy	Funds generated (In Lakh)
Nil				

26. Details of teachers invited as resource persons for Refresher courses, Orientation courses, Seminars, Workshops, Conferences at national and international levels.

- **Dr. Jos T. Puthur** delivered a lecture on the topic “ Academic writing and publishing” at five day faculty development programme on Research and career, October 21, 2020. Vimala College (Autonomous), Thrissur, Funded by Dept. of Biotechnology, Govt. of India under the DBT star college scheme.
- **Dr. Jos T. Puthur**, delivered an invited lecture on the topic Seed priming: A means to boost abiotic stress tolerance mechanism in crop plants at Three Day International Webinar Series- Doctrina (11) on “ Plant Functional Biology” organised by Department of Post Graduate Studies and Research in Botany and Internal Quality Assurance Cell (IQAC), Sir Syed College, Thaliparambu in association with Kerala State Higher Education Council (KSHEC) Biology from 05 to 07 June, 2020.

- **Dr. Jos T. Puthur**, delivered an invited lecture in the Albertian Knowledge Webinar series 2020, organized by Albertian Centre for human Resource Development and Research, St. Alberts College (Autonomous), M G University, Kerala on the topic “Phytochromes Controlled Plant Physiological functions on April 29, 2020.
- **Dr. Jos T. Puthur**, delivered an invited lecture in the seminar “Women in Science” organized by the Dept. of Botany, Govt. Arts and Science College, Kozhikode on Feb 20, 2020, sponsored by KSCSCTE, Govt. of Kerala.
- **Dr. Jos T. Puthur**, delivered an invited lecture on the topic “Career options in Biology” at Dept. of Botany, Farook College (Autonomous), Kozhikode on Feb 14, 2020, sponsored by UGC Autonomous grant 2019-20.
- **Dr. Jos T. Puthur**, Chaired a technical session during National Conference of Plant Physiology-2019 organized by Kerala Agricultural University, Thrissur under the aegis of Indian Society for Plant Physiology, New Delhi on “Plant Productivity and Stress Management” December 19-21, 2019.
- **Dr. Jos T. Puthur**, Chaired a technical session during XLII All India Botanical conference of the Indian Botanical Society and National Symposium on “Innovations and Inventions in Plant science Research” held at Dept. of Botany, University of Calicut, from Nov 06-08, 2019.
- **Dr. Jos T. Puthur**, topic: Molecular and Biochemical techniques at Workshop on Research Methodology, Writing Practices, Language and Soft Skills for Young Scientists Sponsored by: WSD-KSCSCTE held at Malabar Botanical Garden and Institute for Plant Sciences, Kozhikode, 14 & 15th March, 2019.
- **Dr. Jos T. Puthur**, topic: “Framing Research proposals and research funding opportunities” at UGC sponsored one week orientation programme for college teachers held at Farook College (Autonomous), Kozhikode on March 05, 2019.
- **Dr. Jos T. Puthur**, topic: “Framing Research proposals and research funding opportunities” at State level two day workshop on Research methodology-practises and updates organized by MES college, Marampally, Jan 19, 2019.
- **Dr. Jos T. Puthur**, topic: “Physiology of seed storage” at National workshop on seed collection and conservation, organized by Dept. of Botany, Univ. of Kerala, March 8-10, 2017.
- **Dr. Jos T. Puthur**, topic: “Preparation of proposals for research grants” at State level two day workshop on Research methodology-practises and updates organized by MES college, Marampally, Jan 21, 2017.
- **Dr. Jos T. Puthur**, topic: Physiological stress of the plants” at National Seminar on “Species The Passion-II”, organized by St. Thomas College (Autonomous), Thrissur. June 16-17, 2016.
- **Dr. Jos T. Puthur**, National seminar on “Modern trends in phytochemistry” organized by post graduate department of Botany, Maharaja’s college (Autonomous), Ernakulam on Feb 01-02, 2016.
- **Dr. Jos T. Puthur**, National seminar on “sustainable agriculture solutions for food security” organized by Department of Botany, Govt. College, Madapally on Jan 19-20, 2016.

#### **Extension Lectures Delivered**

1) **Dr. Jos T. Puthur**, “Key strategies for student success” in Dept. of Botany, Govt. Arts and Science college, Kozhikode on 23-08-2016.

2) **Dr. Jos T. Puthur**, “UV irradiation and tolerance mechanisms in plants ” in the KSCSCTE sponsored seminar coinciding with the Observance of Ozone day in Carmel College, Mala, Thrissur. Sept 29, 2016.

3) **Dr. Jos T. Puthur**, “Future prospects in Biological Sciences” on Aug 14, 2017, St. Marys College, Thrissur, Kerala.

- 4) **Dr. Jos T. Puthur**, Delivered an invited lecture on the topic “Plant Physiology in relation to abiotic stresses” to the participants of refresher course in life sciences sponsored by RUSA at Human Development Centre, University of Kerala on Nov 13, 2017.
- 5) **Dr. Jos T. Puthur**, Gave a radio talk in AIR, Kozhikode on the topic “New trends in the sphere of bio Science”, broadcasted on Jan 08, 2018.
- 6) **Dr. Jos T. Puthur**, Delivered key note lecture coinciding with the inauguration of two day workshop on molecular biology techniques and bioinformatics held at SreeNarayana College, Nattika, thrissur on Jan 17, 2018.
- 7) **Dr. Jos T. Puthur**, Delivered an invited lecture on the topic “ potential areas for future research in plant physiology” as part of Guru-Guruvandanam, coinciding with the golden jubilee celebrations of Dept. of Botany, St. Thomas College, Thrissur on Feb 12,2018.
- 8) **Dr. Jos T. Puthur**, Gave a radio talk in AIR, Kozhikode on the topic “Contributions of eminent biologist Dr. Kamaljit S. Bawa, the first indian to win the Linnean medal” broadcasted on July 16, 2018.
- 9) **Dr. Jos T. Puthur**, “Future prospects in Biological Sciences” on Oct 15, 2018, NSS College, Manjeri, Kerala.
- 10) **Dr. Jos T. Puthur**, “Future prospects for students of Masters in Botany” on Oct 30, 2018, Vimala College (Autonomous), Thrissur, Kerala.
- 11) **Dr. Jos T. Puthur** “Ozone depletion and UV-B stress to plants” on June 27, 2019, St. Mary’s College, Thrissur in connection with world environmental day.
- 12) **Dr. Jos T. Puthur** “: The art of scientific writing and publishing” on September 26, 2020. St. Thomas College (Autonomous), Thrissur.
- 13) **Dr. Jos T. Puthur** “Future research prospects for biology graduates”on Jan 11, 2021. CPA College of Global studies, Puthanathani, Malappuram, Webinar series INSPIRON 2K21.

### **Dr. P. SunojKumar**

- Delivered an invited talk on “Plant molecular markers and an insight into the Phylogeny of genus 2016 *Leucas* R.Br. (Lamiaceae) at the National Workshop on MolecularPhylogenetics at Indian Institute of Science, Bangalore (Aug1-5).
- Delivered an invited talk on “Classical taxonomy and molecular systematics” at St. Mary’s college 2017 Sultan Bathery on the second day of UGC seminar Savannah 2 on 09-03-2017
- Delivered an invited talk on the importance of Taxonomic studies and an insights into the 2017 taxonomy and origin of *Leucas* Rs.Br. at Unity Womenscollege, Manjeri on 15-3-2017

### **Dr. SanthoshNampy**

- National Seminar at Midnapur College (Autonomous), Midnapur, West Bengal. 02 March 2020.
- National Seminar in the Annual Meeting of Indian Fern Society (IFS). MS University, Vadodara, Gujarat. 25 February 2020.
- National Seminar on “Recent Advances in Plant Sciences”. St. Albert’s College (Autonomous), Ernakulam. 14 January 2019.
- National Seminar at Kerala University, Thiruvananthapuram. 02 February. 2019.

- National Seminar on “Order Commelinales”. Shivaji University, Kolhapur, Maharashtra. 02 January 2019.
- National Seminar on “Modern Techniques in Plant Sciences”. Shivaji University, Kolhapur, Maharashtra. 08 February 2018.

**Dr. John E. Thoppil**

- Urban Wetlands- Restoration and Conservation –Department of Botany, Govt. Arts and Science College, Kozhikode. 5<sup>th</sup> February 2018

**Dr. C. C. Harilal**

Invited lecture on Principles of Eco restoration, Webinar in connection with World Environment Day, Department of Chemistry, St Berchmans’ College, Changanacherry on 6th June 2021.

- Invited lecture on Eco restoration initiatives, Webinar in connection with World Environment Day celebration by Mathrubhoomi Seed Club in collaboration with Government Higher Secondary School, Mavelikara on 5th June 2021.

- Invited lecture on Eco restoration efforts for heterogeneous habitats, Webinar in connection with World Environment Day celebrations by the Department of Biotechnology, University of Kerala, in collaboration with Centre for Biodiversity Conservation (CBC) on 5th June, 2021.

- Invited lecture on Eco restoration strategies, Webinar on Reimagine, Recreate and Restore in connection with the observance of World Environment Day by the Department of Botany, St Mary’s college, Thrissur on 5th June 2021.

- Invited lecture on Strategies of eco restoration, Webinar series of the Department of Psychology, University of Calicut in connection with the observance of World Environment Day on 4<sup>th</sup> of June, 2021.

- Eco restoration initiatives, Webinar series in connection with the observance of World Environment Day by the Department of Chemistry, Majlis Arts and Science College, Puramannur, Valancherry, Malappuram on 4th of June, 2021.

- Invited lecture on Sustainable Development Goals – Where do we stand?, International Seminar on ‘Arabic Broadcasting and Sustainable Development Goals’, Department of Arabic, University of Calicut on 3rd March 2021.

- Invited lecture on Carbon sequestration strategies, World Environment Day observance seminar of the Department of Botany, SN College, Nangiyarkulangara on June 5th 2020.

- Invited lecture on Phyto diversity and carbon sequestration potential. World Environment Day commemoration seminar of the Albertian Centre for Human Resource Development and Research, St. Alberts College, Ernakulam on 05/06/2020.

- Environment in light of Covid 19 Pandemic (Part 2). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 22/05/2020.

- Environment in light of Covid 19 Pandemic (Part 1). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 15/05/2020.

- Post flood management of water resources (Part 3). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 13/03/2020.

- Post flood management of water resources (Part 2). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 06/03/2020.



- Post flood management of water resources (Part 1). Guest talk in Haritham programme, All India Radio (Manjeri FM) on 28/02/2020  
Invited talk on Wetlands of Kerala and their cultural importance. UGC Seminar series of the Department of Botany, Ferook College, Ferook on 12th February 2020.
- Invited talk on Climate Change and Biodiversity, Programme on 'Climate warriors: Training youth in understanding and fighting climate change', sponsored by the Directorate of Environment and Climate Change, Government of Kerala and organized by the Integrated Rural Technology Centre, Palakkad on 7 th February, 2020,
- Invited lecture on 'The History of Climate Change', UGC National Seminar on 'Environment and Development: Issues, Challenges and Potentialities' by the Department of History, University of Calicut on 6/2/2020.
- Invited lecture on Coastal Biodiversity – In light of Coastal conservation. Workshop on 'Coastal and marine biodiversity conservation' for the members of Municipality and GramaPanchayats, Organized by the Social forestry extension division of the Department of Forests, Government of Kerala at Payyoli Municipality on 29/01/2020.
- Biodiversity of India – Prospects and Challenges, Seminar Series 'Sahya' of the Department of Botany, Vimala College, Thrissur on 28th January, 2020.
- Impact of flood on Agro-biodiversity and ecosystems, Department of Environment and Climate Change (DoECC) sponsored National Seminar on 'Post Flood Crops', Organized Jointly by Indian Institute of Spices Research and Sullamussalam Science College, Areekode on 27th January, 2020.
- IYPH 2020: Evaluation of food security in the context of Global Climate Change, Science fair organized by the Deputy Director, Education, Government of Kerala at St. Jammass HSS, Malappuram on 25th January, 2020.
  - Recent trends in carbon sequestration efforts, Directorate of Environment and Climate Change (DoECC) sponsored National seminar on 'Anthropogenic climate change and ecosystems: Challenges and Remedies', Department of Botany, SN College, Kannur on 20th January, 2020.
  - Co-Chair, Seminar on Forestry, Plant Genetics and Improvement, December 3-4, 2019, Kerala Forest Research Institute and GM Foundation at Peechi, Thrissur.
  - Panel discussion, ICFRE sponsored Regional Research Conference on Management of Fragile Ecosystems in Climate Change Scenario. 20th November 2019. Institute of Forest Genetics and Tree Breeding (ICFRE), Coimbatore
  - Keynote address on the occasion of seminar 'Floristic diversity of laterites and wetlands', organized by the Department of Botany, Brennen College, Thalassery on 14th November 2019
  - Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, DPHSS, Palapetty, Malappuram on 17/10/2019.  
Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, MES College, Valancherry on 15/10/2019.
  - Wetlands and conservation strategies –with special reference to Kole Wetlands', State Wetland Authority of Kerala project on wetland conservation, 14/10/2019. SreeNeelakanta Government Sanskrit College, Pattambi.
  - Wetlands and conservation strategies –with special reference to KoleWetlands. State Wetland Authority of Kerala project on wetland conservation, PSMO College, Tirurangadi on 11/10/2019.
  - SWAK funded awareness programme on 'Eco restoration of PonnaniKole wetlands through community participation.', GHSS, Kattoor on 23/9/2019.

- Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, 3/10/2019. Al Falah HS, Kakkidipuram.
- Wetlands and conservation strategies –with special reference to Kole Wetlands 3/10/2019. State Wetland Authority of Kerala project on wetland conservation, THSS Vattamkulam.
- SWAK funded awareness programme on ,Eco restoration of PonnaniKole wetlands through community participation., Department of Botany, Government College, Pattambi, 14/10/2019
- Invited lecture on Ozone hole and climatic changes, KSCSTE sponsored seminar and ozone day celebrations by Sree Krishna College, Guruvayur on 24th September, 2019.
- Invited lecture on Climate change and carbon sequestration initiatives, KSCSTE sponsored World Environmental Day celebrations 2019, on 21/6/2019 at the Department of Botany, Sir Syed College, Thaliparamba
- Invited lecture on Carbon sequestration potentials, Department of Environment and Climate Change sponsored conference on ‘Biodiversity Conservation’, organized by MES College, Mampad on 21-22, February, 2019.
- Invited lecture on Global climate change and sequestration efforts in the Department of Physics, SN College, Kannur, in connection with the Annual Alumni meet on 14 - 16 February 2019.
- Recent trends in Phyto-sequestration of atmospheric carbon dioxide, National seminar on Advances and applications in Plant Science, Department of Botany, University of Kerala, Kariavattom, Trivandrum. 6- 8, February, 2019.
- Wetlands – An abode of Diversity, MES Kalladi College, Mannarkkad, KSCSTE sponsored seminar in connection with World Wetland Day – 2019, 6/2/2019.
- Delivered an invited lecture on the topic ‘Microalgal technologies for Resource Recovery’, on the occasion of the National Seminar on Plant – Microbe interactions (Sponsored by the Directorate of Collegiate Education, GoK) organized by the PG and Research Department of Botany, SN Government Sanskrit College, Pattambi, on 5 th December, 2018.
- Delivered an Inaugural lecture on ‘Biosequestration potentials in carbon mitigation research’, on the occasion of Botany Association Inauguration of Mahatma Gandhi Government College, Mahe, U.T. of Puducherry on 5th October, 2018.
- Delivered an invited lecture on ‘Biodiversity of Western Ghats-Challenges and Mitigation’ on the occasion of the DoECC sponsored National Seminar on ‘Western Ghats – A treasure house of Biodiversity’, organized by the Department of Environmental Sciences, Kannur University during 12-14, March, 2018.
- Delivered an invited lecture on ‘Climate Change and Carbon Research’ on the occasion of the KSCSTE sponsored World Environment Day activities at EMEA College, Kondotty on 18th June 2018.
- Delivered an invited lecture on ‘Wetlands for sustainable urban future’ in the KSCSTE sponsored ‘World Wetland Day celebrations’ organized by the Department of Botany, MES Asmabi College, Kodungallur, on 9th February, 2018.
  - Participated as resource person in INCULCATE science popularization programme of the Government of Kerala, in the University of Calicut, in the year 2017.
  - Delivered a lecture on ‘water literacy’ on the occasion of National River Festival 2017 organized by Nilavicharavedi, Kerala at Cheruthuruthi, Thrissur on 2-5, June 2017.
  - Delivered an invited lecture on ‘micro algal food supplements’ on the occasion of the International workshop on integrative biology, organized by the Centre for Evolutionary and integrative Biology, University of Kerala, Thiruvananthapuram on January, 2017.
  - Delivered an invited lecture on ‘micro algal technologies for environment management’ on the occasion of the national seminar (UGC) on micro algal technologies for environmental

management, organized by the Department of Botany, University College, Thiruvananthapuram, Kerala from 7-8 December, 2016.

- Presented an extension lecture on water quality issues on the occasion of seminar on Water Resources management, organized by ISM at K.P. KesavaMenon Hall, Calicut on 7th October 2016.

- Chaired a session in the KSCSTE sponsored national seminar on 'Environmental issues – challenges and concerns' organized by the Chair for Gandhian Studies and Research, University of Calicut, from 28 – 27, September, 2016

#### Dr. Resmi L

- Chaired a session on Genetics and Plant Breeding in the International Seminar on New Frontiers in Cytogenetics & XIII Conference of the Society of Cytologists & Geneticists (SOCG) held from 15-17 December 2016 at Department of Botany, University of Kerala
  - Chaired a session on Plant Physiology, Biochemistry and Bioinformatics in PROTECTUS PLANTAE '19. International Conference on exploring the scope of Plant Genetic Resources. May 22-24. Department of Botany, University of Kerala.
  - 'Ecosystem Restoration- A Global Perspective'. 06. 06. 2021. World Environment Day Celebrations organized by NSS, Bhoomitrasena Club & Biodiversity Club, SreeAyyappa College, Eramalikkara, Chengannur
27. Details of teachers participated in Refresher courses, Orientation courses, Seminars, Workshops, Conferences at national and international levels.(participant, presented paper, chaired the session)

2016-17	Dr. M. Shamina	Refresher course in Environmental science and geo sciences	09-11-2016 to 29-11- 2016
	Dr. A.K. Pradeep	UGC Sponsored orientation Programme	08-02.2018 to 07.03.2018
	Dr. Resmi L.	Erudite Scholar in Residence Programme Workshop on Transcriptome Analysis in Plants	14.02.2018 to 16.02.2018
	Dr. Pramod C.	Refresher Course in Bioinformatics, Molecular Biology and Microbiology	14. 02. 2018 to 06. 03. 2018
2017-18	Dr. P. Sunojkumar	MHRD-TLC Short run course on Professional development	15.05.2019 to 21.05.2019
	Dr. A.K. Pradeep	Workshop on "Revised Accreditation Framework of NAAC and Quality Systems in Higher Education"	05-06 March 2019
	Dr. Resmi L.	International Workshop on Basic tools and techniques in molecular Biology	17.12.2018 to 19.12.2018
2018-19	Dr. Resmi L.	Short term Course in Gender Sensitization	21-12-2018 to 29-12-2018
	Dr. Resmi L.	Refresher Course in Life Sciences (Interdisciplinary)	06-09-2018 to 26-09-2018
	Dr. Pramod C.	Short Term Course in Research Methodology – Science	12. 12. 2018 to 18. 12. 2018
	Dr. Pramod C.	Faculty Development Programme in Science (Philosophy of Science)	06. 05. 2019 to 10. 05. 2019
	Dr. P. Sunojkumar	MHRD-TLC Short run course on E-content development	12.06.2019 to 18.06.2019
2019-20	Dr. M. Shamina	Short run course on innovations and rejuvenation on teaching in higher education	12-12-2019 to 18-12-2019
	Dr. Resmi L.	'A short term Course in E-Teaching with Learning Management Systems'	20-05-2020 to 29-05-2020
	Dr. Pramod C.	GIAN-Molecular Phylogeny Course	23.09.2019 to 27.09.2019
	Dr. M. Shamina	UGC sponsored refresher course in experimental techniques for biological sciences	06-02-2020 to 19-02-2020
	Dr. M. Shamina	Short term course on soft skills development	19-03-2021 to 25-03-2021
	Dr. M. Shamina	Short run course on ICT enabled	06-11-2019 to 12-11-2019

		curriculum and pedagogy in higher education	
	Dr. Resmi L.	Online Short-Term Faculty Development Programme on "PEDAGOGICAL AND E-LEARNING TOOLS FOR TEACHING Hands – on training on Learning Management System (Moodle) and Course Design	04-08-2020 to 10-08-2020
2020-21	Dr. Resmi L.	Online Education in Higher Education Institutions	01-12-2020 to 05-12-2020
	Dr. Resmi L.	Online Hands on Training Programme on Learning Management System	13-07-2020 to 17-07-2020
	Dr. Resmi L.		05-03-2021 to 15-03-2021

28.

28. Participation of teachers in various academic activities as members of committees at University level,

State level, National level, International level bodies. (give details)

**Dr. Jos T. Puthur**

- Director, Central Sophisticated Instrumentation Facility (CSIF), University of Calicut (Dec 2019, continuing).
- Director, Directorate of Admissions, University of Calicut (April 2014 continuing).
- Member, Academic Advisory Committee for DTH Channel-08, Consortium for Educational Communication (CEC), MHRD, Govt. of India.
- University Nominee, Governing Council, Vimala College (Autonomous), Thrissur, Kerala. (2020, continuing)
- Chairman, Board of Studies (Plant Science), University of Calicut (2020-2022)
- Member, Board of Studies (Plant Science), University of Calicut (2017-2019)
- Subject Expert in Research Advisory Committee, St. Thomas college, Thrissur (Autonomous) (2017, continuing).
- Member, Board of Advisers, Providence College, Kozhikode (2017, continuing)
- Member, Board of Studies (Botany), St. Josephs College (Autonomous), Irinjalakuda (2017-2019), St. Berchmans College, Changanassery (2018, continuing), St. Theresas College, Ernakulam (2018, continuing), St. Alberts college, Ernakulam (2018, continuing), M A College, Kothamangalam (Autonomous), MSc Integrated Bioscience (2021, continuing),
- Subject expert for the selection of Asst. Professors in Plant Sciences at Central University of Kerala, Aug 18, 2015, in Botany at Mar Thoma College, Chungathara, Malappuram Dist. Kerala. March 30, 2016, Deva Matha college, Kuruvilangad, 2017, Christian College, Chenganoor Nov 14, 2018, St. Josephs college for Women, Allapuzha, Nov 2020.
- Co-convenor of Venue arrangement committee of the 28th Kerala Science congress held at Calicut University campus during 28-30th Jan, 2016

**Dr. Santhosh Nampy**

- Member, Governing Council, St. Thomas College (Autonomous), Thrissur (2019-)
- Member, Academic Council, St. Joseph's College (Autonomous), Devagiri (2018- )
- Member, Academic Council, St. Joseph's College (Autonomous), Irinjalakkuda (2018- )
- Member, Academic Council, Christ College (Autonomous), Irinjalakkuda (2018-).
- Member, PG Board of Studies, Mar Athanaceous College (Autonomous), Kothamangalam (2020-). Member, Research Advisory Committee, University of Calicut (2019-)
- Member, Doctoral Committee in Botany (Calicut University: 2019-)
- Member, Green Committee, University of Calicut (2017- )
- Member, Doctoral Committee in Botany, Victoria College, Palakkad (2017-)
- Member, Doctoral Committee in Botany – Guruvayoorappan College, Kozhikode (2017-)
- Chairman, Doctoral Committee in Botany (Kannur University: 2017-2019) Chairman, Doctoral Committee in Botany (Calicut University: 2017-2019)

**Dr. John E. Thoppil**

Chairman-Board of Studies-Environmental Science and water management- Calicut University (2016-  
Member-Board of Studies-Botany (PG) Kerala University (2017-)

**Dr. V. V. Radhakrishnan**

1. Member, P.G. Board of Studies in Botany, University of Calicut
2. Member, P.G. Board of Studies in Botany, Kannur University
3. Chairman, Board of Examiners for Ph.D., University of Kerala
4. Chairman, Board of Examiners for Ph.D., M.G. University, Kottayam
5. Member, Board of Examiners for Ph.D., Kannur University
6. Member, Board of Examiners for Ph.D., Bharathidasan University, Trichy
7. Member, Research Advisory Committee, University of Calicut
8. Member, Board of Examiners for Ph.D., M.S. University, Tamil Nadu
9. Member, P.G. Board of Examiners in Plant Science, University of Calicut
10. Member, P.G. Board of Examiners in Applied Plant Science, University of Calicut
11. Member, P.G. Board of Examiners in Food Science & Technology, University of Calicut

**Dr. C. C. Harilal**

- Chairman (2018 onwards) and Member (2015 onwards), Board of Studies in Environmental Science, University of Calicut
- Member, Board of Studies in Applied Plant Science, University of Calicut (2018 onwards)
- Member, Board of Studies in Environmental Science, Thunchath Ezhuthachen Malayalam University, Tirur (2018 onwards) and Christ College (Autonomous), Irinjalakuda (2018 onwards).
- Member, Academic Council, University of Calicut (2018 onwards)
- Member, Working group on SDG 14, Kerala State Council for Science, Technology and Environment, Government of Kerala (2021)
- Member, U.G. Board of Examiners in Biotechnology, University of Calicut

**Dr. P. Sunojkumar**

- Chairperson, Board of studies in Genetics, University of Calicut. (2016 to 2019)  
Chairperson, PG Board of studies in Plantation Science, University of Calicut. (2016 to 2019)
- Chairman, Board of Examiners, Paramedical courses, University of Calicut
- Chairman Food Technology Examination, University of Calicut
- Member, PG Board of Studies in Botany, Bharatiyar University, Coimbatore (2020 to 2023).
- Member, Faculty of Science, University of Calicut
- Member, PG Board of Studies in Plant Science, University of Calicut.
- Member, PG Board of Studies in Molecular Biology, University of Calicut.
- Member, Board of Studies in Immunology University of Calicut.
- Member, Board of Studies in Genetics, University of Calicut. (2016-2019)
- Member, Board of Examiners in Applied Plant Science, University of Calicut
- Member, Board of Examiners in Botany, Kannur University.
- Member, Board of Examiners in Botany (Genetics & Plant Breeding), University of Kerala
- Member, Board of Question paper setters and Scrutiny University of Kerala
- Member, Planning Board, University of Calicut 2019 onwards
- Member, (Vice Chancellor's nominee) in Research Admission Committee of Kerala Forest Research Institute, Peechi, Thrissur.

**Dr. A. Yusuf**

1. Member, Post graduate Board of studies, Botany, University of Calicut
2. Member, Board of examiners for Ph.D. Mahatma Gandhi University, Kottayam, Kerala
3. Chairman, Board of Examiners for Post graduate program in Plant Sciences, University of Calicut

4. Chairman, Board of examiners, Post graduate program in Bio informatics, University of Calicut
5. Member board of examiners Post graduate graduate program in Applied Plant Sciences, University of Calicut
6. Member, board of examiners, M.Phil. program in Botany, University of Calicut
7. Member, Board of question paper setters and scrutiny, Kerala University, Thiruvananthapuram, Kerala

**Dr. C. Pramod**

- Chairman, PG Board of Examinations (Botany), Kannur University (Present).
- Member, PG Board of Studies (Botany), Kannur University (2018-2020).
- Member, UG Board of Studies (Botany), Kannur University.
- Member, State Level Thematic Expert Committee, Kerala State Biodiversity Board.

**29. Details of teachers appointed/nominated on Editorial Boards at university, state, national and international levels.**

**Dr. C. C. Harilal**

- Chief Editor, ECO CHRONICLE (ISSN 0973 – 4155), A journal of Environmental and Social Sciences, Published by the Society for Environmental and Social Research, Thiruvananthapuram / Cochin (2006 onwards)

**Dr.SanthoshNampy**

- Executive Editor Rheedea (2018-)

**Dr. AK Pradeep, Dr.Sunoj Kumar P., Dr. C. Pramod**

- Associate Editors of the Journal, Rheedea;

**Dr. AK Pradeep**

Editorial Board member of the Journal, Abrahamea

**30. Awards / Prizes and recognitions received by teachers at university, state, national and international level:**

Name of teacher	Year of Award	Name of the award/ fellowship	Name of the Awarding Agency
Dr.SanthoshNampy	2016	Fellow of Linnaean Society London	Linnaean Society London
Dr.Sunojkumar P.	2017	Excellent Scholar Award	International Botanical Congress
Dr.SanthoshNampy	2017	Sibbald Fellowship	Sibbald Trust, Royal Botanic Gardens, Edinburgh
Dr. M. Sabu	2019	Dr. E.K. JanakiAmmal Award	MoEFCC, Govt. of India
Dr.SanthoshNampy	2020	Tod F StuessyGold Medal	East Himalayan Society for Spermatophyte Taxonomy
Dr. M. Shamina	2020	Best Paper Presentation Award In international Conference	BSI, Calcutta
Dr. A.K. Pradeep2018.		Dr. V.V. Sivarajan Gold Medal	

31. Awards and Prizes received by students at university, state, national and international level:

Sl. No.	Year	Title of the innovation	Name of the Awardee	Name of the Awarding Agency
1	2016	Award	Resmi S.	Indian Association for Angiosperm taxonomy
2	2017	IAPT research grant Award USD2000	Dr. Prasad M G	International Association for Plant Taxonomy Bratislava, Slovakia
3	2017	Fr. Antony Mukkath-K S Manilal Award	Dr. Smitha K	Indian Association for Angiosperm Taxonomy
4	2017	S.R. Yadav Award	Resmi S.	Indian Association for Angiosperm taxonomy
5	2018	Prof. Kamal Merit Award	Dr. Deepna Latha K. P.	National fungal culture collection of India, Agharkar Research Institute
6	2018	K S Manilal young scientist award	Dr. Smitha K	Indian Association for Angiosperm Taxonomy
7	2018	IAPT research grant USD2000	Dr. Smitha K	International Association for Plant Taxonomy Bratislava, Slovakia
8	2018	IAPT research grant USD2000	Soumya P.	International Association for Plant Taxonomy, Bratislava, Slovakia
9	2018	S R Yadav young scientist award	Soumya P.	Indian Association for Angiosperm Taxonomy
10	2018	Best Paper Award	Maya R	Department of Microbiology, Periyar University, Salem
11	2018-2019	ASPIRE Scholarship	Resmi S.	Department of Higher Education Council, Government of Kerala
12	2019	Best oral presentation award	Divya K. Venugopal	Department of Botany, University of Calicut
13	2019	Best poster presentation award	Resmi S.	Department of Botany, University of Calicut
14	2019	Best Paper Award	JishinPrakash T.S	All India Botanical Conference of the Indian Botanical Society
15	2019	Best paper award	Sinisha A. K	Provectus Plantae
16	2019	S. N Chaturvedi Medal Award	RamyaSree P. R	Indian Botanical Society
17	2019	Best paper presentation award	Dhanya Thomas T T	National seminar on Plant Sciences: Current challenges & perspectives
18	2019	Best theme paper award	Sarath G Nair	National seminar on advances in biotechnology and bioprospecting
19	2019	K.S. Manilal Young Scientist Award	Shinoj K.	National seminar conducted by IAAT (Indian Association for Angiosperm Taxonomy) at JNTBGRI, Kerala
20	2019	III prize for best oral presentation	Soumya P.	SreeNeelakanda Gov. Sanskrit college, Pattambi, Kerala

21	2019	Prof. ZafarNizam Medal	Vishal Satheesh	The Indian Botanical Society
22	2019	Prof. O. P. Mall Medal	Shahina A.S.	Indian Botanical Society
23	2019	Poster presentation	Aswathi P	Indian Botanical Society
24	2020	Prof. Thomas Kurien Award	Aneesh S.	Current trends in advances in biological sciences
25	2020	Research grant of International Association for Plant Taxonomy	Resmi S.	International Association for Plant Taxonomy
26	2020	Best paper Award	Linssimon	Department of Botany, Periyar University, Salem
27	2021	Best Paper Award	Dilshad P P	Centre for Water Resources Management and Conservation, Kozhikode
28	2021	Best paper presentation award	Vishnu Mohan	Indian Botanical Society
29	2021	Sibbald Fellowship	Resmi S.	Royal Botanic Garden (SIBBALD) Trust, Royal Botanic Garden, Edinburg, Scotland, UK.
30	2021	Best oral presentation award	Sarath G nair	Kerala Science Congress
31	2021	Research grant of International Association for Plant Taxonomy	Akhil M.K	International Association for Plant Taxonomy

**32. Details of Seminars/ Conferences/Workshops organized at university, state, national and international level and the source of funding with details:**

Name of Conference/ Seminars / Workshops	Funding agency	No. of Participants	University/State/National/ International	Dates
Avenue Plants – identification, cultivation & dissemination protocols in the wake of Global Environmental Challenges'	UGC	105	National	25.09.2017-27.09.2017
Recent trends in Global Climate Change and Carbon Sequestration Research'	UGC	130		26.02.2018-28.02.2018
Digital Photography" Workshop		22		21.03.2018-23.2.2018
Getting ready to feed 9 billion through Agricultural innovations		100		12.12.2018
Hands on training in plant DNA barcoding		13		17.1.2019-19.1.2019
Plant sensory perception and adaptations		105		18.1.2019



Three day national seminar on plant sciences: current challenges & perspectives		123		28.2.2019-2.3.2019
Rapid and precise assessment of physiological responses of plants towards stress using computerized and portable instruments		40		01.04.2019-05.04.2019
Feed the future: designing high yielding, multiple stress tolerance in rice		85		05.04.2019
GIAN (MHRD) workshop on Molecular phylogeny		25		23.9.2019-27.09.2019
XLII All India Botanical Conference of the Indian Botanical Society and National Symposium on Innovations and Inventions in Plant Science Research.		750		6.11.2019-8.11.2019
Biotechnological approaches for developing climate resilient crops and heavy metals phytoremediation		71		06.01.2019
Webbinar on 30th Annual conference of IAAT		260		4.12.2019-5.12.2020

### 33. Student profile programme-wise at PG

PG	Applications Received	No. of students Admitted	Seats Available	Male	Female	Total	Year
2016-17	325	22	20	2	20	22	
2017-18		19	20	2	17	19	
2018-19	690	21	20	3	18	21	
2019-20	647	21	20	2	19	21	
2020-21	897	25	25	2	23	25	

### 34. Year-wise results of students at PG:

PG	Year	Appeared	Passed	Pass %	Grade %			
					O	A	B	C
M.Sc. Applied Plant Science	2016-17	23	23	100				
	2017-18	20	20	100				
	2018-19	21	21	100				
	2019-20	22	N A	NA				
	2020-21	25	N A	NA				

**35. Information about M. Phil. programme:**

Year	Applications Received	No. of students admitted	Male	Female	Total
2016-17		7	0	7	7
2017-18	34	9	2	7	9
2018-19	30	9	0	9	9
2019-20	35	9	0	9	9
2020-21		9	0	9	9

**36. Information about Ph. D. programme :**

Year	Applications Received	No. of students admitted	Male	Female	Total
2016-17		14	3	11	14
2017-18		8	2	6	8
2018-19		6	3	3	6
2019-20		5	2	3	5
2020-21		5	1	4	5

**37. Number of students awarded M.Phil., Ph.D ,Degree :**

Year	M.Phil	Ph.D.	Male	Female	Total
2016-17	7	6	4	9	13
2017-18	9	11	4	16	20
2018-19	9	9	3	15	18
2019-20	9	8	0	17	17
2020-21	Course not completed	8	2	6	8

**38. Diversity of Students : (Year-wise)**

Name of the Programme	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
UG	N A.	NA	NA	NA
PG	90	10	0	0
M.Phil.	74	23	3	0
Ph. D.				

