

Curriculum Vitae

DILEEP. C

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Present Position:

Professor & Research Guide

Head of the Department

Department of Post Graduate Studies and Research in Botany

Sanatana Dharma College,

Alapuzha -688 003

Kerala.

Positions Held :

Member – Faculty of Sciences, University of Kerala, 2020- onwards

**Member -Post Graduate Board of Studies in Botany Mahatma Gandhi University
Kottayam .Kerala 2014-2017**

Member –SCERT Curriculum Sub-Committee.Kerala . 2013-2016

Convener – Malpractice Prevention Squad, University of Kerala. 2016

University Supervisor - Admissions for U G courses , University of Kerala

Educational Qualification:

Ph.D. in Botany (Plant - Microbiology) in 1995 from Bhavnagar University, Gujarat, India.

M.Sc in Botany (Plant Pathology) in 1991 from Bhavnagar University, Gujarat, India.

B.Sc. in Botany (Zoology, Chemistry) in 1988 from Mahatma Gandhi University, Kerala, India.

Research Experience :

1. November 1991 April 1995 as Research Fellow, Bhavnagar University, Gujarat, India. 364002

2. December 1995-December 2000 as Senior Research Fellow
Central Plantation Crops Research Institute (ICAR) Kayamkulam ,Kerala

Teaching Experience :

18 years teaching experience in Under Graduate and Post Graduate Level at
Department of Post Graduate studies and Research in Botany
Sanatana Dharma College, Alappuzha ,Kerala ,688 003

List of Publication :

ResearchArticles :

1. **Dileep.C.**, Dileepkumar B.S., and H.C.Dube 1998. "Promotion of plant growth and yield by two rhizoplane Fluorescent Pseudomonads". **Ind J. Exp.Biology36** : 399-402.
2. **Dileep.C.**, Dileepkumar B.S., and H.C.Dube 1998 " Influence of aminoacids, organic acids and sugars on growth , fluorescence and siderophore production of fluorescent Pseudomonads ". **Ind.J . Exp Biology36** : 429-431.
3. **Dileep.C.**, Dileepkumar B.S., and H.C.Dube 1999 . "Disease suppression and Plant growth promotion of peanut by antagonistic fluorescent Pseudomonas strain FPC32 and FPO 4 in soil infested with collar rot fungi *Aspergillus niger*". **Indian Phytopath. 52 (4):** 415- 416
4. **Dileep.C.**, Dileepkumar B.S., 2000 Influence of Metham -Sodium on suppression collar rot disease of peanut , in vitro antibiosis , siderophore production and root colonization by fluorescent Pseudomonad strain FPO4 ". **Ind J. Exp Biology38** :1245-1250
5. **Dileep.C.** 2010. Biocontrol of *Rhizoctonia* wilt of Brinjal (*Solanum melongena*) by *Bacillus* strain SR 4. **J.Mycol.Pl.Pathol. 40(1):**131-135
- 6.**Dileep.C** 2013. First Report of a Leaf Disease of Rambutan(*Nepheliumlappaceum* L.) plant in India. **J.Plant Development Sciences5(3):**285-286.
- 7.**C.Dileep.** 2013 Effect of Amino acids,Organicacids,Sugars,Iron and pH on siderophore production by Two Antagonistic Fluorescent Pseudomonas Strains TR and FR2 from the Acidic Paddy Fields of Kerala.**J.Mycol.Pl.Pathol. 43 (4):**466-471
8. Kumar SN, Bala Nambisan and **Dileep C** (2014) Three bioactive cyclic dipeptides from the *Bacillus* sp. N strain associated with Entomopathogenic nematode. **Peptides.** (DOI: 10.1016/j.peptides.2013.11.017) (**Impact factor-2.5**),**53 (2014): 59-- 69**
9. Kumar SN, **Dileep C**, Mohandas C, Nambisan B and Jayaprakas CA (2014) Cyclo (D- Tyr-D-Phe): A new antibacterial, anticancer and antioxidant cyclic dipeptide from *Bacillus* sp. N strain associated with a rhabditid entomopathogenic nematode . **Journal of Peptide science** (DOI 10.1002/psc.2594) (**Impact factor – 2.1**):**20: 173–185.**
- 10.J.N. Gorankla, S. Nishanth Kumar , G.V. Nisha , A.S. Sumandu , **C. Dileep**, A.Sudaresan , M.M. Sree Kumar , R.S. Lankalapalli and B.S. Dileep Kumar ,(2014) Purification and characterization of antifungal phenazines from a fluorescent Pseudomonas strain FPO4 against medically important fungi.**Journal De Mycologie Médicale(**Impact Factor-1.2).(<http://dx.doi.org/10.1016/j.mycmed.2014.02.003>) **24:185-192**

