

**BOBY T EDWIN PhD**

Grace, Thadathikulam, Kanjiramkulam P.O., Pin. 695524, Kerala, India.

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### **CURRENT PROFESSIONAL STATUS**

Head, Department of Botany  
Thangal Kunju Musliar College of Arts and Science  
Karicodu, Kollam

**TEACHING EXPERIENCE :** 15 Years

### **AREAS OF SPECIALIZATION :**

**Phytopharmaceuticals, Green Synthesis and Tissue Engineering**

### **RESEARCH EXPERIENCE**

**International:** Post doctoral training on embryonic stem cell, Medical Biotechnology Center,  
Southern Denmark University, Odense, Denmark

### **National:**

Awarded DBT and KSCSTE Post doctoral fellowship and completed post doctoral training for two years at **Laboratory for Polymer analysis and Tissue Engineering**

Sree Chitra Tirunal Institute for Biomedical Science and Technology (SCTIMST) <http://www.sctimst.ac.in/>  
- Biomedical Technology Wing, Poojappura, Trivandrum, Kerala, India.

**Under gone training on mesenchymal stem cell from Manipal under the guidance of Dr Satish Totey.'**

**Senior Research Fellow**, Plant Biochemistry and Molecular Biology Research Lab, Conducted research in the purification and characterization of ripening related enzymes, Cloning and sequencing of phytoplasma genes and the Apoptotic behavior of diseased palm due to phytoplasma infection. Aug. 2001-May 2005

### **Seminar organized**

1. Two day seminar in Bioinformatics (2011) funded by KSCSTE (**SSW-IX/04/2010/KSCSTE (7000/-)**)
2. College level orientation programme in General Informatics (2011) sponsored by Higher Education Council, Kerala Government **File no. 59-D/KSHEC/2011-15 (25000/-)**
3. College level orientation in methodology courses for college teachers (2011) sponsored by Higher Education council, Kerala Government **File no. 59-E/KSHEC/2011-15 (5) (30000/-)**
4. One day seminar on Biotechnology and Nano-biotechnology (2013) sponsored by (KSCSTE), file no: **SSW-1/04/2013/KSCSTE. (10,000/-)**
5. Environmental Management Training Programme funded by KSCSTE
6. Co-ordinated Golden Jubilee Exhibition at TKM College of Arts and Science

### **PROJECTS COMPLETED**

1. Differential activation of integrins cadherins and catenins and their correlation with Wnt pathway during osteo induction on synthetic scaffold sanctioned for an amount of Rs **22,00,000/-**  
Funding Agency – **Department Of Science Technology, Govt o India**

2. Pathophysiological variations in bunchy top disease of banana leading to stunted growth – a biochemical quantitative analysis  
Funding Agency – **University Grants Commission , Govt o India**

**Approved research Guide in Botany, MG University**

**Approved research guide in Biotechnology, Kerala University**

**Approved research guide in Botany, Kerala University**

### **PhD Produced 3**

#### **Major Positions /duties at TKM College of Arts and Science**

Head of the Department Botany  
NAAC Coordinator during the visit at 2022  
NAAC Steering Committee Member 2012  
CBCSS/CLMSC Coordinator  
Research Committee Coordinator/ member  
Antiragging Committee Coordinator  
Grievance Redressal Cell Coordinator  
Staff Advisor, Students Union  
Returning Officer, College Union Election

#### **Major Positions /duties at University of Kerala**

Member, Board of Studies  
Member, Malpractice Prevention Code

#### **MEMBERSHIP IN PROFESSIONAL BODIES**

Member, Indian Academy of Science  
Member, Kerala Academy of Science  
Member, Society for Tissue Engineering and Regenerative Medicine (India)  
Life Member, Society of Biomaterials and Artificial Organs – India

#### **Seminar Attended as Resource Person - 18 Nos**

Sl. No.	*Title of the Lecture/ Paper/ Academic Session	Title	Organized by	Whether International/ National/ State or University Level	Score
01	Differential Behaviour Of Activin Induced Embryonic Stem Cells And Mesenchymal Stem Cells in Cartilage Tissue Engineering Using Gelatin-Gum Arabic Scaffolds	Indian Science congress 2010	The Indian Science Congress Association	National	5
02	Sustainability of Biodiversity	World Environment Day Celebrations - 2012	New Bed College, Funded by KSCSTE	University	3
03	Genetic Engineering- the process and its implications	Annual Science Day celebrations 2013	Christian College, Kattakada sponsored by KSCSTE	University	3
04	Suppression of proangiogenic factors of endothelial cells by <i>Hemidesmus indicus</i>	Ethnic Knowledge of Biological Resources in Contemporary Plant Sciences 2014	Sree Narayana College for Women, Kollam Sponsored by UGC	National	5