**39. Number of students cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give Category wise data.**

Year	JRF	NET/ SET	GATE	Other Exams	Total
2016	9	2	--		11
2017	5	3	--		8
2018	12	3	--		15
2019	9	4	--		13
2020	2	2	6		10
2021	1	1	--		2

40. **Student progression/ placement record: Number/ percentage of students proceeded for higher studies Number/percentage of students placed:**

Year	% proceeded for higher studies		% of students placed
	UG to PG	PG to Ph.D./ M.Phil	
2016		4	
2017		6	
2018		3	
2019		4	
2020		7	
2021		1	

41. **Diversity of Faculty:**

Teaching faculty	%
from the same university	8
from other universities within the State	4
from other States	0
from outside the country	0

42. **Number of faculty who were awarded M.Phil., Ph.D., D.Sc. / D.Lit.: All**

43. **Present details of departmental infrastructural & other facilities with regard to**

- a) Central Library Books and Journals, etc, relevant to Department: NA
- b) Departmental Library (books, journals etc.) : Books 7377
- c) Computers and Internet facilities for staff : Yes
- d) Total number of class rooms : 3
- e) Class rooms with ICT facility :
- f) Students' laboratory : 2
- g) Research laboratories : 8
- h) Seminar Hall 2
- i) Smart class room :2
- j) Any other facility LCDs,

44. **List of post-doctoral students and Research Associates**

**a) Post-doctoral. students-**

Sr. No.	Name of the Faculty	Post-doctoral Students	Research Topic
1	Dr. C CHARILAL	2	Taxonomic Revision of freshwater Microalgae under selenastraceae and scenedesmaceae. Novel insight into lipidomic and proteomic metabolomes  Phyto fabrication of silver nano materials genomic characterization of dengue and zika virus vector out break in endemic region of Tamil Nadu & Kerala.

**c) Research Associates**

Sr. No.	Name of the Faculty	Research Associates	Research Topic
1	Nil	Nil	Nil

**45.Number of post graduate students getting financial assistance from the university/state / central government**

2016-17	2017-18	2018-19	2019-20	2020-21
27	37	53	48	44

**46.Curricular Aspects:**

**a) Does the faculty take initiative in curriculum development process?**

**Yes. All members of the faculty participate and contribute in the preparation and revision of the curriculum.**

**b) Is curriculum suitable to make students globally competitive in theSubject? If yes, substantiate.**

**Yes. The curriculum and syllabus is being revised time to time incorporating current updates in biological sciences. An evaluation process by the stakeholders of the syllabus (Students, Alumni and Teachers) is being done for the purpose.**

**c) Does the department offer program with sufficient no. of electives options.**

**Yes. 22 elective courses are included in the syllabus.**

**d) While framing curriculum, is feed-back taken from stakeholder's viz. Students/Alumni/Parents/Employers considered?**

**Yes :Feedback taken from students, alumni and teachers.**

**e) What is the frequency of curriculum revision? (3/4/5 years or more)**

**5 Years**

**f) Does the curriculum have emerging thrust areas, including interdisciplinary areas? (If yes, elaborate).**

**Yes. The curriculum incorporate all basic and applied aspects of plant science with interdisciplinary areas such as Biochemistry, Biotechnology, Phytogeography, Biostatistics, Genetic Engineering, Bioinformatics and Ethnobotany.**

**47. Teaching-Learning, Evaluation.**

1) **Number of teachers preparing & following Academic Teaching plan**  
12

2) **How many teachers use the following teaching methods?**

a) **Interactive lecture method using blackboard, Group discussions, Problem solving, Seminars.**

12

b) **Use ICT methods to support lectures.**

12

3) **Does the Department have Peer review processes? If yes, are the suggestions effectively used to improve the teaching quality?**

No.

4) **Does the department have any mechanism to ensure that entire syllabus is completed?**

**Yes. The leaning process is continually monitored by Department council.**

5) **Do you offer Bridge/Remedial courses? If yes, Give details.**

**Yes. A bridge course with prescribed scheme and syllabus for the students admitted to the first semester is conducted before the commencement of the regular classes. Slow learners if any are given additional coaching and guidance, based on the evaluation of the Bridge Course.**

6) **What is the method for conducting internal evaluation?**

48. **The continuous evaluation is based on the attendance of students in theory and practical classes, internal examinations, assignment, seminar, viva voce, laboratory skill, etc. Teacher Performance:**

1) **Whether the performance of the teacher assessed by the students? If yes, are the feedback reports analysed and suggestions communicated to teachers?**

Yes

2) **Number of teachers getting a) Very Good \_\_\_\_ b) Good \_\_\_\_**

c) **Average \_\_\_\_\_ remarks from students.**

000

3) **Whether suggestion boxes are kept in the department to get suggestions from students on infrastructural facilities available in the department?**

No

4) **Are the suggestions received from students used for improvement of facilities?**

Have not done

5) **Do teachers submit Self-Appraisal Reports? Are these reports appraised by HOD and forwarded to the university with comments?**

Yes

6) **What is the individual faculty wise h index?**

Prof. John E. Thoppil	13
Prof. Santhosh Nampy	9
Prof. V.V. Radhakrishnan	
Prof. Jos T. Puthur	20

Dr.Sunojkumar P.	5
Dr. Yusuf A.	
Prof. C.C. Harilal	6
Dr.Shamina	
Dr. A.K. Pradeep	10
Dr.Resmi L.	
Dr.Deepnalatha K.P.	10
Dr.Pramod C.	5

7) Give details of “beyond syllabus scholarly activities” of the department.

**Monthly research paper presentation, group discussion**

**49. List the distinguished alumni of the department (maximum 10)**

- i. Dr. K.V. Sankaran, Director (Rtd.), Kerala Forest Research Institute**
- ii. Dr. P.E. Rajasekharan, Principal Scientist, IIHR (ICAR), Bengaluru**
- iii. Dr. M. Sivadasan, Professor (Rtd.), King Saud University, KSA
- iv. Dr. N. Sasidharan, Senior Scientist, Kerala Forest Research Institute**
- v. Dr. S.D. Biju, Professor, Delhi University
- vi. Dr. V.V. Sivarajan, Professor (Expired), University of Calicut
- vii. Dr. Renuka C., Senior Scientist, Kerala Forest Research Institute**
- viii. Dr. C. Sathish Kumar, Senior Scientist (Rtd.), JNTBGRI**
- ix. Dr. P.V. Madhusudan, Professor (Rtd.), University of Calicut**

**50. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.**

Value Added Course on “Ornamental Horticulture: Scope, Method & Management”

**51 How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?**

**By continuous evaluation (CE) and terminal evaluation (TE).**

**52 Highlight the Special facilities (if, any) of the Department.**

- i. **DST-FIST (2 cycles) & KSCSTE-SARD Funded**
- ii. **Largest University Botanical Garden in India (CUBG)**
- iii. **Calicut University Herbarium (CALI)**
- iv. **HQs of Indian Association for Angiosperm Taxonomy (IAAT) & Gregor Mendel Foundation (GMF)**
- v. **Two Journals: Rheedea & Eco-chronicle**
- vi. **Inter University Centre for Plant Biotechnology**
- vii. **Calicut University Park**
- viii. **Touch & Feel Garden for Visually Challenged**
- ix. **Calicut University Botanical Society (CUBS)**
- x. **Calicut University Botany Alumni (CUBAL)**
- xi. **Well equipped modern laboratories in all divisions.**

**53. Highlight the unique features of the department.**

- I. *Ex situ* conservation of biodiversity and germplasm from different phytogeographic regions of India and other countries, in Calicut University Botanic Garden.**

- II. **Water conservation in large scale by the construction of reservoirs/ponds in Botanic Garden.**
- III. **Touch and feel garden for visually impaired.**
- IV. **Facility for plant identification, deposit of voucher specimen and research in Calicut University Herbarium.**

**54. State the Innovative practices adopted in the department.**

**000**

**55 Highlight the participation of students and faculty in extension activities.**

- I. 2017 - Science propagation programme: an Inculcate programme in association with KSSTM Kerala (60 students participated).
- II. 2017 – Biodiversity awareness programme for school children -Botanical Garden Exhibition (1200 children participated)

**56.Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.**

**a. Strengths:**

**Eight divisions with experienced faculty, good laboratories and supporting staff.**

**Ambitious students from all sections of the society**

**Heritage of past eminent faculty**

**World-class facilities**

**Updated curriculum**

**b. Weaknesses:**

**Shortage of physical space in tune with the rapid development of facilities**

**c. Opportunities:**

**Have very good plant taxonomy division location in a biodiversity rich area.**

**d. Challenges:**

**Less students turning up for research**

**57. Future plans of the department:**

**a. Long term plans-**

**To make department a centre of excellence in the study area of plant sciences**

**b. Short term plans**

**To achieve DST FIST 3<sup>rd</sup> cycle.**

**Declaration by the Head of the Department/Institution:**

**I am aware that the above information provided by the department will be validated by the AAA committee during the visit.**

**Head of Department**

**Date:**

# Faculty profile:

## (Information for last five years from 2016-17 to 2020-21)

### I Dr. Santhosh Nampy

1. Name of the faculty : Santhosh Nampy
2. Name of the Department : Botany
3. Educational qualifications : M.Sc. (Botany), Ph.D (Botany)
4. Present position : Professor
5. Address for correspondence : Department of Botany, University of Calicut,  
Calicut University P.O., Kerala– 673 635, India
6. E-mail & contact number : [santhoshnampy2019@gmail.com](mailto:santhoshnampy2019@gmail.com),  
[cue3974@uoc.ac.in](mailto:cue3974@uoc.ac.in); 9447461622
7. Specialization: Taxonomy, Molecular Phylogeny and Pollination Biology, Focusing on  
Commelinaceae, Gesneriaceae, Araceae, Gentianaceae, Polypodiaceae and the  
genera *Sonerila*, *Ixora*, *Selaginella*, *Crotalaria* and *Utricularia*.
8. Total teaching experience: 30 years
9. Courses taught: Pteridology, Angiosperm Taxonomy, Genetic Engineering
10. Research experience: 32 years
11. Major research projects completed: 3; Title of the project, Date of sanction and Duration,  
Grant received, Funding agency. PI or Co-PI. : **(Enclosure I)**
12. Minor research projects completed: Title of the project, Date of sanction and Duration,  
Grant received, Funding agency. PI or Co-PI. :
13. Number of students awarded Ph.D. degree: 3; Name of the student, topic of research, date  
of registration, date of declaration of Ph.D. degree. **(Enclosure- II)**



14. Number of students registered for Ph.D. degree: 7; Name of the student, topic of research, date of registration. **(Enclosure- II)**
15. Provide information as indicated in 11 and 12 above.
16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person. **(Enclosure-III)**
17. Innovative processes developed in teaching and learning. Prepared computer aided teaching and learning material using ICT infrastructure. Conducted students' seminar, assignments, class room tests, tutorials and group discussions. Attended a training programme on learning management system (moodle) during 25/052020 to 08/06/2020.
18. Participation in curricular development: As member PG Board of studies in Botany and as Academic Council member regularly attended the meetings, involved in discussions on need analysis, curriculum development and revised the curriculum of various courses.
19. Participation in co-curricular and extra-curricular activities.
  1. Being the Officer-in-Charge of the Calicut University Botanical garden, involved in the maintenance and conservation of rare, endemic and threatened plants.
  2. As Executive Editor of the International Journal *Rheedea*, ensured timely publication of the journal.
  3. As the Secretary of Indian Association of Angiosperm Taxonomy (IAAT) arranged regular meetings of the Association for strengthening taxonomic research in India.
20. Refresher and Orientation courses attended: Nil
21. Examination/Evaluation reforms initiated: Internal tests were conducted with questions based on Knowledge level using revised Bloom's taxonomy. The results were reviewed and remedial actions were arranged for poor performers.

22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors –1.19; citations –304 (236–since 2016); h-index–10 (9–since 2016). Numbers in SCOPUS (59). (**Enclosure- IV**)
23. Books published: with ISBN No., Without ISBN No., Chapters in books. (**Enclosure- IV**)
24. Patents Applied/Granted: National. International, commercialized: Nil
25. Consultancy services provided and revenue generated: Nil
26. Conferences, seminars, symposia and workshops organized as convener/coordinator: (**Enclosure- V**)
27. Number of collaborations: 3
28. Awards /recognitions received: International, National, State, University level. (**Enclosure- VI**)

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13, 14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

### **Enclosure 1**

Major research projects completed/Ongoing;

Title of the project	Date of sanction and Duration	Grant received	Funding agency	PI or Co-PI
Taxonomic and molecular studies on the genus <i>Arisaema</i> C. Martius (Araceae) in India	2013-2016	Rs. 40, 64, 000/-	Science, Engineering Research Board, New Delhi	PI
Angiosperm diversity of Idukki district, Kerala	2016-2019	Rs. 24, 16, 800	Kerala State Council for Science Technology & Environment, Trivandrum	PI
Taxonomy,			Science,	PI

molecular phylogeny and conservation of the genus <i>Aeschynanthus</i> Jack (Gesneriaceae) in India	2018-2021	Rs. 28, 34, 040	Engineering Research Board, New Delhi	
---	-----------	-----------------	---------------------------------------	--

## **Enclosure 2**

### **Number of students awarded Ph.D. degree;**

Name of the student	Topic of research	Date of registration	Date of declaration of Ph.D. degree
Mr. Manudev K. Madhavan	A taxonomic study on <i>Arisaema</i> C. Martius (Araceae) in India	2012	2017
Ms. Janeesha A.P	Taxonomic studies on the family <i>Gesneriaceae</i> Rich. & Juss. in South India Supplemented with molecular data	2013	2018
Ms. Veena V.	Pollination biology of selected taxa of the tribe <i>Commelineae</i> (Commelinaceae)	2014	2021

### **Number of students registered for Ph.D. degree;**

Name of the student	Topic of research	Date of registration.
Dani Francis	Floristic studies on monocotyledons of Idukki District, Kerala	19/05/2017
Divya K Venugopal	Diversity of Gamopetalae in Idukki District, Kerala	19/05/2017
Vishnu Mohan	Flora of Idukki district,	30/05/2017

	Kerala- Studies on diversity of Polypetalous and monochlamydeous families	
Ms. Sreekutty T.K.	Molecular phylogeny and character evolution in <i>Murdannia</i> Royle (Commelinaceae) in India supplemented with morphological and cytological data	09/05/2018
Ms. Harishma K.H.	Taxonomic revision of the genus <i>Ixora</i> L. (Rubiaceae) in India based on morphological, palynological and molecular studies	23/11/2020

### **Enclosure-III**

#### **Papers presented in Conferences/Workshops;**

1. Vishnu Mohan & **Santhosh Nampy**. 2021. The genus *Callitriche* (Callitrichaceae) in India with a new species *Callitriche idukkiana* from the Southern Western Ghats. On XLIII All India Botanical Conference of Indian Botanical Society and national seminar on Sustainable development of plant resources and conservation of threatened plants in botanic gardens, held at CSIR-NBRI, Lucknow. 19–21 March 2021.
2. Resmi S. & **Santhosh Nampy**. 2021. An overview of the genus *Sonerila* (Melastomatacae) in India. International seminar on Species the Passion VI, organized by Department of Botany, St. Thomas College (Autonomous), Thrissur. 15<sup>th</sup> January 2021.
3. **Santhosh Nampy**. 2020. An overview of the family Gesneriaceae in India. Tod F. Steussy Medal Award Presentation, East Himalayan Society for Spermatophyte Taxonomy, organized by Mansarovar Global University. 6–7 November 2020.
4. **Santhosh Nampy**. 2020. Plant taxonomy in India: Importance of revisions: A case study based on Indian Commelinaceae. National Seminar at Midnapur College (Autonomous), Midnapur, West Bengal. 2<sup>nd</sup> March 2020.
5. **Santhosh Nampy**. 2020. Diversity, endemism and Phytogeography of the Polypodioid ferns of South India. National Seminar conference on Pteridology today and tomorrow: Relevance to

impact on diversity and climate change, held at MS University of Baroda, Vadodara, Gujarat. 25<sup>th</sup> February 2020.

6. Akhil M.K. & **Santhosh Nampy**. 2019. *Lysionotus* in India. XLII All India Botanical Conference of Indian Botanical, held at Department of Botany, University of Calicut. 6– 8 November 2019.

7. Dani Francis & **Santhosh Nampy**. 2019. Diversity of the genus *Eriocaulon* (Eriocaulaceae) in Idukki district, Kerala. XLII All India Botanical Conference of Indian Botanical, held at Department of Botany, University of Calicut. 6–8 November 2019.

8. Divya K. Venugopal & **Santhosh Nampy**. 2019. Studies on the diversity of the genus *Anaphalis* (Asteraceae) of Idukki district, Kerala. XLII All India Botanical Conference of Indian Botanical, held at Department of Botany, University of Calicut. 6– 8 November 2019.

9. Janeesha A.P. & **Santhosh Nampy**. 2019. Taxonomic and molecular studies on the family Gesneriaceae in South India. XLII All India Botanical Conference of Indian Botanical, held at Department of Botany, University of Calicut. 6–8 November 2019.

10. Krishnapriya M.P. & **Santhosh Nampy**. 2019. Indian Bladderworts: An overview. XLII All India Botanical Conference of Indian Botanical, held at Department of Botany, University of Calicut. 6– 8 November 2019.

11. Maneesha M.S., Krishnapriya M.P. & **Santhosh Nampy**. 2019. Prey composition of aquatic *Utricularia exoleta* (Lentibulariaceae) in Kerala. XLII All India Botanical Conference of Indian Botanical, held at Department of Botany, University of Calicut. 6– 8 November 2019.

12. Sreekutty T.K. & **Santhosh Nampy**. 2019. Preliminary phylogenetic studies on the genus *Murdannia* (Commelinaceae) in India, inferred from ITS sequences. XLII All India Botanical Conference of Indian Botanical, held at Department of Botany, University of Calicut. 6– 8 November 2019.

13. Veena V. & **Santhosh Nampy**. 2019. Andromonoecy and the breeding system of *Commelina diffusa* (Commelinaceae). XLII All India Botanical Conference of Indian Botanical, held at Department of Botany, University of Calicut. 6–8 November 2019.

14. Vishnu Mohan & **Santhosh Nampy**. 2019. Diversity and endemism of *Impatiens* (Balsaminaceae) in Idukki district, Kerala. XLII All India Botanical Conference of Indian

Botanical, held at Department of Botany, University of Calicut. 6–8 November 2019.

15. Arunkumar P.G. & **Santhosh Nampy**. 2019. Infrageneric relationships in *Arisaema* (Araceae) in India inferred from ITS sequence data. National Seminar on Plant Sciences: Current challenges and perspectives, held at Department of Botany, University of Calicut. 28<sup>th</sup> February–1<sup>st</sup>&2<sup>nd</sup> March 2019.

16. Dani Francis & **Santhosh Nampy**. 2019. Two new species of *Eriocaulon* L. (Eriocaulaceae) from Idukki district, Kerala, India. National Seminar on Plant Sciences: Current challenges and perspectives, held at Department of Botany, University of Calicut. 28<sup>th</sup> February–1<sup>st</sup>& 2<sup>nd</sup> March 2019.

17. Divya K. Venugopal & **Santhosh Nampy**. 2019. A new species *Parasopubia* (Scrophulariaceae) from Idukki district, Kerala. National Seminar on Plant Sciences: Current challenges and perspectives, held at Department of Botany, University of Calicut. 28<sup>th</sup> February – 1–2 March 2019.

18. Janeesha A.P. & **Santhosh Nampy**. 2019. Phylogeny and divergence time of *Jerdonia* Wight (Gesneriaceae), an endemic genus of Western Ghats, inferred from ITS sequence data. National Seminar on Plant Sciences: Current challenges and perspectives, held at Department of Botany, University of Calicut. 28<sup>th</sup> February – 1–2 March 2019.

19. Krishnapriya M.P. & **Santhosh Nampy**. 2019. Prey composition of *Utricularia exoleta* R.Br. (Lentibulariaceae): an aquatic carnivorous plant. National Seminar on Plant Sciences: Current challenges and perspectives, held at Department of Botany, University of Calicut. 28<sup>th</sup> February – 1–2 March 2019.

20. Resmi S. & **Santhosh Nampy**. 2019. The genus *Sonerila* Roxb. (Melastomataceae) in Western Ghats: Ecology, endemism and conservation. National Seminar on Plant Sciences: Current challenges and perspectives, held at Department of Botany, University of Calicut. 28<sup>th</sup> February–1<sup>st</sup>&2<sup>nd</sup> March 2019.

21. Syam Radh S. & **Santhosh Nampy**. 2019. Novelties from Mathikettan shola National Park, Kerala, India. 31<sup>st</sup> Kerala Science Congress, held at Fatima Mata national College, Kollam. 2–3 February 2019.

**22. Santhosh Nampy**. 2018. International Seminar on “Recent Advances in Plant Sciences”. St.

Albert's college (Autonomous), Ernakulam. 14<sup>th</sup> January 2019.

23. Resmi S. & **Santhosh Nampy**. 2018. Taxonomic identity of *Sonerila axillaris* (Melastomataceae) in India. XXVIII Annual Conference of Indian Association for Angiosperm Taxonomy, Maharaja Sayajirao University of Baroda, Gujarat. 29–31 October 2018.

24. Veena V. & **Santhosh Nampy**. 2018. Pollen dispersal, Pollen viability and pistil receptivity in *Murdannia nudiflora* (Commelinaceae). XLI All India Botanical Conference of the Indian Botanical Society. 25–27 October 2018. Jiwaji University, Gwalior.

25. Vishnu Mohan & **Santhosh Nampy**. 2018. Rediscovery of *Callitriche wightiana* (Callitrichaceae) after 180 years from India. XLI All India Botanical Conference of the Indian Botanical Society. 25–27 October 2018. Jiwaji University, Gwalior.

26. Dani Francis & **Santhosh Nampy**. 2018. A glimpse to the orchid diversity of Idukki district (Kerala) with special emphasis on its conservation. XLI All India Botanical Conference of the Indian Botanical Society. 25–27 October 2018. Jiwaji University, Gwalior.

27. Divya K. Venugopal & **Santhosh Nampy**. 2018. *Acnistus arborescence* (Solanaceae) Potential invasive plant from America with notes on its typification. XLI All India Botanical Conference of the Indian Botanical Society. 25–27 October 2018. Jiwaji University, Gwalior.

28. Resmi S. & **Santhosh Nampy**. 2018. *Sonerila lateritica* Resmi, Manudev & Nampy (Melastomataceae): A habitat study and notes on its conservation. National seminar. Trissur. 28<sup>th</sup> June 2018, St. Thomas College, Trissur.

**29. Santhosh Nampy**. 2017. Floral ontogeny of *Jerdonia indica* (Gesneriaceae) and its systematic implications. XXXX All India Botanical Conference of the Indian Botanical Society & National Symposium on Evaluation and Conservation of Plant Germplasm. 15–17 September 2017. Punjabi University, Patiala.

30. Arunkumar P.G. & **Santhosh Nampy**. 2017. Species delineation within *Arisaema* sect. *Sinarisaema* Nakai, inferred from nuclear and chloroplast DNA markers. XXVII Annual Conference of Indian Association for Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges. 10–12 November, 2017. Delhi University, Delhi.

31. Syam Radh S. & **Santhosh Nampy**. 2017. A new species of *Peperomia* Ruiz & Pav (Piperaceae) from Mathikettan Shola National Park. XXVII Annual Conference of Indian

Association for Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges. 10–12 November, 2017. Delhi University, Delhi.

32. Veena V. & **Santhosh Nampy**. 2017. Anther Dimorphism and its probable consequences in three species of the family Commelinaceae. XXVII Annual Conference of Indian Association for Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges. 10–12 November 2017. Delhi University, Delhi.

33. Resmi S. & **Santhosh Nampy**. 2017. Taxonomic studies on Acaulescent species of *Sonerila* in Western Ghats. XXVII Annual Conference of Indian Association for Angiosperm Taxonomy & International Symposium on “Plant Systematics: Priorities and Challenges”. 10–12 November 2017. Delhi University, Delhi.

34. Dani Francis & **Santhosh Nampy**. 2017. Preliminary observations on the monocot flora of Idukki district, Kerala. XXVII Annual Conference of Indian Association for Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges. 10–12 November 2017. Delhi University, Delhi.

35. Divya K. Venugopal & **Santhosh Nampy**. 2017. Reinstating *Fagraea coromandelina* Wight (*Loganiaceae*), with notes on its Typification. XXVII Annual Conference of Indian Association for Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges. 10–12 November 2017. Delhi University, Delhi.

36. Vishnu Mohan & **Santhosh Nampy**. 2017. Preliminary observations on the diversity of Polypetalous Families in Idukki District. XXVII Annual Conference of Indian Association for Angiosperm Taxonomy & International Symposium on Plant Systematics: Priorities and Challenges. 10–12 November 2017. Delhi University, Delhi.

37. Resmi S. & **Santhosh Nampy**. 2017. Phytogeography, Endemism and Conservation of the genus *Sonerila* Roxb. (Melastomataceae) in Western Ghats (T2-42-17). XIX International Botanical Congress. 23–29 July 2017, Shenzhen, China.

38. Resmi S. & **Santhosh Nampy**. 2017. Diversity, distribution and endemism of the genus *Sonerila* Roxb. (Melastomataceae) in Western Ghats, India. XIX Commonwealth Forestry Conference. 3–7 April, 2017.

39. Janeesha A.P. & **Santhosh Nampy**. 2017. The family Gesneriaceae in South India: Endemism



and Conservation. 29<sup>th</sup> Kerala Science Congress. January, 2017.

40. Dani Francis & **Santhosh Nampy**. 2017. Taxonomic revision of the genus *Spermacoce* (Rubiaceae) in Kerala. 29<sup>th</sup> Kerala Science Congress. January, 2017.

41. Janeesha A.P. & **Santhosh Nampy**. 2016. The genus *Henckelia* Spreng. (Gesneriaceae) in South India. XXVI Annual conference of IAAT and International Seminar on Conservation and Sustainable Utilization of Biodiversity. 7–9 November, 2016. Shivaji University, Kolhapur.

42. Resmi S. & **Santhosh Nampy**. 2016. Intraspecific diversity of *Sonerila rheedi* Wall. Ex Wight & Arnott (Melastomataceae) in Western Ghats. XXVI Annual conference of IAAT and International Seminar on Conservation and Sustainable Utilization of Biodiversity. 7–9 November, 2016. Shivaji University, Kolhapur.

43. Veena V. & **Santhosh Nampy**. 2016. Possible significance of floral organ structural variations in *Dictyospermum montanu* Wight (Commelinaceae). XXVI Annual conference of IAAT and International Seminar on Conservation and Sustainable Utilization of Biodiversity. 7–9 November, 2016. Shivaji University, Kolhapur.

44. Arunkumar P.G. & **Santhosh Nampy**. 2016. Intraspecific variations in *Arisaema decipiens* Schott: conformation through nuclear and chloroplast data. XXVI Annual conference of IAAT and International Seminar on Conservation and Sustainable Utilization of Biodiversity. 7–9 November, 2016. Shivaji University, Kolhapur.

45. Syam Radh S & **Santhosh Nampy**. 2016. Diversity and endemism of the family Rubiaceae in Mathikettanshola National Park, Kerala. XXVI Annual conference of IAAT and International Seminar on Conservation and Sustainable Utilization of Biodiversity. 7–9 November, 2016. Shivaji University, Kolhapur.

**List of invited lectures:**

1. National Seminar at Midnapur College (Autonomous), Midnapur, West Bengal. 02 March 2020.

2. National Seminar in the Annual Meeting of Indian Fern Society (IFS). MS University, Vadodara, Gujarat. 25 February 2020.

3. GIAN (MHRD) workshop on Molecular phylogeny. Department of Botany, University of Calicut. September 23–27, 2019.

4. National Seminar on “Recent Advances in Plant Sciences”. St. Albert’s College (Autonomous), Ernakulam. 14 January 2019.
5. National Seminar at Kerala University, Thiruvananthapuram. 02 February. 2019.
6. National Seminar on “Order Commelinales”. Shivaji University, Kolhapur, Maharashtra. 02 January 2019.
7. National Seminar on “Modern Techniques in Plant Sciences”. Shivaji University, Kolhapur, Maharashtra. 08 February 2018.

#### **Enclosure- IV**

##### **List of papers published;**

1. Dani Francis, Vishnu Mohan, Divya K. Venugopal & **Santhosh Nampy**. 2021. *Burmannia munnarensis* (Burmanniaceae) a new species and rediscovery of *B. indica* after 110 years from southern Western Ghats, Kerala, India. *Phytotaxa* 507 (1): 105–112. Impact factor- 1.171. 10.11646/phytotaxa.507.1.6
2. Vishnu Mohan, Dani Francis, **Santhosh Nampy** & Divya K Venugopal. 2021. *Impatiens raktakesara* (Balsaminaceae), a new species from the southern Western Ghats, India. *Brittonia*.1–7. Impact factor- 0.863.10.1007/s12228-021-09676-7
3. Divya K Venugopal, **Santhosh Nampy**, Pradeep A K, Dani Francis, Vishnu Mohan, Syam Radh Sasi. 2021. A new species of *Parasopubia* (Orobanchaceae) from the southern Western Ghats, India. *Anales del Jardín Botánico de Madrid* 78 (1): e106. Impact factor- 0.513.10.3989/ajbm.2585
4. **Santhosh Nampy**, Akhil M.K. & Vishnu Mohan. *Henckelia khasiana*, a new species of Gesneriaceae from India. *Anales del Jardín Botánico de Madrid* 78 (1): e105. Impact factor- 0.513. 10.3989/ajbm.2570
5. Resmi S., **Santhosh Nampy** & Akshtra P.F.2021. *Sonerila konkanensis* (Melastomataceae), a new species from south Goa, India. *Candollea*. Impact factor- 0.48.
6. Resmi S. & **Santhosh Nampy**. 2021. *Sonerila longipedunculata*, a new species of Melastomataceae from southern Western Ghats, India with additional notes and typification of *Sonerila tranvancorica*. *European Journal of Taxonomy*. 733: Impact factor- 1.393. 10.5852/ejt.2021.733.1231
7. Divya K. Venugopal, **Santhosh Nampy**, Dani Francis & Vishnu Mohan. 2021. *Asyneuma cupularis*, a new species of Campanulaceae from southern Western Ghats, India and

lectotypification of *Campanula fulgens* (*Asyneuma fulgens*). *Nordic Journal of Botany* 39(1): 1-7. Impact factor- 0.802. 10.1111/njb.02889

8. Resmi S & **Santhosh Nampy**, 2021. A new addition to the stoloniferous *Sonerila* (Sonerileae, Melastomataceae) from southern Western Ghats, India. *Brittonia* 1-8. Impact factor- 0.863. 10.1007/s12228-021-09657-w

9. Akhil M.K., Nikhil Krishna, Athalappil Amrutha & **Santhosh Nampy**. 2020. A new species of *Lysionotus* (Gesneriaceae) from Arunachal Pradesh, India. *Journal of Asia-Pacific Biodiversity*. Available online 28.09.2020. Impact factor- 0.92. 10.1016/j.japb.2020.09.009

10. Veena V. & **Santhosh Nampy**. 2020. Heteromorphic stamen: a strategy in nectar-less entomophilous plants to increase pollination efficiency? An investigation with regard to three species of Commelinaceae. *Plant Systematics and Evolution* 306. Impact factor- 1.631. 10.1007/s00606-020-01710-7

11. Dani Francis, Vishnu Mohan, Divya K. Venugopal & **Santhosh Nampy**. 2020. A new species of *Eriocaulon* (Eriocaulaceae) from the southern Western Ghats of Kerala, India. *Edinburgh Journal of Botany*. 7 (2): 281–290. Impact factor- 0.7. 10.1017/S0960428620000013

12. Vishnu Mohan, Divya K. Venugopal, Dani Francis & **Santhosh Nampy**. 2020. Two new scapigerous species of *Impatiens* (Balsaminaceae) from southern Western Ghats, India. *Taiwania* 65(2): 187–194. Impact factor- 1.02. 10.6165/tai.2020.65.187

13. Taram M., D. Borah & **Santhosh Nampy**. 2020. *Boeica multinervia* K.Y.Pan (Gesneriaceae): a new record for India. *Check List* 16 (1): 89–92. Impact factor- 0.66. 10.15560/16.1.89

14. Janeesha A.P. & **Santhosh Nampy**. 2020. A taxonomic revision of *Henckelia* (Gesneriaceae) in South India with a new species, one new combination and seven lectotypifications. *Rheedea* 30 (1): 48–95. Impact factor- 0.09. 10.22244/rheedea.2020.30.01.03

15. Resmi S. & **Santhosh Nampy**. 2019. Lectotypification of the names four species in *Sonerila* (Melastomataceae). *Rheedea* 29(4): 332–335. Impact factor- 0.09. 10.22244/rheedea.2019.29.4.08

16. Veena V. & **Santhosh Nampy**. 2019. Induced cleistogamy: A strategy for reproductive assurance in *Murdannia nudiflora* (Commelinaceae). *Botany* 97: 547–557. Impact factor- 1.147. 10.1139/cjb-2019-0007

17. Akhil M.K., **Santhosh Nampy** & Javad P. 2019. *Lysionotus gamosepalus* var. *gamosepalus* (Gesneriaceae): A new record for India. *Rheedea* 29(3): 222–226. Impact factor- 0.09. 10.22244/rheedea.2019.29.3.08
18. **Santhosh Nampy**, Divya K. Venugopal, Dani Francis & Vishnu Mohan. 2019. New record of *Iochroma arborescens* (Solanaceae) for India, a potential invasive plant from America with notes on its typification. *Rheedea* 29(3): 222–226. Impact factor- 0.09. 10.22244/rheedea.2019.29.3.06
19. Manudev K.M., Arunkumar P.G., Syam Radh S. & **Santhosh Nampy**. 2019. Taxonomic revision of *Arisaema* (Araceae) sect. *Sinarisaema* in India. *Rheedea* 29(2): 119–173. Impact factor- 0.09. 10.22244/rheedea.2019.29.2.01
20. Syam Radh S. & Santhosh Nampy. 2019. *Memecylon idukkianum*, a new species of Melastomataceae from Kerala, India. *Kew Bulletin* 74: 1–6. Impact factor- 0.96. 10.1007/s112225-019-9800-y
21. Resmi S. & **Santhosh Nampy**. 2018. Lectotypification of four names in *Sonerila* (Melastomataceae). *Phytotaxa* 375 (2): 165–170. Impact factor- 1.171. 10.11646/phytotaxa.375.2.3
22. ArunKumar P.G., Manudev K.M. & **Santhosh Nampy**. 2018. Taxonomic identity of *Arisaema Pangii* (Araceae) inferred from molecular and morphological data without a note on its distribution. *Annales Botanici Fennici*. 56: 19–25. Impact factor- 0.574.
23. Syam Radh S. & **Santhosh Nampy**. 2018. *Peperomia ekakesara*: A new species of Piperaceae from Mathikettan shola National Park (MSNP), Kerala, India. *Phytotaxa* 364 (3): 283–288. Impact factor- 1.171. 10.11646/phytotaxa.364.3.8
24. Divya K. Venugopal, Dani Francis Vishnu Mohan & **Santhosh Nampy**. 2018. Notes on taxonomic identity and typification of *Fagraea coromandelina* (Gentianaceae). *Phytotaxa* 360(3): 292–295. Impact factor- 1.171. 10.11646/phytotaxa.360.3.10
25. Manudev K.M., Arunkumar P.G., Syam Radh S. & **Santhosh Nampy**. 2018. Notes on the taxonomy and typification of *Arisaema petiolulatum* (Araceae: Arisaema sect. Anomala). *Rheedea* 28(1): 29–36. Impact factor- 0.09. 10.22244/rheedea.2018.28.1.03
26. Prashob P., Manudev K.M., Sibichen M. Thomas & **Santhosh Nampy**. 2018. *Osbeckia saddlepeakensis* (Melastomataceae): a new species from Andaman and Nicobar Islands, India. *Phytotaxa* 344 (2):185–190. Impact factor- 1.171. 10.11646/phytotaxa.344.2.7

27. Resmi S. & **Santhosh Nampy**. 2018. A new species of *Sonerila* (Melastomataceae: Sonerileae) from southern Western Ghats, India. *Phytotaxa* 333(2): 235–242. Impact factor- 1.171. 10.11646/phytotaxa.333.2.7
28. Möller, M., **Santhosh Nampy**, Janeesha A.P. & Weber A. 2017. The Gesneriaceae of India: Consequences of updated generic concepts and new family classification. *Rheedea* 27(1): 23–41. Impact factor- 0.09. 10.22244/rheedea.2017.27.1.5
29. Manudev K.M., A.J. Robi & **Santhosh Nampy**. 2017. *Eriocaulon idukkianum*, a new tuberous species of Eriocaulaceae from Southern Western Ghats, India. *Phytotaxa* 324 (3): 288–292. Impact factor- 1.171. 10.11646/phytotaxa.324.3.5
30. Manudev K.M. & **Santhosh Nampy**. 2017. Second-step lectotypification of three names of Araceae from India. *Phytotaxa* 302(1): 090–094. Impact factor- 1.171. 10.11646/phytotaxa.302.1.9
31. Manudev K.M., Robi A.J. & **Santhosh Nampy**. 2017. *Impatiens stolonifera* (Balsaminaceae): A new scapigerous species from the southern Western Ghats, Kerala, India. *Phytotaxa* 295(1): 071–076. Impact factor- 1.171. 10.11646/phytotaxa.295.1.6
32. Janeesha A.P. & **Santhosh Nampy**. 2016. Lectotypification of three names in the genus *Henckelia* Spreng. (Gesneriaceae). *Phytotaxa* 268(1): 080–084. Impact factor- 1.171.
33. Jameera A., **Santhosh Nampy** & A.P. Janeesha. 2016. A taxonomic revision of *Pollia* (Commelinaceae) in India with six lectotypifications. *Phytotaxa* 263(3): 202–218. Impact factor- 1.171.
34. Manudev K.M. & **Santhosh Nampy**. 2017. Second-step lectotypification of three names of Araceae from India. *Phytotaxa* 302(1): 090–094. Impact factor- 1.171. 10.11646/phytotaxa.263.3.2
35. Syam Radh S., **Santhosh Nampy** & K.M. Manudev. 2016. A synopsis of the genus *Amischotolype* ( Commelinaceae ) in India with one record *A. monosperma* (C.B.Clarke) I.M.Turner from Andaman & Nicobar Islands and lectotypification of *A. hookeri* (Hassk.) H.Hara. *International Journal of Advanced Research* 4(4): 427–434. Impact factor-7.08.
36. Shahina P.M. & **Santhosh Nampy**. 2016. A taxonomic revision of *Exacum* L. (Gentianaceae – Exaceae ) in South India. *International Journal of Advanced Research* 4(3): 1656–1683. Impact factor-7.08.
37. Manudev K.M. & **Santhosh Nampy**. 2016. Lectotypification of *Arisaema consanguinum* Schott (Araceae). *Candollea* 71: 23–26. Impact factor-0.48. 10.15553/c2016v711a5

38. Manudev K. M. & **Santhosh Nampy**. 2016. Neotypification of *Arisaema murrayi* (J. Graham) Hook. (= *Arum murrayi* J. Graham) (Araceae). *Taiwania* 61(1):58–60. Impact factor-1.02. 10.6165/tai.2016.61.58

39. Shahina P. M. & **Santhosh Nampy**. 2016. Medicinal plant systematics of Gentianaceae in South India. *South Indian Journal of Biological Sciences* 2(1): 162–168. Impact factor- 3.63.

