

**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: Department of Life Sciences
2. Year of establishment: 1978
3. Courses offered: PG, M. Phil., Ph.D., Others

Year	PG	M. Phil	Ph.D.	Others
2016-17	M.Sc Microbiology M.Sc Biochemistry M.Sc Human Physiology	Microbiology Biochemistry Physiology	Microbiology Biochemistry Physiology	
2017-18	M.Sc Microbiology M.Sc Biochemistry M.Sc Human Physiology	Microbiology Biochemistry Physiology	Microbiology Biochemistry Physiology	
2018-19	M.Sc Microbiology M.Sc Biochemistry M.Sc Human Physiology	Microbiology Biochemistry Physiology	Microbiology Biochemistry Physiology	
2019-20	M.Sc Microbiology M.Sc Biochemistry M.Sc Human Physiology	Microbiology Biochemistry Physiology	Microbiology Biochemistry Physiology	
2020-21	M.Sc Microbiology M.Sc Biochemistry M.Sc Human Physiology	Microbiology Biochemistry Physiology	Microbiology Biochemistry Physiology	

4. Courses introduced during last 5 years: **M.Sc Forensic Science**
5. Does the department have Academic flexibility? If yes since when?: **No**
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: **No**
9. Examination System: Annual/ Semester/Choice Based Credit System/ Credit and Grading system/ any other system, specify: **Semester**
10. Participation of the department in the curriculum development for courses offered by the Departments. **Periodical revision of PG syllabus by department council.**
11. Does the department have different syllabus than the one used by university for PG courses?  
Yes. CCSS.

12. Number of teaching posts sanctioned, filled and vacant.

Designation	Sanctioned	Filled	Filled under CAS
Professor	–	–	
Associate Professor	3	2	
Assistant Professor	5	4	
Total	8	6	

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. B.S.Harikumaran Thampi	Associate Professor of Biochemistry & HoD	Ph.D Biochemistry	25 Years, 15 years	Permanent
Dr. E. Sreekumaran,	Associate Professor of Physiology	Ph.D Physiology	18 years 11 years	Permanent
Dr. Denoj Sebastian,	Assistant Professor Microbiology	Ph.D Microbiology	18 years 21 years	Permanent
Dr. G. Radhakrishna Pillai.	Assistant Professor Biochemistry	PhD Biochemistry	27 years	Permanent
Dr. D. Gayathri Devi.	Assistant Professor Biochemistry	Ph.D Biochemistry	8 years 14 years	Permanent
Mr. Emmanuel Simon	Assistant Professor Biochemistry	Ph.D Biochemistry	12 years 14 years	Permanent

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

Year	Name	Designation	Qualifications	Teaching/ Research Experience	Nature of appointment
2016-2017	Reshma C. V.	Guest Lecturer on hourly basis	M.Sc Microbiology, Ph.D, NET	–	Guest
2017-2018	Shabeera. K.	Guest Lecturer on hourly basis	M.Sc Microbiology	–	Guest
	C. P Sreena	Guest Lecturer on hourly basis	M.Sc Microbiology, NET	–	Guest
2018-2019	Bijesh. K.	Asst. Professor on contract basis	M.Phil Microbiology & NET	–	Guest
	Dr. Vimal K P	Asst. Professor on hourly basis	Ph.D & NET	–	Guest
2019-2020	Bijesh. K.	Asst. Professor on contract basis	M.Phil Microbiology & NET	–	Guest
	Dr.Punya Premrajan	Asst. Professor on contract basis	Ph.D		Guest

2020-2021	Dr.Punya Premrajan	Asst. Professor on contract basis	Ph.D	2 years	Guest
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**14. List of Visiting Fellows/Teachers, Adjunct and Emeritus Professors, (for last 5 years).**

Year	Name	Qualifications
2016-17	Smt. Fasna K., Guest Lecturer on hourly basis to teach the Bio-statistics component for 40 sessions	M.Phil Statistics
2017-18 2018-19 2019-20 2020-21	Sri. Jabir. K. Guest Lecturer on hourly basis to teach the Bio-statistics component for 40 sessions	M.Phil Statistics

15. Percentage of classes taken by temporary/visiting faculty (programme- wise information):  
**100%**

**16. Programme-wise Student Teacher Ratio: (Average of 5 Years)**

Year	Student teacher ratio
2016-17	M.Sc Microbiology – 3:9, M.Sc Biochemistry – 3:6, M.Sc Hum. Physiology – 2:6
2017-18	M.Sc Microbiology – 3:9, M.Sc Biochemistry – 3:6, M.Sc Hum. Physiology – 2:6
2018-19	M.Sc Microbiology – 3:9, M.Sc Biochemistry – 3:6, M.Sc Hum. Physiology – 2:6
2019-20	M.Sc Microbiology – 3:12, M.Sc Biochemistry – 3:12, M.Sc Hum. Physiology – 2:12
2020-21	M.Sc Microbiology – 3:12, M.Sc Biochemistry – 3:12, M.Sc Hum. Physiology – 2:12

17. Number of academic support staff (technical) and administrative staff sanctioned, filled and vacant:

Sr. No.	Posts	Sanctioned posts	Filled	Actual
1	Laboratory Assistant	2	2	2
2	Clerk (office)	3	3	3
3	Technical Assistant	1	Nil	Working on contract basis
4	Peon	1	Nil	Working on daily wage basis
5	Others - Librarian	1	1	1
	Animal Room Assistant	1	Nil	Working on daily wage basis
	Sweeper	2	Nil	Working on daily wage basis

18. Thrust areas of research as identified by the department:

**Ph.D in Biochemistry, Ph.D in Human Physiology, and Ph.D in Microbiology**

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, DBT etc):

Sr. No.	Name of the Principle Investigator (CO-investigator)	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in Lakh)	Remarks if any
1	Dr. Gayathri Devi. D	Screening of five indigenous plants of Kerala for trypsin inhibitors- their isolation, characterisation and effects on cancer cells	DST-SERB, Govt. of India 3 years 15-05-2014	18.3 Lakh	Completed in June 2017
2	Dr B S Harikumaran Thampi	Value addition of Pine apple Agro waste	Kerala State Planning board.	10.34	
		Proteases from cuttle fish ink	UGC	2.89	
3	Dr. Denoj Sebastian	“Cloning and Expression of azurin, a powerful anticancer agent from native Pseudomonas isolates and its characterization”.	UGC	3 Lakhs.	(2016) 2Years
4	Dr. G. Radhakrishna Pillai.	Augmentation of Proliferation, Mobilisation, Homing and Differentiation of stem cells for regenerative therapy using phyto-ethnopharmaceuticals	UGC	3 Lakhs	2016
5	Dr.E.Sreekumaran	"Neurochemical and neurobehavioural effects of food additive Monosodium glutamate on preadolescence: A study on Wistar rats"	UGC	3 Lakhs	2016

b) From International funding agencies: **Nil**

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

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

Scheme and Funding Agency	Non- Recurring	Recurring	Project Fellow	Total

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

**Animal House, Cell Culture Facility, General Instruments.**

22. Special research laboratories sponsored by / created by industry or corporate bodies. - **No**

**23. Publications:**

Sr. No.	Papers published in peer reviewed journals	Monographs, Books, Chapters in books	Citations	h-index	Impact factor range/Average Impact factor
1	<b>Dr. B.S. Harikumar Thampi</b> N. S. Rajendran and B.S. Harikumar Thampi. Pectin Extraction from stem pith of banana; structural and rheological charecterization in Modern trends in biological sciences	A handbook in connection with International Seminar. Eds. Smitha K.R. Sooryagatha Publishers, Kochi, 2019			ISBN : 978817255112 16
2	Seena T. Pandarekandy, P. G. Sreejesh, B. S. Harikumar thampi and E. Sreekumaran. Hypoglycaemic Effect of Glibenclamide: A Critical Study on the Basis of Creatinine and Lipid Peroxidation Status of Streptozotocin-induced Diabetic Rat Indian Journal of Pharmaceutical Sciences.			2017;79 (5):768-777	
3	Chithra Pillai, K.V. Faseela and Harikumar Thampi. Nutritional composition of selected traditional rice varieties of Kerala, Journal of tropical agriculture.			Vol 58 (1)	
4	Liji. P and B. S. Harikumar Thampi. Invitro evaluation of apoptotic induction of butyric acid derivatives in colorectal carcinoma cells. Anticancer research.	39. pp 3795-3801, 2019.			DOI: <a href="http://10.21873/anticanres.13528">http://10.21873/anticanres.13528</a>
5	Rinju R and B S Harikumar Thampi Characterization studies on starch extracted from the. stem of pineapple plant (Ananas comosus) at different. growth stages. Environmental Communication. Biosci.	Biotech. Res. Comm. 12(3): 801-808 (2019)			<a href="http://10.21786/bbrc/12.3/37">http://10.21786/bbrc/12.3/37</a>
6	I C Renu and B S Harikumar Thampi. Studies on Collagen Hydrolysis by Pineapple (Ananas Comosus) Stem Bromelain. International Journal of Pharmacy and Biological Sciences.	9 (1). pp 118-126, 2019.			