- 11.S. Nishanth Kumar, , Jubi Jacob, Nisha G.V, Asha A,**Dileep C** and Dileep Kumar B.S.(2014) Investigation of antifungal activity of stilbenes alone and in combination with fluconazole against *Candida albicans*. ***International Journal of Pharmacy and Pharmaceutical Sciences***.6 (4); 304-307
- 12.Sreerag RS, **Dileep C**, Kumar SN (2014) Antimycobacterial activity of crude extracts produced by *Bacillus* sp. associated with entomopathogenic nematode. ***International Journal of Pharmacy and Pharmaceutical Sciences*** 6(9) 140-142 (Impact factor-1.54)
13. Kumar SN, Sreerag RS, **Dileep Chandrasekaran**, Bala Nambisan, Ruby John Anto (2014) Biocontrol of *Aspergillus* species on peanut kernels by antifungal diketopiperazine producing *Bacillus cereus* associated with entomopathogenic nematode. ***PLOS ONE***.(Impact factor-4.2). August 2014 :9(8).
- 14.Sumandu A S and**C Dileep**,2018,Plant growth promotion, yield and colonization by two antagonistic fluorescent *Pseudomonas aeruginosa* strain from acidic soils of Kuttanad, Kerala***J.Mycol.Pl.Pathol***, 48(3): 273-283
- 15.CG Sreekala, Surabhi Sankar and **C Dileep**,2019Comparison of *Pseudomonas aeruginosa* Strains from Tropical RainForest and Paddy Cultivated Soils on Plant Growth Promotion and Herbicide Tolerance ***J Mycol Pl Pathol***, 49(3):263-272
16. Surabhi Sankar and **C.Dileep** 2020,Population Dynamics, siderophore production and disease suppression during different seasons of *Pseudomonas aeruginosa* from acidic paddy fields .***International Journal of Scientific Research in Biological Sciences*** 7(5) 16-23
17. T.S Reshma ,Smitha Balan and **C.Dileep** ,2023.First Report of rice discolouration and leaf blight caused by *Pantoea ananatis* in the Kuttanad agro-ecosystem, Kerala,India. ***Can.J.PlantPathol***. 45(1) 30-34
- 18.T.S.Reshma and **C.Dileep**, 2024.Interactive effects on ACC-deaminase activity in salt – tolerant plant growth promoting rhizobacteria and impacts on rice crop improvement. *Journal of Agronomy and Crop science*.00,e12688.<https://doi.org/10.1111/jac.12688> (In press)

Reviews and Abstracts:

1. **Dileep.C**, Kumar .B.S.D and Dube .H.C 2000 “ Disease suppression and plant growth promotion of peanut by peanut by antagonistic fluorescent *Pseudomonads* strain **FPC32** and **FPO4** ,in soil infested with collar – rot fungi *Aspergillusniger*” : **Review of Plant Pathology** Vol 79 No.6 CABI Publishing UK.
2. **Dileep.C**, Kumar .B.S.D and Dube .H.C 2000 “ Disease suppression and plant growth promotion of peanut by peanut by antagonistic fluorescent *Pseudomonads* strain **FPC32** and **FPO4** ,in soil infested with collar – rot fungi *Aspergillusniger*” : **Biocontrol News and Informations** Vol.21 No.2. CABI Publishing UK .

3. **C.Dileep** and B.S.Dileepkumar,2013."Plant Growth Promoting and Disease Suppression Properties of Two *Pseudomonas* strains Isolated from Paddy fields of Kuttanad, Kerala", *J. Mycol Plant Pathol.*, Vol-43, No-1, Pages: 115 .
4. A.S .Sumandu and **C.Dileep**,2015, Influence of Glyphosate on Plant Growth Promoting Rhizobacteria PRS-3 and PRP-5 Against Sheath Blight Suppressive in Acidic Soil of Kuttanad, Kerala.*J.Mycol.Pl.Pathol.* **45** (1): 97
- 5.A.S. Sumandu and **C. Dileep**,2015 ,PGPR: An alternative to the chemical plant Protection.*J.Mycol.Pl.Pathol.* **45** (1): 97
6. A.S.Sumandu and **C.Dileep**.2016,Bio-Formulation of *Pseudomonas aeruginosa* strains of PRS3and PRP5.*J.Mycol.Pl.Pathol.* **46** (2): 173