#### **List of books published;**

1. Shahina P.M. & **Santhosh Nampy**. 2017. *Gentians of South India*. Centre for Research in Indigenous Knowledge, Science & Culture (CRIKSC), Kozhikode.

2. Anna Ancy Antony A. & **Santhosh Nampy**. 2016. *Murdannia* Royle (Commelinaceae) of India. Centre for Research in Indigenous Knowledge, Science & Culture (CRIKSC), Kozhikode. ISBN: 978-81-903430-2-2

#### **Enclosure- V**

##### **Conferences/ programmes conducted as Organizing Secretary;**

1. Webinar on 30<sup>th</sup> Annual conference of IAAT, Department of Botany, University of Calicut. December 4–5, 2020

2. XLII All India Botanical Conference of the Indian Botanical Society and National Symposium on “Innovations and Inventions in Plant Science Research.”, Department of Botany, University of Calicut. November 6–9, 2019.

3. GIAN (MHRD) workshop on Molecular phylogeny. Department of Botany, University of Calicut. September 23–27, 2019.

4. National seminar on plant sciences: current challenges. Department of Botany, University of Calicut. February 28–March, 02 2019.

#### **Enclosure- VI**

##### **Awards/ honours;**

1. Tod F. Steussy Gold Medal for meritorious contributions in Plant Taxonomy (2020)

2. Sibbald Fellowship (Sibbald Trust, Royal Botanic Gardens, Edinburgh, 2017)

3. Fellow, Linnaean Society London (2016)

## **II Prof. John E Thoppil**

29. Name of the faculty : **John E Thoppil**
30. Name of the Department : **Botany**
31. Educational qualifications : **Ph. D.**
32. Present position : **Senior Professor**
33. Address for correspondence : **Thoppil house, Chelembra P.O., 673634, Malappuram (dist), Kerala**
34. E-mail and contact number : **[jethoppil@uoc.ac.in](mailto:jethoppil@uoc.ac.in), [jethoppil@gmail.com](mailto:jethoppil@gmail.com), 9847767193**
35. Specialization : **Botany ([Cell Biology and Phytochemistry](#))**
36. Total teaching experience : **26 years**
37. Courses taught : **M. Sc. Applied Plant Science, M. Phil. Botany, Ph. D. Course Work Botany**
38. Research experience : **30 years**
39. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI: **Nil**
40. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI: **Nil**
41. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree: **Enclosure II**
42. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration. **Enclosure II**
43. Provide information as indicated in 11 and 12 above. **Enclosure II**
44. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person. **Enclosure III**
45. Innovative processes developed in teaching and learning: **Usage of Power Point presentations, Video modules, Conduct of Screened animations to illustrate important concepts for the M. Sc. Applied Plant Science, M. Phil. Botany, Ph. D. Course Work Botany courses.**
46. Participation in curricular development: **Involved in revising the syllabi of M. Sc. Applied Plant Science 2019 and M. Sc. Environmental Science and Water Management 2019.**
47. Participation in co-curricular and extra-curricular activities: **As Convener of Green Committee of University of Calicut controls and co-ordinates the green activities and clean activities of the Campus and framed the Green Protocol for University of Calicut and Comprehensive Waste Management Policy of the Campus.**

48. Refresher and Orientation courses attended: **NIL**
49. Examination /Evaluation reforms initiated: **NIL**
50. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS: **Enclosure IV**
51. Books published: with ISBN No., Without ISBN No., Chapters in books: **Enclosure IV**
52. Patents Applied/Granted: National. International, commercialized: **Nil**
53. Consultancy services provided and revenue generated:**Nil**
54. Conferences, seminars, symposia and workshops organized as convener/coordinator: **Nil**
55. Number of collaborations:**Nil**
56. Awards /recognitions received: International, National, State, University level: **Nil**

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13,14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

#### ENCLOSURE II

**Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.**

Sl. No.	Name of Scholar	Topic of research	Date of registration	Date of declaration
1.	Seema Devi R.	<i>In vitro</i> propagation, antimutagenic and biochemical assays of <i>Orthosiphon thymiflorus</i> (Roth.) Sleesen (Lamiaceae).	2009	02/12/2016
2.	Anjana S.	Cytological, phytochemical, Pharmacological and <i>in vitro</i> regeneration studies on <i>Pogostemondeccanensis</i> (Panigrahi) Press (Lamiaceae).	2011	30/03/2017
3.	Sandhya Vincent Neelamkavil	Chromosome analysis, antioxidant, antitumor and phytochemical studies in some species of <i>Isodon</i> (Schrad. Ex Benth.) Spach(Lamiaceae).	25/05/2012	30/05/2016
4.	Sinitha K.	Cytogenetic and phytochemical aspects of some selected species of <i>Amomum</i> Roxb. (Zingiberaceae).	2012	26/03/2018
5.	Sumitha K.V.	Antitumor activity, radioprotective efficacy screening, phytochemical characterization and molecular profiling of some selected taxa of <i>Ocimum</i> L. (Lamiaceae).	25/03/2013	06/10/2017



6.	Neethu Kannan B.	Cytogenetical studies, phytochemical profiling (GC/MS & HR-LC/MS) and bioactivity screening of selected taxa of <i>Cynanchum</i> L. (Apocynaceae).	2014	13/10/2017
7.	Prajitha V.	Cytogenetical, micromorphological, molecular and phytochemical characterization of selected species of the genus <i>Amaranthus</i> L. (Amaranthaceae).	2014	27/09/2018
8.	Sajitha Menon K.	Bioactivity screening and phytochemical analysis of some selected species of <i>Gomphostemma</i> Wall. Ex Benth. (Lamiaceae).	25/07/2016	31/12/2019
9.	Archana E.R.	Phytochemical analysis, bioactivity screening and characterization of biosynthesized silver nanoparticles on selected species of <i>Aglaia</i> Louriero (Meliaceae).	11/09/2015	09/03/2021

**Number of students registered for Ph.D. Degree: Name of the student,  
topic of research, date of registration.**

No	Name of student	Topic of research	Date of registration
1.	Rubeena M.	Bioactivity screening, and cytogenetical, molecular and phytochemical characterization of selected species of <i>Cissus</i> L. (Vitaceae).	05/05/2016
2.	Aneesh S.	Bioactivity screening and phytochemical characterization of some selected Basidiomycetes.	15/12/2016
3.	Niranjana M. R.	Phytochemical analysis, Bioactivity studies and molecular characterization of some selected species of <i>Curcuma</i> L.(Zingiberaceae).	27/01/2017
4.	Ramyasree P. R.	Bioactivity screening and cytogenetical, molecular and phytochemical characterization of selected species of <i>Memecylon</i> L. (Melastomataceae).	29/06/2017
5.	Preetha Mol S. N.	Bioactivity screening and cytogenetical, molecular and phytochemical characterization of selected species of <i>Ophiorrhiza</i> L. (Rubiaceae).	17/11/2017
6.	Reshmi C.	Assessment of bioactivity and cytogenetical, molecular and phytochemical characterization of selected species of <i>Strobilanthes</i> Blume (Acanthaceae).	20/12/2017
7.	Aswathi P.	Bioactivity studies and phytochemical characterization of some selected dye yielding plants of Kerala	15/02/2019
8.	Nushiba Naser P. T.	Bioactivity screening and phytochemical	19/09/2019

		characterization of selected species of <i>Ficus</i> L. (Moraceae).	
9.	Sameena V. P	Bioactivity screening and phytochemical profiling of selected species of <i>Euphorbia</i> L. (Euphorbiaceae).	18/06/2021

### ENCLOSURE III

**Participation in conferences, symposia, seminars and workshops:** International, National, State or University level, attended. Presented paper, chaired session, Resource person.

<i>Sl. No</i>	<i>Title of Lecture /Academic Session</i>	<i>Title of Conference / Seminar etc.</i>	<i>Organised by</i>	<i>Whether international /national</i>
1	Urban Wetlands-Restoration and Conservation –	Urban Wetlands-Restoration and Conservation - Seminar and quiz competition	Department of Botany, Govt. Arts and Science College, Kozhikode. 5 <sup>th</sup> February 2018.	National

### ENCLOSURE IV

**Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.**

**h-index: 15**

<b>Sl. No</b>	<b>Title of the paper</b>	<b>Journal</b>	<b>ISSN/ DOI</b>	<b>Scopus citation index</b>
1.	Cytotoxic and apoptotic activities of extract of <i>Amaranthus spinosus</i> L. in <i>Allium cepa</i> and Human erythrocytes. <b>2016.</b> Prajitha, V. and <b>Thoppil, J. E.</b>	Cytotechnology 69 (1): 123-133	ISSN-1573-0778 doi:10.1007/s10616-016-0044-5	<b>3.3</b>
2.	Induction of giant cells by the synthetic food colorants viz., Lemon yellow and Orange red. <b>2016.</b> Prajitha, V. and <b>Thoppil, J. E.</b>	Cytotechnology 68 (3): 443-450	ISSN-1573-0778 doi:10.1007/s10616-014-9797-x	<b>3.3</b>
3.	Genotoxic and antigenotoxic potential of the aqueous leaf extracts of <i>Amaranthus spinosus</i> Linn. using <i>Allium cepa</i> assay. <b>2016.</b> Prajitha, V. and <b>Thoppil, J. E.</b>	South African Journal of Botany 102 (1): 18-25	ISSN 0254-6299 <a href="http://dx.doi.org/10.1016/j.sajb.2015.06.018">http://dx.doi.org/10.1016/j.sajb.2015.06.018</a>	<b>3.4</b>

4.	Cytogenetic characterization of <i>Amaranthuscaudatus</i> and <i>Amaranthushybridussubsp.cruentus</i> (L.). <b>2017.</b> Prajitha, V. and <b>Thoppil, J. E.</b>	Cytotechnology70 (1): 95-101	ISSN-1573-0778 doi:10.1007/s10616-014-9797-x	<b>3.3</b>
5.	Cytotoxicity, Apoptotic activity and phytochemical analysis of rhizome extract of <i>Amomumpterocarpum</i> Thwaites. <b>2016.</b> Sinitha, K. and <b>Thoppil, J. E.</b>	Journal of Chemical and Pharmaceutical Science 4 (1): 18-21.	ISSN-0974-2115	-
6.	Evaluation of cytotoxicity of the aqueous leaf extract of <i>Pogostemonheyneanus</i> Benth. (Java Patchouli). <b>2017.</b> Anjana, S. and <b>Thoppil, J. E.</b>	Biotropia24 (1): 28-34.	ISSN - 0215-6334 <a href="https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.11598%2Fbtb.2017.24.1.507">https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.11598%2Fbtb.2017.24.1.507</a>	-
7.	Evaluation of antioxidant, antiinflammation and chemical composition of methanolic extract of <i>Amomummasticatorium</i> Thwaites (Zingiberaceae). <b>2017.</b> Sinitha, K. and <b>Thoppil, J. E.</b>	International Journal of Pharmacognosy 4 (12): 413-418.	ISSN - 2394 - 5583 doi:10.13040/IJPSR.0975-8232.IJP.4(12).413-18	-
8.	Cytogenetic evaluation of two species of <i>Cynanchum</i> L. (Apocynaceae) from South India: A possible clue to evolution. <b>2018.</b> Neethu, K. B. and <b>Thoppil, J. E.</b>	Phytotaxa 357 (1): 198-206	ISSN - 1179 - 3155 <a href="http://dx.doi.org/10.11646/phytotaxa.357.3.4">http://dx.doi.org/10.11646/phytotaxa.357.3.4</a>	- <b>1.168</b>
9.	Comparative analysis of the toxicity levels of commercial coils and natural camphor used as mosquito repellents. <b>2018.</b> Neelamkavil, S. V. and <b>Thoppil, J. E.</b>	International Journal of Current Advanced Research 7 (2): 10338-10342	ISSN - 2319 - 6475 <a href="http://dx.doi.org/10.24327/ijcar.2018">http://dx.doi.org/10.24327/ijcar.2018</a>	-
10.	Screening of cytotoxicity, metabolic inhibition and possible apoptotic cell death induced by <i>Gomphostemmaheyneanum</i> Wall. Ex Benth. <i>Varheyneanum</i> using <i>Allium cepa</i> root tips. <b>2018.</b> Sajitha, M. K. and <b>Thoppil, J. E.</b>	International Journal of Pharmacy 8 (1): 56-64	ISSN -2249 - 1848	-
11.	Cytotoxic potential of <i>Cissusquadrangularis</i> on <i>Allium cepa</i> root meristem. <b>2018.</b> Rubeena, M. and <b>Thoppil, J. E.</b>	International Journal of Advances in Pharmaceutical Sciences 10 (1): 1-6	ISSN – 0976 - 1055 <a href="http://dx.doi.org/10.5138/09761055.2212">http://dx.doi.org/10.5138/09761055.2212</a>	-
12.	Plant-mediated synthesis of silver nanoparticles by two species of <i>Cynanchum</i> L. (Apocynaceae): A comparative approach on its physical characteristics. <b>2018.</b> Neethu, K. B. and <b>Thoppil, J. E.</b>	International Journal of Nano Dimension 9 (1): 104-111	ISSN - 2005-8868	-
13.	Phytochemical profiling and anti-bacterial efficacy screening of	International Journal of Current Pharmaceutical	ISSN - 0975-7066 <a href="https://doi.org/10.2215">https://doi.org/10.2215</a>	-

	<i>Aglaialabarica</i> Sasidh. <b>2018</b> . Archana, E. R. and <b>Thoppil, J. E.</b>	Research 10 (1): 20-22	9/ijcpr.2018v10i1.24402	
14.	C-mitotic potential of aqueous leaf extract of <i>Memecylonranderianum</i> SM & MR Almeida. - a promising natural colchicine analog. <b>2018</b> . RamyaSree, P. R. and <b>Thoppil, J. E.</b>	International Research Journal of Pharmacy 9 (11): 113-115	ISSN - 2230 - 8407 doi:10.7897/2230-8407.0911269	-
15.	Mitoclastic effects of <i>Isodonnigrescens</i> (Benth.) H. Hara extract using chromosome aberration assay. <b>2018</b> . Neelamkavil, S. V. and <b>Thoppil, J. E.</b>	International Journal of Current Advanced Research 7 (7): 14543-14545	ISSN - O - 2319-6475, http://dx.doi.org/10.24327/ijcar.2018	-
16.	Chromosome aberration study of <i>Isodonnigherricus</i> (Benth.) H. Hara extract using <i>Alliumcepa</i> assay. <b>2018</b> . Neelamkavil, S. V. and <b>Thoppil, J. E.</b>	International Journal of Development Research 8 (8): 22389-22392	ISSN - 2230-9926	-
17.	Phytochemical evaluation and <i>in vitro</i> antioxidant studies of selected species of <i>Gomphostemma</i> Wall. ex Benth. from Western Ghats. <b>2018</b> . Sajitha, M. K. and <b>Thoppil, J. E.</b>	Journal of Drug Delivery and Therapeutics 8 (6): 32-37	<b>ISSN - 2250-1177</b> https://doi.org/10.22270/jddt.v8i6-s.2074	-
18.	<i>Aglaialabarica</i> induced apoptosis evaluation in plant meristem, erythrocytes and human cancer cell lines. <b>2019</b> . Archana, E. R. and <b>Thoppil, J. E.</b>	Journal of Drug Delivery and Therapeutics 9 (2): 118-124	<b>ISSN - 2250-1177</b> <a href="http://dx.doi.org/10.22270/jddt.v9i2-s.2611">http://dx.doi.org/10.22270/jddt.v9i2-s.2611</a>	-
19.	<b>Induction of nuclear buds and micronuclei in <i>Allium cepa</i> root meristem by the leaf extract of <i>dieffenbachia maculata</i> (Lodd.) Sweet. <b>2019</b>. Aswathi, P. and <b>Thoppil, J. E.</b></b>	<b>International Research Journal of Pharmacy 10 (2): 166-170</b>	ISSN - 2230 – 8407 doi:10.7897/2230-8407.100262	-
20.	Apoptotic and cytotoxic activities of <i>Strobilanthesvirendrakumarana</i> Venu and P. Daniel in <i>Alliumcepa</i> and human red blood cells. <b>2019</b> . Reshmi, C. and <b>Thoppil, J. E.</b>	Asian Journal of Pharmaceutical and Clinical Research 12 (6): 93-97	ISSN - 2455-3891 <a href="http://dx.doi.org/10.22159/ajpcr.2019.v12i6.3312">http://dx.doi.org/10.22159/ajpcr.2019.v12i6.3312</a>	-
21.	Evaluation of cytotoxicity and apoptotic potential of <i>Ophiorrhizapectinata</i> Arn. – A potent anticancer agent. <b>2019</b> . PreethaMol, S. N. and <b>Thoppil, J. E.</b>	Asian Journal of Pharmaceutical and Clinical Research 12 (8): 97-102	ISSN - 2455-3891 http://dx.doi.org/10.22159/ajpcr.2019.v12i8.34176	-
22.	Identification of Chemical constituents of <i>Cynanchumsarcomedium</i> by HR-LC/MS and evaluation of anti-proliferative activity on human MCF-7 and HCT-15 cancer cell lines: <i>in vitro</i> mechanistic evidences. <b>2019</b> . Neethu, K. B. and <b>Thoppil, J. E.</b>	International Journal of Botany Studies 4 (4): 190-198	ISSN - 2455-541X doi.org/10.22271/botany	-

23.	Study on cytotoxicity and chemical profiling of <i>Hexagoniatenuis</i> (Hook.) Fr., a Potential Bracket Fungus (Polyporaceae). <b>2019</b> . Aneesh, S. and <b>Thoppil, J. E.</b>	International Journal of Pharmacy and Biological Sciences 9 (3): 822-831	ISSN - 2230-7605 <a href="https://doi.org/10.21276/ijpbs.2019.9.3.1">https://doi.org/10.21276/ijpbs.2019.9.3.1</a>	-
24.	Cytotoxic potential and phytochemical profiling of <i>Andrographisatropurpurea</i> (Dennst.) Alston an endemic species from Southern Western Ghats. <b>2019</b> . Sheethal, S. K. and <b>Thoppil, J. E.</b>	Journal of Pharmacognosy and Phytochemistry 8 (4): 1691-1699	ISSN - 2278-4136 <a href="http://dx.doi.org/10.22271/phyto">http://dx.doi.org/10.22271/phyto</a>	--
25.	Enigmatic induction of cytomixis in <i>Allium cepa</i> root meristem by <i>Aglaiaedulis</i> Roxb. leaf extract and its phytochemical rationale. <b>2020</b> . Archana, E. R. and <b>Thoppil, J. E.</b>	Asian Journal of Pharmaceutical and Clinical Research 13 (3): 168-171	ISSN - 2455-3891 <a href="http://dx.doi.org/10.22159/ajpcr.2020.v13i3.36429">http://dx.doi.org/10.22159/ajpcr.2020.v13i3.36429</a>	-
26.	Genotoxicity evaluation of <i>Cissuslatifolia</i> Lam. and its genoprotective effect on oxidative damage induced by hydrogen peroxide. <b>2020</b> . Rubeeena, M. and <b>Thoppil, J. E.</b>	Asian Journal of Pharmaceutical and Clinical Research 13 (7): 185-191	ISSN - 2455-3891 <a href="http://dx.doi.org/10.22159/ajpcr.2020.v13i7.37382">http://dx.doi.org/10.22159/ajpcr.2020.v13i7.37382</a>	-
27.	Assessment of antioxidant potential and antigenotoxicity analysis through hydrogen peroxide-induced oxidative stress in <i>Terminaliapaniculata</i> Roth. <b>2020</b> . Aswathi, P. and <b>Thoppil, J. E.</b>	Asian Journal of Pharmaceutical and Clinical Research 13 (8): 106-110	ISSN - 2455-3891 <a href="http://dx.doi.org/10.22159/ajpcr.2020.v13i8.38123">http://dx.doi.org/10.22159/ajpcr.2020.v13i8.38123</a>	-
28.	Andrographolide a potential therapeutic drug against breast cancer: A review. <b>2020</b> . Sheethal, S. K. and <b>Thoppil, J. E.</b>	International Journal of Pharmacognosy and Phytochemical Research 12 (2): 72-77	doi:10.25258/phyto.12.2.1	-
29.	Revisiting the taxonomy of <i>Ophiorrhizacodyensis</i> and lectotypification of <i>O. pykarensis</i> (Rubiaceae), two endemic taxa of the Western Ghats. <b>2020</b> . Hareesh, V. S., Preethamol, S. N., Sabu, M. and <b>Thoppil, J. E.</b>	Phytotaxa 452 (2): 173-179	ISSN - 1179-3163 <a href="https://doi.org/10.11646/phytotaxa.452.2.6">https://doi.org/10.11646/phytotaxa.452.2.6</a>	<b>1.7</b>
30.	<i>Ficus</i> : A potent genus in the green synthesis of metal nanoparticles. <b>2020</b> . Naser, P. T. N. and <b>Thoppil, J. E.</b>	International Journal of Pharma and Bio Sciences 11 (4): 29-36	ISSN - 0975-6299 <a href="http://dx.doi.org/10.22376/ijpbs.2020.11.4.p29-36">http://dx.doi.org/10.22376/ijpbs.2020.11.4.p29-36</a>	-
31.	Phenolic content, flavonoid content and antioxidant potential of whole plant extract of <i>Ophiorrhizapectinata</i> Arn. <b>2020</b> . Preethamol,	Indian Journal of Pharmaceutical Sciences 82 (4): 712-718	ISSN -1998 – 3743 doi: <a href="https://doi.org/10.36468/pharmac">10.36468/pharmac</a>	<b>1.1</b>

	S. N. and <b>Thoppil, J. E.</b>		<a href="http://www.euticalsciences.com">euticalsciences.699</a>	
32.	Evaluation of genoprotection against malathion induced toxicity by Orthosiphon thymiflorus Sleesen. Seemadevi, Priya Srinivas and <b>Thoppil J. E.</b>	Journal of Ayurveda and Integrative Medicine 320-329	<a href="http://elsevier.com/locate/jaim">http://elsevier.com/locate/jaim</a> <a href="https://doi.org/10.1016/j.jaim.2021.01.005">https://doi.org/10.1016/j.jaim.2021.01.005</a>	-
33.	Comparative seed morphology, pharmacognostic, phytochemical and antioxidant potential of <i>Memecylon</i> . Ramya Sree, P. R. and <b>Thoppil, J. E.</b>	Turkish Journal of Pharmaceutical Science	18(2):213-222.	1.1
34.	An overview on breast cancer genetics and recent innovations: Literature survey. Ramya Sree, P. R. and <b>Thoppil, J. E.</b>	Breast Disease	40(2), 1-12.	1.7
35.	Mixoploidy in <i>Strobilanthes amallaica</i> J.R.I. Wood (Acanthaceae Juss.) an important taxon of south-western Ghat, India. Reshmi C and <b>Thoppil, J. E.</b>	The Nucleus	<a href="https://doi.org/10.1007/s13237-021-00363-2">https://doi.org/10.1007/s13237-021-00363-2</a>	1.2

**Books published: with ISBN No., Without ISBN No., Chapters in books.**

<b>Sl. No.</b>	<b>Title</b>	<b>Authorship</b>	<b>Publisher &amp; ISSN /ISBN No.</b>	<b>Book/book chapter</b>
1.	Cytological and morphological consequences of synthetic food colourants.	Prajitha, V. and <b>Thoppil, J. E.</b> <b>2016</b>	LAP LAMBERT Academic publishing, Germany  ISBN-978-3-659-92158-2	Book
2.	<i>Amaranthus blitum</i> ; Pharmacological Evaluation, phytochemical screening and antimicrobial activity. pp. 1249-1269. <b>2018</b>	Prajitha, V. and <b>Thoppil, J. E.</b> <b>2018</b>	Advances in Functional Food for Human Health. Megh, R. G. & Joy, P. P. (Eds), Apple Academic Press, USA	Book chapter
3.	Prajitha, V. and <b>Thoppil, J. E.</b> Biology and Cultivation of Grain Amaranths. pp. 78-85. <b>2018</b>	Prajitha, V. and <b>Thoppil, J. E.</b> <b>2018</b>	Crops of Kerala – An overview Radhakrishnan, V. V., Hrideek, T. K., Raghu, A. V., & Chandramohan, K. T. (Eds), Priya Offset Press, Kerala	Book chapter

			ISBN- 978-81-935133-0-9	
4.	Exploration of <i>Memecylonranderianum</i> S. M. & A. R. Almeida.	RamyaSree P R. and <b>Thoppil, J. E. 2019</b>	LAP LAMBERT Academic publishing, Germany ISBN-978-3-659-54946-5	Book
5.	Cytotoxicity and phytochemical analyses in Dumbcane ( <i>Dieffenbachia</i> ).	Aswathi, P. and <b>Thoppil, J. E. 2019</b>	LAP LAMBERT Academic publishing, Germany ISBN-978-620-0-47336-3	Book
6.	RamyaSree, P. R. and <b>Thoppil, J. E.</b> Ecological importance of Melastomataceae. pp. 216-224. <b>2020</b>	RamyaSree P R. and <b>Thoppil, J. E. 2020</b>	Organism and Environment, A. K. Sarkar, Educreation publishing, New Delhi. ISBN-978-93-89808-99-5.	Book chapter
7.	Bioprospecting of <i>Strobilanthesvirendrakumarana</i> Venu & P. Daniel.	Reshmi, C. and <b>Thoppil, J. E. 2020</b>	LAP LAMBERT Academic publishing, Germany ISBN-978-620-0-50542-2	Book
8.	Exploration of the herb <i>Andrographisatropurpurea</i> (Dennst.) Alston.	Sheethal, S. K. and <b>Thoppil, J. E. 2020</b>	LAP LAMBERT Academic publishing, Germany ISBN-978-620-0-52937-4	Book
9.	Chemical profiling and cytotoxic study of <i>Hexagoniatenuis</i> (Hook) Fr., a potential bracket fungus.	Aneesh, S. and <b>Thoppil, J. E. 2020</b>	LAP LAMBERT Academic Publishing, Germany ISBN-978-620-0-78669-2	Book
10.	Cytotoxic giant-cell induction & phytoconstituents of Yellow Oleander, <i>Cascabelathevetia</i> (L.) Lippold [Apocynaceae].	Navya, S., Shija, J. and <b>Thoppil, J. E. 2020</b>	LAP LAMBERT Academic Publishing, Germany ISBN-978-620-2-51678-5	Book
11.	<a href="#">Cytotoxic potential and phytochemical analysis of Kozhikode leaf-flower plant, <i>Phyllanthuskozhiodianus</i> Sivar. &amp; Mani. (Euphorbiaceae).</a>	Thasnim, P. M. and <b>Thoppil, J. E. 2020</b>	LAP LAMBERT Academic Publishing, Germany ISBN: 978-620-2-52110-9	Book

### III Dr. Jos T. Puthur

1. Name of the faculty: Dr. Jos T Puthur
2. Name of the Department: Botany
3. Educational qualifications: MSc, PhD and Post doctorate
4. Present position: Professor
5. Address for correspondence: Plant Physiology and Biochemistry Division, Department of Botany, University of Calicut, 673635
6. E-mail and contact number: [jtputhur@yahoo.com](mailto:jtputhur@yahoo.com), +91-9447507845
7. Specialization: Plant Physiology and Biochemistry
8. Total teaching experience: 19
9. Courses taught: Plant Physiology, Microtechnique
10. Research experience: 25
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

Sl No.	Title of the project	Date of sanction	Duration	Grant received	Funding agency	PI or Co-PI
1	Ecophysiological studies of Mangroves in Kadalundi Vallikunnu Community Reserve with Special Reference to <i>Acanthus ilicifolius</i> L. (2017-20)	2017	3 Year	Rs. 21,32,000/-	KSCSTE	Dr. Jos T Puthur

12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. Nil
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.



Sl No.	Name of the student	topic of research	date of registration	Date of declaration of Ph.D. degree.
	Dhanya Thomas T T	Enhancing abiotic stress tolerance of <i>Oryza sativa</i> L. by priming seeds and seedlings with UV- B radiation	2016	2021
1	Sruthi P.	Ecophysiological studies on a mangrove species <i>Bruguiera cylindrica</i> (L.) Blume	2015	2020
2	Sinisha A.K.	Heavy metal induced variation in photosynthetic features of selected rice ( <i>Oryza sativa</i> L.) varieties	2013	2019
3	Faseela P.	Functional imprints of high light intensity light and UV-B radiation in selected rice ( <i>Oryza sativa</i> L.) varieties	2013	2018
4	Mirshad, P.P.	Establishment of energy grasses in degraded soils facilitated by VAM fungi	2012	2017
5	Shackira A.M.	Evaluation of heavy metal phytoremediation potential and elucidation of underlying phytotechnology in a halophyte, <i>Acanthus ilicifolius</i> L.	2012	2017
6	Vijayakumari K.	Influence of $\gamma$ -aminobutyric acid (GABA)/ $\beta$ -amino butyric acid (BABA)-priming on osmotic stress tolerance potential of black pepper ( <i>Piper nigrum</i> L.)”	2011	2016

14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration.

Sl. No.	Name of the student	topic of research	date of registration
1	Veena Mathew	Biofortification of rice ( <i>Oryza sativa</i> L.) with zinc through nutripriming of seeds	18-12-2020
2	Amritha M S	Nanoscale graphite carbon nitride (g-C <sub>3</sub> N <sub>4</sub> ) priming of rice ( <i>Oryza sativa</i> L.) for enhancing abiotic stress tolerance	07-09-2020
3	Aswathi Raj K. P	The effect of various priming techniques on drought stress tolerance and recovery kinetics of <i>Vigna unguiculata</i> (L.) Walp	18-02-2020
4	Noble Louis	Priming induced epigenetic changes and trans-generational memory related to abiotic stress response in <i>Oryza sativa</i> L.	8-11-2019
5	Sarath G. Nair	Physio-Dynamism related to phytoremediation and phytodesalination in <i>Clerodendrum inerme</i> (L.) Gaertn.	11-02-2019
6	Akhila Sen	Seed priming influenced oxidative stress and antioxidation mechanisms in <i>Oryza sativa</i> L. and <i>Vigna radiata</i> (L.) Wilczek subjected to different abiotic stresses.	28-04-2017
7	Sameena P.P.	Heavy metal phytoremediation by the bioenergy crop <i>Ricinus communis</i> L. and the associated physiochemical and anatomical changes.	26-04-2017
8	Janeeshma E.	Heavy metal phytoremediation mechanisms in <i>Zea mays</i> L. and <i>Oryza sativa</i> L. associated with arbuscular mycorrhiza.	15-04-2016

15. Provide information as indicated in 11 and 12 above.

16 Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

- **Dr. Jos T. Puthur** delivered a lecture on the topic “ Academic writing and publishing” at five day faculty development programme on Research and career, October 21, 2020. Vimala College (Autonomous), Thrissur, Funded by Dept. of Biotechnology, Govt. of India under the DBT star college scheme.
- Dr. Jos T. Puthur, delivered an invited lecture on the topic Seed priming: A means to boost abiotic stress tolerance mechanism in crop plants at Three Day International Webinar Series-Doctrina (11) on “ Plant Functional Biology” organised by Department of Post Graduate Studies and Research in Botany and Internal Quality Assurance Cell (IQAC), Sir Syed College, Thaliparambu in association with Kerala State Higher Education Council (KSHEC) Biology from 05 to 07 June, 2020.
- Dr. Jos T. Puthur, delivered an invited lecture in the Albertian Knowledge Webinar series 2020, organized by Albertian Centre for human Resource Development and Research, St. Alberts College (Autonomous), M G University, Kerala on the topic” Phytochromes Controlled Plant Physiological functions on April 29, 2020.
- Dr. Jos T. Puthur, delivered an invited lecture in the seminar “Women in Science” organized by the Dept. of Botany, Govt. Arts and Science College, Kozhikode on Feb 20, 2020, sponsored by KSCSCTE, Govt. of Kerala.
- Dr. Jos T. Puthur, delivered an invited lecture on the topic “Career options in Biology” at Dept. of Botany, Farook College (Autonomous), Kozhikode on Feb 14, 2020, sponsored by UGC Autonomous grant 2019-20.
- Dr. Jos T. Puthur, Chaired a technical session during National Conference of Plant Physiology-2019 organized by Kerala Agricultural University, Thrissur under the aegis of Indian Society for Plant Physiology, New Delhi on “Plant Productivity and Stress Management” December 19-21, 2019.
- Dr. Jos T. Puthur, Chaired a technical session during National Conference of Plant Physiology-2019 organized by Kerala Agricultural University, Thrissur under the aegis of Indian Society for Plant Physiology, New Delhi on “Plant Productivity and Stress Management” December 19-21, 2019.
- Dr. Jos T. Puthur, Chaired a technical session during XLII All India Botanical conference of the Indian Botanical Society and National Symposium on “Innovations and Inventions in Plant science Research” held at Dept. of Botany, University of Calicut, from Nov 06-08, 2019.
- Dr. Jos T. Puthur, topic: Molecular and Biochemical techniques at Workshop on Research Methodology, Writing Practices, Language and Soft Skills for Young Scientists Sponsored by: WSD-KSCSCTE held at Malabar Botanical Garden and Institute for Plant Sciences, Kozhikode, 14 & 15th March, 2019.
- Dr. Jos T. Puthur, topic: “Framing Research proposals and research funding opportunities” at UGC sponsored one week orientation programme for college teachers held at Farook College (Autonomous), Kozhikode on March 05, 2019.
- Dr. Jos T. Puthur, topic: “Framing Research proposals and research funding opportunities” at State level two day workshop on Research methodology-practises and updates organized by MES college, Marampally, Jan 19, 2019.

- Dr. Jos T. Puthur, topic: “Physiology of seed storage” at National workshop on seed collection and conservation, organized by Dept. of Botany, Univ. of Kerala, March 8-10, 2017.
- Dr. Jos T. Puthur, topic: “Preparation of proposals for research grants” at State level two day workshop on Research methodology-practises and updates organized by MES college, Marampally, Jan 21, 2017.
- Dr. Jos T. Puthur, topic: Physiological stress of the plants” at National Seminar on “Species The Passion-II”, organized by St. Thomas College (Autonomous), Thrissur. June 16-17, 2016.
- Dr. Jos T. Puthur, National seminar on “Modern trends in phytochemistry” organized by post graduate department of Botany, Maharaja’s college (Autonomous), Ernakulam on Feb 01-02, 2016.
- Dr. Jos T. Puthur, National seminar on “sustainable agriculture solutions for food security” organized by Department of Botany, Govt. College, Madapally on Jan 19-20, 2016.