7	N. S. Rajendran and B.S. Harikumar Thampi. Extraction and characterisation of pectin from Banana peel. Carpathian journal of food science and technology.	2019, 11(4), 45-63.			<a href="https://doi.org/10.34302/2019.11.4.4">https://doi.org/10.34302/2019.11.4.4</a>
8	Liji P, Sinosh Skariyachan, Harikumar Thampi BS. Cytotoxic effects of butyric acid derivatives through GPR109A receptor in Colorectal Carcinoma cells by in silico and in vitro methods.	Journal of Molecular Structure 1243 (2021) 130832.			<a href="https://doi.org/10.1016/j.molstruc.2021.130832">https://doi.org/10.1016/j.molstruc.2021.130832</a>
9	Radhakrishnapillai Rinju, Balakrishnan-Saraswathi Harikumar Thampi. "Characteristics of Starch Extracted from the Stem of Pineapple Plant ( <i>Ananas comosus</i> ) - an Agro Waste from Pineapple Farms". Brazilian Archives of Biology and Technology.	Vol.64: e21190276, 2021.			<a href="https://doi.org/10.1590/1678-4324-2021190276">https://doi.org/10.1590/1678-4324-2021190276</a>
10	Rajendran Neravathu Sivan, Balakrishnan Saraswathy Harikumar Thampi. Extraction, rheological and textural analyses and grading of pectin from stem pith of banana. Ukrainian Food Journal.	2021, 10 (1). 124-135			
11	N. S. Rajendran, B. S. Harikumar Thampi. Pectin – Extraction from underground stem of banana and its structural, rheological and textural analyses and grading. Journal of Food Processing and Preservation.	2021, 45(4).			DOI: 10.1111/jfpp.15332
1	<b>Dr. Gayathri Devi. D,</b> M.S. Soumya, <b>Gayathri Devi. D,</b> K.M. Shafeekh, Suresh Das and Annie Abraham. Photodynamic therapeutic efficacy of symmetrical diiodinated squaraine in <i>in vivo</i> skin cancer models. Photodiagnosis and Photodynamic Therapy Peer reviewed	<b>18</b> , 302–309 (2017).			<b>Impact factor:</b> 2.589
2	Sajil K.K. and Gayathri Devi. D. Study on Antioxidant Activity of <i>Ipomoea sepiaria</i> Koenig Ex. Roxb. and <i>Evolvulus alsinoides</i> Linn. by DPPH, FRAP and ABTS Methods. Science, Technology and Development Peer reviewed	<b>9 (2)</b> , 103-107 (2020).			

3	Merin Rinky K., Jiji R and Gayathri Devi. D. <i>Garcinia cambogia</i> L. seeds as a source of oil and a trypsin inhibitory protein having microbicidal and antioxidant potentials. Science, Technology and Development Peer reviewed	9 (2), 76-81 (2020).	167	6	
4	Merin Rinky K, Lijith K P, Chanchitha Chandran and Gayathri Devi D. Identification of <i>Artocarpus hirsutus</i> and <i>Garcinia gummi-gutta</i> as the sources of trypsin inhibitory proteins whose activity can be modulated by industrial additives. Indian Journal of Natural Products and Resources (IJNPR) [Formerly Natural Product Radiance (NPR)]	[Accepted for publication on 31-03-2021].			
1	<b>Dr. Denoj Sebastian</b> Ambili M, Denoj Sebastian. Evaluation of sensitivity and cost effectiveness of molecular methods for the co-detection of waterborne pathogens in India., Marine Biotechnology	2021, (Accepted)			<a href="https://doi.org/10.1007/s10126-021-10078-9">https://doi.org/10.1007/s10126-021-10078-9</a> (Impact Factor: 3.6).
2	Rasiya K.T, Denoj Sebastian. Iturin and surfactin from the endophyte <i>Bacillus amyloliquefaciens</i> strain RKEA3 exhibits antagonism against <i>Staphylococcus aureus</i> , Biocatalysis and Agricultural Biotechnology,	2021, 102125			ISSN 1878-8181. (Scopus CiteScore 3.9) <a href="https://doi.org/10.1016/j.bcab.2021.102125">https://doi.org/10.1016/j.bcab.2021.102125</a>
3	Sreena C.P., Denoj Sebastian. Arecanut husk: A potential feedstock for enhanced production of endoglucanase by <i>Bacillus subtilis</i> MU S1. Environmental Technology & Innovation.,	Volume 19, August 2020			(Impact Factor: 5.263) <a href="https://doi.org/10.1016/j.eti.2020.100989">https://doi.org/10.1016/j.eti.2020.100989</a>
4	MC Sreena, D Sebastian. Cloning, expression and characterization of the anticancer protein azurin from an indigenous strain <i>Pseudomonas aeruginosa</i> SSj". International Journal of Peptide Research and Therapeutics.	2019.			<a href="https://doi.org/10.1007/s10989-019-09924-1">https://doi.org/10.1007/s10989-019-09924-1</a>
5	Sreena C.P., Denoj Sebastian. Jackfruit outer rind: A sustainable feedstock for fermentable sugar production using recombinant endoglucanase from <i>Bacillus subtilis</i> MU S1. Environmental Technology & Innovation Available online	9 August 2019,			<a href="https://doi.org/10.1016/j.eti.2019.100448">https://doi.org/10.1016/j.eti.2019.100448</a>
6	Ambili M and Denoj Sebastian. Assessment of bacteriological quality of drinking water from North Kerala, India.	Biosci. Biotech. Res. Comm. 12(2): 239-244 (2019).			DOI: <a href="http://dx.doi.org/10.21786/bbrc/12.2/5">http://dx.doi.org/10.21786/bbrc/12.2/5</a>

7	MC Sereena, D Sebastian. Evaluation of Anticancer and Anti-hemolytic Activity of Azurin, a Novel Bacterial Protein from <i>Pseudomonas aeruginosa</i> SSj. <i>International Journal of Peptide Research and Therapeutics</i> .	(2019) 1-8.			<a href="https://doi.org/10.1007/s10989-019-09851-1">https://doi.org/10.1007/s10989-019-09851-1</a> .
8	B Kavuthodi, D Sebastian. Biotechnological valorization of pineapple stem for pectinase production by <i>Bacillus subtilis</i> BKDS1: Media formulation and statistical optimization for submerged fermentation. <i>Biocatalysis and agricultural biotechnology</i> .	(2018) 16, 715-722.			<a href="https://doi.org/10.1016/j.bcab.2018.05.003">https://doi.org/10.1016/j.bcab.2018.05.003</a> .
9	Sereena .M.C, Denoj Sebastian. Characterization of anticancer compound azurin from indigenous isolate <i>Pseudomonas aeruginosa</i> SSj.	<i>International Journal of Life Sciences Research</i> . (2018).			Vol. 6, Issue 4, pp: (174-179). ISSN 2348-313X [Web Link]
10	Bijesh Kavuthodi, Denoj Sebastian. Response Surface Methodological Approach to Optimize the Critical Medium Components for Augmented Pectinase Production by <i>Bacillus subtilis</i> BKDS1.	<i>Journal of Pure and Applied Microbiology</i> , (2018) Vol. 12(2), p. 981-991.E			<a href="http://dx.doi.org/10.22207/JPAAM.12.2.62">http://dx.doi.org/10.22207/JPAAM.12.2.62</a>
11	Bijesh Kavuthodi and Denoj Sebastian. Review on bacterial production of alkaline pectinase with special emphasis on <i>Bacillus</i> species.	<i>Microbiological Communication. Biosci. Biotech. Res. Comm.</i> (2018); 11(1): 18-30.			<a href="http://dx.doi.org/10.21786/bbr.c/11.1/4">http://dx.doi.org/10.21786/bbr.c/11.1/4</a>
12	C.P.Sreena, Denoj Sebastian. Augmented cellulase production by <i>Bacillus subtilis</i> strain MU S1 using different statistical experimental designs.	<i>Journal of Genetic Engineering and Biotechnology</i> . 2018; 16(1).9-16.			<a href="https://doi.org/10.1016/j.jgeb.2017.12.005">https://doi.org/10.1016/j.jgeb.2017.12.005</a>
13	Shaheedha, Sreena C P, Denoj Sebastian. Poultry Feeds as Carriers of Antibiotic Resistant Enterobacteriaceae.	<i>Int J Pharma Res Health Sci</i> . 2017; 5 (6): 1949-53. Numbers in Scopus: 6	(2017-2020): 76	5	<a href="http://dx.doi.org/10.21276/ijprhs.2017.06.10">http://dx.doi.org/10.21276/ijprhs.2017.06.10</a>
1	<b>Dr. G. Radhakrishna Pillai.</b> S Renganathan, AS Srivastava, RG Pillai, Dhanwantharam kashayam, an Ayurvedic Polyherbal Formulation, Reduces Oxidative Radicals and Reverts Lipids Profile towards Normal in Diabetic Rats	<i>Biochemistry and biophysics reports</i> , 22, 2020, 100755. Peer Reviewed			ISSN/ ISBN No. 2405-5808 1
2	Sabu V.....RG Pillai, Combinatorial Action of Triterpenoid, Flavonoid, and Alkaloid on Inflammation.	<i>Natural Product Communications</i> 2019: 1-9 Peer Reviewed			ISSN/ ISBN No. 15559475 .6



3	<b>RG Pillai</b> , Antiproliferative actions of Ziziphus jujube fruit extract is mediated through alterations in Bcl2-Bax ration and through the activation of caspases.	Chem Biol Let, 2020, 7(1), 41-46. 0.8			ISSN/ ISBN No. 2347-9825
4	<b>RG Pillai</b> , Curcumin prolongs graft survival in mice models of corneal allografts by suppressing the expression of inflammatory factors,	JETIR, 2019, 6(6).			
5	<b>S Renganathan, RG Pillai</b> , Anti oxidant activities of Dhanwantaram Kashayam –an Ayurvedic polyherbal formulation alleviates diabetic complications in rats	2020			2251-6581
1	<b>Dr. E. Sreekumaran</b> P.G. Sreejesh and E. Sreekumaran. Effect of monosodium glutamate on striato-hippocampal acetylcholinesterase level in the brain of male Wistar albino rats and its implications on learning and memory during aging. Bioscience Biotechnology Research Communications,	11(1): 76-82 (2018).			
2	Greeshma C, Varun, Sreekumaran E. Supplementation of zinc induces retinoic acid-mediated differentiation of rat bone marrow mesenchymal stem cells (MSCS) into insulin producing cells (ipcs) in-vitro. International Journal of Research in Ayurveda and Pharmacy.	pages 109-112, 2017.			DOI: 10.7897/2277-4343.08150; 8 (Suppl 1),
1	<b>Emmanuel Simon</b> Curcumin and its synthetic analogue dimethoxycurcumin differentially modulates antioxidant status of normal human peripheral blood mononuclear cells E Simon, P Aswini, VB Sameer Kumar, G Mankadath Free radical research 52 (5),		44	2	583-591, April 2018.