Books Published

1. **Dileep C, 2012 ,Rhizosphere Fluorescent Pseudomonas – A New Perspective** Published by *Lambert Academic Publishing* ,Saarbrücken, Germany.
2. **Dileep.C, 2012,Plant Protection –An Integrated Approach** . Published by *Lambert Academic Publishing* ,Saarbrücken, Germany.

Book Chapter

C. Dileep, C. G. Sreekala, T. S. Reshma, and Surabhi Sankar (2021), Fluorescent Pseudomonads in Iron Chelation and Plant Growth Promotion in Abiotic Stresses.In Sustainable Development and Biodiversity (Vol.26)**Endophytes: Mineral Nutrient Management**,Vol.3*Eds.* Dinesh Kumar Maheshwari and ShrivardhanDheeman Springer ,105-120

Gene Bank Accession

1. Dileep KBS, Nishanth KS, **Dileep C**, Sundaresan A and Ravishanker L. (2013) Plant growth promoting rhizobacterial FP04 16S ribosomal RNA gene, partial sequence **GenBank Accession No KF500003.**
- 2.Dileep KBS, Nishanth KS, **Dileep C**, Sundaresan A (2013) Plant growth promoting *Pseudomonas monteilii* TR 16S ribosomal RNA gene, partial sequence **GenBank Accession No KF712283**
3. Dileep KBS, Nishanth KS, **Dileep C**, Sundaresan A (2013) Plant growth promoting *Pseudomonas putida* FR 16S ribosomal RNA gene, partial sequence **GenBank Accession No KF712284**
4. **Dileep.C** and Sumandu .A.S, (2015)*Pseudomonas aeruginosa* strain PRS3 16S ribosomal RNA gene, partial sequence .**GenBankAccession No KR061875.1**
- 5.**Dileep.C** and Sumandu .A.S,(2015)*Pseudomonas aeruginosa* strain PRP5 16S ribosomal RNA gene, partial sequence .**GenBankAccession No KR061876.1**

6. **Dileep.C** and Sreekala. C.G,(2019)*Pseudomonas aeruginosa* strainSR721-H1 ribosomal RNA gene, partial sequence .**GenBankAccession No MK894004.1**
7. **Dileep.C** andSreekala.C.G,(2019) *Pseudomonas aeruginosa* strainSR721-RRP1 16S ribosomal RNA gene, partial sequence .**GenBankAccession No MK894005.1**
8. **Dileep.C** andSreekala.C.G,(2019)*Pseudomonas aeruginosa* strain SR1289-SCP 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MK894006.1**
9. **Dileep.C** andSreekala.C.G,(2019)*Pseudomonas aeruginosa* strainSR1289-RP12 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MK894007.1**
10. **Dileep.C** andSreekala.C.G,(2019)*Pseudomonas otitidis* strain SR1289-MIP 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MK894008.1**
11. **Dileep.C** andSreekala.C.G,(2019)*Pseudomonas aeruginosa* strainSR1289-BPS 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MK894009.1**
12. **Dileep.C** and, Surabhi,S. (2019)*Pseudomonas aeruginosa* strain SR721-RS1 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MK8940010.1**
13. **Dileep.C** andSurabhi,S,(2019)*Pseudomonas aeruginosa* strain SR721-KS1 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MK8940011.1**
14. **Dileep.C** andSurabhi,S,(2019)*Pseudomonas aeruginosa* strainSR1289-PS2 16S ribosomal RNA gene, partial sequence .**GenBankAccession NoMK8940012.1**
15. **Dileep.C** and Surabhi,S (2019) *Pseudomonas aeruginosa*strain SR1289-PS3 16S ribosomal RNA gene, partial sequence**GenBankAccession NoMK894013.1**
16. **Dileep.C** andSurabhi,S,(2019)*Pseudomonas aeruginosa* strainSR1289-KNP 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MK894014.1**
17. Reshma T S and Dileep.C (2020)*Pseudomonas taiwanensis* strain PK7 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MT218377**
18. Reshma T S and Dileep C (2020)*Pseudomonas aeruginosa* strain P61 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MT218378**
19. Reshma T S and Dileep C (2020)*Pseudomonas aeruginosa* strain KFSC2 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MT218375**
20. Reshma T S and Dileep C (2020)*Pseudomonas aeruginosa* strain KFSC1 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MT218376**
21. Reshma T S and Dileep C (2020) *Enterobacter* strain P2F 16S ribosomal RNA gene, partial sequence .**GenBankAccession No.MT218379**