#### 17 Innovative processes developed in teaching and learning.

Surprise test conducted for students, Ask them to collect advanced information for certain topics from published literatures

#### 18 Participation in curricular development:

- Member, Academic Advisory Committee for DTH Channel-08, Consortium for Educational Communication (CEC), MHRD, Govt. of India.
- University Nominee, Governing Council, Vimala College (Autonomous), Thrissur, Kerala. (2020, continuing)
- Chairman, Board of Studies (Plant Science), University of Calicut (2020-2022)
- Member, Board of Studies (Plant Science), University of Calicut (2017-2019)
- Subject Expert in Research Advisory Committee, St. Thomas college, Thrissur (Autonomous) (2017, continuing).
- Member, Board of Advisers, Providence College, Kozhikode (2017, continuing)
- Member, Board of Studies (Botany), St. Josephs College (Autonomous), Irinjalakuda (2017-2019), St. Berchmans College, Changanassery (2018, continuing), St. Theresas College, Ernakulam (2018, continuing), St. Alberts college, Ernakulam (2018, continuing), M A College, Kothamangalam (Autonomous), MSc Integrated Bioscience (2021, continuing),

#### 19 Participation in co-curricular and extra-curricular activities.

Director, Central Sophisticated Instrumentation Facility (CSIF), University of Calicut (Dec 2019, continuing).

Director, Directorate of Admissions, University of Calicut (April 2014 to Dec 2019).

#### 20 Refresher and Orientation courses attended:

Dr. Jos T. Puthur, Delivered an invited lecture on the topic “Plant Physiology in relation to abiotic stresses” to the participants of refresher course in life sciences sponsored by RUSA at Human Development Centre, University of Kerala on Nov 13, 2017.

21 Examination /Evaluation reforms initiated: OBE implemented in the Syllabus of MSc Applied Plant Sciences by the BoS in Plant Sciences, wherein I am the chairman.

22 Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.

Total Citations: 1767

h-index: 22

Sl. No	Authors	Title of the paper/Book	Journal	Publisher/Impact factor	Date of publishing
	Mathew Veena and Jos T Puthur	Seed nutripriming with zinc is an apt tool to alleviate malnutrition	Environmental Geochemistry and Health	Springer 4.609	Accepted
1.	Riya Johnson and Jos T Puthur	Seed priming as a cost effective technique for developing plants with cross tolerance to salinity stress	Plant Physiology and Biochemistry	Elsevier 4.27	26/02/2021
2	Riya Johnson and Jos T Puthur	Bio stimulant priming in <i>Oryza sativa</i> : a novel approach to reprogram the functional biology under nutrient-deficient soil	<a href="#">Cereal Research Communications</a>	Springer 0.85	09/03/2021
3	Edappayil Janeshma · Hazem M. Kalaji · Jos T. Puthur	Differential responses in the photosynthetic efficiency of <i>Oryza sativa</i> and <i>Zea mays</i> on exposure to Cd and Zn toxicity	Acta physiologia plantarum	Springer 2.354	04/01/2021
4	Palliyath Sruthi	Cadmium stress alleviation potential of	Bioremediat	Taylor &	20/04/202

	& Jos T. Puthur	Bruguiera cylindrica (L.) Blume enhances in combination with NaCl	ion Journal	Francis 1.7	1
5	Kumar Arun · Edappayil Janee shma · Joseph Job · Jos T. Puthur	Physiochemical responses in coconut leaves infected by spiraling whitefly and the associated sooty mold formation	Acta Physiologia Plantarum	Springer 2.354	08/02/202 1
6	P. P. Sameena & Jos T. Puthur	Cotyledonary leaves effectively shield the true leaves in <i>Ricinus communis</i> L. from copper toxicity	Internationa l Journal of Phytoremed iation	Taylor & Francis 3.212	01/10/202 0
7	Akhila Sen & Jos T. Puthur	Halo and UV-B priming influences various physiological and importantly yield parameters of <i>Oryza sativa</i> var. Vyttila 6	New Zealand Journal of Crop and Horticultura l Science	Taylor & Francis 1.154	19/11/202 0
8	Nair G. Sarath . Jos T. Puthur	Heavy metal pollution assessment in a mangrove ecosystem scheduled as a community reserve	Wetlands Ecology and Managemen t	Springer 1.379	16/11/202 0
9	P. P. Sameena & Jos T. Puthur	Heavy Metal Phytoremediation by Bioenergy Plants and Associated Tolerance Mechanisms	Soil and Sediment Contaminati on: An Internationa l journal	Taylor & Francis 2.061	22/12/202 0

10	E. Janeeshma, Vijisha K. Rajan & Jos T. Puthur	Spectral variations associated with anthocyanin accumulation; an apt tool to evaluate zinc stress in <i>Zea mays</i>	Chemistry and Ecology	Taylor & Francis 2.244	04/08/2020
11	Akhila Sen, Dinakar Challabathula & Jos T. Puthur	UV-B Priming of <i>Oryza sativa</i> Seeds Augments the Innate Tolerance Potential in a Tolerant Variety more Effectively Toward NaCl and PEG Stressors	Journal of Plant Growth Regulation	Springer 4.169	30/06/2020
12	<a href="#">Edappayil Janeeshma</a> , <a href="#">Jos T. Puthur</a> , <a href="#">Parvaiz Ahmad</a>	Silicon distribution in leaves and roots of rice and maize in response to cadmium and zinc toxicity and the associated histological variations	Physiologia Plantarum	Wiley Online Library 4.5	11/12/2020
13	T. T. D. Thomas & Jos T. Puthur	UV-B priming enhances specific secondary metabolites in <i>Oryza sativa</i> (L.) empowering to encounter diverse abiotic stresses	Plant Growth Regulation	Springer 3.412	2020
14	Palliyath Sruthi & Jos T. Puthur	High NaCl tolerance potential of <i>Bruguiera cylindrica</i> (L.) Blume compromised by mild CuSO <sub>4</sub> concentration as evidenced by unique physiochemical features	Marine Pollution Bulletin,	Elsevier 5.553	2020

15	Akhila Sen & Jos T Puthur	Influence of different seed priming techniques on oxidative and antioxidative responses during the germination of <i>Oryza sativa</i> varieties	Physiology and Molecular Biology of Plants	Springer 2.391	2020
16	T.T. Dhanya Thomas, Challabathula Dinakar & Jos T. Puthur	Effect of UV-B priming on the abiotic stress tolerance of stress-sensitive rice seedlings: Priming imprints and cross-tolerance	Plant Physiology and Biochemistry	Elsevier 4.27	2020
17	E. Janeeshma & Jos T. Puthur	Direct and indirect influence of arbuscular mycorrhizae on enhancing metal tolerance of plants	Archives of Microbiology	Springer 2.552	2020
18	Dhanya T. ThomasA and Jos T. PuthurA	Amplification of abiotic stress tolerance potential in rice seedlings with a low dose of UV-B seed priming	Functional Plant Biology,	CSIRO 3.1	2019
19	Parammal Faseela, Jos Thomas Puthur	Intraspecific variation in sensitivity of high yielding rice varieties towards UV-B radiation	Physiology and Molecular Biology of Plants	Springer 2.391	2019
20	Shackira A. M. & Jos T. Puthur	Cd <sup>2+</sup> influences metabolism and elemental distribution in roots of <i>Acanthus ilicifolius</i> L.	International Journal of Phytoremediation	Taylor & Francis 3.212	2019
21	Palliyath Sruthi & Jos T. Puthur	Characterization of physiochemical and anatomical features associated with enhanced phytostabilization of Copper in <i>Bruguiera</i>	International Journal of Phytoremediation	Taylor & Francis 3.212	2019



		<i>cylindrica</i> (L.) Blume			
22	Dhanya T. T. Thomas · Dinakar Challabathula · Jos T. Puthur	UV-B priming of <i>Oryza sativa</i> var. Kanchana seedlings augments its antioxidative potential and gene expression of stress-response proteins under various abiotic stresses	3 Biotech	Springer 2.406	2019
23	P. Faseela, A.K. Sinisha, M. Brestic, and J.T. Puthur	Chlorophyll a fluorescence parameter as indicators of a particular abiotic stress in rice	Photosynthe tica	Academy of Sciences of the Czech Republic 3.189	2019
24	Sruthi Palliyath · Jos T. Puthur	The modulation of various physiochemical changes in <i>Bruguiera cylindrica</i> (L.) Blume affected by high concentrations of NaCl	Acta Physiologia e Plantarum	Springer 2.354	2018
25	A. M. Shackira & Jos T. Puthur & E. Nabeesa Salim	<i>Acanthus ilicifolius</i> L. a promising candidate for phytostabilization of zinc	Environmen tal Monitoring Assessment	Springer 2.513	2017
26	Dhanya Thomas T.T., Jos T. Puthur	UV radiation priming: A means of amplifying the inherent potential for abiotic stress tolerance in crop plants	Environmen tal and Experiment al Botany	Elsevier 5.545	2017
27	P.P. Mirshad, Jos T. Puthur	Drought tolerance of bioenergy grass <i>Saccharum spontaneum</i> L. enhanced by arbuscular mycorrhizae	Rhizosphere	Elsevier 3.129	2017
28	Parammal Faseela, Jos T. Puthur	The imprints of the high light and UV-B stresses in <i>Oryza sativa</i> L. Kanchana seedlings are differentially modulated	Journal of Photochemi stry & Photobiolog	Elsevier 6.252	2017

			y, B: Biology		
29	AM Shackira and Jos T Puthur	Enhanced phytostabilization of cadmium by a halophyte— <i>Acanthus ilicifolius</i> L.	Internationa l Journal of Phytoremed iation	Taylor & Francis  3.212	2017
30	Palliyath Sruthi . Abdul Majeed Shackira . Jos T. Puthur	Heavy metal detoxification mechanisms in halophytes: an overview	Wetlands Ecology and Managemen t	Springer  1.379	2016
31	Vijayakumari, K. Jisha K. C. and Jos T Puthur	GABA/BABA priming: a means for enhancing abiotic stresstolerance potential of plants with less energy investmentson defence cache	Acta Physiologia Plantarum	Springer  2.354	2016
32	P. P. Mirshad & Jos T. Puthur	Arbuscular mycorrhizal association enhances drought tolerance potential of promising bioenergy grass ( <i>Saccharum arundinaceum</i> retz.)	Environmen tal Monitoring Assessment	Springer 2.513	2016

23 Books published: with ISBN No., Without ISBN No., Chapters in books.

Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
Jos T Puthur	Plant-metal interaction	Photostabilization of heavymetals: understanding of the principles and practices	Book chapter		International	Jul-19	978-3-030-20732-8	Calicut University	Springer
Jos T Puthur	Priming-Mediated Stress and Cross-Stress Tolerance	Seed priming-induced physiochemical and molecular events in plants coupled to abiotic stress tolerance: An overview	Book chapter		International	Jan-20	978-0-12-817892-8	Calicut University	Elsevier
Jos T Puthur	International conference on exploring the scope of plant genetic resources	Histochemical changes in roots and leaves of maize seedlings subjected to cadmium stress	Proceedings	International conference on exploring the scope of plant genetic resources	International	May-19	978-81-940888-0-6	Kerala university	
Jos T Puthur	International conference on exploring the scope of plant genetic resources	Photochemistry associated with phyto-desalinization potential of <i>Clerodendrum inerme</i> (L.) Gaertn	Proceedings	International conference on exploring the scope of plant genetic resources	International	May-19	978-81-940888-0-6	Kerala university	

Jos T Puthur	International conference on exploring the scope of plant genetic resources	Differential response of two rice varieties towards Zn stress assessed through bioaccumulation and histological changes” at International conference on exploring the scope of plant	Proceedings	International conference on exploring the scope of plant genetic resources	International	May-19	978-81-940888-0-6	Kerala university	
Jos T Puthur	International conference on exploring the scope of plant genetic resources	Copper induced oxidative stress and antioxidant defense mechanisms in <i>Bruguiera cylindrica</i> (L.) Blume	Proceedings	International conference on exploring the scope of plant genetic resources	International	May-19	978-81-940888-0-6	Kerala university	
Jos T Puthur	International seminar on photochemistry and application	The effects of UV-B radiation stress on photochemistry of rice seedlings	Proceedings	International seminar on photochemistry and application	International	Nov-17		MG University	
Jos T Puthur	International seminar on photochemistry and application	Augmentation of UV-B stress tolerance mechanism in rice seedlings with low dose of UV-B priming	Proceedings	International seminar on photochemistry and application	International	Nov-17		MG University	

Jos T Puthur	International seminar on photochemistry and application	Cadmium stress induced changes in Chlorophyll <i>a</i> fluorescence of <i>Oryza sativa</i> 'Aathira' and 'Mattatriveni'	Proceedings	International seminar on photochemistry and application	International	Nov-17		MG University	
Jos T Puthur	International seminar on photochemistry and application	UV-B priming imparts NaCl and PEG stress tolerance potential to rice seedlings	Proceedings	International seminar on photochemistry and application	International	Nov-17		MG University	
Jos T Puthur	8 <sup>th</sup> International Conference on Photosynthesis and Hydrogen Energy Research for Sustainability	Rice cultivars with varied tolerance towards high light and UV-B irradiation: A comparative physiochemical approach	Proceedings	8 <sup>th</sup> International Conference on Photosynthesis and Hydrogen Energy Research for Sustainability	International	Nov-17	978-93-5288-261-8	University of Hyderabad	
Jos T Puthur	8 <sup>th</sup> International Conference on Photosynthesis and Hydrogen Energy Research for Sustainability	Modulation of photosynthesis associated with phytostabilization of Zinc in a halophyte- <i>Acanthus ilicifolius L.</i>	Proceedings	8 <sup>th</sup> International Conference on Photosynthesis and Hydrogen Energy Research for Sustainability	International	Nov-17	978-93-5288-261-8	University of Hyderabad	

Jos T Puthur	Erudite webinar proceedings Plant Functional Biology Sir Syed College	Calcium oxalate crystal formation; a means of Cu detoxification and Na <sup>+</sup> regulation in <i>Bruguiera cylindrica</i> (L.) Blume	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	
Jos T Puthur	Erudite webinar proceedings Plant Functional Biology Sir Syed College	Alterations in the antioxidative functions in <i>Ricinus communis</i> L. seedlings exposed to increasing levels of copper	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	
Jos T Puthur	Erudite webinar proceedings Plant Functional Biology Sir Syed College	Modulation of various physio-chemical changes in <i>Vigna unguiculata</i> L. var. KBC IV subjected to NaCl and PEG stress	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	
Jos T Puthur	Erudite webinar proceedings Plant Functional Biology Sir Syed College	Phytochemical analysis of <i>Zea mays</i> associated with arbuscular mycorrhizae and subjected to cadmium and zinc stresses	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	

Jos T Puthur	Erudite webinar proceedings Plant Functional Biology Sir Syed College	Physio-chemical changes in <i>Acanthus ilicifolius</i> L. associated with arsenic stress	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	
Jos T Puthur	Erudite webinar proceedings Plant Functional Biology Sir Syed College	Enhancement in major metabolites content of cowpea seeds induced by $\beta$ -amino butyric acid (BABA)	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	
Jos T Puthur	Erudite webinar proceedings Plant Functional Biology Sir Syed College	Effects of high light exposure on leaf gas exchange parameters and xanthophyll cycle pigments in rice seedlings	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	
Jos T Puthur	Erudite webinar proceedings Plant Functional Biology Sir Syed College	Ameliorative potential of halo priming in enhancing stress tolerance of <i>Oryza sativa</i> L. Vyttila 6 through enhanced gene expression levels of antioxidant enzymes	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	

Jos T Puthur	Erudite webinar Plant Functional Biology Sir Syed College	Dual role of UV-B in stress induction and alleviation is dosage dependent in rice	Proceedings	Plant Functional Biology	International	Feb-21	978-81-940448-9-5	Sir syed College Kannur	
Jos T Puthur	sustainable environment clean-up green remediation	Potential role of microbial endophytes in xenobiotic stress management	Book chapter		International	May-21	978-0-12-823828-8	Calicut University	Elsevier
Jos T Puthur	sustainable environment clean-up green remediation	Phycoremediation and phytoremediation: Promising tools of green remediation	Book chapter		International	May-21	978-0-12-823828-8	Sir syed College Kannur	Elsevier



24 Patents Applied/Granted: National. International, commercialized: Nil

25 Consultancy services provided and revenue generated: Nil

26 Conferences ,seminars, symposia and workshops organized as convener/coordinator:

Sl. No.	Name of the workshop/ seminar	Number of Participants	Date
1	Biotechnological approaches for developing climate resilient crops and heavy metals phytoremediation	71	06.01.2020
2	Feed the future: designing high yielding, multiple stress tolerance in rice	85	05.09.2019
3	Rapid and precise assesment of physiological responses of plants towards stress using computerised and portable instruments	40	01.04.2019-05.04.2019
4	Plant sensory perception and adaptations	105	18.01.2019
5	Getting ready to feed 9 billion through agricultural innovations	100	12.12.2018

27 Number of collaborations: 2

Sl No.	Title of the collaborative activity	Name of the collaborating agency with contact details	Name of the participant	Year of collaboration	Duration	Nature of the activity
1	Dehydrins	Central	Prof. (Dr.)	2018	3 Year	Scheme for

	rejuvenated by seed priming empowers enhanced abiotic stress tolerance in rice	University of Tamilnadu, Thiruvarur	Jos T Puthur			Promotion of Academic Research Collaboration (SPARC)
2	Priming induced epigenetic changes and transgenerational memory related to abiotic stress response in <i>Oryza sativa</i> L.	IISER Thirupathi	Noble Louis	2019	5 Year	Research

28 Awards /recognitions received: International, National, State, University level.

2019 Course coordinator of GIAN (Global Initiative for Academic Networking) programme of MHRD, Govt. of India held in University of Calicut, Kerala, April 01-05, 2019.

2017 Faculty member of the Massive Online Open Course (MOOC) of Consortium for Educational Communication (CEC), MHRD, Govt. of India.

29

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13, 14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

-----

#### **IV Dr. A.K. Pradeep**

1. Name of the faculty: A.K. PRADEEP
2. Name of the Department: Botany
3. Address for correspondence: Tulsi, Mathapuzha Road, Thenhipalam  
P.O., Malappuram Dist., Kerala 673636
4. E-mail and contact number: akpradeep1@uoc.ac.in
5. Specialization: Angiosperm Taxonomy and Floristics
6. Total teaching experience: 9 Years
7. Courses taught: MSc, M.Phil and Ph.D
8. Research experience: 25 Years
9. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. NIL
10. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. NIL
11. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.
- 12.

S. No	Name	Topic	Date of reg.	Date of Award
1	Pramod C.	“Floristic and ecological studies on Madayippara lateritic plateau of northern Kerala”.	19.04.2010	29 March 2016
2	Lemiya K.M.	Biosystematic studies on <i>Ammannia</i> L., <i>Rotala</i> L. and <i>Nesaea</i> Kunth (Lythraceae) in South India”.	24.10.2011	10.05.2018
3	ThoibaKottekkattu	Taxonomic Studies on Eragrostidinae (Poaceae: Chloridoideae: Eragrostideae) in Peninsular India”.	14.10.2013	24.04.2019

13. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration.

Sl.No	Name	Topic	Date of Registration
1	Drisy V.	Taxonomic Studies on Ischaeminae and Anthistiriinae (Poaceae: Panicoideae: Sacchareae) in Peninsular India	5.2.2015

2	Nikhil Krishna	Taxonomic Studies on the Genus <i>Begonia</i> L. (Begoniaceae) in India.	22.04.2016
3	Amrutha A.	Taxonomic Studies on the Genus <i>Leea</i> L. (Vitaceae) in India.	15.05.2017

14. Provide information as indicated in 11 and 12 above. SEE ABOVE

15. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

Name of Conference, Seminar etc. Attended	Nature of the Conference / Seminar	Organizer of the Conference / Seminar	Details of Participation	If paper presented, title of the paper	Date
Biodiversity & Botanical Inventory in India	National	Nehru Arts & Science College, Kanhangad	Resource person	Biodiversity & Botanical Inventory in India	4 February 2020
Two Day Seminar on Plant systematics & Current Scenario and future perspectives	National	Post graduate and Research Department of Botany, SreeNeelakanta Government Sanskrit College, Pattambi	Resource person	International Code of Nomenclature of Plants	24–25 October 2019
XLII All India Botanical conference of the Indian Botanical Society and national symposium on Innovations and inventions in plant science research	National	Department of Botany, University of Calicut	Participation		6–8 November 2019
Annual conference of Indian Association of Angiosperm Taxonomy (IAAT) & National conference on modern trends in Biosystematics of Angiosperms.	International	JNTBGRI Palode, Thiruvananthapuram, Kerala.	Participation		11–13 November 2019
National Seminar on Plant Sciences: Current challenges &	National	Department of Botany, University of Calicut	participation		28 February 2019–2 March 2019

Perspectives					
National Workshop on Plant Taxonomy: Nomenclature, Illustration & Photography	National	Department of Botany, Govt. Brennen College, Thalasserry	Resource person	Botanical Nomenclature	15–16 November 2018
XXVIII Annual Conference of Indian Association for Angiosperm Taxonomy & International symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today & Tomorrow. 29-31 October 2018.	International	Department of Botany, Maharaja Sayajirao University of Baroda, Vadodra, Gujarat, India	Paper presentation	An overview of the Genus <i>Begonia</i> (Begoniaceae) in India.	29–31 October 2018
Workshop on “Digital Photography”	National	Department of Botany, University of Calicut	conducted		21–23 March 2018
National Seminar on Plant Taxonomy- A tool for Biodiversity Conservation	National	University College, Kerala University, Thiruvananthapuram	Resource person	Botanical Nomenclature	14–15 December 2017
National Seminar on Basics in Angiosperm Taxonomy	National	PG and Research Department of Botany, MES Asmabi College, P. Vemballur, Kodungallur	Resource person	Botanical Nomenclature	22–23 November 2017
XXVII Annual conference of Indian Association for Angiosperm Taxonomy and Symposium on “Plant Systematics: Priorities and challenges	International	Department of Botany, University of Delhi	Participation		10–13 November 2017

16. Innovative processes developed in teaching and learning. NIL

17. Participation in curricular development: NIL

18. Participation in co-curricular and extra-curricular activities. NIL

19. Refresher and Orientation courses attended:

Orientation Course	UGC-Human Research Development Centre, University of Calicut	08.02.2018 to 07.03.2018 (28 days)	UGC-Human Resource Development Centre
--------------------	--	------------------------------------	---------------------------------------

20. Examination /Evaluation reforms initiated: NIL

21. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.

Sr. No	Papers published in peer reviewed journals	Journal	Citations	Impact factor range/Average Impact factor
1	Nikhil Kkrishna, <b>AyilliathKuttiyeri Pradeep</b> , Athalappil Amrutha &ThachatJayakrishnan 2020. A new species and a new record of <i>Begonia</i> (sect. <i>Platycentrum</i> , Begoniaceae) from northeastern India	Phytotaxa 482(3):261-267		1.171
2	ValiyaparambilDrisyaa& <b>AyilliathKuttiyeri Pradeep</b> 2020. On reinstating <i>Heteropogonallionii</i> (Poaceae: Panicoideae)	Phytotaxa 429(2):157-166	1	1.171
3	T. Taram, D. Borah, N. Krishna, <b>A.K. Pradeep</b> , A. Amrutha & M. Hughes 2020. <i>Begonia oyunia</i> (Begonia sect. <i>Monophyllon</i> , Begoniaceae), a remarkable new species from Northeast India.	Gardens Bulletin Singapore, 72 (1): 109–115	1	
4	Thoibakottekkattu& <b>A.K. Pradeep</b> 2020. Lectotypification and a new record of the genus <i>Eragrostiella</i> (Tripogoninae, Cynodonteae, Chloridoideae, Poaceae) from India	Phytotaxa 464(1):109-115		1.171
5	Thoiba K. & <b>A.K. Pradeep</b> 2020. A revision of <i>Tripogon</i> (Poaceae: Chloridoideae) in India.	Rheedea 30(3):270-277.		
6	Drisyaa V. & <b>A.K. Pradeep</b> 2020. On reinstating <i>Heteropogonallioni</i> (Poaceae: Panicoideae).	Phytotaxa, 429 (2), pp. 157–166	1	1.171
7	Drisyaa V. & <b>A.K. Pradeep</b> 2020. Lectotypification of three names in the genus <i>Iseilema</i> (Poaceae).	Phytotaxa, 424 (1), pp. 56–60		1.171
8	Krishna, N., Britto, S.J., Thomas, S., Mani,	Edinburge Journal of	2	

	B., <b>Pradeep A.K.</b> &Jithin, K.V, 2019. A new section ( <i>Begonia</i> sect. <i>Flocciferae</i> sect. nov.) and two new species in Begoniaceae from the Western ghats of India.	Botany, pp. 1–18		
9	Nikhil Krishna, <b>AyilliathKuttiyeri Pradeep</b> &ThachatJayakrishnan 2018. <i>Begonia naga</i> (Begoniaceae, Sect. <i>Platycentrum</i> ), a new species from Nagaland, India	. Phytotaxa 381 (1): 006-011.	4	1.171
10	Thoibakottekkattu& <b>A.K. Pradeep</b> . 2018. Lectotypification of three names in the genus <i>Tripogon</i> (Poaceae).	Phytotaxa 350 (2): 177–181.	1	1.171
11	Puthur Varghese Anto, <b>A.K. Pradeep</b> , Franklin Francis, Nimmi C. Dominigose& Hari Sasidaran. 2018. <i>Parthenocissus renukae</i> , a new species of Vitaceae from South India.	Taiwania 63 (2): 139–142.	1	0.69
12	K.H. AmithaBachan, A.J. Robi, <b>A.K. Pradeep</b> & P.S. Udayan 2018. Lectotypification of <i>Cryptocarya anamalayana</i> Gamble (Lauraceae) with a note on its fruits.	Bangladesh Journal of Plant Taxonomy 25(1):107–111.	2	0.32
13	<b>Thoibakottekkattu</b> and <b>A.K. Pradeep</b> 2018. <i>Eragrostisbrownii</i> (Poaceae: Eragrostidinae), a new record for India.	Taiwania 63(1): 84–88.	1	0.69
14	J.F. Veldkamp, ThoibaKottekkattu& <b>A.K. Pradeep</b> . 2017. <i>Eragrostispaniciformis</i> (Poaceae): A new record for Asia from Kerala, India.	Rheedea 27 (1): 46–49.	2	
15	Lemiya, K.M. & <b>Pradeep, A.K.</b> 2017. Cuticular features of selected species of <i>Ammania</i> , <i>Rotala</i> and <i>Nesaea</i> (Lythraceae) in South India.	Int. J. Cur. Res. 9 (07): 54432–54440.		
16	AmithaBachan K.H. & <b>Pradeep, A.K.</b> 2017. <i>Osbechiawalkeri</i> Arn (Malastomataceae): A new record from Southern Western Ghats, India.	Int. J. Adv. Res. 5(7): 339–341.		
17	ThoibaKottekkattu, K.M. Manudev& <b>A.K. Pradeep</b> 2016. Two new species of <i>Tripogon</i> (Poaceae:Chloridoideae:Tripogoninae) from India.	Phytotaxa 272(2):125–133	2	1.171

22. Books published: with ISBN No., Without ISBN No., Chapters in books.

Book 1

ISBN: 81-901637-6-0

A HILLOCK OF BIODIVERSITY: ECOLOGY AND FLORA OF MADAYIPPARA

A SOUTH INDIAN LATERITIC PLATEAU

23. Patents Applied/Granted: National. International, commercialized: NIL

24. Consultancy services provided and revenue generated: NIL
25. Conferences, seminars, symposia and workshops organized as convener/coordinator:  
Organized a three day workshop on Digital Photography during 21–23 March 2018
26. Number of collaborations: NIL
27. Awards /recognitions received: National level:  
Dr. V.V. Sivarajan Gold Medal-2018 (Instituted by Indian Association for Angiosperm Taxonomy)

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13, 14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.



## V Dr. P. Sunoj Kumar

1. Name of the faculty : Dr. P. SUNOJ KUMAR.
2. Name of the Department : BOTANY
3. Educational qualifications : M.Sc., B.Ed., BLISc., M.Phil., Ph.D
4. Present position: Assistant Professor
5. Address for correspondence : Assistant Professor of Botany•  
University of Calicut• Kerala 673635•
6. E-mail and contact number : Phone:91-9446891708  
•Email: [drsunoj@uoc.ac.in](mailto:drsunoj@uoc.ac.in)
7. Specialization : Angiosperm Taxonomy, Phylogeny
8. Total teaching experience : 11 years
9. Courses taught : MSc., MPhil., PhD
10. Research experience : 25 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

Sl. No.	Title of the project	Date of Sanction	Funding agency	Amount sanctioned	PI/ Co-PI
1	<i>Taxonomic and molecular studies on the family Lamiaceae Juss. in Southern Western Ghats</i> .	2012-2015	SERB, DST New Delhi	<b>Rs.19,11,000</b>	PI
2	“Molecular marker based studies on the phylogenetic relationships and biogeographic origin of the medicinal plant genus <i>Leucas</i> (Lamiaceae)”	2013-2016	DBT, Govt. of India	<b>Rs.34,00,000</b>	PI
3	Taxonomic revision, chemotaxonomy using fatty acid profiles and molecular phylogeny of the aromatic family Lamiaceae (subfamily Nepetioideae) in India with special reference to the biogeographic origin and relationship of the Indian endemic radiations of the genus <i>Isodon</i>	2019-2021	SERB, DST New Delhi w.e.f 11-10-2019 3 years	<b>Rs.32,08,830</b>	PI

12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. NIL
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.

SN	Name of student	Topic of research	year	Fellowship
<b>Ph.D Awarded</b>				
1	Prasad, M. G.,	Taxonomic studies on the family Linderniaceae in Peninsular India.	2016	RGNF
2	Vimal, K. P.	A study on systematic and phylogenetic relationships on Asian <i>Leucas</i> (Lamiaceae) based on molecular methods.	2018	DBT
3	Smitha, K.	Taxonomic revision and molecular phylogeny of the genus <i>Plectranthus</i> LHer complex (Lamiaceae) in India	2018	KSCSTE
4	Sajna, Mannethody	Anatomy and micromorphology in relation to taxonomy of the genus <i>Leucas</i> R.Br. in India	2018	Moulana Azad National
5	Shinoj. K.	Morphologic and Taxonomic studies on the genera <i>Pogostemon</i> , <i>Scutellaria</i> and <i>Anisochilus</i> in Western Ghats	2019	KSCSTE
6	Geethika. K.	<b>Studies on the phytochemical profiling and molecular phylogeny of the sub family Lamioideae (Lamiaceae) in Western Ghats.</b>	2015	KSCSTE
<b>Submitted</b>				
2	Soumya. K	Molecular taxonomic studies on the genus <i>Justicia</i> (Acanthaceae) in south India.	2021	RGNF

14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration.

1	<b>Jiji. P.</b>	Systematic studies on <i>Hedyotis-Oldenlandia</i> complex in peninsular India using molecular phylogeny and morphology	2017	University
2	<b>Geomol</b>	Taxonomic revision of the family Urticaceae in Peninsular India	2017	KSCSTE
3	<b>Alan Thomas</b>	A study on the historical biogeography of Indian radiation of the genus <i>Isodon</i> (Schrad. ex Benth.) Spach (Lamiaceae).	2020	CSIR-JRF
4	<b>Ashna Toms</b>			
<b>MPhil = 05 student. PDF = Nil</b>				

15. Provide information as indicated in 11 and 12 above.

16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

Jeomol. KK & Sunojkumar. P 2018. Revision of the genus *Pilea* in Peninsular India 29<sup>th</sup> Annual Conference of IAAT & National Symposium on Modern Trends in Biosystematics of Angiosperms from 11-13 November, 2019 at TBGRI. Thiruvananthapuram.

Soumya K & Sunojkumar. P 2019 Systematic studies on the genus *Justicia* (Acanthaceae) in Peninsular India with special emphasis on Molecular Phylogeny and Micromorphology 29<sup>th</sup> Annual Conference of IAAT & National Symposium on Modern Trends in Biosystematics of Angiosperms from 11-13 November, 2019 at TBGRI. Thiruvananthapuram.

Shinoj K & Sunojkumar. P 2019 Taxonomic studies on the genera *Anisochilus* and *Pogostemon* (Lamiaceae) in Western Ghats 29<sup>th</sup> Annual Conference of IAAT & National Symposium on Modern Trends in Biosystematics of Angiosperms from 11-13 November, 2019 at TBGRI. Thiruvananthapuram.

Sunojkumar. P 2019. Numerical taxonomy of the Asian *Leucas* based on morphological characters. 29<sup>th</sup> Annual Conference of IAAT & National Symposium on Modern Trends in Biosystematics of Angiosperms from 11-13 November, 2019 at TBGRI. Thiruvananthapuram.

Sunojkumar. P 2019. XLII All India Botanical Conference of the Indian Botanical Society and National Symposium on Innovation and Inventions in Plant Science Research from 6-8 November 2019 at Calicut University

Sunojkumar. P 2018. Lamiacean plants in southern Western Ghats: diversity and endemism. Oral presentation at the 28<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow. Held on 29<sup>th</sup> October- 31<sup>st</sup> October 2018, at M. S. University, Baroda, Vadodara, Gujarat, India.

Jiji. P & Sunojkumar. P 2018. Towards a molecular phylogenetic studies on the *Heydotis-Oldenlandia* complex in Peninsular India. Oral presentation at the 28<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow. Held on 29<sup>th</sup> October- 31<sup>st</sup> October 2018, at M. S. University, Baroda, Vadodara, Gujarat, India.

Vimal. K & Sunojkumar. P 2018. Insights into the phylogeny, biogeography and character evolution of the Lamioid mint genus *Leucas*. Oral presentation at the 28<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow. Held on 29<sup>th</sup> October- 31<sup>st</sup> October 2018, at M. S. University, Baroda, Vadodara, Gujarat, India.

Soumya K & Sunojkumar. P 2018 An integrated approach to solve taxonomic problems in *Justicia* Sect. *Rostellaria* in India. Oral presentation at the 28<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow. Held on 29<sup>th</sup> October- 31<sup>st</sup> October 2018, at M. S. University, Baroda, Vadodara, Gujarat, India.

Shinoj, K & Sunojkumar, P 2018. Taxonomic revision of the genus *Anisochilus* (Lamiaceae) in Western Ghats Oral presentation at the 28<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow. Held on 29<sup>th</sup> October- 31<sup>st</sup> October 2018, at M. S. University, Baroda, Vadodara, Gujarat, India.

Jeomol K. K. & Sunojkumar P. 2018. Diversity of the genus *Pouzolzia* Gaud. (Urticaceae) in India. Poster presentation at the 28<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow. Held on 29<sup>th</sup> October- 31<sup>st</sup> October 2018, at M. S. University, Baroda, Vadodara, Gujarat, India.

Smitha K. & Sunojkumar P. 2018. Diversity and endemism of *Plectranthus-Coleus* complex in India. Oral presentation at the 28<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow. Held on 29<sup>th</sup> October- 31<sup>st</sup> October 2018, at M. S. University, Baroda, Vadodara, Gujarat, India.

Geethika K. & **Sunojkumar P.** 2018. Fatty acid profiling in the genus *Leucas* (Lamiaceae) and its medicinal importance. Oral presentation at the 28<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) and International Symposium on Conservation of Angiosperm Diversity: Hidden Treasure of Today and Tomorrow. Held on 29<sup>th</sup> October- 31<sup>st</sup> October 2018, at M. S. University, Baroda, Vadodara, Gujarat, India.

Jeomol K. K. & **Sunojkumar P.** 2017 A review on the diversity of Urticaceae Juss. in Peninsular India. Poster presentation. 27<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) held on 10<sup>th</sup> November- 12<sup>th</sup> November 2017, at Delhi University, Delhi.

Smitha K. & **Sunojkumar P.** 2017 Molecular phylogeny of *Plectranthus* L'Her (Lamiaceae) in India using Chloroplast DNA sequences. Oral session. 27<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) held on 10<sup>th</sup> November- 12<sup>th</sup> November 2017, at Delhi University, Delhi.

Geethika K. & **Sunojkumar P.** 2017 Phytochemical screening and HPTLC Fingerprinting profile of *Leucas stelligera*, *Leucas eriostoma* and *Leucas ciliata* (Lamiaceae). Oral session. 27<sup>th</sup> Annual Conference of Indian Association for Angiosperm Taxonomy (IAAT) held on 10<sup>th</sup> November- 12<sup>th</sup> November 2017, at Delhi University, Delhi.