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)

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

Sl. No.	Conferences, symposia, seminars and workshops	International/ National	Attended/ Presented paper/ chaired session/ Resource person

1	<b><u>Dr. Gayathri. Devi. D, Asst. Professor</u></b> Microbiology Association Inauguration, EMEA, Kondotty, March 2018	State	Invited talk (Presented a paper)
2	International Conference on Advances in Biosciences, EMEA, Kondotty, February 2019	International	Chaired a session
3	ICAISET-19, Sree Ayyappa College, Chengannur, December 2019	International	Presented a paper
4	Two-Day Virtual International Conference On Energy, Environment And Health, Sree ayyappa College, Chengannur, September 2020	International	Chaired a session
1	<b><u>Dr. Denoj Sebastian</u></b> Seminar on intellectual property rights conducted by St. Pius X College, Rajapuram	State	Resource person
2	Lecture on research methodology to the Short Term Course in Research Methodology on 17.12.2018	State	Resource person
3	Seminar on amazing microbes, SN College, Kannur. 11.02.2019	State	Resource person
4	Seminar on research methodology- Reference management systems and bibliometric analysis. June 16 & 17, 2020, Kannur University	State	Resource person
5	Lecture on publications and bibliometric analysis on online FDP programme organised by Farook College. 25/07/2020	State	Resource person
1	<b><u>Dr. E. Sreekumaran</u></b> “Role of teachers in pollution mitigation” on 13 <sup>th</sup> February, 2018.		Resource person
2	“What we ought to know as teachers.” on 14 <sup>th</sup> February, 2018.		Invited talk
3	“Science, Technology, pollution and solutions .” at the Pazhassiraja college, Batherry, Wayanad district, Kerala for the National Science Day Celebrations entitled he synergy of science and technology 1920 – 2020” - on 27 <sup>th</sup> February, 2018		Resource person and Chief Guest for a talk
4	A talk on “Beat plastic pollution.” on 26 <sup>th</sup> June, 2018.		Resource person
5	“Science, Technology, pollution and solutions.” in a KSCSTE sponsored seminar on 9 <sup>th</sup> March, 2018.		Resource person
6	UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic “Role of teachers in pollution mitigation” on 3 <sup>rd</sup> July, 2018.		Resource person
7	UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic “Role of teachers in pollution mitigation” on 15 <sup>th</sup> September, 2018.		Resource person
8	SAFI Institute of Advanced Study (SIAS), Rasiya Nagar, Vazhayoor East PO, Via Ramanattukara,		Resource person

	Malappuram district Kerala – 673 633., for the Key note address on the Microbiology students' association (Microbiome) inauguration on 1 <sup>st</sup> October, 2018.		
9	EMEA college of Arts and Sciences, Kondotty for a talk on "Science, Technology, pollution and solutions." in a National seminar on 5 <sup>th</sup> December, 2018.	National	Resource person
10	EMEA college of Arts and Sciences, Kondotty for Inaugurating the Biochemistry Association, 2018-19 a talk on 28 <sup>th</sup> January, 2019.		Resource person
11	Orientation programme No.105 at the UGC-Academic Staff College, University of Calicut., on the topic "Pollution and our role as responsible citizens" on 6 <sup>th</sup> February, 2019.		Resource person
12	Three days at the Aryabhata Hall, Central science complex, University of Calicut on "Microscopy" to the 9 <sup>th</sup> standard school students who excelled in USS scholarship examination with distinction, in the Three day Science Residential Camp 'ASTRA JALAKAM' conducted by the State Institute of Educational Training (SIET), Government of Kerala from 26 to 28 <sup>th</sup> November, 2018.		Resource person
13	The Department of Education, University of Calicut., for a talk on "Pollution: Our role as responsible citizens." on the occasion of World Environment Day on 6 <sup>th</sup> June, 2019.		Resource person
14	Neuro science lecture series at the Department of Biotechnology, Cochin University of Science and Technology, Cochin on the topic "Alzheimer's disease: A neurodegenerative disorder." on 31 <sup>st</sup> July, 2018.		Invited talk
15	UGC sponsored refresher course in History & Cultural studies conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic "Role of teachers in pollution mitigation" on 19 <sup>th</sup> September, 2018.		Resource person
16	Was invited to the Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram., to give a hands on training of patch clamp technique on 28 <sup>th</sup> and 29 <sup>th</sup> September, 2018.		Invited
17	UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic "Role of teachers in pollution mitigation" on 3 <sup>rd</sup> November, 2018.		Resource person
18	UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic "Role of teachers		Resource person

	in pollution mitigation” on 21 <sup>st</sup> November, 2019.		
19	UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic “Role of teachers in pollution mitigation” on 25 <sup>th</sup> October, 2019.		Resource person
20	UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic “Role of teachers in pollution mitigation” in the month of January, 2020.		Resource person

27. Details of teachers participated in Refresher courses, Orientation courses, Seminars, Workshops, Conferences at national and international levels.(participant, presented paper, chaired the session)

Sl. No.	Conferences, symposia, seminars and workshops	International/ National	Attended/ Presented paper/ chaired session/ Resource person
1	<b><u>Dr. Gayathri. Devi. D, Asst. Professor</u></b> Kerala Science Congress, Thalassery, January 2018	State	Attended
2	Three day Workshop on Redesigning of Courses for Outcome Based Education, University of Calicut and Kerala Higher Education Council, February 2019	State	Attended
3	Two day Workshop on Revised Accreditation Framework of NAAC and Quality Systems in Higher Education, University of Calicut, March 2019	State	Attended
4	Online Hands on training Programme on Learning Management System- Moodle, Department of Computer Science and IQAC, University of Calicut, 25 <sup>th</sup> May -9 <sup>th</sup> June 2020	State	Attended
5	3-Day Online Training Programme on the Topic “CBCSS-UG Regulations 2019 MHRD TLC, University of Calicut , July 2020	University	Attended
6	International Webinar on Photodynamic Therapy of Cancer using Natural Photosensitizers, Alphonsa College Pala, July 2020	International	Attended
7	International Webinar on <b>“Autoimmunity and Antimicrobial Response Factors”</b> Department of Biochemistry and Industrial Microbiology in association with IQAC, Sree Narayana College for Women, Kollam, July 2020	International	Attended

8	Covid -19 Diagnosis: Fundamentals, Current Diagnostic Techniques and Future Directions, Nirmala College Muvattupuzha, August 2020	State	Attended
9	International Webinar on “NOVEL TOOLS OF MOLECULAR BIOLOGY IN THERAPEUTICS AND MOLECULAR BREEDING” Organised by Department of Biochemistry, Markaz Arts and Science College, Athavanad, 5th September 2020	International	Attended
10	Prof. K. T. Augusti endowment lecture-2020 ‘The emerging role of the complement system in depression and other neuropsychiatric disorders’ Organized by Kerala Academy of Sciences, Thiruvananthapuram December 11th, 2020	National	Attended
11	Discovery and Development of Phyto-Pharmaceuticals with special reference to Reverse Pharmacology, System Biology and Nutrigenomics’ Organized by Kerala Academy of Sciences, Thiruvananthapuram In association with Inter University Centre for Genomics & Gene Technology (IUCGGT) University of Kerala, Thiruvananthapuram November 2nd, 2020	National	Attended
1	<b><u>Dr. Denoj Sebastian</u></b> Proteomics workshop from 26/06/2017 to 01/07/2017, IIT Bombay	National	Attended
2	Online Hands on training Programme on Learning Management System-Moodle, Department of Computer Science and IQAC, University of Calicut, 25 <sup>th</sup> May -9 <sup>th</sup> June 2020	State	Attended
3	Web of Science certification basic series training, 11. March 2020	International	Attended
4	Web of Science certification advanced series training, 15. April 2020	International	Attended
5	‘Open Access Initiatives, Digital Resources & Publishing Processes’ workshop by organized by Internal Quality Assurance Cell and Cambridge	National	Attended

	University Press on <b>10<sup>th</sup> September 2020</b>		
6	Online Training Course in “microRNA Data Analysis and Experimental Design” organized by Centre for Stem Cell and Cancer Genomics, AMI Bioscience, Coimbatore on : July 22-26, 2020	National	Attended
1	<b><u>B S Harikumar Thampi</u></b> Presented a poster entitled “Proximate and anti-nutrients analysis of pineapple plant ( <i>ananas comosus</i> ) stem and leaves”, in 50 <sup>th</sup> Annual International Conference of Nutrition Society of India (NSI) at ICMR-National Institute of Nutrition, Jamai-Osmania, Hyderabad, on November 15-17, 2018.	International	Presented a poster
2	“Characterization of starch from an agro-waste-the pineapple plant stem” in 30 <sup>th</sup> Kerala Science Congress at Govt. Brennen College, Thalassery on January 28-30, 2018.	State	Presented paper
3	“XRD Studies on pineapple plant stem starch at different growth stages” in a national seminar on “Recent Trends in Food Technology-Processing Preservation and Byproduct Utilization” conducted by SAFI Institute of Advanced Study, Vazhayur on January 10-11, 2018.	National	Presented paper
4	“Thermal and Rheological Studies on Starch Isolated from Pineapple Plant Stem-An Agrowaste from Pineapple Farms” in an International Conference on Recent Trends in Agriculture, Veterinary and Life Sciences-2017” at Carmel College for Women, Nuvem, Goa on December 28-30, 2017.	International	Presented paper
5	“XRD studies on Starch isolated from different regions of pineapple plant stem” in an International Seminar on Environment, Society and Economy-AMBIENTE-2017, conducted by St.Joseph’s College for Women, Alappuzha, Kerala on December 18-19, 2017.	International	Presented paper
6	Presented a poster entitled “Rheological properties of pineapple plant stem starch and their comparison with corn starch” in a national seminar, conducted	National	Presented a poster