22. Reshma T S and Dileep C (2020) *Pantoea ananatis* strain RP1
16S ribosomal RNA gene, partial sequence .**GenBank Accession No.OK398432**

23. Reshma T S and Dileep C (2020) *Pseudomonas aeruginosa*
acdS like gene, partial sequence .**GenBank Accession OQ703930**

24. Reshma T S and Dileep C (2020) *Pseudomonas aeruginosa*
acdS like gene, partial sequence .**GenBank Accession OQ798805**

Paper Presentation(National)

1. R. V. Nair and **Dileep .C** . “Pollen management in Coconut” , at National Conference on ‘50 year on Indian Palynology ‘, held at Thiruvananthapuram from 14th to 16th November 1997.

2. **Dileep .C** and H.C.Dube . “Biological Suppression of collar –rot fungi of Peanut *Aspergillus niger* by fluorescent *Pseudomonas* FPO4”, at 26th Mycological society of India conference on ‘Mycology at 2000 and beyond’ held at Sardar Patel University , Vallabh Vidyanagar ,Anand, Gujarat on 21st to 23rd December 1999.

3. **Dileep.C** ,. “Biofertilizers and Organic Farming” , at One day sensitization Programme on Business Opportunities in Bio-Technology on 19.01.2005 at Hotel Hyson Heritage, Kozhikode. Organised by Small Industries Service Institute, Indian Institute of Spices, Research and District Industries Centre, Kozhikode .

4. **C.Dileep** and B.S.Dileepkumar, "Plant Growth Promoting and Disease Suppression Properties of Two *Pseudomonas* strains Isolated from Paddy fields of Kuttanad, Kerala", at 34th Annual Conference & Symposium of Indian Society of Mycology and Plant Pathology held at Navsari Agricultural University on 21-23 January 2013

5. A.S .Sumandu and **C.Dileep**, 2015, Influence of Glyphosate on Plant Growth Promoting Rhizobacteria PRS-3 and PRP-5 Against Sheath Blight Suppressive in Acidic Soil of Kuttanad, Kerala at 36th Annual Conference and national Symposium on “Challenges And Management approaches for Crop diseases of National Importance – Status and Prospects” at Agricultural College and Research Institute, (Tamilnadu Agricultural university) , Madurai on 12- 14 February 2015.

6. A.S. Sumandu and **C. Dileep**, 2015 ,PGPR: An alternative to the chemical plant protection at 36th Annual Conference and national Symposium on “Challenges And Management approaches for Crop diseases of National Importance –Status and Prospects” at Agricultural College and Research Institute, (Tamilnadu Agricultural University), Madurai on 12- 14 February 2015 .

7. A.S. Sumandu and **C. Dileep**. 2016. Bio-Formulation of *Pseudomonas aeruginosa* strains of PRS3 and PRP5 at 37th Annual Conference and national Symposium of Indian Society of Mycology and Plant Pathology on “Food security through Plant health Protection” in Department of Plant Pathology, RAU ,Pusa (Samastipur) Bihar on 04- 06 April ,2016.

8. Sreekala.C.G ,Surabhi Sankar,Reshma. T.S , and **C. Dileep**.2018,Comparative study on the plant growth promoting rhizobacteria from forest and agricultural soils at 39th Annual Conference and national Symposium of Indian Society of Mycology and Plant Pathology on “Plant and soil health management : New Challenges and Opportunities ICAR- Indian Institute of Pulses Research, Kanpur from November 16-18, 2018.
9. Reshma. T.S ,Sreekala.C.G ,Surabhi Sankar and **C. Dileep**.2018,Population dynamics of Rhizobacteria in soils of post flooded areas of Kuttanad region at 39th Annual Conference and national Symposium of Indian Society of Mycology and Plant Pathology on “Plant and soil health management : New Challenges and Opportunities at ICAR- Indian Institute of Pulses Research, Kanpur from November 16-18, 2018

(State Level)