Geethika K. & **Sunojkumar P.** 2017. "Phytochemical screening and HPTLC Fingerprinting profile of four species of *Leucas* (Lamiaceae)" Gregor Mendel Foundation National Seminar on modern trends in conservation utilisation and improvement of plant genetic resources at the Department of Botany, Kerala University, Thiruvananthapuram on 23 & 24<sup>th</sup>, Nov. 2017.

**Sunojkumar. P.** 2017 Taxonomic Revision and Phylogeny of the genus *Leucas* s.str (Lamiaceae: Lamioideae). International Botanical Congress (IBC) 2017, Shenzhen, China. <http://119.28.67.204:8080/ibc2017/app/login.jsp>

**Sunojkumar. P.** 2016 Insights into the molecular phylogeny and biogeography of the genus *Leucas* R.Br. (Lamiaceae). National Seminar on Genetic Resources & Plant Breeding at the Department of Botany, Govt. Brannan College, Talassery, Kannur, Kerala 17<sup>th</sup> to 19<sup>th</sup> November, 2016. (sponsored by Directorate of College education, Kerala)

**Sunojkumar, P** & Vimal K.P. 2016 On the phylogeny and phylogeography of medicinal *Leucas* R.Br. (Lamiaceae: Lamioideae) pp 141. International Seminar on Conservation and Sustainable Utilization of Biodiversity on 7-9<sup>th</sup> November, 2016 at the Shivaji University, Kohlapur, Maharashtra, India in connection with the 26<sup>th</sup> Annual Conference of IAAT

Shinoj, K & **Sunojkumar, P** 2016 Taxonomy and phylogeography of the genus *Anisochilus* (Lamiaceae) in India pp 48. International Seminar on Conservation and Sustainable Utilization of Biodiversity on 7-9<sup>th</sup> November, 2016 at the Shivaji University, Kohlapur, Maharashtra, India in connection with the 26<sup>th</sup> Annual Conference of IAAT

Smitha, K & **Sunojkumar, P** . 2016 The genus *Plectranthus* L'Her. (Lamiaceae) in India – A taxonomic approach pp 47. International Seminar on Conservation and Sustainable Utilization of Biodiversity on 7-9<sup>th</sup> November, 2016 at the Shivaji University, Kohlapur, Maharashtra, India in connection with the 26<sup>th</sup> Annual Conference of IAAT.

**Sunojkumar. P** 2016 Plant molecular markers and insights into the molecular phylogeny of the genus *Leucas* R.Br. (Lamiaceae) at the National workshop on Molecular phylogenetics at the Indian Institute of Science, Bangalore 1-5<sup>th</sup> August, 2016.

**Sunojkumar, P.** 2016 Relevance of Botanical Nomenclature at the Molecular age. At the National workshop on Botanical Nomenclature, St. Joseph's college, Devagiri, 9-11<sup>th</sup> March 2016.

17. Innovative processes developed in teaching and learning: Taught classes using LMS

18. Participation in curricular development:

- Chairperson, Board of studies in Genetics, University of Calicut. (2016 to 2019)
- Chairperson, PG Board of studies in Plantation Science, University of Calicut. (2016 to 2019)
- Chairman, Board of Examiners, Paramedical courses, University of Calicut
- Chairman Food Technology Examination, University of Calicut
- Member, PG Board of studies in Botany, Bharatiyar University, Coimbatore (2020 to 2023).
- Member, Board of Examiners of PhD, Shivaji University, Kolhapur, Maharashtra.
- Member, Faculty of Science, University of Calicut.
- Member, PG Board of Studies in Plant Science, University of Calicut.
- Member, PG Board of Studies in Molecular Biology, University of Calicut.
- Member, Board of Studies in Immunology University of Calicut.
- Member, Board of Studies in Genetics, University of Calicut.
- Member, Board of Examiners in Applied Plant Science, University of Calicut
- Member, Board of Examiners in Botany, Kannur University.
- Member, Board of Examiners in Botany (Genetics & Plant Breeding), University of Kerala
- Member, Board of Question paper setters and Scrutiny University of Kerala
- Member,(VCs nominee) in Research Admission Committee of KFRI, Peechi, Thrissur. Member, IUCN special survival commission for Western Ghat Plant Specialist group

19. Participation in co-curricular and extra-curricular activities.

Working as the Director, School of Health Sciences with additional charges for the Centre for Health Sciences and University Health Centre.

Member, University Guest house committee,

Member, Planning Board, University of Calicut 2019 onwards

20. Refresher and Orientation courses attended:

<b>Name of the Course /Summer School</b>	<b>Place</b>	<b>Duration</b>	<b>Sponsoring Agency</b>
Short run course on Professional development	MHRD-TLC University of Calicut	15.05.2019 to 21.05.2019 <b>(7 days course)</b>	MHRD
Short run course on E-content development	MHRD-TLC University of Calicut	12.06.2019 to 18.06.2019 <b>(7 days course)</b>	MHRD

21. Examination /Evaluation reforms initiated: Modified the syllabus of BSc Genetics into OBE mode.

22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.

Research papers SCOPUS indexed = 28

Res. Paper in peer reviewed journals= 28+ 2

Total Impact Factor = 28

Citations in Google Scholar = 125

H index in Google scholar = 6

## Research Papers list

- Alan Thomas & P. Sunojkumar 2021 Lectotypification of the basionym of *Isodon kurzii* and *Isodon nilgherriensis* *Phytotaxa* 496 (1): 093–096 <https://doi.org/10.11646/phytotaxa.496.1.6>
- Soumya, P & P. Sunojkumar 2020 A note on the nomenclature of *Justicia micrantha* Wall. ex C.B. Clarke (Acanthaceae) and its lectotypification *Phytotaxa* 453 (2): 151–153 <https://doi.org/10.11646/phytotaxa.453.2.7>
- Jeomol, & P. Sunojkumar 2020 *Pilea hyalina* (Urticaceae), a new record for Asia from Peninsular India *Rheedea* 30(2) 299–306 <https://dx.doi.org/10.22244/rheedea.2020.30.02.07>
- Girish. E & P. Sunojkumar 2020 A new variety of *Cleistanthus* (Phyllanthaceae) from southern Western Ghats, India *Rheedea* 30(2) 278–281 <https://dx.doi.org/10.22244/rheedea.2020.30.02.03>
- .Sunojkumar. P 2020 The identity, typification and nomenclature of three Linnaean names referable to *Leucas* (Lamiaceae) from India *Taxon* 69 (2) 381 – 385. <https://doi.org/10.1002/tax.12185>
- Jeomol, & P. Sunojkumar 2020 *Elatostema agasthyanum* (Urticaceae), a new lithophytic species from the southern Western Ghats, Kerala, India *Phytotaxa* 430 (1): 033–040 <https://doi.org/10.11646/phytotaxa.430.1.5>
- Soumya, P & P. Sunojkumar 2019 Notes on the identity of *Justicia diffusa* var. *bedyotiifolia* (Acanthaceae) with reduction of *Justicia gambleana* *Phytotaxa* 415 (3): 130–136 <https://doi.org/10.11646/phytotaxa.415.3.2> (SCIE Journal, Th. Ru IF=1.3)
- Sunojkumar. P 2019 *Leucas sahyadriensis* (Lamiaceae: Lamioideae) an overlooked new endemic species from India and notes on *Leucas chinensis* *Phytotaxa* 399 (3): 187–194 <https://dx.doi.org/10.11646/phytotaxa.399.3.2>
- Soumya, P & P. Sunojkumar 2019 Lectotypification of three names in *Justicia* (Acanthaceae) *Phytotaxa* 391 (2): 138–142 <https://dx.doi.org/10.11646/phytotaxa.391.2.7> (SCIE Journal, Th. Ru IF=1.3)
- Prasad M. G & Sunojkumar. P. 2018 Notes on the identity of two Indian species of *Lindernia* sensu stricto (Linderniaceae), and lectotypification of the name *L. srilankana* *Phytotaxa* 371 (1): 042–048 <https://doi.org/10.11646/phytotaxa.371.1.5> (SCIE Journal, Th. Ru IF=1.3)
- Vimal K. P., Shinoj, K., Prasad, M.G & Sunojkumar. P. 2018 *Leucas dbonimalayensis* (Lamiaceae): a new species from Peninsular India *Ann. Bot. Fennici* 55:289–292 <https://doi.org/10.5735/085.055.0410>
- Soumya, P & P. Sunojkumar 2018 Lectotypification of three names in *Justicia* (Acanthaceae) *Phytotaxa* 350 (1): 097–100 <https://dx.doi.org/10.11646/phytotaxa.350.1.11> (SCIE Journal, Th. Ru IF=1.3)
- Smitha. K., Paton, A & Sunojkumar. P 2018 Re-establishment of *Plectranthus bishopianus* (Lamiaceae) based on morphological and micromorphological data *Plant Systematics and Evolution* 304:807–816 (SCI Journal, Springer publications Th. Ru. IF=1.5) <https://doi.org/10.1007/s00606-018-1511-6>
- Sajna, M & Sunojkumar. P 2018 Nutlet micromorphology of Indian *Leucas* (Lamioideae: Lamiaceae) with emphasis on its systematic implication *Rheedea* 28(1) 16–28 <https://dx.doi.org/10.22244/rheedea.2018.28.1.02>

- Sajna, M & **Sunojkumar. P** 2018 Trichome micromorphology and its systematic significance in Asian *Leucas* (Lamiaceae) *Flora* 242: 70-78 <https://doi.org/10.1016/j.flora.2018.03.007> (SCIE Journal, Th. Ru IF=1.5)
- Smitha. K & **Sunojkumar. P** 2018 Notes on *Plectranthus sahyadricus* (Lamiaceae)— a new species from Western Ghats India *Phytotaxa* 345 (2): 165-169 <https://dx.doi.org/10.11646/phytotaxa.345.2.8> (SCIE Journal, Th. Ru IF=1.3)
- Soumya, P & **P. Sunojkumar** 2018 *Justicia segoviaensis* a new name for *J. Micrantha* (Oerst.) V.A.W.Graham (Acanthaceae) *Phytotaxa* 338(2) 222-222 <http://doi.org/10.11646/phytotaxa.338.2.9> (SCIE Journal, Th. Ru. IF=1.3).
- Shinoj K & **P. Sunojkumar** 2018 *Anisochilus kanyakumariensis* (Lamiaceae): A new species from Western Ghats, India. *Phytotaxa* 333(1) 099-109 <http://doi.org/10.11646/phytotaxa.333.1.7> (SCIE Journal, Th. Ru. IF=1.3).
- Arjun Prasad Tiwari, M. Shaikh, S. K. Gavade, M. M. Lekhak & **P. Sunojkumar** 2018 *Leucaspachmarbiensis* (Lamiaceae; Lamiaceae) a new species from Central India *Nordic J. Botany* 36(4): xx-xx, <https://doi.org/10.1111/njb.01636> ISSN 1756-1051 (SCIE Journal, Th. Ru. IF=0.9).
- Smitha. K & **Sunojkumar. P** 2018 *Plectranthus gamblei* (Lamiaceae): a new endemic species from India and notes on the identity and lectotypification of *P. bourneae* *Nordic J. Botany* 35: xx-xx, ISSN 1756-1051 (SCIE Journal, Th. Ru. IF=0.9). <https://doi.org/10.1111/njb.01639>
- Soumya, P & **P. Sunojkumar** 2017 *Justicia barapaniensis*, a new name for *Justicia salicifolia* T.Anderson (Acanthaceae) *Phytotaxa* 332(1) 098-100 <http://doi.org/10.11646/phytotaxa.332.1.12> (SCIE Journal, Th. Ru. IF=1.3).
- Geethika, K & **P. Sunojkumar** 2017. Preliminary phytochemical screening of 6 members of *Leucas* (Lamiaceae) *Int. J. Pharm. Scie. Rev. Res.* 47(1): 60-64
- Vimal K. P & **Sunojkumar. P.** 2017 Notes on the identity and distribution of the endemic *Leucas nepetifolia* (Lamiaceae: Lamioideae) in Peninsular India *Rheedea* 27(1): 50-53. (Scopus indexed UGC Journal). <https://dx.doi.org/10.22244/rheedea.2017.27.1.8>
- Choudhary A. K., **Sunojkumar. P.** & G. Mishra 2017 Fatty acid profiling and multivariate analysis in the genus *Leucas* reveals its nutritional, pharmaceutical and chemotaxonomic significance. *Phytochemistry*. 143: 72-80. <http://dx.doi.org/10.1016/j.phytochem.2017.07.007>. (Elsevier publication SCI Journal, Th. Ru. IF=3.09).
- Smitha. K & **Sunojkumar. P** 2017 Notes on *Plectranthus montanus* (Lamiaceae)— a poorly known species in India and reduction of *Coleus subbaraoi* as one of its synonyms *Phytotaxa* 302 (3): 290-293 <https://dx.doi.org/10.11646/phytotaxa.302.3.10> (SCIE Journal, Th. Ru. IF=1.3)
- Prasad M. G & **Sunojkumar. P.** 2017 Re-establishment of the overlooked species *Torenia godefroyi* (Linderniaceae), and notes on the identity of *T. lindernioides* *Nordic J. Botany* 35: 45-47, 2017 doi: <http://dx.doi.org/10.1111/njb.01397> ISSN 1756-1051 (SCIE Journal, Th. Ru. IF=0.9).
- Smitha. K & **Sunojkumar. P** 2016 *Plectranthus anamudianus* (Lamiaceae): a new species from Western Ghats, India *Phytotaxa* 284 (1): 051-060 DOI <http://dx.doi.org/10.11646/phytotaxa.284.1.5> **Error! Hyperlink reference not valid.** (SCIE Journal, Th. Ru. IF=1.3)

Chen, Y-P, Xiang, C-L, Sunojkumar. P & H. Peng 2016 *Isodon villosus* (Nepetoideae, Lamiaceae), a new species from Guangxi, China *Phytotaxa* 268 (4): 271–278) (SCIE Journal, Th. Ru. IF=1.3) DOI <http://dx.doi.org/10.11646/phytotaxa.268.4.5>

### Non Scopus (peer reviewed)

Geethika, K & P. Sunojkumar 2019. Phytochemical Screening and High-Performance Thin-Layer Chromatography Fingerprint Profile of Three Species of *Leucas* (Lamiaceae) *Anc. Sci. Life.* 37: 102-107 [https://dx.doi.org/10.4103/asl.ASL\\_63\\_18](https://dx.doi.org/10.4103/asl.ASL_63_18)

Shinoj, K; Vimal, K.P & P. Sunojkumar 2016 A checklist of the genus *Pogostemon* desf. in Southern Western Ghats *South Indian Journal Of Biological Sciences* 2016; 2(1); 46-51

### 23. Books published: with ISBN No., Without ISBN No., Chapters in books.

Sl. No.	Title of book / chapter / editor of book etc.	National / International	ISSN / ISBN No	Name of authors	Whether you are the main author
1	Taxonomic studies on the genus <i>Salvia</i> in India	International Lap Lambert Academic Publishing, Germany	978-613-3-99666-3	Sunojkumar. P & Rinshy K V	Yes
2	Clerodrum-Rothea-Volkameria complex in (Lamiaceae) in Southern Western Ghats	International Lap Lambert Academic Publishing, Germany	978-613-5-843385-9	Soumya P & Sunojkumar 2018	Yes

24. Patents Applied/Granted: National. International, commercialized: NIL

25. Consultancy services provided and revenue generated: NIL

26. Conferences ,seminars, symposia and workshops organized as convener/coordinator: NIL

27. Number of collaborations:

Four

Dr. Praveen Karanth, Professor, CES, IISc Bangalore

Dr. Girish Mishra, Asst. Prof. Botany dept. Delhi University

Dr. Chunlei Xiang, Asso. Prof. Kunming Institute of Botany, China

Dr. Douglas Soltis, Distinguished Professor, Florida state university, US

28. Awards /recognitions received: International, National, State, University level.

Excellent Scholar Award from the International Botanical Congress Secretariat, Shenzhen, China

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13,14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.



VI **Dr. C.C. Harilal**

1. Name of the faculty: Harilal C.C.
2. Name of the Department: Botany
3. Educational qualifications: M.Sc., M.Phil., Ph.D.
4. Present position: Professor
5. Address for correspondence: C3 Quarters, University of Calicut
6. E-mail and contact number: [ccharilal22@gmail.com](mailto:ccharilal22@gmail.com); 9447956226
7. Specialization: Environmental Sciences
8. Total teaching experience: 19 years
9. Courses taught: M.Sc., M.Phil., Ph.D. (course work)
10. Research experience: 24 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

Title	Date and duration	Grant received	Funding agency	Co PI / PI
Eco restoration of Ponnani Kole Wetlands through community participation	March 2019 One year	Rs. 350000	State Wetland Authority of Kerala (Department of Environment and Climate Change)	Principal Investigator
Eco restoration of eroded shoreline regions of Malappuram District using Riley encasement method of mangrove afforestation	March 2014 Three years	Rs. 1865000	Kerala Stat Council for Science Technology and Environment	Principal Investigator
Identification and characterization of lipid resultant fatty acid methyl esterase (FAME) hyper producing algal species from marine, coastal and freshwater environments of Kerala	March 2015 Three years	Rs. 3242500	Department of Biotechnology (SERB), New Delhi	Co Investigator
A pilot study for the bioconversion of hazardous DEHP plasticizer in plastics into a drug by <i>Achromobacter denitrificans</i> SP1.	March 2013 Three years with an extended period of one year	Rs. 2810000	Department of Biotechnology, New Delhi	Principal Investigator (Officiating)

12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.: Nil

13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.

Name of student	Topic	Date of registration	Date of award
Dr. R.M. Hidayathulla	Studies on coastal erosion in selected uninhabited islands of Lakshadweep Archipelago with special reference to Biodiversity Conservation.	2012	2017
Dr. Rathy M.C.	Studies on the effect of plant secondary metabolites in the control of mosquito vectors.	2012	2018
Dr. Sajith U.	Entomological and environmental studies on the endemicity of filariasis in Kerala	2012	2018
Dr. Snisha S.	Characterization of bioactive components in plants with respect to their efficacy in the treatment of selected water contaminants. •	2012	2018
Dr. Neethu G. Pillai	Studies on the standardization of growth requirements of mangroves for assessing the probability of sites for afforestation.	2013	2018
Dr. Karthika S. Menon	Feasibility studies on the utilization of fresh water microalgal species in carbondioxide sequestration.	2013	2018
Dr. Bindumol P.	Studies on leaching and dissipation of commonly used organophosphorus pesticides in Cardamom ecosystems of Idukki District, Kerala.	2015	2019
Dr. Hareesh E.S.	Studies on Achromobacter denitrificans strain SP1 regarding the production of Prodigiosin upon utilizing hazardous phthalate.	2016	2021

14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration.

Name of student	Topic	Date of registration
Mrs. Sheeja	Surveillance of ground water quality in relation to geochemistry in selected districts of Kerala, with special reference to fluoride and arsenic contamination	2015
Ms. Sashna N C	Carbon sequestration potential of selected native grasses – An assessment using carbon dioxide controlled systems	2018
Mrs. Aparna Sreekumar	Assessment of carbon assimilation potential of selected tree species of Kerala using OTC/FACE/SACC systems	2018
Mrs. Swetha K.	An inventory on the diversity of Family Scytonemataceae in selected districts adjoining the Western Ghats region of Kerala	2019
Mrs. Jiji P.V.	Studies on the mosquito repellent efficiencies of plant	2019

	formulations	
Ms. Naseefa K.	Carbon sequestration and growth promotion potentials of Biochar on selected rice varieties of Kerala.	2019

15. Provide information as indicated in 11 and 12 above.

16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

Resource person in seminars / workshops

- Invited lecture on ‘constraints in mangrove conservation’, on the occasion of “International day for the conservation of mangrove ecosystems, 2021”, at Ramnarain Ruia Autonomous College, Mumbai on 26<sup>th</sup> July 2021.
- Invited lecture on Principles of Eco restoration, Webinar in connection with World Environment Day, Department of Chemistry, St Berchmans’ College, Changanacherry on 6<sup>th</sup> June 2021.
- Invited lecture on Eco restoration initiatives, Webinar in connection with World Environment Day celebration by Mathrubhoomi Seed Club in collaboration with Government Higher Secondary School, Mavelikara on 5<sup>th</sup> June 2021.
- Invited lecture on Eco restoration efforts for heterogeneous habitats, Webinar in connection with World Environment Day celebrations by the Department of Biotechnology, University of Kerala, in collaboration with Centre for Biodiversity Conservation (CBC) on 5<sup>th</sup> June, 2021.
- Invited lecture on Eco restoration strategies, Webinar on Reimagine, Recreate and Restore in connection with the observance of World Environment Day by the Department of Botany, St Mary’s college, Thrissur on 5<sup>th</sup> June 2021.
- Invited lecture on Strategies of eco restoration, Webinar series of the Department of Psychology, University of Calicut in connection with the observance of World Environment Day on 4<sup>th</sup> of June, 2021.
- Eco restoration initiatives, Webinar series in connection with the observance of World Environment Day by the Department of Chemistry, Majlis Arts and Science College, Puramannur, Valancherry, Malappuram on 4<sup>th</sup> of June, 2021.
- Invited lecture on Sustainable Development Goals – Where do we stand?, International Seminar on ‘Arabic Broadcasting and Sustainable Development Goals’, Department of Arabic, University of Calicut on 3<sup>rd</sup> March 2021.
- Invited lecture on Carbon sequestration strategies, World Environment Day observance seminar of the Department of Botany, SN College, Nangiyarkulangara on June 5<sup>th</sup> 2020.
- Invited lecture on Phyto diversity and carbon sequestration potential. World Environment Day commemoration seminar of the Albertian Centre for Human Resource Development and Research, St. Alberts College, Ernakulam on 05/06/2020.
- Invited talk on Wetlands of Kerala and their cultural importance. UGC Seminar series of the Department of Botany, Ferook College, Ferook on 12<sup>th</sup> February 2020.
- Invited talk on Climate Change and Biodiversity, Programme on ‘Climate warriors: Training youth in understanding and fighting climate change’, sponsored by the Directorate of Environment and Climate Change, Government of Kerala and organized by the Integrated Rural Technology Centre, Palakkad on 7<sup>th</sup> February, 2020,
- Invited lecture on ‘The History of Climate Change’, UGC National Seminar on ‘Environment and Development: Issues, Challenges and Potentialities’ by the Department of History, University of Calicut on 6/2/2020.
- Invited lecture on Coastal Biodiversity – In light of Coastal conservation. Workshop on ‘Coastal and marine biodiversity conservation’ for the members of Municipality and Grama Panchayats,

Organized by the Social forestry extension division of the Department of Forests, Government of Kerala at Payyoli Municipality on 29/01/2020.

- Biodiversity of India – Prospects and Challenges, Seminar Series ‘Sahya’ of the Department of Botany, Vimala College, Thrissur on 28<sup>th</sup> January, 2020.
- Impact of flood on Agro-biodiversity and ecosystems, Department of Environment and Climate Change (DoECC) sponsored National Seminar on ‘Post Flood Crops’, Organized Jointly by Indian Institute of Spices Research and Sullamussalam Science College, Areekode on 27<sup>th</sup> January, 2020.
- IYPH 2020: Evaluation of food security in the context of Global Climate Change, Science fair organized by the Deputy Director, Education, Government of Kerala at St. Jammass HSS, Malappuram on 25<sup>th</sup> January, 2020.
- Recent trends in carbon sequestration efforts, Directorate of Environment and Climate Change (DoECC) sponsored National seminar on ‘Anthropogenic climate change and ecosystems: Challenges and Remedies’, Department of Botany, SN College, Kannur on 20<sup>th</sup> January, 2020.
- Co-Chair, Seminar on Forestry, Plant Genetics and Improvement, December 3-4, 2019, Kerala Forest Research Institute and GM Foundation at Peechi, Thrissur.
- Panel discussion, ICFRE sponsored Regional Research Conference on Management of Fragile Ecosystems in Climate Change Scenario. 20<sup>th</sup> November 2019. Institute of Forest Genetics and Tree Breeding (ICFRE), Coimbatore
- Keynote address on the occasion of seminar ‘Floristic diversity of laterites and wetlands’, organized by the Department of Botany, Brennen College, Thalassery on 14<sup>th</sup> November 2019
- Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, DPHSS, Palapetty, Malappuram on 17/10/2019.
- Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, MES College, Valancherry on 15/10/2019.
- Wetlands and conservation strategies –with special reference to Kole Wetlands’, State Wetland Authority of Kerala project on wetland conservation, 14/10/2019. Sree Neelakanta Government Sanskrit College, Pattambi.
- Wetlands and conservation strategies –with special reference to Kole Wetlands. State Wetland Authority of Kerala project on wetland conservation, PSMO College, Tirurangadi on 11/10/2019.
- SWAK funded awareness programme on ‘Eco restoration of Ponnani Kole wetlands through community participation.’, GHSS, Kattoor on 23/9/2019.
- Wetlands and conservation strategies –with special reference to Kole Wetlands, State Wetland Authority of Kerala project on wetland conservation, 3/10/2019. Al Falah HS, Kakkidipuram.
- Wetlands and conservation strategies –with special reference to Kole Wetlands 3/10/2019. State Wetland Authority of Kerala project on wetland conservation, THSS Vattamkulam.
- SWAK funded awareness programme on ‘Eco restoration of Ponnani Kole wetlands through community participation.’, Department of Botany, Government College, Pattambi, 14/10/2019
- Invited lecture on Ozone hole and climatic changes, KSCSTE sponsored seminar and ozone day celebrations by Sree Krishna College, Guruvayur on 24<sup>th</sup> September, 2019.
- Invited lecture on Climate change and carbon sequestration initiatives, KSCSTE sponsored World Environmental Day celebrations 2019, on 21/6/2019 at the Department of Botany, Sir Syed College, Thaliparamba
- Invited lecture on Carbon sequestration potentials, Department of Environment and Climate Change sponsored conference on ‘Biodiversity Conservation’, organized by MES College, Mampad on 21-22, February, 2019.
- Invited lecture on Global climate change and sequestration efforts in the Department of Physics, SN College, Kannur, in connection with the Annual Alumni meet on 14 - 16 February 2019.
- Recent trends in Phyto-sequestration of atmospheric carbon dioxide, National seminar on Advances and applications in Plant Science, Department of Botany, University of Kerala, Kariavattom, Trivandrum. 6- 8, February, 2019.

- Wetlands – An abode of Diversity, MES Kalladi College, Mannarkkad, KSCSTE sponsored seminar in connection with World Wetland Day – 2019, 6/2/2019.
- Delivered an invited lecture on the topic ‘Microalgal technologies for Resource Recovery’, on the occasion of the National Seminar on Plant – Microbe interactions (Sponsored by the Directorate of Collegiate Education, GoK) organized by the PG and Research Department of Botany, SN Government Sanskrit College, Pattambi, on 5<sup>th</sup> December, 2018.
- Delivered an Inaugural lecture on ‘Biosequestration potentials in carbon mitigation research’, on the occasion of Botany Association Inauguration of Mahatma Gandhi Government College, Mahe, U.T. of Puducherry on 5<sup>th</sup> October, 2018.
- Delivered an invited lecture on ‘Biodiversity of Western Ghats-Challenges and Mitigation’ on the occasion of the DoECC sponsored National Seminar on ‘Western Ghats – A treasure house of Biodiversity’, organized by the Department of Environmental Sciences, Kannur University during 12-14, March, 2018.
- Delivered an invited lecture on ‘Climate Change and Carbon Research’ on the occasion of the KSCSTE sponsored World Environment Day activities at EMEA College, Kondotty on 18<sup>th</sup> June 2018.
- Delivered an invited lecture on ‘Wetlands for sustainable urban future’ in the KSCSTE sponsored ‘World Wetland Day celebrations’ organized by the Department of Botany, MES Asmabi College, Kodungallur, on 9<sup>th</sup> February, 2018.
- Participated as resource person in INCULCATE science popularization programme of the Government of Kerala, in the University of Calicut, in the year 2017.
- Delivered a lecture on ‘water literacy’ on the occasion of National River Festival 2017 organized by Nilavicharavedi, Kerala at Cheruthuruthi, Thrissur on 2-5, June 2017.
- Delivered an invited lecture on ‘micro algal food supplements’ on the occasion of the International workshop on integrative biology, organized by the Centre for Evolutionary and integrative Biology, University of Kerala, Thiruvananthapuram on January, 2017.

#### Papers presented in seminars

- Sheeja, K.M. and Harilal, C.C. Variation in ground water with respect to changing monsoonal patterns in Malappuram and Palakkad Districts of Kerala. National seminar on role of community in water conservation – a milestone towards sustainable development. The Gandhigram Rural Institute, Dindigul, Tamilnadu, 6<sup>th</sup> February, 2020.
- Karthika S. Menon & C.C. Harilal. pH specific modification of the culture medium for the enhanced growth of *Desmodesmus opoliensis*. National Seminar on Forestry, Plant Genetics and Improvement. Kerala Forest Research Institute, Peechi, 3-4 December, 2019.
- Aparna Sreekumar, Sashna, N.C., & Harilal, C.C. A review on the responses of tree species to elevated carbon dioxide – an approach to mitigation efforts through carbon offset planting. XLII All India Botanical Conference, 6-8, November 2019 of the Indian Botanical Society.
- Sashna, N.C., Aparna Sreekumar & C.C. Harilal. Response of grass species to elevated Carbon dioxide: Implication for carbon mitigation efforts. XLII All India Botanical Conference, 6-8, November, 2019 of the Indian Botanical Society.
- K. M. Sheeja and Harilal, C. C. A surveillance on Fluoride contamination in the groundwater sources of Palakkad District, Kerala. International conference on Recent innovations in Bio-sustainability and Environmental Research 2019 (RIBER-2019). Department of Zoology, Annamalai University, 20<sup>th</sup> February to 22<sup>nd</sup> February 2019.

- Hareesh, E. S. and Harilal, C.C. Profiling of quorum sensing signaling molecules (N-acyl-Homoserine Lactones) produced by *Achromobacter denitrificans* SP1 using LC-Q-ToF-MS analysis and its role in prodigiosin production. International Conference on Extremophilic microbes for the sustainable development in Agriculture, Environment and Health. Department of Microbiology, Periyar University, Salem, Tamil Nadu. 19-21, December 2018.
- Vishnu Sreejith, M. and Harilal C.C. Diversity and niche characteristics preference of Avifauna across selected harbours of Malabar Coast of Kerala, India. National Symposium on Animal Behaviour, Biodiversity and Human future. Ethological society of India (ESI) and Department of Zoology, University of Calicut. 4-6 December, 2018.
- Haritha D. S., Ajayan K. V. and Harilal C. C. Fatty acid and biochemical composition of seaweeds from Thikkodi Bio reserve, Kerala. National Seminar on Plant Diversity Conservation and Bio-prospecting in Western Ghats. Department of Botany, Govt. College Kasaragod. 26<sup>th</sup> and 27<sup>th</sup> September 2018.
- Anjula K, Ajayan K. V, Harilal C. C and Shyamasurya A. P. Effect of LED light on the growth and lipid production in *Chlamidomonas reinhardtii*. National Seminar on Plant Diversity Conservation and Bio-prospecting in Western Ghats. Department of Botany, Govt. College Kasaragod. 26<sup>th</sup> and 27<sup>th</sup> September 2018.
- Hareesh E. S., C. C. Harilal and Ajayan K. V. National Seminar on Research in Agricultural, Environmental, Industrial and Food Microbiology: Advances and Challenges, SAFI institute of advanced study, Ramanattukara. 15-16 March 2018.
- G. P. Bindumol and C. C. Harilal. Spatio temporal variability in soil characteristics and its influence on the retention of Chlorpyrifos and Quinalphos in cardamom growing soils of Idukki District, Kerala. National seminar on Recent trends in climate change and carbon research. Department of Botany, University of Calicut, 26-28, February 2018.
- Karthika S. Menon and C. C. Harilal. Studies on the carbon confiscation efficiency of *Acutodesmus obliquus* under intermittent supply of carbon dioxide. National seminar on Recent trends in climate change and carbon research. Department of Botany, University of Calicut, 26-28 February 2018.
- K. M. Sheeja and C. C. Harilal. Seasonal changes in the ground water table of Malappuram and Palakkad districts of Kerala with respect to Changing Monsoonal Patterns. National seminar on recent trends in climate change and carbon research. Department of Botany, University of Calicut, 26-28 February 2018.
- P. S. Manaswini, K. V. Ajayan and C. C. Harilal. Changes on growth and biochemical properties of *Monoraphidium contortum* under various nitrate levels. National seminar on Recent trends in climate change and carbon research. Department of Botany, University of Calicut, 26-28 February 2018.
- Hareesh, E. S. and Harilal, C. C. Selection of ideal medium and DEHP concentration for the enhanced production of prodigiosin by *Achromobacter denitrificans* SP1 and an invitro assessment of its antibacterial properties. National Conference on Bio resource utilization for sustainable food and energy production. Department of Botany, Periyar University, Salem, TamilNadu. 1-2 February 2018.
- Karthika S. Menon, Sini, K.P and Harilal.C.C.(2017).Growth maximization studies of *Chlamydomonas eudorinae* in Bolds Basal medium under varying levels of pH. 3<sup>rd</sup> National Biodiversity congress, February 22 – 26, 2017. Trivandrum.
- Karthika, S.Menon, Thasnim, P.M. and C.C.Harilal. (2017). Optimization of pH favouring enhanced growth of freshwater microalgal species *Chlamydomonas gorvei* in Bolds Basal medium. National seminar on modern trends in conservation, utilization and improvement of plant genetic resources in collaboration with Gregor Mendel Foundation University of Calicut at Department of Botany, university of Kerala on November 23-24, 2017.Trivandrum.

- Bindumol G.P. and C.C.Harilal. (2017). Seasonal variation in water quality of aquatic bodies adjoining cardom ecosystems of Idukki district, Kerala. National seminar on modern trends in conservation, utilization and improvement of plant genetic resources in collaboration with Gregor Mendel Foundation University of Calicut at Department of Botany, university of Kerala on November 23-24, 2017. Trivandrum.
- Bindumol G.P. and Harilal C.C. Leaching characteristics of Quinalphos in sandy clay loam soil in Cardamom Plantations. National seminar on biodiversity and importance of western ghats for better living. Department of Botany, Government College, Kasaragod. 29 – 30, August, 2017.

#### Seminars attended

- Participated in the 29<sup>th</sup> session of Kerala Science Congress held from 28 – 30 January, 2017 at Marthoma College, Thiruvalla.
- Participated in the online Hands on Training Programme on LMS – MOODLE, organized by the University of Calicut Kerala, from 26<sup>th</sup> June to 5<sup>th</sup> July 2020.
- Participated in the 3 day programme on curriculum development, organized by the MHRD – TLC, University of Calicut from 6-8 July 2020.
- Participated in the one day programme on OBE, organized by the MHRD – TLC, University of Calicut, for the members of the Board of studies on 15<sup>th</sup> January 2021.

#### 17. Innovative processes developed in teaching and learning.

- MOOC course on “Physical processes associated with the Earth” has been developed as part of M.Sc. Applied Plant Science Programme.
- Practicals on Environmental Biology has been given field orientation.

#### 18. Participation in curricular development:

- Revised the syllabus of M.Sc. Environmental Science programme (OBE based) in 2009.

#### 19. Participation in co-curricular and extra-curricular activities.

- Course Coordinator / Head, Department of Environmental Science, University of Calicut (2015 onwards)
- Chief, University Employment Information and Guidance Bureau, University of Calicut (2014 onwards).
- Chairman (2018 onwards) and Member (2015 onwards), Board of Studies in Environmental Science, University of Calicut
- Member, Board of Studies in Applied Plant Science, University of Calicut (2018 onwards)
- Member, Board of Studies in Environmental Science, Thuncheth Ezhuthachen Malayalam University, Tirur (2018 onwards) and Christ College (Autonomous), Irinjalakuda (2018 onwards).
- Coordinator, GREEN BRIGADE (An Eco Club), Department of Botany, University of Calicut (2010 onwards)
- Member, Academic Council, University of Calicut (2018 onwards)
- Secretary, Alumni Association of the University of Calicut (2021)

- Chief Editor, ECO CHRONICLE (ISSN 0973 – 4155), A journal of Environmental and Social Sciences, Published by the Society for Environmental and Social Research, Thiruvananthapuram / Cochin (2006 onwards)
- Member, Green Committee, University of Calicut (2017 onwards)
- Coordinator, Bhoomitra Club, University of Calicut (2018 onwards)
- Member, Working group on SDG 14, Kerala State Council for Science, Technology and Environment, Government of Kerala (2021)
- Secretary, Department Council (Botany), University of Calicut (2010 - 2019)
- Member – IAAT – University of Calicut (2012 onwards)
- Member – GM Foundation, University of Calicut (2012 onwards)
- Programme Officer, National Service Scheme, Calicut University Campus Unit (2012 – 2016)
- Estate Officer, University of Calicut (2014-2016)
- Secretary / Treasurer, Parent Teacher Association (Botany), University of Calicut (2010 – 2016)
- Founder Secretary and Executive committee member, Society for Environmental and Social Research (Reg. No. T646/2000), Trivandrum / Cochin (2000 onwards).
- Chairman / Member, Board of question paper setters / Examiners / Adjudicators of Kerala / Kannur / Malayalam / Mahatma Gandhi Universities.
- Coordinator, ECAC (2017), Energy Management Centre, Government of Kerala, organized by the Department of Botany, University of Calicut.
- Coordinator, ECAC (2016), Energy Management Centre, Government of Kerala, organized by the Department of Botany, University of Calicut.
- Coordinator, NEAC (2016), Ministry of Environment and Forest, Government of India, implemented in the Department of Botany, University of Calicut, for the setting up of a Bamboosetum.