	by Inter University Centre for Genomics & Gene Technology, University of Kerala, Kariavattom on March 1-3, 2017.		
7	Extraction and Characterisation Of Pectin From Underground Stem of Banana. -Poster presented at the International Conference of Nutrition Society of India during November 2018.	International	Presented a poster
8	'Biochemical profiling of selected indigenous varieties of rice ( <i>Oryza sativa</i> L) found in Kerala' at second international NIN centenary conference on Aligning food systems for healthy diets and improved nutrition, National Institute of Nutrition, Hyderabad. Nov 11 – 13, 2018.	International	
9	International conference on Nutraceuticals and Chronic diseases. Butyric acid derivatives induces Caspase-3 dependent apoptotic pathway in HCT116 cell lines. Goa. (September 1-3, 2017)	International	
10	Kerala Childrens Science congress, University of Calicut Food and Microbes. Dept. of Life Sciences, University of Calicut. (April 20-22, 2017)	State	
11	Science Awareness week Sponsored by KSCST & Kerala higher education Department. Life and Evolution. St.Mary's College, Sulthan Batheri (07/11/2017)	State	
12	Science Awareness week Sponsored by KSCST & Kerala higher education Department. Life and Evolution SN College, Chelannur. (10/11/2017)	State	
13	Sastrajalakam Sponsored by Kerala State education Department Biomolecules Department of Physics, University of Calicut. (27/11/18)	State	
14	Information Literacy programme. Quality and Ethical issues of Research. Christ College, . (15/11/18)	State	
15	Value addition of agro waste for food and feed- International Conferance on food and Industrial Biotechnology, MACFAST, Thruvalla, 24-26 Nov	International	

2019.		
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28. Participation of teachers in various academic activities as members of committees at University level, State level, National level, International level bodies. (give details)

Members of academic council	- Dr. B.S. Harikumar Thampi, Dr. Denoj Sebastian
Board of Studies Chairman	- Dr. B.S. Harikumar Thampi, Dr. Denoj Sebastian, Dr. E. Sreekumaran
Directorate of Admission	- Dr. Denoj Sebastian
Director, CDC	- Dr. B.S. Harikumar Thampi
Hostel Warden	- Dr. Emmanuel Simon
Planning Board Members	- Dr. B.S. Harikumar Thampi, Dr. Denoj Sebastian.
Covid Cell	- Dr. E. Sreekumaran

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

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

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

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
<b>Dr. B.S. Harikumar Thampi</b>	UGC grant			one-month period programme
1. Extension activity on Health and Environmental awareness.	12 <sup>th</sup> plan 2016			
2. Kerala Childrens Science congress, University of Calicut Food and Microbes.	KSCSTE.		Dept. of Life Sciences, University of Calicut.	April 20-22, 2017
3. Erudite Scholar in Residence programme	KSHEC			18/02/2020 to 21/02/2020
<b>Dr. G. Radakrishna Pillai</b>	Planning and economic affairs, Govt. of Kerala			10-2014 to 12-2017
1. Investigations on the development of effective biogas technology for the high ranges of Kerala- a translational project using biotechnology for the benefit of the tribes of Wayanad				
2. Augmentation of proliferation, mobilisation, homing and differentiation of stem cells for regenerative therapy using phyto-ethnopharmaceuticals	UGC			7/2016 to 09/2017
3. Techniques and Processes in Biomedical research	MHRD, Government of India			July 2019



33. Student profile programme-wise at PG

PG (M.Sc)	Applications Received	No. of students Admitted	Seats Available	Male	Female	Total	Year
Microbiology	CAP	10 (1 Foreign student)	9	–	10	10	2016
Biochemistry	CAP	6	6	–	6	6	
Hum. Physiology	CAP	6	6	–	6	6	
Microbiology	CAP	9	9	–	9	9	2017
Biochemistry	CAP	6	6	–	6	6	
Hum. Physiology	CAP	6	6	–	6	6	
Microbiology	CAP	9	9	1	8	9	2018
Biochemistry	CAP	6	6	1	5	6	
Hum. Physiology	CAP	6	6	–	6	6	
Microbiology	CAP	12	12	1	11	12	2019
Biochemistry	CAP	12	12	2	10	12	
Hum. Physiology	CAP	9	12	–	9	9	
Microbiology	CAP	12	12	2	10	12	2020
Biochemistry	CAP	12	12	1	11	12	
Hum. Physiology	CAP	9	12	2	7	9	

34. Year-wise results of students at PG:

PG	Year	Appeared	Passed	Pass %	Grade %			
					O	A	B	C
Microbiology	2016	9	9	100%				
Biochemistry		6	6	100%				
Hum. Physiology		5	5	100%				
Microbiology	2017	9	9	100%				
Biochemistry		6	5	83%				
Hum. Physiology		6	5	83%				
Microbiology	2018	10	10	100%				
Biochemistry		6	5	83%				
Hum. Physiology		6	5	83%				
Microbiology	2019	9	9	100%				
Biochemistry		6	6	100%				
Hum. Physiology		6	5	83%				
Microbiology	2020	9	9	100%				
Biochemistry		5	5	100%				
Hum. Physiology		4	4	100%				

35. Information about M. Phil. programme:

Year	Subject	Applications Received	No. of students admitted	Male	Female	Total
2016	–	--	Nil	–	–	--
2017	Biochemistry	Through entrance	2	1	1	2

	Physiology	Through entrance	1	–	1	1
2018	Microbiology	Through entrance	1	–	1	1
2019	Microbiology	Through entrance	1	–	1	1
	Biochemistry	Through entrance	1	–	1	1
2020	Physiology	Through entrance	1	1	–	1
	Microbiology	Through entrance	1	–	1	1
	Biochemistry	Through entrance	4	–	4	4
	Physiology	Through entrance	2	–	2	2

36. Information about Ph. D. programme :

Year	Applications Received	No. of students admitted	Male	Female	Total
2016	Exempted from entrance	7	1	6	7
2017	Through entrance	4	2	2	4
2018	Exempted from entrance	1	1	–	1
2019	–	–	–	–	--
2020	Through entrance	4	–	4	4

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

Year	M.Phil	Ph.D.	Male	Female	Total
2016	1	1	–	2	2
2017	--	2	–	2	2
2018	2	1	1	2	3
2019	1	3	2	2	4
2020	–	4	1	3	4

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	–	–	–	–
PG - 2016	19	2	--	1
2017	18	3	–	--
2018	16	3	–	–
2019	24	9	–	--
2020	18	10	5	--
M.Phil - 2016	–	–	–	--
2017	3	–	–	--
2018	1	–	–	--
2019	3	–	–	--
2020	7	–	–	--
Ph. D - 2016	7	–	–	--
2017	4	–	–	--
2018	1	–	–	--
2019	--	–	–	--
2020	4	–	–	--

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

Year	MPSC/UPSC	NET/ SET	GATE	Other Exams DBT Fellowship/ KSCSTE/ARS NET	Total
2016	–	–	–	–	--
2017	–	1	–	–	--
2018	–	–	–	5	–
2019	–	–	–	–	–
2020	–	–	1	1	–

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	--	2	
2017	--	5	
2018	--	--	
2019	--	3	
2020	--	9	

41. Diversity of Faculty:

Teaching faculty	%
from the same university	2
from other universities within the State	4
from other States	--
from outside the country	--

42. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. / D.Lit.: 6

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

- a) Central Library Books and Journals, etc, relevant to Department : Books-36, Journals-7
- b) Departmental Library (books, journals etc.) : Text book-2645,  
Reference Book – 256  
Number of titles – 2587  
Number of research thesis - 115
- c) Computers and Internet facilities for staff : LAN connection system
- d) Total number of class rooms : 9
- e) Class rooms with ICT facility : All class rooms
- f) Students' laboratory : 5
- g) Research laboratories : 15
- h) Seminar Hall : 1
- i) Smart class room : 2
- j) Any other facility LCDs, : 3

44. List of post-doctoral students and Research Associates

a) Post-doctoral. Students- Nil

Sr. No.	Name of the Faculty	Post-doctoral Students	Research Topic

1			
2			

**b) Research Associates : Nil**

Sr. No.	Name of the Faculty	Research Associates	Research Topic
1			
2			

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

2016 admission – E-grantz – 20, Muslim Girls – 9, 2017 admission – E-grantz – 17, 2018 admission – E-grantz – 9, 2019 admission – E-grantz – 25. Muslim Girls – 8, 2020 – E-grantz – 30, Muslim Girls – 6, State Merit – 3

**46. Curricular Aspects:**

- a) Does the faculty take initiative in curriculum development process? - **Yes**
- b) Is curriculum suitable to make students globally competitive in the Subject?  
If yes, substantiate.- **Modifying the syllabus in a term of three years.**
- c) Does the department offer program with sufficient no. of electives options. - **Yes**
- d) While framing curriculum, is feed-back taken from stakeholder's viz. Students/Alumni/Parents/Employers considered? - **Yes**
- e) What is the frequency of curriculum revision? (3/4/5 years or more) - **3 years**
- f) Does the curriculum have emerging thrust areas, including interdisciplinary areas? (If yes, elaborate). - **Yes**

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

- 1) Number of teachers preparing & following Academic Teaching plan - **6**
- 2) How many teachers use the following teaching methods? - **All Teachers**
  - a) Interactive lecture method using blackboard, Group discussions, Problem solving, Seminars.
  - b) Use ICT methods to support lectures.
- 3) Does the Department have Peer review processes? If yes, are the suggestions effectively used to improve the teaching quality? : **Yes**
- 4) Does the department have any mechanism to ensure that entire syllabus is completed? : **Yes**
- 5) Do you offer Bridge/Remedial courses? If yes, Give details.: **Yes**
- 6) What is the method for conducting internal evaluation?  
**Seminar, Assaignment, test papers, Viva-voce .**