05	Pollution	National Science Day Celebrations 2014	Christian College, Kattakada sponsored by KSCSTE	University	3
05	Healing the Wounds of the Environment	National science day celebrations 2015	Christian College, Kattakada sponsored by KSCSTE	University	3
06	Tissue Engineering	National science day celebrations 2016	St. Gregorious college, Kottarakara sponsored by KSCSTE	University	3
07	Green Technologies	Ban Pollution- Save Nature and Make future 2016	Kerala University College of Teacher Education, KSCSTE funded	University	3
08	Tissue Engineering – The Concept Introduction And Validation Of Gum Arabic Scaffolds As An Ideal System For Bone Tissue Engineering	One day Seminar 2016	Sree Narayana College, Kollam	University	3
9	River Ecosystem : Management and Conservation Strategies	World wet land day celebrations 2018	Christian College, Kattakada sponsored by KSCSTE	University	3
10	Beat Plastic Pollution	Environment Day Celebrations 2018	Sree Narayana College, Punalur	University	3
11	Ozone and the Environment	Ozone day Celebrations 2019	Sree Narayana College, Kollam	University	3
12	What we breathe today?	World Environment Day Celebrations 2019	Christian College, Kattakada sponsored by KSCSTE	University	3
13	Wounds in the environment	Environmental Management Training Programme 2018	Sree Narayana College, Sivagiri, Varkala 2018	National	5
14	Pharmaceutical chemistry ( Chaired the session)	Insight into the Interdisciplinary Perspectives of Chemical and Biosciences	Govt. Arts College, Thiruvananthapuram	National	5
15	Biotechnology for Sustainable Living	Multidisciplinary National Seminar , Bodhi 2019	Kumbalathu Sankupilla Memorial Devaswom Borrd College, Sasthamcotta	National	5
16	Restoration of Earth- Back to Tradition Green Living?	International Earth Day 2021 (Webinar)	Sree Narayana College, Sivagiri Varkala	University	3
17	Wet Land Ecosystem- Restoration- Challenges	World wet land day celebrations 2023	Sree Narayana College for Women, Kollam	University	3

18	Climate Change- Green Living a Remedy?	Two day National Seminar on Biodiversity: Exploitation, exploration and conservation for sustainable development 2024	N SS College Nilamel	National	5
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**Gene Accessions -7 nos**

**Publications - 18 Nos**

Sl. No.	Title With Page Nos.	Journal	UGC ISSN ISBN NO	Whether Peer Reviewed, Impact Factor, If Any
	Unveiling the key toxicity indicators and mechanisms on phytotoxicity of cerium dioxide nanoparticles in rice ( <i>Oryza sativa</i> ), Volume 376, 2025, 144270,	Chemosphere,	ISSN 0045-6535, <a href="https://doi.org/10.1016/j.chemosp here">https://doi.org/10.1016/j.chemosp here</a>	8
01	Unlocking The Potential Of Marine Asparaginase Sources (2023) 40:147-181	Thalassas: An International Journal Of Marine Sciences	Print ISSN 0212-5919	Peer Reviewed (Scopus Cited)
02	Anti-Inflammatory Effects Of Vitex Altissima Leaf Extract In Lipopolysaccharide-Induced RAW 264.7 Macrophages 15 (4) 461-468 (2023)	International Journal Of Pharmaceutical Sciences And Drug Research	ISSN 0975 - 248X	Peer Reviewed (UGC Care Listed)
03	Whole Genome Sequence Data Of Bacillus Australimaris Strain B28A, Isolated From Marine Water In India 37:1-5 (2021)	Data Brief.	ISSN 2352-3409	Peer Reviewed (Scopus Cited)
04	Isolation And Identification Of Marine Bacillus Altitudinis KB1 From Coastal Kerala: Asparaginase Producer 63(2): 43-48 (2021)	J Mar Bio Assoc India.	ISSN 2321-7898	Peer Reviewed (UGC Care Listed)
05	Isolation And Characterization Of A Protease From Bacillus Sps 43(3): 685-691 (2021)	Materials Today Proceedings	ISSN 2214-7853.	Peer Reviewed (Scopus Cited)
06	Identification Of An	IJRASB	ISSN- 2349-	Peer Reviewed