20. Refresher and Orientation courses attended:

- Participated in the online Hands on Training Programme on LMS – MOODLE, organized by the University of Calicut Kerala, from 26<sup>th</sup> June to 5<sup>th</sup> July 2020.
- Participated in the 3 day programme on curriculum development, organized by the MHRD – TLC, University of Calicut from 6-8 July 2020.
- Participated in the one day programme on OBE, organized by the MHRD – TLC, University of Calicut, for the members of the Board of studies on 15<sup>th</sup> January 2021.

21. Examination /Evaluation reforms initiated: Nil

22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.



## Peer Reviewed

SI No	Title	Impact factor	Citation
1	Ajayan K.V., Shamna P., Haritha D.S. and Harilal C C. Fatty acid profile and metal composition of seaweeds from three locations of the continental shelf of Kerala coast, India. (2021). Regional Studies in Marine Science (Elsevier), 45 (11): 101864	<b>1.624</b>	
2	Sheeja, K.M. and Harilal C C. Ionic flux and geological release of fluoride in groundwater sources of a semi-arid tropical region in south India. (2021). International Journal of Environmental Analytical Chemistry (Taylor & Francis), DOI: 10.1080/03067319.2021.1901281	<b>2.826</b>	
3	Karthika S. Menon and Harilal C C. Optimization of carbon mitigation efficiency of native microalgal species – <i>Chlamydomonas globosa</i> cultured under intermittent Supply of CO <sub>2</sub> . (2020). Research Journal of Chemistry and Environment 24(11):15-20	<b>0.25</b>	
4	Hareesh E.S., Harilal, C.C., Pradeep, S. and Jula Garvasis. Quorum sensing mediated response of <i>Achromobacter denitrificans</i> SP1 towards prodigiosin production under phthalate stress. (2020). Journal of Basic Microbiology 60 (9). (Wiley)	<b>2.281</b>	3
5	Ajayan, K.V., Athira, N.K. and Harilal C.C. A novel method for the release of viable single cells from <i>Botryococcus braunii</i> (Race B) colony using iodine treatment (2020) Algal Research 48:101924 (Elsevier)	<b>4.401</b>	
6	Hareesh, E.S., Harilal C.C. and Pradeep, S. Response surface optimization of prodigiosin production by phthalate degrading <i>Achromobacter denitrificans</i> SP1 and exploring its antibacterial activity (2020). Preparative Biochemistry & Biotechnology 50(1) (Taylor & Francis),	<b>2.162</b>	7
7	Ajayan K.V., Anjula, K., Syamasurya A.P. and Harilal C.C. Energy efficient technology for enhanced growth and lipid production in <i>Chlamydomonas reinhardtii</i> through additional reflector coated LED photobioreactor. Biochemical Engineering Journal (Elsevier) 144 (2019) 81-88	<b>3.978</b>	5
8	Ajayan, K.V., Harilal, C.C. and ParanGani. Performance of reflector coated LED Bio-box on the augmentation of growth and lipid production in aerophytic Trebouxiophyceae algae <i>Coccomyxa sp.</i> Algal Research (Elsevier) 38 (2019), 101401 (IF: 3.723).	<b>4.401</b>	7
9	Archana G., Sajith, U., A. Yusuf and Harilal, C.C. Hormone induced root initiation in the stem cuttings of selected mangrove species (2019). Eco Chronicle, Vol. 14 (2) 167 – 172.		
10	Ajayan K. V., C. C. Harilal & M. Selvaraj. Phycoremediation resultant lipid production and antioxidant changes in green microalgae <i>Chlorella Sp.</i> International journal of phytoremediation (Taylor & Francis), 2018; 19; 20 (11): 1144	<b>2.528</b>	13

	- 1151.		
11	Ajayan K.V., P.S. Manaswini and C.C. Harilal. Effect of nitrate and phosphate levels on biochemical contents and fatty acid methyl esters profile of <i>Monoraphidium contortum</i> (Thuret). Eco Chronicle (ISSN: 0973-4155) Vol. 13, No. 2. June, 2018.		
12	Bindumol G.P. and Harilal C.C. Mobility and dissipation of Chlorpyrifos and quinalphos in sandy clay loam in an agroecosystem – a laboratory based soil column study. (2017). Environmental Monitoring and Assessment (Springer) 2017: 189: 506	<b>2.513</b>	1
13	Neethu G Pillai & Harilal C. C. Delineation of sites ideal for mangrove afforestation in the South west coast of Kerala. (2018). International Journal of Scientific Research and Review. 7 (10), 389 – 398.		
14	Neethu G Pillai & Harilal C. C. Standardization of the growth sustaining attributes of <i>Avicennia officinalis</i> L. for strategic afforestation protocols. (2018). International Journal of Advanced Scientific Research and Management. 3(8) 201 – 206.		
15	Neethu G Pillai & Harilal C. C. Evaluation of the growth sustaining attributes of <i>Rhizophora mucronata</i> Lam. for strategic afforestation protocols (2018). International Journal of Multidisciplinary Research Review. 3(8) 497 – 501		
16	Neethu G Pillai & Harilal C. C. Inventory on the diversity and distribution of mangroves from the coastal ecosystems of Kerala state, India. (2018). International journal of recent scientific research. Vol 9 Issue 2(D). 4002-24007. DOI: 10.24327/IJRSR.		
17	Karthika, S. Menon and Harilal, C.C. Biofixation potential of carbon dioxide by fresh water species of <i>Chlorella</i> and <i>Closteriopsis</i> . International Research Journal of Environmental Sciences. Volume 5(2), 2016.51-56, ISSN: 2319-1414.		
18	Neethu G. Pillai and Harilal C.C. Assessment of seasonal changes in water quality adjoining Thekkumbad mangrove – sacred grove ecosystem of Kannur district, Kerala, India. International Research Journal of Environmental Science, Vol. 6 (8) 43 – 47 (ISSN: 2319 – 1414)		
19	Karthika, S. Menon, Thasnim P.M. and C.C.Harilal. Growth standardization studies on <i>Monoraphidium contortum</i> cultured under pH specific conditions in Bolds Basal medium. (2018). Journal of Algal Biomass Utilization 9 (1), 19 – 25. 229 – 6905.		
20	Karthika.S. Menon and Harilal, C.C. Growth maximization and carbon dioxide assimilation studies of <i>Protococcus</i> species grown under culture conditions using Bolds Basal medium. Journal of Algal Biomass Utilization. Volume 7(3),		

	2016.42-52, ISSN: 2229-6905.		
21	Karthika S. Menon, K.P. Sini and C.C. Harilal. Standardization of pH favouring augmented growth and biomass production of fresh water micro algal species of <i>Coccomyxa</i> , in Bolds Basal medium. Indian Journal of Scientific Research. Volume 13 (1), 2017. 116 – 121		
22	Shilna E.P., Harilal C.C., Sajith, U., Athira, P. and Sinooja, P. Evaluation of the growth performances of the propagules of selected mangrove species along Kadalundi – Vallikkunnu Community Reserve, Kerala, India. International Journal of Plant, Animal and Environmental Sciences, Volume 7 (1), 2017.		
23	Snisha S. and Harilal C.C. Feasibility studies of natural plants coagulants in the removal of selected water contaminants. International Journal of Developmental Research. Vol. 07, Issue 07, 2017, pp 13732 – 13735 (ISSN: 2230 – 9926)		
24	Snisha S. and Harilal C.C. pH stabilization of potable water using selected plant metabolites. International Journal of Current Research, 8, (03), 2016. 28053-28057 (ISSN: 0975-833X)		
25	Shilna E.P., Sajith, U. and Harilal C.C. Surveillance of water quality in pursuit of mangrove afforestation along the coastal and inland aquatic environments of Malappuram District, Kerala, India. International Research Journal of Environmental Sciences, Vol. 5 (6), 2016. 41-50 (2319 – 1414)		
26	Neethu G. Pillai and Harilal C.C. Surveillance on the tolerance limit of <i>Sonneratia alba</i> Sm. to certain hydrogeochemical parameters from heterogeneous natural habitats of Kerala, South India. International Research Journal of Biological Sciences, Vol. 5 (1), 2016. 28-37, EISSN: 2278 – 3202		
27	Sajith, U., M. C. Rathy and C. C. Harilal. (2016). Habitat characterization and diversity assessment of mosquitoes from selected coastal districts of Kerala, India, Recent Research in Science and Technology, 8, 1-5.		

### Non-Peer reviewed

Sl No	Title	Impact factor	Citation
1	Neethu G Pillai & Harilal C. C. Growth sustaining aspects of <i>Excoecaria agallocha</i> L. for strategic afforestation protocols. (2018). International Journal of Scientific Research in Biological Sciences. 5(4) 137-142.		
2	Neethu G Pillai & Harilal C. C. Optimization of the growth sustaining attributes of <i>Bruguiera cylindrica</i> (L.) Blume for strategic afforestation practices (2018). International Journal of Scientific Research and Review. 7(8) 167 – 176.		
3	Neethu G Pillai & Harilal C. C. MANGROVES – A REVIEW. International Journal of Recent Advances in Multidisciplinary Research. 5(8) 4035-4038.		

Books published: with ISBN No., Without ISBN No., Chapters in books. Books

- Harilal C.C. (Editor), Ponnani Kole Wetlands - Problems and Prospects (ISBN: 978-81-935133-3-0), Published by Gregor Mendel Foundation, University of Calicut (funded by the State Wetland Authority of Kerala)
- Harilal C. C., Ajayan K.V. and Shahida V. Characterization of non-traditional plant fibres. (ISBN: 978-620-0-21416-4). Lambert Academic Publishing
- Neethu G. Pillai and Harilal C.C. Extent and Diversity of Kerala Mangroves (ISBN: 978-613-9-97546-4) Lambert Academic Publishing.

Book Chapters

- Muhammad Dilshad, P.P. and Harilal C.C. Change detection in land cover using Remote Sensing and GIS techniques – A case study of Ponnani Kole Wetland, Kerala. (2019). PONNANI KOLE WETLANDS - Problems and Prospects (ISBN: 978-81-935133-3-0), Published by Gregor Mendel Foundation, University of Calicut, P. 07 – 15.
- Ajayan, K.V., Harilal, C.C. and Archana, V. Microalgal diversity of Ponnani Kole Wetland of Kerala. (2019). PONNANI KOLE WETLANDS - Problems and Prospects (ISBN: 978-81-935133-3-0), Published by Gregor Mendel Foundation, University of Calicut, P. 63 – 73.
- Neethu G. Pillai and Harilal C C. (2017). Inquisition on the tolerance limit of *Excoecaria agallocha* L. to certain hydrogeochemical parameters in pursuit of their introduction in heterogeneous coastal environments. Mainstreaming biodiversity for sustainable development (Kerala Biodiversity Board) Publisher: Kerala State Biodiversity Board (ISBN: 978-81-934231-1-0)
- Karthika S. Menon and Harilal C C. (2017). Growth maximization studies of *Chlamydomonas eudorinae* in Bolds Basal medium under varying levels of pH. Mainstreaming biodiversity for sustainable development (Kerala Biodiversity Board) Publisher: Kerala State Biodiversity Board (ISBN: 978-81-934231-1-0)

23. Patents Applied/Granted: National. International, commercialized: Nil

24. Consultancy services provided and revenue generated: Nil

25. Conferences ,seminars, symposia and workshops organized as convener/coordinator:

- Organizing Secretary – UGC sponsored national seminar on ‘Recent trends in Global Climate Change and Carbon Sequestration Research’ Department of Botany, University of Calicut (26-28, February, 2018)
- Organizing secretary – UGC sponsored extension seminar on ‘Avenue Plants – identification, cultivation and dissemination protocols in the wake of Global Environmental Challenges’, organized by the Department of Botany, University of Calicut (25-27, September, 2017)

26. Number of collaborations: Nil

27. Awards /recognitions received: International, National, State, University level: Nil

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13, 14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

\*\*\*\*

## VII : Dr. A Yusuf

1. Name of the faculty: Dr.A.Yusuf
2. Name of the Department: Botany
3. Educational qualifications: MSc., Ph.D.
4. Present position: Assistant professor
5. Address for correspondence: Dept.of Botany, University of Calicut, Calicut University Po., Malappuram Dist. Kerala-673635
6. E-mail and contact number: cue3293@uoc.ac.in
7. Specialization: Plant Biotechnology
8. Total teaching experience:16 Years
9. Courses taught: Plant Biotechnology, Immunology, Biochemistry, Genetic Engineering, Biophysics, Bioinformatics
10. Research experience:
  - i. Research Associate, ICAR-NBPGR,New Delhi- 1996-2002
  - ii. Post-Doctoral Fellow-, Albert Katz Centre for Desert Agobiology, Ben Gurion University of Negev, Israel- 2002-2005
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.
  1. DNA barcode based phylogenetic analysis of the members of Zingiberaceae- 01.07.2015, Three years, Rs.13,80,000, University Grants Commission, Dr. A.Yusuf , PI, Prof. K.V.Mohanan, Co-PI
  2. How does redox homeostasis and antioxidative system contribute to salt tolerance in rice varieties from different agroecological zones in Kerala, 05.03.2016, Three years, ₹22,99,400, Kerala State Council for Science Technology and Environment, Dr. A.Yusuf , PI, Prof. K.V.Mohanan, Co-PI
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

None
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.

S.No.	Name of the student	Topic of research	Date of registration	Date of declaration of Ph.D. degree
1	Rajeshkumar T.	Molecular studies on the selected members of the family Zingiberaceae	31/03/2009	04.09.2013
2	Deepa P.	Molecular characterization of Ammonium transporter in relation to host-parasite interaction in Santalum album	24.09.2010	24.03.2017
3	Showmy K.S	Expression and comparative modeling of rice PR1 proteins under pathogen challenge and chemical induction	05.08.2011	24.07.2017
4	Aparna M.B.	Effects of elevated CO <sub>2</sub> on putative ammonium transporter1 expression in Azolla – Anabaena azollae symbiotic system	CDC/B1/1337/2011(1)	20.06.2019
5	Santoshkumar R.	Phylogeny, phytochemical analysis and relative expression of Curcumin synthase genes from Curcuma species of South India	11.08.2014	03.01.2020
6	Pravisya R.	Biotic priming of Okhra seeds using various phosphate solubilizing bacteria against drought stress	23.09.2013	30.10.2019

14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration.

15. Provide information as indicated in 11 and 12 above.

16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

1. Santhoshkumar R and Yusuf A. Phylogenetic analysis of chloroplast *matK* gene from South Indian *Curcuma* species. *International Seminar on 'New Frontiers in Cytogenetics' and XIII Conference of the Society of Cytologists and Geneticists*. 15-17 December 2016, Department of Botany, University of Kerala.
2. Santhoshkumar R and Yusuf A. DNA Barcoding Based Phylogenetic Analysis of South Indian *Curcuma* Species Using Chloroplast *rbcL* gene. *International Conference Technological Advancement for Sustainable Agriculture and Rural Development*. 20-22 February 2017, TASARD New Delhi, India.
3. Santhoshkumar R and Yusuf A. Authentication of South Indian *Curcuma* species (Zingiberaceae) based on Two Chloroplast Genes *rbcL* and *matK*

NAME	Topic of Research	REGISTRATION ORDER NUMBER	DATE OF REGISTRATION
Lins Simon	Invivo and organellar signaling in rice varieties under salt stress	15036/2016/Admn	29/08/2016
Maya R	Identification, cloning and expression studies of nitrogen fixing genes from different nitrogen fixing associations	5707/2016/Admn	15/04/2016
Raseena M	Micropropagation, phytochemical analysis and DNA barcoding of selected medicinal tress	13724/2016/Admn	27/10/2016
Farhad VP	Morphological, biochemical and molecular charactersation of Nostoc spp. and their assessment as a biofertiliser for rice	6282/2015/Admn	05/02/2015
Ranjith NK	Development of bioindicator and biomonitor system using diatoms for assaying water quality and evaluation of water samples.	5177/2018/Admn	26/03/2018

sequences. *National seminar on Modern Trends in Conservation Utilisation and Improvement of Plant Genetic Resources*. 23-24 November 2017. University of Kerala.



4. Lins Simon and Yusuf A. Antioxidant signaling in salt tolerant rice varieties. *National seminar on modern trends in conservation, utilisation and improvement of plant genetic resources*. 23-24 November 2017. Department of Botany, University of Kerala.
5. Santhoshkumar R and Yusuf A. Phylogentic studies of South Indian *Curcuma* species using chloroplast markers. *National conference on Innovations in Biotechnology*. 14-15<sup>th</sup> December 2017. School of Biotechnology, Madurai Kamaraj University.
6. Santhoshkumar R and Yusuf A. Phytochemical analysis of methonalic extract of four wild *Curcuma* species using GC-MS. *National seminar on Recent Trends in Climate Change and Carbon Research*. 26-28<sup>th</sup> February 2018. University of Calicut.
7. Lins Simon and Yusuf A. Salt stress induces the upregulation of antioxidant system in rice varieties from Kaipad rice system. *National Seminar on Recent trends in Climate change and Carbon research*. 26-28<sup>th</sup> February 2018. Department of Botany, University of Calicut.
8. Maya R. and Yusuf A. Isolation, preliminary characterization and 16S ribosomal rna typing of root nodule bacteria from *Mimosa Pudica* L. *International conference on extremophilic microbes for sustainable development, in agriculture, environment and health*. 18-21<sup>th</sup> December, 2018. Department of Microbiology, Periyar university, Salem .
9. Lins Simon and Yusuf A. Upregulation of antioxidant system in Pokkali rice varieties under salinity stress. National Symposium on Innovations and Inventions in Plant Science research. Department of Botany, University of Calicut. November 2019.
10. Lins Simon and Yusuf A. Upregulation of antioixdant system in rice varieties under salinity stress. National seminar on Forestry, Plant Genetics and Improvement. KFRI, Thrissur – December 2019.03/12/2019
11. Raseena M and Yusuf A. Callus mediated multiple shoot regeneration and conservation of an endangered medicinal plant *Withania somnifera*. (L.) Dunal. National seminar on Forestry, Plant Genetics and Improvement. KFRI, Thrissur – December 2019.
12. Raseena M and Yusuf A. Rapid *in vitro* multiplication and conservation of an endangered medicinal plant *Withania somnifera*. (L.) Dunal. National Symposium on Innovations and Inventions in Plant Science research. Department of Botany, University of Calicut. November 2019.

13. Jishin Prakash T S and Yusuf A. Optimization of callus induction and sequencing of lea genes from two native rice cultivars of Wayanad. National Symposium on Innovations and Inventions in Plant Science research. Department of Botany, University of Calicut. November 2019.
14. Habeebmon K C and Yusuf A. GS specific activity, nitrogen assimilation and biomass production in *Santalum album* L. grown with selected primary hosts. National Symposium on Innovations and Inventions in Plant Science research. Department of Botany, University of Calicut. November 2019.
15. Maya R and Yusuf A. Isolation, characterization, identification and screening of nitrogen fixing bacteria from root nodule of *Mimosa pudica* L. National Symposium on Innovations and Inventions in Plant Science research. Department of Botany, University of Calicut. November 2019.
16. Santoshkumar R and Yusuf A. Differential expression of CURS genes during various growth stages of *Curcuma zanthorrhiza* and *Curcuma longa* species. National Symposium on Innovations and Inventions in Plant Science research. Department of Botany, University of Calicut. November 2019.
17. Innovative processes developed in teaching and learning. none
18. Participation in curricular development: none
19. Participation in co-curricular and extra-curricular activities.
20. Refresher and Orientation courses attended: Two courses on e-content development
21. Examination /Evaluation reforms initiated: None
22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.
  1. Pravisya P. and Yusuf A. (2021) Pre treatment with *Bacillus subtilis* mitigates drought induced photo-oxidative damages in okra by modulating antioxidant system and photochemical activity *Physiol Mol Biol Plants* <https://doi.org/10.1007/s12298-021-00982-8>
  2. Santoshkumar R. and Yusuf A. (2020) Comparative differential expression of CURS genes and determination of curcumin content at different growth stages of *Curcuma longa* L. and its wild relative *C. zanthorrhiza* Roxb. *Genet Resour Crop Evol* <https://doi.org/10.1007/s10722-020-00970-z>
  3. Santoshkumar R. and Yusuf A. (2020) In silico structural modeling and analysis of physicochemical properties of curcumin synthase (CURS1, CURS2, and CURS3) proteins of *Curcuma longa* *Journal of Genetic Engineering and Biotechnology* volume 18, Article number: 24

4. Lins S., and Yusuf A. (2020) Regulation of enzymatic and non-enzymatic antioxidants contribute to salt tolerance in hitherto unknown upland farmer rice varieties *Current Botany* 11: 18-27
5. Lins S., and Yusuf A. (2020) Effects of salt stress on antioxidant and ascorbate-glutathione cycle enzyme activities in Pokkali rice varieties- *Vytilla* 1-9 *Plant Science Today* 7(3) 341-348
6. Lins S., and Yusuf A. (2020) Upregulation of chloroplast antioxidant system to alleviate salt dependent oxidative system in rice varieties . *Journal of Stress Physiology and Biochemistry* 16( 3). 26-37
7. Lins S., and Yusuf A. (2020) Differential salt tolerance capacity of kaipad rice varieties evidenced by enzymatic and non- enzymatic antioxidant system *Journal of plant physiology and pathology* 8:1 , 1-8
8. Showmy KS and Yusuf A. (2020) Characterization of disease resistance in nine traditional rice (*Oryza sativa* L.) cultivars and expression of chennellu PR1 gene in response to *Xanthomonas oryzae* pv. *Oryzae* *Indian phytopathology* 25(2) 8-10
9. Santoshkumar R. and Yusuf A. (2019) Chemotaxonomic studies on rhizome extract compositions of twenty *Curcuma* species from South India. *Biochemical systematic and Ecology* 84 : 21-25  
<https://doi.org/10.1016/j.bse.2019.03.005>
10. Pravisya P. Jayaram K.M. and Yusuf A. (2018) Biotic priming with *Pseudomonas fluorescens* induce drought stress tolerance in *Abelmoschus esculentus* (L.) Moench (Okra) *Physiol. Mol. Bio plants* DOI : 10.1007/s12298-018-0621-5 PMBP-D-18-00230.1
11. Yusuf, A, Aparna, M. B. and Y.M.Heimer (2018) Regulation of Glutamine Synthetase (GS) Activity and Root Morphological Plasticity in the Nitrogen Fixing *Azolla- Anabaena* Symbiont under Nitrogen Limiting Conditions *Plant Physiol Pathol* 2018, 6:5 DOI: 10.4172/2329-955X.1000191
12. Santhoshkumar R. and Yusuf A. (2018) Molecular evaluation using two Chloroplast genes of South Indian *Curcuma* species: Insight in to Phylogenetic relationship. *International Journal of Research and Analytical Reviews* 5 (3) 498-504
13. Aparna, M. B. and Yusuf, A (2017) Biochemical and morphological changes in *Azolla-Anabaena Azollae symbiotic system under gradient concentrations of NH4NO3*. *International Journal of Development Research* Vol. 07, Issue, 12, pp.17977-17984
14. Yusuf P. Deepa (2017) Influence of N nutrients on GS activity and putative ammonium transporter1;2 (SaAMT1;2) expression in sandal plants (*Santalum album* L.) *Trees* 31:1773–1784 DOI 10.1007/s00468-017-1583-x
15. Rajesh Kumar T and Yusuf Akkara (2017) Chemical examination of the leaf essential oil of *C. mutabilis* Sckornickova *et al.* from southern India *Journal of Advances in Biological Science* Volume 4 (1) 8-10
16. Rajesh Kumar T and Yusuf Akkara (2017) Chemical composition of the rhizome essential oil of *Zingiber cernuum* from south India *Indian Journal of Tropical Biodiversity*, 25(2) 154-164
17. Aparna, M. B. and \*Yusuf, A (2017) Molecular cloning, phylogenetic analysis of AMT1 from *Azolla – Anabaena Azollae* symbiotic system . *International Journal of Current Research* Vol. 9, Issue, 07, pp.53890-53897
18. Rajesh Kumar T and Yusuf Akkara (2017) Analysis by gas chromatography-mass spectrometry of the essential oil of *Curcuma inodora* Blatt. (*Zingiberaceae*) from Southern India *Journal of Pharmacognosy and Phytochemistry* 2017; 6(4): 1629-1634

19. Rajesh Kumar T, SanthoshKumar R , Yusuf Akkara . (2017) GC and GC-MS analysis of the dried Leaf and Rhizome essential oil of *Curcuma aurantiaca* Zipp. (Zingiberaceae). *IOSR Journal of Pharmacy and Biological Sciences* Volume 12, Issue 4 Ver. VII (Jul – Aug 2017), PP 68-75
20. Palengara Deepa\* and Akkara Yusuf . (2017) Effect of glutamine nutrition on glutamine synthetase activity and ammonium transporter expression in *Santalum album* L. seedlings Int.J.Curr.Biotechnol., 5(1):1-8.
21. Santhoshkumar R. and **Yusuf A.** (2017) DNA barcoding and phylogenetic analysis of south Indian *Curcuma* species using chloroplast matK gene. Int. J. of Adv. Res. 5(2) 615-621.
22. Deepa P. and **Yusuf A.** (2017) Effect of glutamine nutrition on glutamine synthetase activity and ammonium transporter expression in *Santalum album* L. seedlings Int. J. Curr. Biotech. 5(1) 1-8.
23. Books published: with ISBN No., Without ISBN No., Chapters in books.  
  
Phylogeny of *Curcuma* spp. using morphological and molecular markers  
  
01- ISBN- 978-620-0-57141-0
24. Patents Applied/Granted: National. International, commercialized: None
25. Consultancy services provided and revenue generated: None
26. Conferences ,seminars, symposia and workshops organized as convener/coordinator:  
  
Coordinator- Workshop on DNA barcoding
27. Number of collaborations: None
28. Awards /recognitions received: International, National, State, University level. None

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13, 14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

### VIII Dr. V.V. Radhakrishnan

1. Name of the faculty: Dr. V.V. Radhakrishnan
2. Name of the Department: Department of Botany
3. Educational qualifications: M.Sc. (Botany), Ph.D. (Botany)
4. Present position: Professor, Department of Botany & Dean, Faculty of Science
5. Address for correspondence: Department of Botany, University of Calicut, Kerala - 673 635
6. E-mail and contact number: E-mail: rkvadakkan@gmail.com      Mob: 9447524456
7. Specialization: Genetics and Plant Breeding
8. Total teaching experience: 11 years
9. Courses taught: Genetics, Plant Breeding, Biostatistics, Crop Improvement
10. Research experience: 35 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. Nil
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. Nil
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree. Five

Sl. No.	Name of the Research Scholar	Title of the thesis	Year of registration	Year of award
1	Shintu P.V.	Studies on variability, divergence and improvement of <i>Maranta arundinacea</i> L. (West Indian arrowroot).	2012	2017
2	Athira K.A.	Pre-breeding and breeding studies on <i>Curcuma zanthorrhiza</i> Roxb. accessions of Central Kerala.	2014	2019
3	Surekha Y. Pawar	Studies on the diversity and tillering behaviour of some native rice cultivars of Wayanad region of Kerala State of India.	2014	2020
4	Neethu K.	Studies on genetic diversity and improvement of wild turmeric ( <i>Curcuma aromatica</i> Salisb.) of Kerala.	2015	2021
5	Manu Philip	Cyanobacterial diversity of Western Ghat forests of Kerala, India.	2016	2021

14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration. Seven

Sl. No.	Name of the Research Scholar	Title of the thesis	Year of registration
1	Thushara V.S.*	Studies on genetic variability and improvement of peacock ginger ( <i>Kaempferia rotunda</i> L., Zingiberaceae).	2015
2	Shahina A.S.	Systematic studies on the marasmioid and gymnopoid fungi (Agaricales, Basidiomycota) of Kerala State.	2016
3	Greeshma Ganga K.G.	Systematic studies on coprinoid and psathyrelloid	2016

		agarics (Agaricales, Basidiomycota, Fungi) of Kerala State.	
4	Litty R.	Studies on variability, divergence and improvement of <i>Maranta arundinacea</i> L. (West Indian arrowroot).	2017
5	Mohammed Irfan T.K.	Pre-breeding and breeding studies on <i>Curcuma zanthorrhiza</i> Roxb. accessions of Central Kerala.	2019
6	Veena K.S.	Studies on the diversity and tillering behaviour of some native rice cultivars of Wayanad region of Kerala State of India.	2021
7	Lijisha P.	Studies on genetic diversity and improvement of wild turmeric ( <i>Curcuma aromatica</i> Salisb.) of Kerala.	2021

\*Thesis submitted.

15. Provide information as indicated in 11 and 12 above.

16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

Sl. No.	Authors	Title	Title of the Conference	Date
1	P.R. Akhila V.V. Radhakrishnan K. Pradipkumar K.V. Mohanan	Assessment of variability and performance of some new landraces of small cardamom ( <i>Elettaria cardamomum</i> Maton)	Plantation Crops Symposium - 22 (PLACROSYM - 22)	December 15 - 17, 2016
2	V.V. Radhakrishnan	Varietal wealth of major spices of India (Invited Talk)	National Seminar on Genetic Resources and Plant Breeding	November 17 - 19, 2016
3	K. Neethu V.V. Radhakrishnan K.V. Mohanan	Influence of the status of planting materials on growth and yield of wild turmeric ( <i>Curcuma aromatica</i> )	XLII All India Botanical Conference of the Indian Botanical Society and National Symposium on Innovations and Inventions in Plant Science Research	November 6 - 8, 2019
4	V.S. Thushara V.V. Radhakrishnan K.V. Mohanan	Assessment of the genetic base of peacock ginger ( <i>Kaempferia rotunda</i> ) in Kerala, India	XLII All India Botanical Conference of the Indian Botanical Society and National Symposium on Innovations and Inventions in Plant Science Research	November 6 - 8, 2019
5	R. Litty V.V. Radhakrishnan K.V. Mohanan	Exploratory surveys for white turmeric ( <i>Curcuma zedoaria</i> ) genetic resources of Kerala	XLII All India Botanical Conference of the Indian Botanical Society and National Symposium on Innovations and Inventions in Plant Science Research	November 6 - 8, 2019
6	K.S. Veena	A study on field-level variability of	XLII All India	November

	V.V. Radhakrishnan K.V. Mohanan	<i>Exacum tetragonum</i> in north Kerala, Indiaj	Botanical Conference of the Indian Botanical Society and National Symposium on Innovations and Inventions in Plant Science Research	6 - 8, 2019
7	K.S. Veena V.V. Radhakrishnan K.V. Mohanan	Assessment of the genetic base of Bicolour Persian Violet ( <i>Exacum tetragonum</i> Roxb.) in North Kerala	National Seminar on Forestry, Plant Genetics and Improvement	December 3 - 4, 2019
8	K.A. Athira V.V. Radhakrishnan K.V. Mohanan	Growth and yield of false turmeric ( <i>Curcuma zanthorrhiza</i> Roxb.) as influenced by the status of the planting material	National Seminar on Forestry, Plant Genetics and Improvement	December 3 - 4, 2019
9	Y.P. Surekha V.V. Radhakrishnan K.V. Mohanan	A study on ratoon cropping in some native rice cultivars of Wayand region of Kerala State of India	National Seminar on Forestry, Plant Genetics and Improvement	December 3 - 4, 2019
10	V.S. Thushara V.V. Radhakrishnan K.V. Mohanan	Assessment of the genetic variability of peacock ginger ( <i>Kaempferia rotunda</i> L.) in Kerala State of India	National Seminar on Forestry, Plant Genetics and Improvement	December 3 - 4, 2019
11	K. Neethu V.V. Radhakrishnan K.V. Mohanan	Association of agronomic characters in wild turmeric ( <i>Curcuma aromatica</i> Salisb.)	National Seminar on Forestry, Plant Genetics and Improvement	December 3 - 4, 2019
12	R. Litty V.V. Radhakrishnan K.V. Mohanan	<i>Curcuma zedoaria</i> Rosc. (white turmeric) - An insight into a rare medicinal plant	National Seminar on Forestry, Plant Genetics and Improvement	December 3 - 4, 2019
13	Y.P. Surekha V.V. Radhakrishnan K.V. Mohanan	A study of genomic variability among some important native rice cultivars of Wayand region based on ISSR profiling	National Seminar on Forestry, Plant Genetics and Improvement	December 3 - 4, 2019

17. Innovative processes developed in teaching and learning.

18. Participation in curricular development:

19. Participation in co-curricular and extra-curricular activities

- 1) Member, Academic Council, University of Calicut
- 2) Chairman, P.G. Board of Studies in Botany, University of Calicut
- 3) Member, P.G. Board of Studies in Botany, Kannur University
- 4) Chairman, Board of Examiners for Ph.D., University of Kerala
- 5) Chairman, Board of Examiners for Ph.D., M.G. University, Kottayam
- 6) Member, Board of Examiners for Ph.D., Kannur University
- 7) Member, Board of Examiners for Ph.D., Bharathidasan University, Trichy
- 8) Member, Board of Examiners for Ph.D., M.S. University, Tamil Nadu
- 9) Member, P.G. Board of Examiners in Applied Plant Science, University of Calicut
- 10) Member, P.G. Board of Examiners in Food Science & Technology, University of Calicut

- 11) Member, U.G. Board of Examiners in Biotechnology, University of Calicut
  - 12) Member, Research Advisory Committee (RAC), Kerala Forest Research Institute
  - 13) Member, RAC, Centre for Water Resources Development and Management
  - 14) Member, RAC, Malabar Botanical Garden & Institute for Plant Sciences
  - 15) Life Member & Secretary, Gregor Mendel Foundation
  - 16) Life Member, Indian Society of Genetics and Plant Breeding
  - 17) Life Member, Indian Society of Plant Genetic Resources
  - 18) Life Member & Fellow, Indian Association for Angiosperm Taxonomy
  - 19) Life Member, Indian Society for Plantation Crops
  - 20) Life Member & Executive Councilor, Indian Society for Spices
  - 21) Life Member, Association of Rice Research Workers
  - 22) Life Member, Society for Environmental Education in Kerala
  - 23) Life Member, Malabar Natural History Society
  20. Refresher and Orientation courses attended:
  - 21 Examination /Evaluation reforms initiated:
  22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.
- 
1. Thushara V.S., **Radhakrishnan V.V.** and Mohanan K.V., 2020. Genetic diversity of *Kaempferia rotunda* L. accessions of Kerala. *Journal of Emerging Technologies and Innovative Research* 7(11): 154-162. ISSN: 2349-5162.
  2. Manu Philip and **Radhakrishnan V.V.**, 2020. Diversity of the genus *Chroococcus nageli* (Chroococcaceae, Cyanobacteria) from Southern Western Ghat regions of Kerala, India. *International Journal of Advanced Research* 8(09): 817-820. ISSN: 2320-5407.
  3. Neethu K., **Radhakrishnan V.V.** and Mohanan K.V., 2020. Assessment of the genetic base of wild turmeric (*Curcuma aromatica* Salisb.) in Kerala, India. *Eco Chronicle* 15(1): 13-16. ISSN: 0973-4155.
  4. Kunhalavi M., **Radhakrishnan V.V.** and Mohanan K.V., 2019. A study on the variability of morphometric characters in apple mint [*Mentha rotundifolia* L. (Huds)]. *International Journal of Research and Analytical Reviews* 6(1): 93-96. ISSN: 2349-5138.
  5. Abhilash Joseph E., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Accretion of anthocyanin in rice cultivars under salinity stress. *Journal of Non-Timber Forest Products* 25(4): 127-130. ISSN: 0971-9415.
  6. Soorya V., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Association of agronomic characters in *Curcuma aeruginosa* Roxb. (Pink and blue ginger). *International Journal of Research and Analytical Reviews* 5(4): 142-146. ISSN: 2349-5138.