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

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

Dr. B.S. Harikumaran Thampi	6
Dr. Denoj Sebastian	7
Dr. E. Sreekumaran	5
Dr. Gayathri Devi. D	6
Dr. Emmanuel Simaon	2
Dr. G. Radhakrishna Pillai	5

- 7) Give details of “beyond syllabus scholarly activities” of the department.  
- **Administrative charges**

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

1	Dr. A.P. Krishna	K.S.Hegde Medical Academy, Mangalore
2	Dr. T.P. Baburaj	DRDO Scientist
3	Dr. Bindu M Kutty	NIMHANS Bangalore
4	Dr. Haridasan. C.	Chemin Chemicals, UK
5	Dr. Saji Kumar	National University, Singapore
6	Dr. Shobi. V.	National Institute of Nutrition
7	Dr. Pradeep Punakkal	Ramalingaswami Fellow, Sreechitra Tirunal Institute for Medcial Sciences & Technology
8	Dr. Rajeevan T Narayanan	Marie Sklodowska Curie Fellow - Center of Advanced European Studies and Research.
9	Dr. Suchithra. T.V.	NIT Calicut
10	Dr. Reena. K.	Managing Director, Areena Hygiene Solution

50. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts : - Erudite Scholar in Residence Programme, involving Dr. Ajay Goel, Professor and Chair of Molecular Diagnosis Therapeutics and Translational Oncology, Beckman Research Institute, City of Hope Comprehensive Cancer Centre in Duarte, CA, USA, held from 18<sup>th</sup> to 20<sup>th</sup> February, 2020 at the Department of Life Sciences.
51. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored? - By continuous evaluation
52. Highlight the Special facilities (if, any) of the Department. - Most modern animal house facility for housing different experimental animals, separate labs for PG, M.Phil and Research, separate instrumentation facility and cell culture facility.
53. Highlight the unique features of the department.- Offering PG, M.Phil and Ph.D in three different disciplines like Microbiology, Biochemistry and Human Physiology.
54. State the Innovative practices adopted in the department. - Very good lab and store management system.

55. Highlight the participation of students and faculty in extension activities.- Students and teachers are involving extension activities like the prevention of life style disorders and communicable deceases like Covid. The major activities including the sucessful functioning of Covid Cell headed by Dr. E. Sreekumaran, Associate Professor of this department. The department is engaged in the campaign brake the chain by preparing sanitizer and supplying it to the whole University offices and departments since the Govt. of Kerala longued the campaign from March 2020 onwards.

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

- a. Strengths: Running of three different programms - PG, M.Phil and Ph.D in three different disciplines like Microbiology, Biochemistry and Human Physiology.
- b. Weaknesses: Shortage in permanent faculty
- c. Opportunities: To strengthen the required teaching faculty as per the workload.
- d. Challenges: Availability of funds.

57. Future plans of the department:

- a. Long term plans - To create new teaching post and technical post.
- b. Short term plans - Improving the infrastructural facility and to go for more external funded project to improve the research environment.

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

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



Head of Department  
Head of the department  
Department of Life Sciences  
University of Calicut  
Kerala, PIN- 673 636

*[Handwritten signature and date 05/11/2024]*

## **Format for preparing the faculty profile:**

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

1. Name of the faculty: G. Radhakrishna Pillai
2. Name of the Department: Department of Life Sciences
3. Educational qualifications: MSc PhD
4. Present position: Assistant Professor
5. Address for correspondence: Department of Life Sciences
6. E-mail and contact number: [pillai\\_radhakrishna@hotmail.com](mailto:pillai_radhakrishna@hotmail.com) 9495554891
7. Specialization: Biochemistry
8. Total teaching experience: 27 years
9. Courses taught: MSc Physiology
10. Research experience:
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

Total numbers: 10

1. Title: Investigations on the Bioremediation of gold industry effluents using bacteria  
Funding agency: UGC  
Amount: 5 lakhs  
Year: 1999
2. Title: Effect of heat shock proteins on protecting cardiomyocytes  
Funding agency: STEC  
Amount: 2 lakhs  
Year: 1999
3. Title: Developing virus mediated methods for suppressing allogenic response in organ recipients  
Funding agency: Action Research  
Amount: 75 lakhs  
Year : 2001
4. Title: Investigations on the pharmacokinetics of BGC945  
Funding agency: BACR  
Amount: 95 lakhs  
Year: 2004

5. Title: Investigations on the Development of effective Biogas Technology for the high ranges of Kerala- a translational project using biotechnology for the benefit of the tribes of Wayanad  
Funding agency: Kerala State Planning Board  
Amount: 10.6lakhs  
Year: 2014
6. Title: Augmentation of Proliferation, Mobilisation, Homing and Differentiation of stem cells for regenerative therapy using phyto-ethnopharmaceuticals  
Funding agency: UGC  
Amount: 3 Lakhs  
Year: 2016
7. Title: Student learning ability and diet  
Funding agency: Ealign Council  
Amount: 3 Lakhs  
Year: 2010
8. Title: Healthy heart  
Funding agency: British Heart Foundation  
Amount: 2 Lakhs  
Year: 2011
9. Title: Potentiate Femina  
Funding agency: Big Lottery Fund  
Amount: 9 Lakhs  
Year: 2010
10. Title: Influence of diet on the behaviour of school children  
Funding agency: Ealing Council  
Amount: 6 Lakhs  
Year: 2009
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.#	Name	Title of research	Date of Registration	Date of declaration
1	Smitha Renganathan	“Comparative Evaluation Of The Effect Of Bone Marrow Derived Stem Cells, Se2 And Dhanwantaram Kashaya In Diabetic Rats”.	15.05.2014	23/06/2021

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

Sl. No.	Name of Student	Title of research	Date of Registration
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1	Anusha.T.P.	Investigations on antioxidant potential of various active principles isolated from Hyptis suaveolens (L) poit.	04.05.2017
2	Aparna Menon. A.	Investigations on the formulation and drug loading features of silicon nanoparticles from diatom frustules.	17.08.2017

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

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

<b>Sl. No</b>	<b>Title of Lecture /Academic Session</b>	<b>Title of Conference / Seminar etc</b>	<b>Organised by</b>	<b>Whether international /national</b>
1	Orientation course at ASC	Class room management	Bharathidasan University	National
2	Orientation course at ASC	Effective teaching and assessment	Goa University	National
3	Refresher courses	NLP for teachers	Calicut University	National
4	Refresher courses	Technology oriented education	Calicut University	National
5	Refresher courses	AfL and AoL	Calicut University	National
6	Orientation course	International teacher	Jamia Milia Islamia	National
7	Chaired a session Colloquium on Crystallography	National Colloquium on 100 years of Crystallography	Department of Biotechnology and Microbiology	National
8	Quality sustenance in research: ethics and practices	Research scholars meet	Research council, St Thomas College, Thrissur	Regional
9	Application of neurolinguistic programming: case studies on the impact of NLP in higher education	National workshop on psychotherapeutic intervention strategies	Department of Psychology, University of Kerala	National
10	Molecular mechanisms underlying the bioactivities of Garcinia mongostiana: an insilico, in vitro and in vivo approach	International Seminar on Neutraceuticals and Chronic diseases	Swamy Rama Himalayan University	International
11	Real-time PCR- an effective tool in quantifying the expression of immunomodulatory genes	Human cell culture and molecular biology	GIOSTAR, Ahmedabad	National
12	Endocrine dysfunction and sexuality	National conference on Sexual medicine	Department of Psychology, University of Kerala	National

13	Effective management of blue green infrastructure investment pathways for restructuring Kerala Economy	International conference on Restructuring Kerala economy: Alternative perspectives	Department of IUCAE, University of Kerala	International
14	ICT enabled teaching and learning in higher education	National Seminar on Indian Education System	Bharatheeya Vichara Kendra	National
15	Nanotechnology to empower the elderly to overcome Alzheimer's and ageing	National workshop on Recent trends in Nano Technology for Age Old	Centre for enabling Technology for the aged, Cochin University	National
16	Innovative approaches in molecular biological experiments	National workshop on Methodology of Biological Research	PG and Research Department of Zoology, Victoria College Palakkad	National
17	Curcumin for Ocular degenerative diseases	International Conference on Pharmacognosy, Phytochemistry and Natural Products	Omics International	International
18	Impact of De-nationalisation and Globalisation on Science Education and Research in Developing countries	International Seminar on Higher Education in a developing economy	Inter University Centre for Alternative Economics, University of Kerala, Trivandrum	International
19	Energy efficiency and conservation	Energy Conservation awareness program	Sastravedi, Kozhikode	Regional
20	Molecular therapy for vision ailments	Molecular therapeutics: from bench to bed- the technique in an industrial perspective	Department of Biotechnology, University of Kerala	National
21	Inculcating scientific temper to support specially abled persons	National Science day celebration	Sree Vyasa NSS College, Vadakkamchery	Regional
22	Analytical methods in cell and organ culture	In vitro toxicology: concepts and Practices with emphasis on Hepatotoxicity, Enterotoxicity and Multiple Organ toxicity with IdMOC	Department of Zoology, University of Kerala	International
23	Physiology of Sex Chairing session	National conference on Sexual medicine	Department of Psychology, University of Kerala	National
24	Impact of migration on health Chairing session	International conference on Restructuring Kerala economy: Alternative perspectives	Department of IUCAE, University of Kerala	International

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.