	Antibacterial Potential Marine Streptomyces Sps From Sargassum Fluitans 7(3):53-58 (2020)		8889	
07	Pharmaceutical Properties Of Oldenlandia Corymbosa Linn Materials Today: Proceedings 41(3): 698-702 (2021)	Materials Today Proceedings	ISSN 2214-7853.	Peer Reviewed (Scopus Cited)
08	Fatty Acid Derivative Of Methanol Extract Of Oldenlandia Corymbosa: A Potential Compound Against K. Pneumoniae And MCF-Cell Lines 7(3):46-52 (2020)	IJRASB	ISSN- 2349-8889	Peer Reviewed
09	Green Synthesis Of Silver Nanoparticles Using Gleichenia Dichotoma 11(7):1632-1638 (2018)	Trends In Biosciences	ISSN 0974-8431	Peer Reviewed
10	Non Toxic Biopolymeric Network For Future Bone Tissue Engineering 11(7): 1108-1113 (2018)	Trends In Biosciences	ISSN 0974-8431	Peer Reviewed
11	Effect Of Biomaterials In Orthopaedic Mesenchymal Stem Cell Therapy 11(1):1-10 (2011)	Journal Of Medical Sciences	ISSN 1682-4474	Peer Reviewed
12	Bone Marrow Mesenchymal Stem Cells For Future Orthopaedics 4(1):15-25 (2011)	International Journal Of Osteoporosis And Metabolic Disorders	ISSN 1994-5442	Peer Reviewed
13	Invitro Evaluation Of Wound Healing Property Of Hemigraphis Alternata (Burm.F)T.Anders Using Fibroblast And Endothelial Cells 8(1)185-193 (2011)	Biosciences Biotechnology Research Asia	ISSN 0973-1245	Peer Reviewed
14	Kerala Wilt Disease Phytoplasma: Phylogenetic Analysis And Identification Of A Vector, Proutista Moesta 71(1-3) : 41-47 (2007)	<i>Physiological And Molecular Plant Pathology</i>	ISSN 1096-1178	2.7 Peer Reviewed (Scopus Cited)
15	Cloning And Sequencing Of Phytoplasma Ribosomal DNA (Rdna) Associated With Kerala Wilt Disease Of Coconut Palms 13:1-5 (2004)	<i>J. Plant Biochemistry And Biotechnology</i>	ISSN 0971-7811	Peer Reviewed (Scopus Cited)
16	Molecular Identification Of <i>Proutista Moesta</i> As The Vector And The Phylogenetic Analysis Of KWD Phytoplasma 6:560-563 (2007)	<i>, Indian Journal Of Biotechnology</i>	ISSN 0975-0967	Peer Reviewed

17	Plasma Membrane Disintegration- A Possible Trigger For The Induction Of Programmed Cell Death (Apoptosis) During Phytoplasma Infection 5: 239; 1-6 9 (2016)	Science Letter Journal 2016,	ISSN 2454 – 7239	Peer Reviewed
18	Bone Tissue Engineering Using Biomaterial Scaffold With Antioxidant Property 6(2): 1-4 (2019)	Journal Of Advances In Biological Science	ISSN 2394 - 7837	Peer Reviewed

**Book / Proceedings Chapters – 7 Nos**

Sl. No.	Title With Page Nos.	Book, Title, Editor & Publisher	ISSN/ISBN No.
01	In Vitro And In Vivo Evaluation Of 1-(3 Dimethylaminopropyl)-3-Ethyl Carbodiimide (EDC) Cross-Linked Gum Arabic–Gelatin Composite As An Ideal Porous Scaffold For Tissue Engineering 131-145	Biomaterials In Orthopaedics And Bone Regeneration Design And Synthesis Preetkanwal Singh Bains, Sarabjeet Singh Sidhu Springer	2524-5384
02	Light Mediated Switchable Antibacterial Activity Of Cerium Dioxide Nanoparticles On Gram Positive And Gram Negative Bacteria 020009 , 1 -8	AIP Proceedings International Conference On Energy And Environment AIP Publishing	1551-7616
03	Athira Madhu And Bobby T Edwin Sumarouba Glance Leaf Extract Mediated Synthesis Of Silver Nanoparticles And Their Characterization An Eco-Friendly Approach . 86-93	Revamping Microbial Biotechnology Manonmaniam Sundaranar University	(ISBN 978-93-8140-35-1)
04	B Surumi, A Jayakumaran Nair And Bobby T Edwin Green Synthesis And Characterization Of Silver Nanoparticles From Marine Macro Algae Ulva Lactuca 93-99	Revamping Microbial Biotechnology Manonmaniam Sundaranar University	ISBN 978-93-81402-35-1)
05	Bioremediation For Restoring The Health Of Kerala Wilt Disease Of Coconut Palms 125-135	Proceedings Sixteenth Kerala Science Congress	
06	Molecular Identification Of Proutista Moesta As Vector And Phylogenetic Analysis Of KWD Phytoplasma 481-483	Proceedings Eighteenth Kerala Science Congress	
07	Activity Of Polygalacturonase And Pectin Methyl Esterase – The Cell Wall Associated Enzymes In Oil Palm (Elaeis Guineensis) Fruit Tenera Variety During Development And Storage Pp.326 – 329	Proceedings 16th Kerala Science Congress	
08	Reviewer	AIP Conference Proceedings	ISSN 1551-7616

09	Reviewer	Materials Today Proceedings (Elsevier)	ISSN 2214-7853
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### **EDUCATION**

**University College, Kerala, India**

Ph. D. in Life Science - Botany

*Thesis Title: Vector –Phytoplasma – Palm relationship in Kerala wilt disease of coconut palms*

*Thesis Advisor: Prof. Dr. C. Mohankumar*

10-04-2006

**Sanatana Dharma College, Kerala, India**

M. Sc. in botany with specialization in tissue culture with first class

23-04-2001

*MSc. Dissertation title: Effect of pre-sowing hardening treatment of plant growth regulators on growth and development of an important crop plant – Rye (*Secale cereal*)*

**Christian College Kattakada, Kerala, India**

15-01-1999

B.Sc. in botany.

**NATIONAL ELIGIBILITY TEST QUALIFIED** - ICAR Net SL No. ASRB/CE/EXAM I (NET)/2005/06651