7. Surekha Y.P., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Comparative performance of some native rice cultivars of Wayanad region of Western Ghats, South India under upland and wetland conditions. *Journal of Non-Timber Forest Products* **25**(3): 141-144. ISSN: 0971-9415.
8. Athira K.A., **Radhakrishnan V.V.** and Mohanan K.V., 2018. A study on the genetic variability of false turmeric (*Curcuma zanthorrhiza* Roxb.) in Central Kerala of India. *International Journal of Research and Analytical Reviews* **5**(3): 482-488. ISSN: 2349-5138.
9. Athira K.A., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Assessment of the genetic base of false turmeric (*Curcuma zanthorrhiza* Roxb.) in Central Kerala, India. *Eco Chronicle* **13**(1): 7-10. ISSN: 0973-4155.
10. Surekha Y.P., **Radhakrishnan V.V.** and Mohanan K.V., 2018. A study of variability among some important native rice cultivars of Wayanad region of Western Ghats, South India. *Journal of Non-Timber Forest Products* **25**(2): 99-102. ISSN: 0971-9415.
11. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Bioactive compounds in the rhizome of *Maranta arundinacea* L. (Arrowroot) as revealed by GC-MS analysis. *Journal of Non-Timber Forest Products* **25**(2): 85-89. ISSN: 0971-9415.
12. Surekha Y.P., **Radhakrishnan V.V.** and Mohanan K.V., 2018. System of rice intensification - An overview. *International Journal of Current Advanced Research* **7**(6): 13380-13382. ISSN: 2319-6475.
13. Remya R., **Radhakrishnan V.V.** and Mohanan K.V., 2017. A study on field level variability and diversity of *Scoparia dulcis* L. in North Kerala, India. *Eco Chronicle* **12**(1): 7-11. ISSN: 0973-4155.
14. Neethu K., **Radhakrishnan V.V.** and Mohanan K.V., 2017. A study of the genetic variability of wild turmeric (*Curcuma aromatica* Salisb.) in Kerala State of India. *International Journal of Current Advanced Research* **6**(11): 7311-7314. ISSN: 2319-6475.
15. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2017. Factor analysis in *Maranta arundinacea* L. *International Journal of Current Advanced Research* **6**(11): 7328-7331. ISSN: 2319-6475.
16. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2017. Correlation analysis of growth and yield characters in *Maranta arundinacea* L. (West Indian arrowroot). *International Journal of Current Advanced Research* **6**(9): 6302-6305. ISSN: 2319-6475.
17. Athira K.A., **Radhakrishnan V.V.** and Mohanan K.V., 2017. *Curcuma zanthorrhiza* Roxb. (False turmeric) - A retrospective view. *Indian Journal of Arecanut, Spices and Medicinal Plants* **19**(2): 10-14. ISSN: 0972-2483.
18. Akhila P.R., **Radhakrishnan V.V.**, Pradipkumar K. and Mohanan K.V., 2017. Assessment of variability and performance of new landraces of small cardamom (*Elettaria cardamomum*

Maton). *Journal of Plantation Crops* **45**(1): 43-48. ISSN: 0304-5242. **Impact Factor (NAAS): 5.54**

19. Soorya V., **Radhakrishnan V.V.** and Mohanan K.V., 2016. Effect of the status of planting material on growth and yield characters of Travancore starch plant (*Curcuma aeruginosa* L.). *Journal of Non-Timber Forest Products* **23**(4): 195-197. ISSN: 0971-9415.
20. Akhila P. Ravindran, **Radhakrishnan V.V.**, Pradipkumar K. and Mohanan K.V., 2016. Characterization of four new landraces of cardamom. *Indian Journal of Arecanut, Spices and Medicinal Plants* **18**(3): 47-52. ISSN: 0972-2483.
21. **Radhakrishnan V.V.** and Mohanan K.V., 2016. Cardamom - Properties, Products and Uses. *Journal of Non-Timber Forest Products* **23**(3): 139-142. ISSN: 0971-9415.
22. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2016. A study on the genetic control and potential of the important agronomic characters of *Maranta arundinacea* L. *International Journal of Current Research* **8**(10): 39756-39761. ISSN: 0975-833X.
23. Abhilash Joseph E., **Radhakrishnan V.V.** and Mohanan K.V., 2016. Variation in total polyamine content in some native rice cultivars of North Kerala, India in response to salinity stress. *International Journal of Agriculture, Environment and Biotechnology* **9**(5): 731-738. ISSN: 0974-1712.
24. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2016. A study on the genetic variability of West Indian arrowroot (*Maranta arundinacea* L.) in Kerala State of India. *Agriculture, Forestry and Fisheries* **5**(5): 186-190. ISSN: 2328-5648.
25. Soorya V., **Radhakrishnan V.V.** and Mohanan K.V., 2016. A study on the genetic variability and genetic control of the important morphometric characters of *Curcuma aeruginosa* Roxb. *Journal of Non-Timber Forest Products* **23**(2): 61-65. ISSN: 0971-9415.
26. Chandramohan K.T., **Radhakrishnan V.V.** and Mohanan K.V., 2016. Performance evaluation of some native rice cultivars of the *kaippad* farming system of Kerala State of India. *Universal Journal of Agricultural Research* **4**(2): 37-41. ISSN: 2332-2284.
27. Surekha Y. Pawar, **Radhakrishnan V.V.** and Mohanan K.V., 2016. The importance of optimum tillering in rice - an overview. *South Indian Journal of Biological Sciences* **2**(1): 125-127. ISSN: 2454-4787.
28. Joseph E.A., **Radhakrishnan V.V.** and Mohanan K.V., 2016. Differential expression of Cyclophilin 1 and Cyclophilin 2 genes under salinity stress in some native rice cultivars of North Kerala, India. *International Journal of Plant Breeding and Genetics* **10**(1): 1-11. ISSN: 1819-3595.
29. Thushara V.S., **Radhakrishnan V.V.** and Mohanan K.V., 2020. Genetic diversity of *Kaempferia rotunda* L. accessions of Kerala. *Journal of Emerging Technologies and Innovative Research* **7**(11): 154-162. ISSN: 2349-5162.

30. Manu Philip and **Radhakrishnan V.V.**, 2020. Diversity of the genus *Chroococcus nageli* (Chroococcaceae, Cyanobacteria) from Southern Western Ghat regions of Kerala, India. *International Journal of Advanced Research* **8**(09): 817-820. ISSN: 2320-5407.
31. Neethu K., **Radhakrishnan V.V.** and Mohanan K.V., 2020. Assessment of the genetic base of wild turmeric (*Curcuma aromatica* Salisb.) in Kerala, India. *Eco Chronicle* **15**(1): 13-16. ISSN: 0973-4155.
32. Kunhalavi M., **Radhakrishnan V.V.** and Mohanan K.V., 2019. A study on the variability of morphometric characters in apple mint [*Mentha rotundifolia* L. (Huds)]. *International Journal of Research and Analytical Reviews* **6**(1): 93-96. ISSN: 2349-5138.
33. Abhilash Joseph E., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Accretion of anthocyanin in rice cultivars under salinity stress. *Journal of Non-Timber Forest Products* **25**(4): 127-130. ISSN: 0971-9415.
34. Soorya V., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Association of agronomic characters in *Curcuma aeruginosa* Roxb. (Pink and blue ginger). *International Journal of Research and Analytical Reviews* **5**(4): 142-146. ISSN: 2349-5138.
35. Surekha Y.P., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Comparative performance of some native rice cultivars of Wayanad region of Western Ghats, South India under upland and wetland conditions. *Journal of Non-Timber Forest Products* **25**(3): 141-144. ISSN: 0971-9415.
36. Athira K.A., **Radhakrishnan V.V.** and Mohanan K.V., 2018. A study on the genetic variability of false turmeric (*Curcuma zanthorrhiza* Roxb.) in Central Kerala of India. *International Journal of Research and Analytical Reviews* **5**(3): 482-488. ISSN: 2349-5138.
37. Athira K.A., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Assessment of the genetic base of false turmeric (*Curcuma zanthorrhiza* Roxb.) in Central Kerala, India. *Eco Chronicle* **13**(1): 7-10. ISSN: 0973-4155.
38. Surekha Y.P., **Radhakrishnan V.V.** and Mohanan K.V., 2018. A study of variability among some important native rice cultivars of Wayanad region of Western Ghats, South India. *Journal of Non-Timber Forest Products* **25**(2): 99-102. ISSN: 0971-9415.
39. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Bioactive compounds in the rhizome of *Maranta arundinacea* L. (Arrowroot) as revealed by GC-MS analysis. *Journal of Non-Timber Forest Products* **25**(2): 85-89. ISSN: 0971-9415.
40. Surekha Y.P., **Radhakrishnan V.V.** and Mohanan K.V., 2018. System of rice intensification - An overview. *International Journal of Current Advanced Research* **7**(6): 13380-13382. ISSN: 2319-6475.

41. Remya R., **Radhakrishnan V.V.** and Mohanan K.V., 2017. A study on field level variability and diversity of *Scoparia dulcis* L. in North Kerala, India. *Eco Chronicle* **12**(1): 7-11. ISSN: 0973-4155.
42. Neethu K., **Radhakrishnan V.V.** and Mohanan K.V., 2017. A study of the genetic variability of wild turmeric (*Curcuma aromatica* Salisb.) in Kerala State of India. *International Journal of Current Advanced Research* **6**(11): 7311-7314. ISSN: 2319-6475.
43. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2017. Factor analysis in *Maranta arundinacea* L. *International Journal of Current Advanced Research* **6**(11): 7328-7331. ISSN: 2319-6475.
44. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2017. Correlation analysis of growth and yield characters in *Maranta arundinacea* L. (West Indian arrowroot). *International Journal of Current Advanced Research* **6**(9): 6302-6305. ISSN: 2319-6475.
45. Athira K.A., **Radhakrishnan V.V.** and Mohanan K.V., 2017. *Curcuma zanthorrhiza* Roxb. (False turmeric) - A retrospective view. *Indian Journal of Arecanut, Spices and Medicinal Plants* **19**(2): 10-14. ISSN: 0972-2483.
46. Akhila P.R., **Radhakrishnan V.V.**, Pradipkumar K. and Mohanan K.V., 2017. Assessment of variability and performance of new landraces of small cardamom (*Elettaria cardamomum* Maton). *Journal of Plantation Crops* **45**(1): 43-48. ISSN: 0304-5242. **Impact Factor (NAAS): 5.54**
47. Soorya V., **Radhakrishnan V.V.** and Mohanan K.V., 2016. Effect of the status of planting material on growth and yield characters of Travancore starch plant (*Curcuma aeruginosa* L.). *Journal of Non-Timber Forest Products* **23**(4): 195-197. ISSN: 0971-9415.
48. Akhila P. Ravindran, **Radhakrishnan V.V.**, Pradipkumar K. and Mohanan K.V., 2016. Characterization of four new landraces of cardamom. *Indian Journal of Arecanut, Spices and Medicinal Plants* **18**(3): 47-52. ISSN: 0972-2483.
49. **Radhakrishnan V.V.** and Mohanan K.V., 2016. Cardamom - Properties, Products and Uses. *Journal of Non-Timber Forest Products* **23**(3): 139-142. ISSN: 0971-9415.
50. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2016. A study on the genetic control and potential of the important agronomic characters of *Maranta arundinacea* L. *International Journal of Current Research* **8**(10): 39756-39761. ISSN: 0975-833X.
51. Abhilash Joseph E., **Radhakrishnan V.V.** and Mohanan K.V., 2016. Variation in total polyamine content in some native rice cultivars of North Kerala, India in response to salinity stress. *International Journal of Agriculture, Environment and Biotechnology* **9**(5): 731-738. ISSN: 0974-1712.

52. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2016. A study on the genetic variability of West Indian arrowroot (*Maranta arundinacea* L.) in Kerala State of India. *Agriculture, Forestry and Fisheries* **5**(5): 186-190. ISSN: 2328-5648.
  53. Soorya V., **Radhakrishnan V.V.** and Mohanan K.V., 2016. A study on the genetic variability and genetic control of the important morphometric characters of *Curcuma aeruginosa* Roxb. *Journal of Non-Timber Forest Products* **23**(2): 61-65. ISSN: 0971-9415.
  54. Chandramohan K.T., **Radhakrishnan V.V.** and Mohanan K.V., 2016. Performance evaluation of some native rice cultivars of the *kaippad* farming system of Kerala State of India. *Universal Journal of Agricultural Research* **4**(2): 37-41. ISSN: 2332-2284.
  55. Surekha Y. Pawar, **Radhakrishnan V.V.** and Mohanan K.V., 2016. The importance of optimum tillering in rice - an overview. *South Indian Journal of Biological Sciences* **2**(1): 125-127. ISSN: 2454-4787.
  56. Joseph E.A., **Radhakrishnan V.V.** and Mohanan K.V., 2016. Differential expression of Cyclophilin 1 and Cyclophilin 2 genes under salinity stress in some native rice cultivars of North Kerala, India. *International Journal of Plant Breeding and Genetics* **10**(1): 1-11. ISSN: 1819-3595.
23. Books published: with ISBN No., Without ISBN No., Chapters in books.

#### Chapters in Books (National): 10

1. Mohanan K.V. and **Radhakrishnan V.V.**, 2019. Gingers as food and spice. In: *Asian Zingiberales: Resume & Prospects* (Eds. Prabhukumar K.M., Thomas V.P., Hareesh V.S. and Mathew Dan), Bishen Singh Mahendra Pal Singh, Dehra Dun, India. pp. 113-132. ISBN: 978-81-211-1006-8
2. Surekha Y.P., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Some promising native rice cultivars of Wayanad region of India. In: *Modern Trends in Conservation, Utilization and Improvement of Plant Genetic Resources* (Eds. Mohanan K.V., Radhakrishnan V.V., Suhara Beevy S., Yusuf A. and Gangaprasad A.), Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. pp. 14-19. ISBN: 978-81-935133-1-6
3. Neethu K., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Variation in rhizome yield in different accessions of *Curcuma aromatica* Salisb. of Kerala State, India. In: *Modern Trends in Conservation, Utilization and Improvement of Plant Genetic Resources* (Eds. Mohanan K.V., Radhakrishnan V.V., Suhara Beevy S., Yusuf A. and Gangaprasad A.), Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. pp. 20-26. ISBN: 978-81-935133-1-6
4. Shinoj K., Mintu P.M., George Daniel, **Radhakrishnan V.V.** and Mohanan K.V., 2018. A study on the segregation of the progenies of a dwarf C x R (*Coffea congenesis* x *Coffea canephora*) coffee plant in relation to hypocotyl length. In: *Modern Trends in Conservation, Utilization and Improvement of Plant Genetic Resources* (Eds. Mohanan K.V., Radhakrishnan V.V., Suhara Beevy S., Yusuf A. and Gangaprasad A.), Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. pp. 27-31. ISBN: 978-81-935133-1-6

5. Athira K.A., **Radhakrishnan V.V.** and Mohanan K.V., 2018. Rhizome yield variation in different accessions of *Curcuma zanthorrhiza* Roxb. of Central Kerala, India. In: *Modern Trends in Conservation, Utilization and Improvement of Plant Genetic Resources* (Eds. Mohanan K.V., Radhakrishnan V.V., Suhara Beevy S., Yusuf A. and Gangaprasad A.), Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. pp. 14-19. ISBN: 978-81-935133-1-6
6. **Radhakrishnan V.V.**, 2018. Biology and cultivation of cardamom, the queen of spices. In: *Crops of Kerala - An overview*. (Eds. Radhakrishnan V.V., Hrideek T.K., Raghu A.V. and Chandramohanan K.T.) Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. pp. 64-72. ISBN: 978-81-935133-0-9
7. **Radhakrishnan V.V.**, 2018. Biology and cultivation of vanilla, the prince of spices. In: *Crops of Kerala - An overview*. (Eds. Radhakrishnan V.V., Hrideek T.K., Raghu A.V. and Chandramohanan K.T.), Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. pp. 73-77. ISBN: 978-81-935133-0-9
8. **Radhakrishnan V.V.**, 2018. Biology and cultivation of tea. In: *Crops of Kerala - An overview*. (Eds. Radhakrishnan V.V., Hrideek T.K., Raghu A.V. and Chandramohanan K.T.), Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. pp. 111-117. ISBN: 978-81-935133-0-9
9. Shintu P.V., **Radhakrishnan V.V.** and Mohanan K.V., 2017. West Indian Arrowroot. In: *Horticultural Crops of High Nutritive Values* (Ed. Peter K.V.), Brillion Publishing, New Delhi, India. pp. 393-405. ISBN: 978-81-932226-38
10. Soorya V., **Radhakrishnan V.V.** and Mohanan K.V., 2017. Travancore Starch Plant. In: *Horticultural Crops of High Nutritive Values* (Ed. Peter K.V.), Brillion Publishing, New Delhi, India. pp. 371-391. ISBN: 978-81-932226-38
1. *Abstracts of Papers of the National Seminar on Forestry, Plant Genetics and Improvement* (Eds. Syam Viswanath, Mohanan K.V., **Radhakrishnan V.V.**, Hrideek T.K., Raghu A.V. and Amruth M.), 2019. Kerala Forest Research Institute, Peechi, Kerala, India. 114p. ISBN: 81-8504-91-1
2. *Modern Trends in Conservation, Utilization and Improvement of Plant Genetic Resources* (Eds. Mohanan K.V., **Radhakrishnan V.V.**, Suhara Beevy S., Yusuf A. and Gangaprasad A.), 2018. Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. 125p. ISBN: 978-81-935133-1-6
3. *Crops of Kerala - An overview*. (Eds. **Radhakrishnan V.V.**, Hrideek T.K., Raghu A.V. and Chandramohanan K.T.), 2018. Gregor Mendel Foundation, Department of Botany, University of Calicut, Kerala, India. 150p. ISBN: 978-81-935133-0-9

24. Patents Applied/Granted: National. International, commercialized:

25. Consultancy services provided and revenue generated:

26. Conferences ,seminars, symposia and workshops organized as convener/coordinator:

As the Organizing Secretary of Gregor Mendel Foundation (GMF), two National Seminars were organized at Department of Botany, University of Kerala, Thiruvananthapuram and Kerala Forest Research Institute, Peechi, Thrissur.

27. Number of collaborations:

28. Awards /recognitions received: International, National, State, University level.

Fellow, Indian Association for Angiosperm Taxonomy (FIAT).

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13, 14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

\*\*\*\*

## **IX Dr. M.Shamina**

1. Name of the faculty: DR M. SHAMINA
2. Name of the Department: BOTANY
3. Educational qualifications: MS.c., PhD, UGC NET
4. Present position: ASST. PROFESSOR
5. Address for correspondence: Dept. Of BOTANY, UNIVERSITY OF CALICUT
6. E-mail and contact number: shaminaraj@yahoo.co.in, Mobile: 9446440327
7. Specialization: cyanobacteriology
8. Total teaching experience: 10 years
9. Courses taught: Biochemistry, Microbiology, Cyanobacteria, Algae, Bryophytes for MSc ,and Microbiology for Mphil and PhD course work
10. Research experience: Joined for PhD in 2001 and the research work is continuing till date
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.-Two projects completed
  - a) Biodegradation of coirpith using fresh water cyanobacterium of Kerala, *Westiellopsisprolififica*  
Janet: Assessment of cyanopithbiofertilizer on the growth of some vegetables  
**Funding Agency- UGC, Govt. of India**  
**Amount- 6 Lakhs**  
**Principal Investigator**  
**Date of Sanction-March 2013**  
**Duration- 2 years (2013- 2015)**
  - b) Systematic studies of fresh water and marine cyanobacteria of Kerala and their conservation.  
**Funding Agency- DST, Govt. of India**  
**Amount- 25 Lakhs**  
**Principal Investigator**  
**Date of Sanction- 2013**  
**Duration- 3 years ( 2013- 2016)**
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. - NIL
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree. - NIL
14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration.- N/A
15. Provide information as indicated in 11 and 12 above.
16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.



16.1. Ram A.T and **M.Shamina**. 2016. Biodiversity of epilithic cyanobacteria from Kerala.

Proceedings of in the 25 thswadeshi science congress. Org. bySwadeshi Science Movement- Kerala and SreeSankaracharyaUniversityof Sanskrit, Kalady, p.309-318.

16.2. Ram A.T. and **M.Shamina**.2016. On some rock dwelling cyanobacteria from Kerala, India.In the National seminar on Plant Science Technology for Sustainable World organized by National Institute of Plant Science Technology (NIPST) and Mahatma Gandhi University, Kottayam p.28.

16.3. Ram A.T. and **M.Shamina**2016. "A Survey on the Diversity of Mangrove Associated Cyanobacteria of Kumbalam Island of Kerala" in the 26<sup>h</sup> Swadeshi Science Congress organised by Swadeshi Science Movement, Kerala Unit of VijnanaBharati, in support of Ministry of Earth Sciences, Government of India, Science and Engineering Research Board ( A statutory body under Department of Science and Technology, Government of India and Kerala State Council of Science, Technology and Environment at Central Marine Fisheries Research Institute (CMFRI), Kochi.p.172.

F16.4. FarhadVP.,Manu Philip, Swetha K. And **M.Shamina**2016. "A study on cyanobacterial diversity at Sholayar, Kerala. In the 26<sup>h</sup> Swadeshi Science Congress organised by Swadeshi Science Movement, Kerala Unit of VijnanaBharati, in support of Ministry of Earth Sciences, Government of India, Science and Engineering Research Board ( A statutory body under Department of Science and Technology, Government of India and Kerala State Council of Science, Technology and Environment at Central Marine Fisheries Research Institute (CMFRI), Kochi.p.173.

16.5. Manu Philip,Farhad VP and **M.Shamina**2016. "A preliminary study on Oscillatoriace of Northern Kerala, India. In the 26<sup>h</sup> Swadeshi Science Congress organised by Swadeshi Science Movement, Kerala Unit of VijnanaBharati, in support of Ministry of Earth Sciences, Government of India, Science and Engineering Research Board ( A statutory body under Department of Science and Technology, Government of India and Kerala State Council of Science, Technology and Environment at Central Marine Fisheries Research Institute (CMFRI), Kochi.p.179.

16.6. Swetha K. and **M.Shamina**2016. "A study on diversity of scytonemataceae (cyanobacteria) of Northern Kerala. In the 26<sup>h</sup> Swadeshi Science Congress organised by Swadeshi Science Movement, Kerala Unit of VijnanaBharati, in support of Ministry of Earth Sciences, Government of India, Science and Engineering Research Board ( A statutory body under Department of Science and Technology, Government of India and Kerala State Council of Science, Technology and Environment at Central Marine Fisheries Research Institute (CMFRI), Kochi.p.210.

**16.7. M. Shamina**. 2016. Diversity of freshwater cyanobacteria of Kerala. In International conference on Microalgal and Cyanobacterial Biotechnology (MACB-2016). Org. National Facility for Marine Cyanobacteria (Sponsored by DBT, Govt. of India) Department of Marine Biotechnology, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India

17. **16.8. M. Shamina.** 2016. Insights into the cyanobacterial interaction with plants: an overview. In the National Seminar on plant microbe interaction: present scenario and future trends Organised by Gov. Arts and Science College, Meenchanda, Kozhikode.**(Invited Talk)**

16.9. Swetha K. &**M. Shamina.** 2017. Diversity of cyanobacteria at Malappuram district, Kerala. In National conference on Biodiversity Biodiversity, Biology and Biotechnology of Algae.Org. CAS, University Of Madras, Chennai, India.pp.47-48.

16.10. Farhad V. P. &**M. Shamina.** 2017. Epilithic Nostoc species from Northern Kerala, India. In National conference on Biodiversity Biodiversity, Biology and Biotechnology of Algae .Org. CAS, University Of Madras, Chennai, India.p. 53

16.11. Arun T. Ram &**M. Shamina.** 2017. The genus *Oscillatoria* Vaucher (cyanobacteria) from selected Mangrove Environments of Kerala, India. In National conference on Biodiversity Biodiversity, Biology and Biotechnology of Algae. Org. CAS, University Of Madras, Chennai, India.pp.43-44

16.12. Manu Philip, Farhad V. P. &**M. Shamina.** 2017. A preliminary field study on the cyanobacterial diversity related to pH from dam sites of Palakkad District. In National conference on Biodiversity Biodiversity, Biology and Biotechnology of Algae. Org. CAS, University Of Madras, Chennai, Kerala, India.p.44.

16.13. Arun T. Ram &**M. Shamina.** 2017. Biodiversity of marine cyanobacteria from different mangrove environments of Kerala, India. In National biodiversity conference – mainstreaming biodiversity for sustainable development,Org. Kerala State biodiversity board.pp. 202-206.

16.14. Ram A.T., **M. Shamina** 2017. Mangrove associated cyanobacterial diversity at Thrissur district, Kerala, India. In the 27<sup>th</sup> Swadeshi Science Congress organised by Swadeshi Science Movement and Amrita VishwaVidyapeetham, Amrita University, Kollam,

16.15. Ram A.T., **M. Shamina** 2017. The genus *Oscillatoria* Vaucher (Cyanobacteria) from selected mangrove environments of Kerala, India, In the National Conference on Biodiversity, Biology and Biotechnology of Algae (NCBBBA 2017) organised by Centre for Advance Studies in Botany, University of Madras, Guindy Campus, Chennai- 600 02, p.43-44.

---

- 16.16. Ram A.T., **M. Shamina** .2018. Cyanobacterial diversity from selected mangrove ecosystems of Southern Kerala, India. In the National Symposium on Advances in Biology of Algae and Cyanobacteria (ABAC) organized by Centre of Advanced Study in Botany, Institute of Science, Banaras Hindu University, Varanasi.
- 16.17. Swetha K and **M. Shamina**. 2018. Diversity of cyanobacterium *Scytonema* from some rocky habitat of Kerala. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)org. by CSIR Institute of Chemical Technology, Hyderabad.p-306
- 16.18. Nimly P and **M Shamina**. 2018. Effect of insecticide Malathion on *Nostochumifusum* Carm. ex Born. et Flah., a rice field cyanobacterium. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)org. by CSIR Institute of Chemical Technology, Hyderabad.p-305
- 16.19. Farhad V.P and **M. Shamina**. 2018. Biochemical characterization of two *Nostoc* species and its effect on rice seed germination. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)org. by CSIR Institute of Chemical Technology, Hyderabad.p-305
- 16.20. Arun T. Ram and **M. Shamina**. 2018. Cyanobacterial epiphytes on mangroves of southern Kerala, India. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018).org. by CSIR Institute of Chemical Technology, Hyderabad,p-304.
- 16.21. Manu Philip and **M. Shamina**. 2018. A study on non-heterocystous cyanobacteria from forests associated with reservoirs of Thrissur District, Kerala. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)org. by CSIR Institute of Chemical Technology, Hyderabad.p-304.
- 16.22. Manu Philip and **M. Shamina**. 2018. A preliminary survey on the diversity of cyanobacteria in forest regions of Palakkad District, Kerala. In. National seminar on interdisciplinary approaches in materials and biochemical research. Org. By Mahatma Gandhi College, Thiruvananthapuram, Kerala, p.5.
- 16.23. Nimly p. and **M. Shamina**. 2018. Evaluation of antibacterial activity of cyanobacterium *Nostochumifusum* Carmichael ex bornet and Flahault. In.

National seminar on interdisciplinary approaches in materials and biochemical research. Org. By Mahatma Gandhi College, Thiruvananthapuram, Kerala, p.5.

16.24. **M. Shamina.** 2020. The cyanobacterial genus *Hapalosiphon Nageli* of Western Ghats of Kerala, India. In international conference on Algae, fungi and plants: systematic to applications. Org. by CAS, Dept. of Botany, university of Calcutta and Botanical survey of India, p-231.

16.25. **M. Shamina** 2020. Cyanobacterial biofertilizer for sustainable development, In National Science day talk at **Central University of Kerala, Kasarkode (Invited Talk)**

16.26. **V.P. Neenu and M. Shamina.** 2021. Response of *Nostoc* species to Cadmium heavy metal stress. Kerala science Congress. Abstracts- p-28

16.27. **M. Shamina 2021.** Algae and Cyanobacteria : An overview. In International webinar on recent trends in biological sciences. Org. by St. Josephs college Devagiri (**Invited Talk**).

17. Innovative processes developed in teaching and learning.

18. Participation in curricular development:

19. Participation in co-curricular and extra-curricular activities.

20. Refresher and Orientation courses attended:

20.1. Refresher course in Environmental Sciences ( 09-11-2016 to 29-11-2016)

20.2. Refresher course in Experimental techniques in biological sciences ( 06-02-2020 to 19-02-2020)

20.3. Short run course on ICT enabled curriculum and pedagogy in higher education ( 06-11-2019 to 12-11-2019)

20.4. Short run course on innovations and rejuvenation on teaching in higher education ( 12-12-2019 to 18-12-2019)

20.5. Short term course on Research Methodology ( 08-01-2021 to 14-01-2021)

20.6. Short term course on soft skill development ( 19-03-2021 to 25-03-2021)

21. Examination /Evaluation reforms initiated:

22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.

22.1. Manu P., Farhad V.P. & **Shamina M.** 2016. Diversity of cyanobacterial flora at Nelliampathy, Kerala. South Indian Journal of Biological Science. 2(1): 198-202.

- 22.2. Ram A.T.& **M. Shamina**2017.Cyanobacterial diversity from seven mangrove environments of Kerala, India. World news of natural sciences. 9(2017): 91-97.
- 22.3. Geethu V. &**M. Shamina** 2018. Antioxidant activity of cyanobacterium nostocspogiformae C. agardh ex born. &Flah .Journal of algal biomass utilization. 9(1): 26-30.
- 22.4. Ram A.T and **M.Shamina**. 2016. Biodiversity of epilithic cyanobacteria from Kerala. Proceedings of in the 25 thswadeshi science congress. Org. bySwadeshi Science Movement-Kerala and SreeSankaracharyaUniversityof Sanskrit, Kalady, p.309-318.
- 22.5. Ram A.T. and **M.Shamina**.2016. On some rock dwelling cyanobacteria from Kerala, India.In the National seminar on Plant Science Technology for Sustainable World organized by National Institute of Plant Science Technology (NIPST) and Mahatma Gandhi University, Kottayam p.28.
- 22.6. Ram A.T. and **M.Shamina**2016. "A Survey on the Diversity of Mangrove Associated Cyanobacteria of Kumbalam Island of Kerala" in the 26<sup>h</sup> Swadeshi Science Congress organised by Swadeshi Science Movement, Kerala Unit of VijnanaBharati, in support of Ministry of Earth Sciences, Government of India, Science and Engineering Research Board ( A statutory body under Department of Science and Technology, Government of India and Kerala State Council of Science, Technology and Environment at Central Marine Fisheries Research Institute (CMFRI), Kochi.p.172.
- 22.7. FarhadVP.,Manu Philip, Swetha K. And **M.Shamina**2016. "A study on cyanobacterial diversity at Sholayar, Kerala. In the 26<sup>h</sup> Swadeshi Science Congress organised by Swadeshi Science Movement, Kerala Unit of VijnanaBharati, in support of Ministry of Earth Sciences, Government of India, Science and Engineering Research Board ( A statutory body under Department of Science and Technology, Government of India and Kerala State Council of Science, Technology and Environment at Central Marine Fisheries Research Institute (CMFRI), Kochi.p.173.
- 22.8. Manu Philip,Farhad VP and **M.Shamina**2016. "A preliminary study on Oscillatoriace of Northern Kerala, India. In the 26<sup>h</sup> Swadeshi Science Congress organised by Swadeshi Science Movement, Kerala Unit of VijnanaBharati, in support of Ministry of Earth Sciences, Government of India, Science and Engineering Research Board ( A statutory body under Department of Science and Technology, Government of India and Kerala State Council of Science, Technology and Environment at Central Marine Fisheries Research Institute (CMFRI), Kochi.p.179.
- 22.9. Swetha K. and **M.Shamina**2016. "A study on diversity of scytonemataceae (cyanobacteria) of Northern Kerala. In the 26<sup>h</sup> Swadeshi Science Congress organised by Swadeshi Science Movement, Kerala Unit of VijnanaBharati, in support of Ministry of Earth

Sciences, Government of India, Science and Engineering Research Board ( A statutory body under Department of Science and Technology, Government of India and Kerala State Council of Science, Technology and Environment at Central Marine Fisheries Research Institute (CMFRI), Kochi.p.210.

- 22.10. **M. Shamina**. 2016. Diversity of freshwater cyanobacteria of Kerala. In International conference on Microalgal and Cyanobacterial Biotechnology (MACB-2016). Org. National Facility for Marine Cyanobacteria (Sponsored by DBT, Govt. of India) Department of Marine Biotechnology, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India
- 
- 22.11. Swetha K. &**M. Shamina**. 2017. Diversity of cyanobacteria at Malappuram district, Kerala. In National conference on Biodiversity Biodiversity, Biology and Biotechnology of Algae.Org. CAS, University Of Madras, Chennai, India.pp.47-48.
- 22.12. Farhad V. P. &**M. Shamina**. 2017. Epilithic Nostoc species from Northern Kerala, India. In National conference on Biodiversity Biodiversity, Biology and Biotechnology of Algae .Org. CAS, University Of Madras, Chennai, India.p. 53
- 22.13. Arun T. Ram &**M. Shamina**. 2017. The genus *Oscillatoria* Vaucher( cyanobacteria) from selected Mangrove Environments of Kerala, India. In National conference on Biodiversity Biodiversity, Biology and Biotechnology of Algae. Org. CAS, University Of Madras, Chennai, India.pp.43-44
- 22.14. Manu Philip, Farhad V. P. &**M. Shamina**. 2017. A preliminary field study on the cyanobacterial diversity related to pH from dam sites of Palakkad District. In National conference on Biodiversity Biodiversity, Biology and Biotechnology of Algae. Org. CAS, University Of Madras, Chennai,Kerala, India.p.44.
- 22.15. Arun T. Ram &**M. Shamina**. 2017. Biodiversity of marine cyanobacteria from different mangrove environments of Kerala, India. In National biodiversity conference – mainstreaming biodiversity for sustainable development,Org. Kerala State biodiversity board.pp. 202-206.
- 22.16. Ram A.T., **M. Shamina** 2017. Mangrove associated cyanobacterial diversity at Thrissur district, Kerala, India. In the 27<sup>th</sup> Swadeshi Science Congress organised by Swadeshi Science Movement and Amrita VishwaVidyapeetham, Amrita University, Kollam,
- 22.17. Ram A.T., **M. Shamina** 2017. The genus *Oscillatoria* Vaucher (Cyanobacteria) from selected mangrove environments of Kerala, India, In the National Conference on Biodiversity, Biology and Biotechnology of Algae (NCBBBA 2017) organised by Centre for Advance Studies in Botany, University of Madras,Guindy Campus, Chennai- 600 02, p.43-44.
- 22.18. Ram A.T., **M. Shamina** .2018. Cyanobacterial diversity from selected mangrove ecosystems of Southern Kerala, India. In the National Symposium on Advances in Biology of

Algae and Cyanobacteria (ABAC) organized by Centre of Advanced Study in Botany, Institute of Science, Banaras Hindu University, Varanasi.

- 22.19. Swetha K and **M. Shamina**. 2018. Diversity of cyanobacterium *Scytonema* from some rocky habitat of Kerala. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)org. by CSIR Institute of Chemical Technology, Hyderabad.p-306
- 22.20. Nimly P and **M Shamina**. 2018. Effect of insecticide Malathion on *Nostochumifusum* Carm. ex Born. et Flah., a rice field cyanobacterium. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)org. by CSIR Institute of Chemical Technology, Hyderabad.p-305
- 22.21. Farhad V.P and **M.Shamina**. 2018. Biochemical characterization of two *Nostoc* species and its effect on rice seed germination. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)org. by CSIR Institute of Chemical Technology, Hyderabad.p-305
- 22.22. Arun T. Ram and **M. Shamina**. 2018. Cyanobacterial epiphytes on mangroves of southern Kerala, India. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018).org. by CSIR Institute of Chemical Technology, Hyderabad,p-304.
- 22.23. Manu Philip and **M. Shamina**. 2018. A study on non-heterocystous cyanobacteria from forests associated with reservoirs of Thrissur District, Kerala. In. International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018)org. by CSIR Institute of Chemical Technology, Hyderabad.p-304.
- 22.24. Manu Philip and **M. Shamina**. 2018. A preliminary survey on the diversity of cyanobacteria in forest regions of Palakkad District, Kerala.In.National seminar on interdisciplinary approaches in materials and biochemical research. Org. By Mahatma Gandhi College, Thiruvananthapuram, Kerala, p.5.
- 22.25. Nimly p. and **M. Shamina**. 2018. Evaluation of antibacterial activity of cyanobacterium *Nostochumifusum* Carmichael ex bornet and Flahault. In. National seminar on interdisciplinary approaches in materials and biochemical research. Org. By Mahatma Gandhi College, Thiruvananthapuram, Kerala, p.5.