### Recent Major Research Publications:

Sl. No.	Name of Authors Title	Journal with volume & page nos.	ISSN/ ISBN No.	Whether peer reviewed. Impact factor, if any	Impact factor	Whether Scopus indexed
1	S Renganathan, AS Srivastava, RG Pillai  Dhanwantharam kashayam, an Ayurvedic Polyherbal Formulation, Reduces Oxidative Radicals and Reverts Lipids Profile towards Normal in Diabetic Rats	Biochemistry and biophysics reports, 22, 2020, 100755.	2405-5808	Peer reviewed	1	Yes
2	Sabu V.....RG Pillai, Combinatorial Action of Triterpenoid, Flavonoid, and Alkaloid on Inflammation,	Natural Product Communications 2019: 1-9	15559475	Peer Reviewed	.6	Yes
3	<b>RG Pillai</b> , Antiproliferative actions of Ziziphus jujube fruit extract is mediated through alterations in Bcl2-Bax ration and through the activation of caspases.	Chem Biol Let, 2020, 7(1), 41-46.	2347-9825	0.8	0	Yes
4	<b>1. RG Pillai</b> , Curcumin prolongs graft survival in mice models of corneal allografts by suppressing the expression of inflammatory factors,	JETIR, 2019, 6(6).	<b>2349-5162</b>	0	0	No
5	Pillai RG., Stem cells for ocular tissue engineering and regeneration	Curr Top Med Chem, 11 (3): 1606-1620	1568-0266	3.826	0	Yes
6	Pillai RG, Foster M, Perumal M, Mitchell F, Leyton J, Aibgirhio FI, Golovko O, Jackman AL, Aboagya EO, Imagign pharmacodynamics of the alpha-folate receptor-targeted thymidylate synthase inhibitor BGC945	Cancer Res, 2008, 15: 68 (10): 3827-34	0008-5472	9.284	8	Yes
7	Pillai RG, Beutelspacher SC, Larkin DF, George AJ, Expression of the chemokine antagonist vMIPII using a non-viral vector can prolong corneal allograft survival,	Transplantati on, 2008, 15: 85 (11): 1640-1647	0041-1337	3.78	4	Yes

8	Pillai RG, Beutelspacher SC, Larkin DF, George AJ, Upregulation of chemokines expression in murine cornea due to mechanical trauma or endotoxin	Br J Ophthalmol, 2008, 92(2): 259-264	1468-2079	2.809	4	Yes
9	Alam AK, Florey O, Weber M, Pillai RG, Chan C, Tan PH, Lechler RI, McClure MO, Haskard DO, George AJ, Knockdown of mouse VCAM-1 by vector-based siRNA	Transplan Immunol, 2006, 16(3-4): 185-193	0966-3274	1.832	9	No
10	Perumal M, Pillai RG, Barthel H, Latigo JR, Forster M, Jackman AL, Aboagye AO, Redistribution of nucleoside transporters to the cell membrane provides a novel Approach for imaging Thymidylate synthase inhibition by Positron Emission Tomography	Cancer Res, 2006, 66 (17): 8558-8564	0008-5472	9.284	5	No
11	Leyton J, Alao AJ, Costa MD, Latigo JL, Perumal M, Pillai RG, He Q, Lam PA, Workman P, Vigushin DM and Aboagye EO, The histone deacetylase inhibitor LAQ824 inhibits cellular proliferation in HCT116 xenografts as determined by 3'-Deoxy-3'-[18F] fluorothymidine Positron emission Tomography (FLT-PET)	Cancer Res, 2006, 66 (15): 7621-7629	0008-5472	9.284	11	No
12	Price YK, Pillai RG and Aboagye EO, Elevation of radio labeled thymidine uptake in IF-1 fibrosarcoma and HT29 colon adenocarcinoma cells after treatment with thymidylate synthase inhibitors	Eur J Nucl Med Mol Imaging	1619 - 7070	5.217	3	No
13	Beutelspacher SC, Pillai RG, Watson MP, Tan PH, Tsang J, McClure MO, George AJT and Larkin DFK, Function of indolamine 2,3 -dioxygenase in corneal allograft rejection and prolongaion of allograft survival by overexpression	Eur J Immunol, 2006, 36(3), 690-700	1521-4141	4.518	8	No
14	Pillai RG, Srivastava AS, Carrier E and Chauhan DP, Induction of apoptosis in human lung cancer cells by Curcumin	Cancer Lett, 2004, 208 (2): 163-170	0304 - 3835	5.016	3	Yes
15	Pillai RG, Redasoft cloning vector – a review	J Immunol Methods	0022-1759	2.2	1	Yes

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

Cell Biology and Biochemistry- A Technical Perspective	CDST	978 93 5288 202-1
Vyakthithwa Vikasanam- Vividha Margangal (വ്യക്തിത്വ വികസനം വിവിധ മാർഗങ്ങൾ)	NSS	978 93 5346 311-3
Protocols in Cell and Molecular Biology	Organising Committee, National Workshop on Advances in Cell and Molecular Biology	978 93 5351 499-0

Techniques and Processes in Biological Research	Convener, National workshop on Cell and Molecular Biology	978 93 5382 418-1
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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.	Title	Agency	Period	Grant /Amount mobilized (Rs lakh)	Whether policy document / patent as outcome
1	Investigations on the development of effective biogas technology for the high ranges of Kerala- a translational project using biotechnology for the benefit of the tribes of Wayanad	Planning and economic affairs, Government of Kerala	10-2014 to 12-2017	10.652	No
2	Augmentation of proliferation, mobilisation, homing and differentiation of stem cells for regenerative therapy using phyto-ethnopharmaceuticals	UGC	7/2016 to 09/2017	3	No
3	Techniques and Processes in Biomedical research	MHRD, Government of India	July 2019	8	No

27. Number of collaborations: 3

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.

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Assistant Professor of Microbiology,  
Department of Life Sciences  
University of Calicut, Thenjipalam  
Kerala – 673635  
Phone 9744444361, 7510444361, 7025444361  
Email: drds@uoc.ac.in

## Dr. Denoj Sebastian

Kochukarottu (H), 32/444-D, Melecherakunnu Road, Bharathan Bazar, Chelavoor, Calicut, Kerala – 673571, INDIA. Ph: 0495-2730672

1 Name of the faculty : **Dr. Denoj Sebastian**

- 2 Name of the Department : Life Science
- 3 Educational qualifications : M.Sc., Ph.D (Microbiology)
- 4 Present position : Assistant Professor
- 5 Address for correspondence : Assistant Professor  
Assistant Professor of Microbiology,  
Department of Life Sciences  
University of Calicut, Thenjipalam  
Kerala – 673635
- 6 E-mail and contact number : Phone 9744444361, 7510444361, 7025444361, Email:  
drds@uoc.ac.in
- 7 Specialization : Microbiology
- 8 Total teaching experience : 18 Years
- 9 Courses taught: : M.Sc. Microbiology  
M.Sc. Biochemistry  
M.Sc. Human Physiology  
M.Phil Microbiology  
Ph.D Microbiology
- 10 Research experience: : University of Calicut Guideship order no.  
CDC/B2/2526/2011-R.R.G dated 15.02.2012  
Completed: Ph.D (5), M.Phil (11), M.Sc.  
Dissertations (49)  
Ongoing: Ph.D (6), M.Phil (1), M.Sc. Dissertations (12)
- 11 Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. : UGC Innovative research project. (2016) “Cloning and Expression of azurin, a powerful anticancer agent from native Pseudomonas isolates and its characterization.” (PI), 3 Lakhs
- 12 Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. : 1. UGC Minor Research Project (2006) Topic: “Isolation and optimization of a microbial consortia for the dry anaerobic digestion of municipal solid waste”. Co-PI – 1 Lakhs  
2. UGC Minor Research Project (2006) Topic: “Impact of old age homes in the family structure of Kerala”. Co-PI- 95,000

- 13 Number of students awarded Ph.D. degree: **Ph.D Awarded (4)**  
 Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree:
1. Akhila B Rajan (Co-Guidance) -Isolation screening and optimization of cholesterol degrading bacteria from the coastal areas of kerala. (07-09-2019)
  2. Sereena MC-Cancer growth suppression using purified azurin from native *Pseudomonas isolates*. (07-09-2019)
  3. Bijesh K-Exploitation of indigenous strain, *Bacillus subtilis* BKDS1 for augmented pectinase production using agro-waste. (07-09-2019)
  4. Sreena C.P-Improvement of biocatalytic efficacy of endoglucanase from indigenous strain *Bacillus subtilis* MU S1 and its application in saccharification of agro-wastes. (24-05-2019)
- 14 Number of students registered for Ph.D. degree: **Ph.D Ongoing (7)**  
 Name of the student, topic of research, date of registration.
1. Abhini KN (Submitted-Co-Guidance) -‘Isolation screening and optimization of some medicinal plant endophytes for the production of l-asparaginase enzyme. (07-09-2019)
  2. Ambili M. A multiplex PCR based molecular epidemiological study on the waterborne diseases in the Malabar region of Kerala (Inspire SRF)
  3. Rasiya K.T. Characterization of antimicrobial peptides of endophytic bacteria isolated from mangroves of Kadalundi (CSIR-SRF).
  4. Nithya Jayan. Development of a microbial remediation system for the enhanced biodegradation of polyethylene bags. (Part-time).
  5. Abdul Bari K.K. Synergistic activity of antimicrobial peptides and antibiotics against multiple drug resistant bacteria. (Part-time).
  6. Smitha Chacko. Isolation, purification and evaluation of synergistic anticancer activity of L-glutaminase from soil bacteria against Leukemic cells. (Part-time, Co-Guide).
  7. Vijisha M.C. Isolation, purification and evaluation of the synergistic anticancer activity of L-Asparaginase from soil actinomycetes against Leukemic cells. (Part-time, Co-Guide)
- 15 Provide information as indicated in 11 and 12 above. : Nil