1. Athira V Sankar ,Remya G R and **Dileep.C**.2012 Plant Growth Promotion and Disease Suppression by *Pseudomonas fluorescens* ,in the UGC sponsored State level Seminar on Beneficial Microbes of Different Agroclimatic zone on 23rd and 24th November 2011, at NSSCollege Pandalam, Organised By Post Graduate Department of Botany , NSS College ,Pandalam.
2. **Dileep.C** 2012 Innovative Non –Chemical Methods in Plant Protection and Growth by Beneficial Microorganisms in the UGC sponsored State level Seminar on Beneficial Microbes of Different Agroclimatic zone on 23rd and 24th November 2011,atNSSCollegePandalam,Organised By Post Graduate Department of Botany ,NSSCollege , Pandalam.

Conferences , Seminars and Symposia attended:

1. 43rd and 44th Annual meetings of Indian Phytopathological Society and **National symposium** in “ Inovative non- chemical methods for the management of Plant diseases”held at Department of Life Sciences , BhavnagarUniversity ,Bhavnagar , Gujarat , on December 30th 1991 – January 2nd 1992. (**National**)
2. Annual meetings and Symposium of Indian Phytopathological Society (South Zone) Held at Central Plantation Crops Research Institute, Regional station, Kayamkulam , Kerala , held on 14th -16th December 1999. (**National**)
3. **International Conference** on “New Horizons in Biotechnology” held at Regional Research Laboratory, Thiruvananthapuram Kerala on April 18th – 21st 2001. (**International**)
5. Conservation of Wetlands – a Multi DisciplinaryApproach ,Organised by Department of Botany ,St.JosephsCollege for Women Alappuzha , on 28th and 29th January 2010.(**National**)
- 6.39thAnnual Conference and national Symposium of Indian Society of Mycology and Plant Pathology on “Plant and soil health management : New Challenges and Opportunities at ICAR- Indian Institute of Pulses Research, Kanpur from November 16-18, 2018.(**National**)

Popular Article:

1. R.V.Nair.,P.M.Jacob and **C.Dileep**.1999. Production of high yielding coconut seedlings through new hybridisation methods (Malayalam). Kerala Karshakan February 25: 3 - 4. Published by Farm Information Bureau ,Kerala
2. R.V.Nair.,P.M.Jacob and **C.Dileep**.. Hybrid Coconut seedlings(Malayalam). Janmabhoomi April 13, Tuesday1999 .
3. R.V.Nair.,**C.Dileep** and P.M.Jacob.. Quality Hybrid Coconut seedlings. Production and Care(Malayalam). Janmabhoomi March 14, Tuesday 2000 .

Radio Talk:

1. JaivaValangalUpayogikkumbolKarshakararingirikkendakaryangal (Malayalam) on 18.12 .2004 at 7 PM in **All India Radio**, Thiruvananthapuram.

Training / Workshop attended

1. ‘**Restructuring the undergraduate course in Botany**’ organized by the Board of Studies in Botany ,University of Kerala and The Higher Education Council, Government of Kerala , from 16th to 20th February 2009.
2. ‘ **Insplore**’ Training programme for College Teachers ,Organised by and Kerala State Science andTechnologyMuseum (Govt of Kerala) and Higher Education Department Govt. of Kerala on 24 & 25 January, 2011 at Kerala State Science and TechnologyMuseum and Priyadarsini Planetarium, PMG Junction Thiruvananthapuram.
- 3.**SCERT**, Kerala Curriculum Sub committee meeting for Class 3, 5, & 7 textbooks of Science from 06.01.2014 to 08.01.2014 (3 days) at RTTC Kaimanam, Thiruvananthapuram.

Research Projects

- 1.Funding Agency- **University Grants Commission (2011)**
Name of the Project- **“Isolation ,Purification , Identification and Potential use of Plant Growth Promoting Rhizobacteria in Kuttanad Region”.**
No. MRP(S)-894/10-11/KLKE001/ UGC-SWRO - Completed
Sanctioned Amount- Rs.1,40,000 – Completed.
- 2.Funding Agency- **University Grants Commission (2014)**
Name of the Project-**“Isolation , Screening , and Developing the Pesticide and Herbicide resistant Fluorescent *Pseudomonas* strains in Kuttanad region”,**
No. MRP(S)-0673/13-14/KLKE001/UGC-SWRO - Ongoing
Sanctioned Amount- Rs. 1,60,000 – Completed.