- 22.26. **M. Shamina**. 2020. The cyanobacterial genus *Hapalosiphon Nageli* of Western Ghats of Kerala, India. In international conference on Algae, fungi and plants: systematic to applications. Org. by CAS, Dept. of Botany, university of Calcutta and Botanical survey of India, p-231.
- 22.27. **V.P. Neenu and M. Shamina**. 2021. Response of *Nostoc* species to Cadmium heavy metal stress. Kerala science Congress. Abstracts- p-28
- 22.28. **M. Shamina** 2020. First report on cyanobacteria from Masirah Island, sultanate of Oman. International journal on Algae, 22 (4) : 347-358.
- 22.29. **M. Shamina** 2021. Response of paddy field cyanobacterium, *Westiellopsis Prolifica* Janet to the inorganic nitrogenous fertilizers. Current botany, 12: 72-74.
- 22.30. V. Geethu and **M. Shamina** 2021. Filamentous cyanobacteria from western ghats of North Kerala, India. Bangladesh J. of Plant Taxon. 28(1): 83-95.
23. Books published: with ISBN No., Without ISBN No., Chapters in books.
- 23.1. Swetha K. & **M. Shamina**. 2019. Diversity of cyanobacterium at Malappuram district, Kerala. In **Algae** ( Biodiversity, Biology and Biotechnology), Ed. S. Nagaraj, Publ. CAS, University Of Madras, Chennai, India, pp. 78-82.
- 23.2. Farhad V. P. & **M. Shamina**. 2019. Epilithic *Nostoc* species from Northern Kerala, India In **Algae** ( Biodiversity, Biology and Biotechnology), Ed. S. Nagaraj, Publ. CAS, University Of Madras, Chennai, India, pp.83-87
- 23.3. Arun T. Ram & **M. Shamina**. 2019. The genus *Oscillatoria* Vaucher ( cyanobacteria) from selected Mangrove Environments of Kerala, India. In **Algae** ( Biodiversity, Biology and Biotechnology), Ed. S. Nagaraj, Publ. CAS, University Of Madras, Chennai, India, pp.88-90
- 23.4. Manu Philip, Farhad V. P. & **M. Shamina**. 2019. A preliminary study on the cyanobacterial diversity related to pH from dam sites of Palakkad District. In **Algae** ( Biodiversity, Biology and Biotechnology), Ed. S. Nagaraj, Publ. CAS, University Of Madras, Chennai, India, pp. . 91-94.
- 23.5. Arun T. Ram & **M. Shamina**. 2017. Biodiversity of marine cyanobacteria from different mangrove environments of Kerala, India. In **mainstreaming biodiversity for sustainable development**, publ. Kerala State biodiversity board. pp. 202-206.
24. Patents Applied/Granted: National. International, commercialized:
25. Consultancy services provided and revenue generated:
26. Conferences, seminars, symposia and workshops organized as convener/coordinator:



27. Number of collaborations:
28. Awards /recognitions received: International, National, State, University level.

**Best paper presentation award in the International conference on Algae , fungi and plants: systematics to applications Organized by CAS, Dept. of Botany, University of Calcutta and Botanical Survey of India in 2020 January**

**M. Shamina. 2020.** The cyanobacterial genus *Hapalosiphon Nageli* of Western Ghats of Kerala , India. In International conference on Algae , fungi and plants: systematic to applications. Org by CAS, Dept. of Botany, university of Culcatta and Botanical survey of India, p-231.

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13,14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

\*\*\*\*

## X Dr. Resmi. L

1. Name of the faculty: Dr. Resmi L.
2. Name of the Department: Botany
3. Educational qualifications: MSc, MPhil, UGC-JRF, PhD
4. Present position: Assistant Professor
5. Address for correspondence: Department of Botany, University of Calicut
6. E-mail and contact number: [resmirajasekhar@yahoo.co.uk](mailto:resmirajasekhar@yahoo.co.uk); 9446564064
7. Specialization: Genetics & Plant Breeding
8. Total teaching experience: 6 Months as Asst. Professor, CU; 13 years at Christian College, Kattakadasffiliated to Kerala University
9. Courses taught: MSc Applied Plant Science; (Formerly UG & PG Botany, Kerala University)
10. Research experience: Two Years Post Doctoralexperience
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. NIL
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. NIL
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree. NIL
14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration. NIL
15. Provide information as indicated in 11 and 12 above.
16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

Name of the Event	National/International	Paper presented
		Genetic diversity and heterozygosity among diploid <i>Musa acuminata</i> Colla
International Seminar on New Frontiers in Cytogenetics & XIII Conference of the Society of Cytologists & Geneticists (SOCG) held from 15-17 December 2016 at Department of Botany, University of Kerala	International	
International Seminar on New Frontiers in Cytogenetics & XIII	International	Chaired a session on Genetics and Plant Breeding

Conference of the Society of Cytologists & Geneticists (SOCG) held from 15-17 December 2016 at Department of Botany, University of Kerala		
1 <sup>st</sup> International Agrobiodiversity Congress, organized by Indian society of Plant Genetic Resources & Bioiversity International held from 2016 November 6-9 at New Delhi.	International	Gene Expression Analysis in Tolerant and Susceptible banana cultivars under drought stress.
One day Seminar on People and Plants: Role of Botanic Gardens on June 5 <sup>th</sup> , 2017 at JNTBGRI, Palode	State	Participated
International Conference on Climate Change & Global Sustainability organized by All Saint's College, Thiruvananthapuram on 18-19 December 2017	International	Participated
International Biodiversity Congress. 4-6 <sup>th</sup> October 2018. Forest Research Institute, Dehradun.	International	Expression profiling of aquaporin genes in banana under drought stress
International Biodiversity Congress. 4-6 <sup>th</sup> October 2018. Forest Research Institute, Dehradun.	International	Differential salt stress tolerance in wild and cultivated <i>Solanum</i> and effect of Salicylic acid in alleviating the stress responses
One Day Seminar on Sustainable Utilization of Plant Resources as alternative to Plastic on 5 <sup>th</sup> June 2018 at JNTBGRI, Palode	State	Participated
PROVACTUS PLANTAE '19. International Conference on exploring the scope of Plant Genetic Resources. 2019 May 22-24. Department of Botany, University of Kerala.	International	qPCR analysis of aquaporin genes in banana
PROVACTUS PLANTAE '19. International Conference on exploring the scope of Plant Genetic Resources. 2019 May 22-24. Department of Botany, University of Kerala.	International	Chaired a session on Plant Physiology, Biochemistry and Bioinformatics
National seminar on Viral Genomics: Its implications in Viral Diagnosis and Disease Control organized by IUCGGT, University of	National	Participated

Kerala on March 14, 2019		
National Workshop on Intellectual Property Rights Organized by Department of Biotechnology, University of Kerala on March 26, 2019	National	Participated
National seminar on Advances and Applications in Plant Science organized by Department of Botany, University of Kerala	National	Participated
National Banana Festival, 17-21 February 2018, Thiruvananthapuram	National	Differential expression of <i>expansin</i> gene under drought stress in banana
National Banana Festival, 17-21 February 2018, Thiruvananthapuram	National	Micropropagation of <i>Musa acuminata</i> cultivar Chingan (AA)

17. Innovative processes developed in teaching and learning.

**Group Discussion in the class Whatsapp groups and asynchronous teaching using Whatsapp, Telegram apps and Google classroom.**

18. Participation in curricular development:

**Participated in the three day Workshop on the revision of the syllabus of FDP Botany under CBCSS organized by the Board of Studies in Botany (Pass) of University of Kerala on 25<sup>th</sup> to 27<sup>th</sup> July 2018.**

19. Participation in co-curricular and extra-curricular activities.

- **Member, Criteria 5 Committee, NAAC Accreditation, University of Calicut**

20. Refresher and Orientation courses attended:

- **UGC- Sponsored Refresher Course in Life Sciences (Interdisciplinary) conducted by UGC-HRDC, University of Kerala, Kariavattom from 06-09-2018 to 26-09-2018.**
- **UGC- Sponsored Short term Course in Gender Sensitization conducted by UGC-HRDC, University of Kerala, Kariavattom from 21-12-2018 to 29-12-2018.**

21. Examination /Evaluation reforms initiated:

22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.

- Citations since 2016: 59
- H index : 4
- Numbers in SCOPUS NIL
- impact factors NIL

Peer reviewed journals:

- **Resmi L.**, Aswati R. Nair and Ashalatha S. Nair. 2016. Population genetic structure and diversity analysis of South Indian banana cultivars. *Journal of Plant Breeding and Crop Science*. 8(1): 1-12.
- Pravithamol & **Resmi L.** 2018. Differential salt stress responses in *Solanum melongena* L. and *Solanum melongena* var. *insanum* (L.) Prain. *Abrahamia- An International journal of plant sciences*. 4:57-66.
- Binitha S. D., **Resmi L.** and Vidhya Vikraman. 2018. Morphological, physiological and biochemical responses of Two *Capsicum* species under drought stress. *International Journal of tropical Agriculture*. 36:1133-1141.
- Binitha S. D. and **Resmi L.** 2018. Water deficit stress on Tomato and Lady's finger. *International Journal of tropical Agriculture*. 36: 1143-1147.
- **Surabhi S. B.**, Resmi L. & Remani Bai R.K. 2020. Documentation of flowering Plants in Kukkiri para, Thiruvananthapuram, Kerala. *Abrahamia- An International Journal of Plant Sciences*. 6(2): 65-89.

## Conference Proceedings

- **Resmi L.**, Ponni T. G. and Ashalatha S. Nair. 2016. Differential expression of *Expansin* gene in drought tolerant and susceptible banana cultivars. National Conference on Genomics and Society-Prospects, Challenges and Concerns. February 17-19. IU-CGGT, Department of Biotechnology, University of Kerala, Thiruvananthapuram.
- **Resmi L.**, Ponni T. G. and Ashalatha S. Nair. 2016. Transcriptional down regulation of *MaRAV* gene in banana under drought stress. International Seminar on New Frontiers in Cytogenetics & XIII Conference of the Society of Cytologists & Geneticists (SOCG) held from 15-17 December at Department of Botany, University of Kerala.
- Athira C. S. and **Resmi L.** 2019. GC-MS profiling of three species of *Phyllanthus*. International seminar on Supra and Nanochemistry of Bioactive molecules. Organized by Christian College, Kattakada from 19<sup>th</sup> to 20<sup>th</sup> August 2019.
- Gnanam A. and **Resmi L.** 2019. GC-MS analysis of bioactive compounds in methanolic leaf extract of *Hemigraphis colorata*. International seminar on Supra and Nanochemistry of Bioactive molecules. Organized by Christian College, Kattakada from 19<sup>th</sup> to 20<sup>th</sup> August 2019.
- Anju J. V., Renjitha V.S. and **Resmi L.** 2019. A preliminary study on Medicinal Plants used in Selected Ayurvedic formulations. Proceedings of PROVECTUS PLANTAE '19 International Conference on exploring the scope of Plant Genetic Resources. May 22-24. Department of Botany, University of Kerala pp. 351-361.
- Asisha S. and **Resmi L.** 2019. Morphological and Biochemical Characterization of Two *Portulaca* species. Proceedings of PROVECTUS PLANTAE '19 International Conference on exploring the scope of Plant Genetic Resources. May 22-24. Department of Botany, University of Kerala pp. 473-483.
- Arya A. R. and **Resmi L.** 2020. "CO<sub>2</sub> sequestration studies as a sustainability initiative". RICERCA 2020, National Online Research Project Presentation Competition organized by the Research Committee, St. Joseph's College for Women, Alappuzha in association with Kerala Sasthra Sahithya Parishath during 18<sup>th</sup> – 24<sup>th</sup> August 2020.
- Arya A. R. and **Resmi L.** 2020. 'Studies on CO<sub>2</sub> sequestration by Campus trees'. Two Day Virtual International Conference on Energy, Environment and Health-Infifest 2020- 10<sup>th</sup> Annual Interdisciplinary symposium of Sree Ayyappa College, 11<sup>th</sup> & 12<sup>th</sup> September 2020. Organized by Sree Ayyappa College, Ereamalikkara, Chengannur

- Surabhi S. B. and **Resmi L.** 2020. “Floristic documentation of angiosperm taxa in Kukkiripara ”. RICERCA 2020, National Online Research Project Presentation Competition organized by the Research Committee, St. Joseph’s College for Women, Alappuzha in association with Kerala SasthraSahithyaParishath during 18th – 24th August 2020.
- Surabhi S. B. and **Resmi L.** 2020. Analysis of Angiosperm diversity in Kukkirippara. International Symposium on Recent approaches in Plant Taxonomy and Ethnobotany organized by Department of Postgraduate Studies and Research, S.D. College, Alappuzha in association with KSHEC. (**Special appreciation by Panelists& Merit Certificate**)

23. Books published: with ISBN No., Without ISBN No., **Chapters in books.**

- **Resmi L.**, Aswati R. Nair and Ashalatha S. Nair. 2016. Genetic Diversity Assessment of South Indian *Musa* cultivars. In ‘Trends in Biodiversity: Floral, Faunal and Ecological Aspects’. Edited by Sobti R. C., Jaiswal K. and Mishra S. Pages 159-171. Narendra Publishing House, NewDelhi.
- **Resmi L.** and Nair A. S. 2020. Differential expression of *Expansin* gene under drought stress in Banana. In ‘Banana Biodiversity, Prospects & Sustainability’. Edited by P. N. Krishnan *et al.* Pages 215-220. CISSA, TVM.
- **Resmi L.** and Nair A. S. 2020. Expression profiling of Aquaporin genes in banana under drought stress. In ‘Perspectives on Biodiversity of India’: Volume IV. Edited by Bijukumar A. ISBN no. 978-81-937930-6-0. Pages 489-491. CISSA, Tvm.

24. Patents Applied/Granted: National. International, commercialized: NIL

25. Consultancy services provided and revenue generated: NIL

26. Conferences, seminars, symposia and workshops organized as convener/coordinator:

- **Two Day Online course on ‘Skill development in Systematic Literature Review’ from 30-31, May 2021 organized by Department of Botany, University of Calicut**
- **Webinar on Emerging Trends in Technology on 28<sup>th</sup> May 2021 organized by Department of Botany, University of Calicut**

27. Number of collaborations: NIL

28. Awards /recognitions received: International, National, State, University level. NIL

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13,14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

\*\*\*\*

X1. **K. P. DeepnaLatha**

1. Name of the faculty: **Dr. K. P. DeepnaLatha**
2. Name of the Department: **Botany**
3. Educational qualifications: **BSc, MSc, MPhil, NET, JRF, Ph.D.**
4. Present position: Assistant Professor
5. Address for correspondence: **Fungal Diversity Division, Dept. of Botany, University of Calicut, 673635**
6. E-mail and contact number: [deepnalathakp@gmail.com](mailto:deepnalathakp@gmail.com); **8921378396**
7. Specialization: **Fungal Systematics**
8. Total teaching experience: **1 year 8 Months**
- 9 Courses taught: **Ph.D., MPhil., MSc & BSc**
- 10 Research experience: **6 years (PhD & CSIR-RA)**
11. Major research projects completed: **Nil**
- 12 Minor research projects completed: **Nil**
- 13 Number of students awarded Ph.D. degree: **Nil**
- 14 Number of students registered for Ph.D. degree: **Nil**
- 15 Provide information as indicated in 11 and 12 above.
- 16 Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person. **Enclosure I attached**
- 17 Innovative processes developed in teaching and learning. **Nil**
- 18 Participation in curricular development: **Nil**
- 19 Participation in co-curricular and extra-curricular activities. **Nil**
- 20 Refresher and Orientation courses attended: **Nil**
- 21 Examination /Evaluation reforms initiated: **Nil**
- 22 Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS. **Enclosure II attached**
- 23 Books published: with ISBN No., Without ISBN No., Chapters in books. **Enclosure II attached**
- 24 Patents Applied/Granted: National. International, commercialized: **Nil**
- 25 Consultancy services provided and revenue generated: **Nil**
- 26 Conferences, seminars, symposia and workshops organized as convener/coordinator: **Nil**
- 27 Number of collaborations: **Nil**

28 Awards /recognitions received: International, National, State, University level.**Enclosure III attached**

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13,14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.

### **Enclosure-I**

#### **List of Papers presented in National/International conferences/Invited Lectures**

1. **K. P. DeepnaLatha**. 2019. The genus *Calocybella* in Kerala State. XLII All India Botanical Congress of the Indian Botanical Society and National Symposium on ‘Innovations and Inventions in Plant Science Research’, Department of Botany, University of Calicut, Thenjipalam, Malappuram, 06-08 November, 2019

2.**K. P. DeepnaLatha**& P. Manimohan. 2019. Diversity of the genus *Calocybella* in tropical India. Asian Mycological Congress (AMC2019), Mie, Japan, 01-04, October, 2019.

3.**K. P. DeepnaLatha**, K. N. Anil Raj & P. Manimohan. 2018. *Laccariaviolaceolamellata*: a new species of Hydnangiaceae (Agaricales) from tropical India based on morphology and molecular phylogeny. International Symposium on Fungal Biology: Advances, Applications and Conservation & 45<sup>th</sup> Annual Meeting of Mycological Society of India, Agharkar Research Institute (ARI), Pune, India, 19-21, November, 2018.

4. **K. P. DeepnaLatha**& P. Manimohan. 2016. Diversity and phylogeny of genus *Inocybe* in Kerala State. National conference on Emerging Trends in Fungal Biology and Plant Protection ETFPP-2016 and 42<sup>nd</sup> Annual Meeting of the Mycological Society of India. Banaras Hindu University, Varanasi, India, 16-18, February, 2016.

#### **II. Invited Lectures**

1. Invited lecture on ‘Diversity of Gilled Mushrooms of Kerala’, Webinar in connection with Liliun-2020 Webinar series, organized by the Department of Botany, P.S.M.O College, Tirurangadi on 5<sup>th</sup> October 2021.



## Enclosure- II

**H-index: 10**

**Citations: 900**

**Numbers in SCOPUS: 19**

**Highest Impact factor: 20**

### **I. List of Publications in peer reviewed journals**

1. **K. P. DeepnaLatha**, K. N. Anil Raj & P. Manimohan 2020. Diversity of the genus *Calocybella* Vizzini, Consiglio & Setti in Kerala State, India. **Cryptogamie, Mycologie** 41 (8): 147-156. <http://cryptogamie.com/mycologie/41/8> (An SCIE international journal published by Laboratoire de cryptogamie, Muséum national d'histoire naturelle, Paris; 2.000 Impact Factor. ISSN: 0181-1584 (Print) 1776-100X (Web)).
2. **K. P. DeepnaLatha**, K. N. Anil Raj & P. Manimohan 2020. *Leucoagaricus callainitinctus*—a new species of *Leucoagaricus* section *Piloselli* (Agaricaceae) from tropical India. **Phytotaxa** 442 (2): 111–120. <https://doi.org/10.11646/phytotaxa.442.2.6> (An SCIE international journal published by Magnolia Press, New Zealand; 1.185 Impact Factor. ISSN: 1179-3155 (print) 1179-3163 (Web)).
3. R. Phookamsak, K. D. Hyde, R. Jeewon et al. (104 authors). 2019. Fungal diversity notes 929–1035: taxonomic and phylogenetic contributions on genera and species of fungi. **Fungal Diversity** 95: 1–273; [10.1007/s13225-019-00421-w](https://doi.org/10.1007/s13225-019-00421-w) (An SCIE international journal published by Springer, Netherlands; 15.386 Impact Factor. ISSN: 1560-2745 (Print); ISSN 1878-9129 (Web)).
4. K. N. Anil Raj, **K. P. DeepnaLatha**, K. M. Leelavathy & P. Manimohan 2019. *Anupama*: a new genus of Biannulariaceae (Agaricales) from tropical India. **Mycological Progress** 18:659–669. <https://doi.org/10.1007/s11557-019-01479-1> (An SCIE international journal published by Springer Science + Business Media on behalf of the German Mycological Society, Germany; 1.914 Impact Factor. ISSN: 1617-416X (print) 1861-8952 (Web)).
5. **K. P. DeepnaLatha**, K. N. Anil Raj & P. Manimohan 2019. *Laccariaviolaceotincta*: a new species from tropical India based on morphology and molecular phylogeny. **Phytotaxa** 392 (2): 140–146. <https://doi.org/10.11646/phytotaxa.392.2.3> (An SCIE international journal published by Magnolia Press, New Zealand; 1.185 Impact Factor. ISSN: 1179-3155 (print) 1179-3163 (Web)).
6. **K. P. DeepnaLatha** & P. Manimohan 2018. A new species of *Hygrocybe* from Kerala State, India. **Phytotaxa** 385 (1): 013–022. <https://doi.org/10.11646/phytotaxa.385.1.2> (An SCIE

international journal published by Magnolia Press, New Zealand; **1.185 Impact Factor**. ISSN: 1179-3155 (print) 1179-3163(Web)).

7. **K. P. DeepnaLatha**, Nanu S, ShahinaA. Sharafudheen& P. Manimohan 2018. Two new species of *Gerronema* (Agaricales, Basidiomycota) from Kerala State, India. **Phytotaxa** 364 (1): 081–091. <https://doi.org/10.11646/phytotaxa.364.1.5> (An SCIE international journal published by Magnolia Press, New Zealand; **1.185 Impact Factor**. ISSN: 1179-3155 (print) 1179-3163(Web)).

8. **K. P. DeepnaLatha**, K. N. Anil Raj & P. Manimohan 2018. Two new species of *Rhodocollybia* from tropical India. **Phytotaxa** 340(2): 157–166. <https://doi.org/10.11646/phytotaxa.340.2.4> (An SCIE international journal published by Magnolia Press, New Zealand; **1.185 Impact Factor**. ISSN: 1179-3155 (print) 1179-3163(Web)).

9. P.W. Crous, M. J. Wingfield, G. E. Burgess, et al. (107 authors) 2017. Fungal Planet description sheets: 558–624. **Persoonia** 38: 240–384; <https://doi.org/10.3767/003158517X698941> (An SCIE international journal published by National Herbarium of the Netherlands, Netherlands; **8.182 Impact Factor**. ISSN 0031-5850 (Print); ISSN 1878-9080 (Web)).

10. S. Tibpromma, K. D. Hyde, R. Jeewon et al. (125 authors). 2017. Fungal diversity notes 491–602: taxonomic and phylogenetic contributions to fungal taxa. **Fungal Diversity** 83(1): 1–292; <http://dx.doi.org/10.1007/s13225-017-0378-0> (An SCIE international journal published by Springer, Netherlands; **15.386 Impact Factor**. ISSN: 1560-2745 (Print); ISSN 1878-9129 (Web)).

11. **K. P. DeepnaLatha**, P. Manimohan& P. Brandon Matheny. 2016. A new species of *Inocybe* representing the Nothocybe lineage. **Phytotaxa** 267 (1): 40–50; <http://dx.doi.org/10.11646/phytotaxa.267.1.4> (An SCIE international journal published by Magnolia Press, New Zealand; **1.185 Impact Factor**. ISSN: 1179-3155 (print) 1179-3163(Web)).

12. **K. P. DeepnaLatha**, Neeraja K. Parambil&PatinjareveetilManimohan. 2016. *Tubariakeralensis*, a new species of *T. furfuracea* complex from tropical India. **Phytotaxa** 278 (3): 287–293. <http://dx.doi.org/10.11646/phytotaxa.278.3.9> (An SCIE international journal published by Magnolia Press, New Zealand; **1.185 Impact Factor**. ISSN: 1179-3155 (print) 1179-3163(Web)).

13. P.W. Crous, M. J. Wingfield, T. I. Burgess et al. (111 authors). 2016. Fungal Planet Description Sheets: 469–557. **Persoonia** 37: 218–403; <http://dx.doi.org/10.3767/003158516X694499> (An SCIE international journal published by National Herbarium of the Netherlands, Netherlands; **8.182 Impact Factor**. ISSN: 0031-5850 (Print); ISSN 1878-9080 (Web)).

14. **K. P. DeepnaLatha** & P. Manimohan. 2016. *Inocyberegaria*, a new species of the Inosperma clade from tropical India. **Phytotaxa**286 (2): 107–115; <http://dx.doi.org/10.11646/phytotaxa.286.2.5> (An SCIE international journal published by Magnolia Press, New Zealand; **1.185 Impact Factor**. ISSN: 1179-3155 (print) 1179-3163(Web)).
15. P. W. Crous, M. J. Wingfield, D. M. Richardson et al. (87 authors). 2016. Fungal Planet Description Sheets 400–468. **Persoonia**36: 316–458; <http://dx.doi.org/10.3767/003158516X692185> (An SCIE international journal published by National Herbarium of the Netherlands, Netherlands; **8.182 Impact Factor**. ISSN: 0031-5850 (Print); ISSN 1878-9080 (Web)).
16. **K. P. DeepnaLatha**, K. N. Anil Raj, ThusharaCherolil, ShahinaA. Sharafudheen & P. Manimohan 2016. Three new species of *Calocybella* from India based on morphology and molecular phylogeny. **Phytotaxa**255 (2): 133–143; <http://dx.doi.org/10.11646/phytotaxa.255.2.2> (An SCIE international journal published by Magnolia Press, New Zealand; **1.185 Impact Factor**. ISSN: 1179-3155 (print) 1179-3163(Web)).
17. **K. P. DeepnaLatha**, K. N. Anil Raj, V. AdnaanFarook, ShahinaA. Sharafudheen, Neeraja K. Parambil & P. Manimohan 2016. Three new species of Russulaceae from India based on morphology and molecular phylogeny. **Phytotaxa**246 (1): 061–077; <http://dx.doi.org/10.11646/phytotaxa.246.1.5> (An SCIE international journal published by Magnolia Press, New Zealand; **1.185 Impact Factor**. ISSN: 1179-3155 (print) 1179-3163(Web)).
18. K. N. Anil Raj, **K. P. DeepnaLatha**, RajanIyyappan & P. Manimohan. 2016. *Rhodophanasquamulosa* a new species of Entolomataceae from India. **Mycoscience** 57 (2): 90–95; <http://dx.doi.org/10.1016/j.myc.2015.10.001> (An SCIE international journal published by Springer, Japan; **1.229 Impact Factor**. ISSN: 1340-3540 (Print) 1618-2545 (Web)).
19. **K. P. DeepnaLatha** & P. Manimohan. 2016. Five new species of *Inocybe* (Agaricales) from tropical India. **Mycologia**108 (1): 110–122; <http://dx.doi.org/10.3852/14-358> (An SCI international journal published by Taylor & Francis for the Mycological Society of America, USA; **2.763 Impact Factor**. ISSN: 0027-5514 (Print) 1557-2536 (Web)).

## **II. List of Books**

1. Latha K.P.D., Manimohan P. (2017). *Inocybes of Kerala*. SporePrint Books, Calicut. 181 p.

## **Enclosure-III**

### **List of Awards/Recognitions**

1. **Prof. Kamal Merit Award of National Fungal Culture Collection of India (NFCCI), Agharkar Research Institute (ARI)** at International Symposium on Fungal Biology: Advances, Applications and Conservation & 45th Annual Meeting of Mycological Society of India held at Agharkar Research Institute (ARI), Pune, India, 19-21, November, 2018.
2. Post-Doctoral Research Fellowship in the form of **CSIR-Research Associate(CSIR-RA)** instituted by **Council of Scientific & Industrial Research (CSIR)** on 25-04-2018.
3. Junior Research Fellowship (JRF) instituted by **University Grants Commission (UGC)** on 09-05-2018.
4. **Dr. M. J. Thirumalachar Young Scientist Award of Mycological Society of India**, at National conference on Emerging Trends in Fungal Biology and Plant Protection ETFPP-2016 and 42<sup>nd</sup> Annual Meeting of the Mycological Society of India held at Banarus Hindu University (BHU), Varanasi, India, 16-18, February, 2016.

## XII **Dr. Pramod C**

1. Name of the faculty : Pramod C.
2. Name of the Department : Botany
3. Educational qualifications : PhD
4. Present position : Assistant Professor
5. Address for correspondence : 'Sonerila', Vattakkulam, Thottada P.O., Kannur 670007
6. E-mail and contact number : [cpramod4@gmail.com](mailto:cpramod4@gmail.com); 9446992507
7. Specialization : Angiosperm Taxonomy & Floristics
8. Total teaching experience : 14 years
9. Courses taught : B.Sc., M.Sc., M.Phil
10. Research experience : 5 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.
14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration.

<b>Sl. No.</b>	<b>Name of Scholar</b>	<b>Research Topic</b>	<b>Date of Registration</b>
1	Drisya V.V. (Kannur University)	Studies on Morphology, Flight behavior and Autorotation of Winged Fruits and Seeds of Selected taxa in South India	2019
2	Sanoj K. (Kannur University)	Taxonomic Revision and Molecular Phylogenetic Studies of the Family Rhizophoraceae in India	2019
3	Greeshma K.S. (Kannur University)	Ecology and Floristic diversity of Seasonal Pools on the Selected Lateritic Plateaus of Northern Kerala	2019

15. Provide information as indicated in 11 and 12 above.

16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

	<b>Subject</b>	<b>Duration</b>	<b>Place</b>	<b>Sponsoring Authority</b>
<b>Workshops</b>	Plant Taxonomy: Nomenclature, Illustration & Photography	15. 11. 2018 to 16. 11. 2018	Govt. Brennen College	Directorate of Collegiate Education
	Interdisciplinary Research in Environment	13. 09. 2018 to 14. 09. 2018	Govt. Brennen College	Directorate of Collegiate Education
	Training on Plant Taxonomy	05. 10. 2016 to 07. 10. 2016	IFGTB, Coimbatore	ICFRE
	GIAN Molecular Phylogeny Course	23. 09. 2019 to 27. 09. 2019	University of Calicut	Global Initiative for Academic Networks
<b>Seminars</b>	Right Wing Formulation of Education Sector	22. 03. 2019	Maharaja's College, Ernakulam	AKGCT
	Kerala State Biodiversity Congress	26. 01. 2019 to 28. 01. 2019	Govt. Brennen College	Kerala State Biodiversity Board
	O. Abu: The Legacy, Literature and Discourse	12.11. 2018 to 13. 11. 2018	Govt. Brennen College	Directorate of Collegiate Education
	Plant Diversity Conservation and Bioprospecting in Western Ghats	26. 09. 2018 to 27. 09. 2018	Govt. College, Kasaragod	Directorate of Collegiate Education
	30 <sup>th</sup> Kerala Science Congress	28. 01. 2018 to 30. 01. 2018	Govt. Brennen College	KSCSTE
	The Impacts of Climate Change on Natural Resources	21. 11. 2017 to 22. 11. 2017	BJM Govt. College, Chavara	Directorate of Collegiate Education
	Commercialization of Higher Education in India	17. 03. 2017	Tirur	AKGCT
<b>Invited Lectures/ Resource Person/ Paper presentation</b>	Conservation and Sustainable Utilization of Biodiversity	07. 11. 2016 to 09. 2016	Shivaji University, Kolhapur	IAAT
	Nature Study Camp	20. 08. 2016	Co-operative Arts & Science College, Madayi	NSS
	Genetic Resources and Plant Breeding	17. 11. 2016 to 19. 11. 2016	Govt. Brennen College	Directorate of Collegiate Education
	Department Seminar	23. 02. 2017	Sree Narayana College, Kannur	PTA
	International Botanical Congress (IBC XIX)	23. 07. 2017 to 29. 07. 2017	Shenzhen, China	IBC Secretariat
	Biodiversity and Importance of Western Ghats for Better Living	29. 08. 2017 to 30. 08. 2017	Govt. College, Kasaragod	Directorate of Collegiate Education
	Ozone Day Seminar	26. 09. 2017	Sir Syed College, Thalipparamba	KSCSTE
	Phytochemistry and Pharmacognosy	04. 10. 2017 to 06. 10. 2017	Govt. College for Women, Thiruvananthapuram	Directorate of Collegiate Education
	Department Seminar	07. 02. 2018	Mahatma Gandhi Govt. Arts College, Mahe	PTA
	Biodiversity and its Conservation, Priorities and Challenges	12. 03. 2018 to 13. 03. 2018	Bharathiar University, Coimbatore	Bharathiar University
	RET Species of Western Ghats: Challenges and Mitigation	20. 06. 2018 to 22. 06. 2018	Kannur University	KSCSTE
	Kerala State Biodiversity Congress	26. 01. 2019 to 28. 01. 2019	Govt. Brennen College	Kerala State Biodiversity Board

Wetlands for Future and disaster risk reduction	04. 02. 2019	Govt. Victoria College, Palakkad	KSCSTE
Higher Secondary School Teachers Transformation Programme	28/09/2019	Sir Syed College, Thalipparamba.	Govt. of Kerala
XLII All India Botanical Conference of the Indian Botanical Society and National Symposium on Innovations and Inventions in Plant Science Research	07. 11. 2019	University of Calicut	IBS
Webinar Series	16. 10. 2020	Haritham Eco & Forestry Club, Chennamangalore Higher Secondary School	
National Webinar on Restoration of Ecosystem and Laterite Habitats	05. 06. 2021	EMEA College of Arts & Science, Kondotty	
Nature, Agrobiodiversity Action & Technology Transfer Initiative Enwenar Series	07. 07. 2021	PULARI & Gifted Chindrens' Programme, Kasaragod	

17. Innovative processes developed in teaching and learning.

18. Participation in curricular development:

- Member, Board of Studies in Botany (PG), Kannur University (2018-2020)
- Convener, Expert Committee for the Preparation of Syllabus for M.Sc. Plant Science with Bioinformatics, Kannur University.

19. Participation in co-curricular and extra-curricular activities.

20. Refresher and Orientation courses attended:

Subject	Duration	Place	Sponsoring Authority
Refresher Course in Bioinformatics, Molecular Biology and Microbiology	14. 02. 2018 to 06. 03. 2018	HRDC Kannur University	UGC
Short Term Course in Research Methodology – Science	12. 12. 2018 to 18. 12. 2018	HRDC Kannur University	UGC
Faculty Development Programme in Science (Philosophy of Science)	06. 05. 2019 to 10. 05. 2019	Rajagiri College of Social Sciences. Kochi	Kerala State Higher Education Council

21. Examination /Evaluation reforms initiated:

22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.

- i. **Pramod C.** and A. K. Pradeep. 2021. Observations on the flowering plant diversity of Madayippara, a southern Indian lateritic plateau from Kerala, India. *Journal of Threatened Taxa* 13(2): 17780–17806. DOI: <https://doi.org/10.11609/jott.3883.13.2>. 17780-17806
  - ii. Resmi S., K. M. Manudev, **C. Pramod** and Santhosh Nampy. 2018. A new species of *Sonerila* (Melastomataceae: Sonerileae) from southern Western Ghats, India. *Phytotaxa* 333 (2): 235–242.
  - iii. **Pramod C.**, V. C. Balakrishnan, K. P. Rajesh, Muhamed Jafer Palot and A. K. Pradeep. 2017. An updated checklist of flowering plants of Madayippara, Kannur district, Kerala. *Malabar Trogon*, 15(1&2): 12-34.
  - iv. Manudev K. M., Sharad S. Kambale, **C. Pramod** and P. S. Prakash. 2016. A New species of *Ceropegia* (Apocynaceae: Ceropegiae) from a midland lateritic hill of Kerala, India. *International Journal of Advanced Research*, 4 (5): 1408-1414.
23. Books published: with ISBN No., Without ISBN No., Chapters in books.
- **Pramod C.** and A. K. Pradeep 2020. *A Hillock of Biodiversity – Ecology and Flora of Madayippara A South Indian Laterite Plateau*. Indian Association for Angiosperm Taxonomy, Calicut.
24. Patents Applied/Granted: National. International, commercialized:
25. Consultancy services provided and revenue generated:
26. Conferences, seminars, symposia and workshops organized as convener/coordinator:
- a. Organizing Secretary, National Seminar on Genetic Resources and Plant Breeding. 17<sup>th</sup> to 19<sup>th</sup> November 2016, Govt. Brennen College, Thalassery.
  - b. Organizing Secretary, National Workshop on ‘Plant Taxonomy: Nomenclature, Illustration & Photography. 15<sup>th</sup> to 16<sup>th</sup> November 2018, Govt. Brennen College, Thalassery.
27. Number of collaborations:
28. Awards /recognitions received: International, National, State, University level.
- a. Fellow of Indian Association for Angiosperm Taxonomy (FIAT).

Note: If necessary for Item No. 11 and 12 provide information in Enclosure-I, for 13, 14 and 15 Enclosure- II, for 16 Enclosure-III, for 22 and 23 Enclosure- IV and so on.