- 16 Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.
1. Kalampalath Vincy, Kavuthodi Bijesh, Denoj Sebastian. Production purification and molecular weight determination of Bacteriocin from *Bacillus subtilis* BKDS1. Management Of Bacterial Wilt In Ginger. September 2017. [[Web Link](#)]
  2. Sreena C.P and Denoj Sebastian. Augmented cellulase production by *Bacillus subtilis* MU S1 using response surface methodology. Proceedings of the Two days' National Seminar on "Recent trends in Microbiology" At: University of Calicut. September 2017.
  3. Vincy Kalampalath, Bijesh Kavuthodi and Denoj Sebastian. Probiotic properties of *Bacillus subtilis* BKDS1, a potent bacteriocin producing stain isolated from dump yards of vegetable and fruit wastes. Proceedings of the Two days' National Seminar on "Recent trends in Microbiology" At: University of Calicut. September 2017.
  4. Nithya Jayan and Denoj Sebastian. Mysterious ability of fungal species to degrade low density polyethylene bags. Proceedings of the Two days' National Seminar on "Recent trends in Microbiology" At: University of Calicut. September 2017.
  5. K.P. Vimal, Sreena C.P and Denoj Sebastian. Bayesian molecular clock divergence dating of *Bacillus* spp. using 16s rRNA gene sequences. Proceedings of the Two days' National Seminar on "Recent trends in Microbiology" At: University of Calicut. September 2017.
  6. Denoj Sebastian. Synthetic Biology -Programming life to solve global challenges. Two day National Conference on Exploring Microbes -2020 (NCEM-2020) At: Karpagam University, Coimbatore - 641021. August 2016.
  7. Sreena C.P, Denoj Sebastian. Biological decolorization of malachite green by *Bacillus subtilis* MU S1. Conference: Biospark 16 UGC sponsored National Seminar on "Nanotechnology meets Microbiology" At: EMEA College of Arts and Science, Kondotty, Malappuram. February 2016. DOI: [10.13140/RG.2.1.4469.2246](https://doi.org/10.13140/RG.2.1.4469.2246)
  8. Kalampalath Vincy, Kavuthodi Bijesh and Denoj Sebastian. Probiotic Efficiency of *Bacillus subtilis* BKDS1, a potent Pectinolytic strain isolated from Dump yards of vegetable wastes. BIOSPARK 16. UGC Sponsored National Seminar On Nanotechnology Meets Microbiology At: EMEA College Kondotty. February 2016. [[Web Link](#)]
  9. Kavuthodi Bijesh, Ansha Antony, Malavika N.J, Malavika N.J, Denoj Sebastian. Exploitation of agro-wastes as a cost effective media for exo-pectinase production by submerged fermentation using *Bacillus Subtilis* BKDS1. Conference: 28 th Kerala Science Congress At: Calicut University. January 2016 [[Web Link](#)]



- 17 Innovative processes developed in teaching and learning : Flipped classroom approach with moodle integration.
- 18 Participation in curricular development: :
  1. Member, Academic Council, University of Calicut. (2015 Onwards)
  2. Member, Faculty of Science, University of Calicut (2016 Onwards)
  3. Chairman, Board of studies in Microbiology (Combined PG & UG), University of Calicut (2016 Onwards)
  4. Member, Board of studies in Medical Microbiology and Medical Biochemistry under Faculty of Medicine, University of Calicut (2019 Onwards)
  5. Member, Board of studies in Immunology, University of Calicut (2019 Onwards)
  6. Member, Board of studies in Molecular Biology, University of Calicut (2019 Onwards)
  7. Member, Board of studies in microbiology (combined) of Kannur University (2008-2010, 2011-2013, 2013-2015)
  8. Member, RAC, Amala Cancer Centre. Thrissur.
- 19 Participation in co-curricular and extra-curricular activities. :
  1. Member, Annual Report Editorial Committee, University of Calicut (2020)
  2. Member, CCSS Academic Committee, University of Calicut (2019 Onwards)
  3. Member, RUSA advisory board, University of Calicut
  4. Member, DPC, Department of Computer Science (VC Nominee, 2019 onwards)
  5. Member, IQAC, University of Calicut,
  6. Member, CSIF committee, University of Calicut
  7. Director, Directorate of Admissions, University of Calicut
  8. DBT nominee, Institutional Biosafety Committee, NIT Calicut
  9. DBT nominee, Institutional Biosafety Committee, Central University of Kerala, Kasargod
  10. Nodal officer, University of Calicut for National Academic Depository.
- 20 Refresher and Orientation courses attended: :
  1. Orientation – UGS ASC, University of Calicut (03-08-2006 to 30-08-2006)
  2. Refresher, UGC ASC, University of Calicut (04-08-2011 to 24-08-2011)
  3. Short term course (09/03/2017 to 15/03/2017)
- 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.

1. Ambili M, Denoj Sebastian. Evaluation of sensitivity and cost effectiveness of molecular methods for the co-detection of waterborne pathogens in India., *Marine Biotechnology*, 2021, (Accepted)(Impact Factor: 3.6). <https://doi.org/10.1007/s10126-021-10078-9>
2. Rasiya K.T, Denoj Sebastian. Iturin and surfactin from the endophyte *Bacillus amyloliquefaciens* strain RKEA3 exhibits antagonism against *Staphylococcus aureus*, *Biocatalysis and Agricultural Biotechnology*, 2021, 102125, ISSN 1878-8181. (Scopus CiteScore 3.9) <https://doi.org/10.1016/j.bcab.2021.102125>
3. Sreena C.P., Denoj Sebastian. Arecanut husk: A potential feedstock for enhanced production of endoglucanase by *Bacillus subtilis* MU S1. *Environmental Technology & Innovation*. Volume 19, August 2020, (Impact Factor: 5.263) <https://doi.org/10.1016/j.eti.2020.100989>
4. MC Sreena, D Sebastian. Cloning, expression and characterization of the anticancer protein azurin from an indigenous strain *Pseudomonas aeruginosa* SSj". *International Journal of Peptide Research and Therapeutics*. 2019. (Impact Factor: 1.931) <https://doi.org/10.1007/s10989-019-09924-1>
5. Sreena C.P., Denoj Sebastian. Jackfruit outer rind: A sustainable feedstock for fermentable sugar production using recombinant endoglucanase from *Bacillus subtilis* MU S1. *Environmental Technology & Innovation*. Volume 16, November 2019, (Impact Factor: 5.263) <https://doi.org/10.1016/j.eti.2019.100448>
6. Ambili M and Denoj Sebastian. Assessment of bacteriological quality of drinking water from North Kerala, India. *Biosci. Biotech. Res. Comm.* 12(2): 239-244 (2019). DOI: <http://dx.doi.org/10.21786/bbrc/12.2/5>
7. MC Sreena, D Sebastian. Evaluation of Anticancer and Anti-hemolytic Activity of Azurin, a Novel Bacterial Protein from *Pseudomonas aeruginosa* SSj. *International Journal of Peptide Research and Therapeutics*,(2019) 1-8. (Impact Factor: 1.931) <https://doi.org/10.1007/s10989-019-09851-1>.
8. B Kavuthodi, D Sebastian. Biotechnological valorization of pineapple stem for pectinase production by *Bacillus subtilis* BKDS1: Media formulation and statistical optimization for submerged fermentation. *Biocatalysis and agricultural biotechnology*. (2018) 16, 715-722. (Scopus CiteScore 3.9) <https://doi.org/10.1016/j.bcab.2018.05.003>.
9. Sreena .M.C, Denoj Sebastian. Characterization of anticancer compound azurin from indigenous isolate *Pseudomonas aeruginosa* SSj. *International Journal of Life Sciences Research*. (2018). Vol. 6, Issue 4, pp: (174-178). ISSN 2249-212X. <http://www.ijlsc.com>

- 23 Books published: with ISBN No., Without ISBN No., Chapters in books.
1. Ambili. M and Denoj Sebastian. 2015. Microbiological Analysis Of Drinking Water From Malabar Region Of Kerala. In Biodiversity and Evaluation: In proceedings of the International Conference on Perspectives and Paradigm shifts (Bijoy Nandan et al. eds.). Held from 2nd to 3rd of December 2015. pp 193-95. ISBN 978-93-80095-70-7
  2. Sreena.M.C and Denoj Sebastian. 2015. Bioprospecting The Azu Gene In Environmental Samples From Western Ghats of South India. In Biodiversity and Evaluation: In proceedings of the International Conference on Perspectives and Paradigm shifts (Bijoy Nandan et al. eds.). Held from 2nd to 3rd of December 2015. pp 196-98. ISBN 978-93-80095-70-7
  3. Bijesh Kavuthodi, Malavika N.J, Ansha Antony and Denoj Sebastian. 2015. Biotechnological prospective of watermelon rind for economical production of exopectinase using *Bacillus subtilis* BKDS1 by submerged Fermentation. In Biodiversity and Evaluation: In proceedings of the International Conference on Perspectives and Paradigm shifts (Bijoy Nandan et al. eds.). Held from 2nd to 3rd of December 2015. pp 223-26. ISBN 978-93-80095-70-7
  4. C.P.Sreena and Denoj Sebastian. 2015. Cost-Effective Cellulase Production By *Bacillus Subtilis* MU S1 Using Lignocellulosic Biomass Residues. In Biodiversity and Evaluation: In proceedings of International Conference on Perspectives and Paradigm shifts (Bijoy Nandan et al. eds.). Held from 2nd to 3rd of December 2015. pp 268-70. ISBN 978-93-80095-70-7
  5. Sreena MC, Sreena CP and Denoj Sebastian. 2016. Bioprospecting Of Native Pseudomonas Isolates From Western Ghats For Anticancer Agents. In Sustainable Biotechnology. LAP LAMBERT Academic Publishing (K. Mashhoor., Ruba Badharudheen and Joysi S Job. eds.). pp 68-72. ISBN: 978-3-659-89742-9
  6. Sreena CP, Sreena MC and Denoj Sebastian. 2016. Arecanut Husk: A Potential Low Cost Substrate For Economical Production Of Hydrolytic Enzymes By *Bacillus Subtilis* MU S1. In Sustainable Biotechnology. LAP LAMBERT Academic Publishing (K. Mashhoor., Ruba Badharudheen and Joysi S Job. eds.). pp 73-78. ISBN: 978-3-659-89742-9

- 24 Patents Applied/Granted: : Nil  
National. International,  
commercialized:
- 25 Consultancy services : Nil  
provided and revenue  
generated:
- 26 Conferences, seminars, : Co-ordinator- 2 day national seminar on Recent trends in  
symposia and workshops microbiology (26<sup>th</sup> & 27<sup>th</sup> September, 2017)  
organized as  
convener/coordinator:
- 27 Number of collaborations: : Nil
- 28 Awards /recognitions : Nil  
received: International,  
National, State, University  
level.

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### **Format for preparing the faculty profile:**

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

- 1 Name of the faculty: Dr.E.Sreekumaran
- 2 Name of the Department: Life Sciences
- 3 Educational qualifications: M.Sc Ph.D.
- 4 Present position: Associate Professor
- 5 Address for correspondence: Coral, Manikulathuparambu, Thenjipalam Post, Malappuram,  
Kerala – 673636.
- 6 E-mail and contact number: [drsreekumaran@uoc.ac.in](mailto:drsreekumaran@uoc.ac.in) 9539254721
- 7 Specialization: Physiology
- 8 Total teaching experience: 18 years
- 9 Courses taught: M.Sc. Human Physiology
- 10 Research experience: 11 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: 3

Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.

Sl.#	Name	Title of research	Date of Registration	Date of declaration
1.	Rahmath A	Neuroprotective effect of Moringa oleifera Bedd. and Vitex negundo L. in scopolamine induced cognitive impairment and oxidative stress in Wistar albino rats.	09-04-2010	16-05-2017
2.	Sreejesh PG	Behavioural and neurochemical effects of monosodium glutamate on striatohippocampal region of the brain and the protective effect of Myristica fragrance Houtt.	01-11-2012	07-01-2020
3.	Seena TP	Evaluation of antidiabetic and antioxidant properties of an ayurvedic preparation, Dasamoolarishta: A prospective study on streptozotocin induced Wistar albino rats.	09-04-2010	17-08-2017

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

Sl. #	Name	Title of research	Date of registration
1.	Sneha, GK	Neuropharmacological study of selected herbal preparations in amnesic rat model	15-12-2016
2.	Ajayikumar Babu, TK	Pathophysiological action of momoeopathic medicines in the symptomatological treatment of polycystic ovarian syndrome: A cross sectional study.	11-05-2018
3.	Arya, K	Isolation and characterization of anticancer compounds from Trichopus zeylanicus and Clerodendrum infortunatum and its effect on human cancer cell lines.	09-10-2020
4.	Bhasura, K	Isolation and characterisation of anti-cancer agents from selected plants of Fabaceae acting on selected human cancer cell lines.	03-11-2020

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

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

1. Resource person of UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic “Role of teachers in pollution mitigation” on 13<sup>th</sup> February, 2018.
2. Invited talk at the Bharathiya Vidhya Bhavan, Bhavan’s Ramakrishnan Institute of Teacher Education, Ramanattukara, Calicut., on the topic “What we ought to know as teachers.” on 14<sup>th</sup> February, 2018.
3. Resource person and Chief Guest for a talk on “Science, Technology, pollution and solutions .” at the Pazhassiraja college, Batherry, Wayanad district, Kerala for the National Science Day Celebrations entitled he synergy of science and technology 1920 – 2020” sponsored by the Kerala State Council for Sciences, Technology and Environment and supported by the Department of Science and Technology on 27<sup>th</sup> February, 2018.
4. Resource person at the MES Mampad college, Malappuram district, Kerala for a talk on “Beat plastic pollution.” on 26<sup>th</sup> June, 2018.
5. Resource person at the EMEA college of Arts and Sciences, Kondotty for a talk on “Science, Technology, pollution and solutions.” in a KSCSTE sponsored seminar on 9<sup>th</sup> March, 2018.
6. Resource person of UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic “Role of teachers in pollution mitigation” on 3<sup>rd</sup> July, 2018.
7. Resource person of UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic “Role of teachers in pollution mitigation” on 15<sup>th</sup> September, 2018.
8. Resource person at the SAFI Institute of Advanced Study (SIAS), Rasiya Nagar, Vazhayoor East PO, Via Ramanattukara, Malappuram district Kerala – 673 633., for the Key note address on the Microbiology students’association (Microbiome) inauguration on 1<sup>st</sup> October, 2018.
9. Resource person at the EMEA college of Arts and Sciences, Kondotty for a talk on “Science, Technology, pollution and solutions.” in a National seminar on 5<sup>th</sup> December, 2018.
10. Resource person at the EMEA college of Arts and Sciences, Kondotty for Inaugurating the Biochemistry Association, 2018-19 a talk on 28<sup>th</sup> January, 2019.
11. Resource person of Orientation programme No.105 at the UGC- Academic Staff College, University of Calicut., on the topic “Pollution and our role as responsible citizens” on 6<sup>th</sup> February, 2019.
12. Resource person for three days at the Aryabhata Hall, Central science complex, University of Calicut on “Microscopy” to the 9<sup>th</sup> standard school students who excelled in USS scholarship examination with distinction, in the Three day Science Residential Camp ‘SASTRA JALAKAM’ conducted by the State Institute of Educational Training (SIET), Government of Kerala from 26 to 28<sup>th</sup> November, 2018.
13. Resource person at the Department of Education, University of Calicut., for a talk on “Pollution: Our role as responsible citizens.” on the occasion of World Environment Day on 6<sup>th</sup> June, 2019.

14. Invited talk as a part of Neuro science lecture series at the Department of Biotechnology, Cochin University of Science and Technology, Cochin on the topic "Alzheimer's disease: A neurodegenerative disorder." on 31<sup>st</sup> July, 2018.
  15. Resource person of UGC sponsored refresher course in History & Cultural studies conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic "Role of teachers in pollution mitigation" on 19<sup>th</sup> September, 2018.
  16. Was invited to the Rajiv Gandhi Centre for Biotechnology (RGCB), Thiruvananthapuram., to give a hands on training of patch clamp technique on 28<sup>th</sup> and 29<sup>th</sup> September, 2018.
  17. Resource person of UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic "Role of teachers in pollution mitigation" on 3<sup>rd</sup> November, 2018.
  18. Resource person of UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic "Role of teachers in pollution mitigation" on 21<sup>st</sup> November, 2019.
  19. Resource person of UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic "Role of teachers in pollution mitigation" on 25<sup>th</sup> October, 2019.
  20. Resource person of UGC sponsored Orientation Programme conducted by the HRDC at the UGC- Academic Staff College, University of Calicut., on the topic "Role of teachers in pollution mitigation" in the month of January, 2020.
  21. Resource person 4<sup>th</sup> Induction programme of the UGC Human resource development centre, University of Calicut., on the topic "Environmental consciousness: The role of teachers in integrating SDG into their teaching and research." on 23<sup>rd</sup> March, 2021.
  22. Meghanath R and Sreekumaran. Oral presentation of a paper on "Phytochemical, antioxidant and GC-MS profiling of aqueous and methanolic extract of invasive weed, Mikania micrantha K, stem, leaf and flower." at the International webinar on phytochemistry- Impacts and applications organized by the Kerala Academy of Sciences, Thiruvananthapuram on 27 & 28<sup>th</sup> September, 2021.
  23. Resource person 11<sup>th</sup> Refresher course in Human rights programme of the UGC Human resource development centre, University of Calicut., on the topic "The role of teachers in shaping human behaviour." on 1<sup>st</sup> October, 2021.
  24. Resource person 6<sup>th</sup> Induction programme of the UGC Human resource development centre, University of Calicut., on the topic "The role of teachers in shaping human behaviour." on 2<sup>nd</sup> October, 2021.
- 
- 17 Innovative processes developed in teaching and learning. : Nil
  - 18 Participation in curricular development: Board of studies of Human Physiology, Chairman.
  - 19 Participation in co-curricular and extra-curricular activities. Active in a National organization Breakthrough Science Society to propagate science and scientific temper. Co ordinator of

National Service Scheme Open unit, University of Calicut., and actively involved in relief works in the flood affected areas of Kerala. NSS Programme Officer of the University of Calicut.

- 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.

1) Basheer, MP., Soopy, K, Pradeep Kumar, KM, Sreekumaran, E and Ramakrishna,T. Vitamin B complex and homocysteine status and Cognitive impairment in the elderly among Indian population. Journal of Neuroscience and Behavioral Health. DOI: 10.5897/JNBH2015.0130; Article Number: 33A828D61832; ISSN 2141-2286; Vol. 8(4), pp. 20-26, November 2016.

P.G. Sreejesh and E. Sreekumaran. Effect of monosodium glutamate on striato-hippocampal acetylcholinesterase level in the brain of male Wistar albino rats and its implications on learning and memory during aging. Bioscience Biotechnology Research Communications, 11(1): 76-82 (2018).

Greeshma C, Varun, Sreekumaran E. Supplementation of zinc induces retinoic acid-mediated differentiation of rat bone marrow mesenchymal stem cells (MSCS) into insulin producing cells (ipcs) in-vitro. International Journal of Research in Ayurveda and Pharmacy. DOI: 10.7897/2277-4343.08150; 8 (Suppl 1), pages 109-112, 2017.

P. K. Jabbar, T. P. Seen, N. Abilash, C. Jayakumari, E. Sreekumaran, P.G.Sreejesh, V. D. Darwin, G. Ramesh and R. Sreenath. Evaluation of detrimental factors of drinking water and the effect of blood glucose levels and anxiety status: an experimental study in wistar albino rats using elevated plus maze. International Journal of Pharmaceutical Sciences and Research, 2021; Vol. 12(11): 5880-5893. E-ISSN: 0975-8232; P-ISSN: 2320-5148.

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

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## **Format for preparing the faculty profile:**

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

1. Name of the faculty: Dr. Gayathri Devi. D
2. Name of the Department: Department of Life Sciences
3. Educational qualifications: M.Sc., M.Phil. and Ph. D. in Biochemistry
4. Present position: Assistant Professor in Biochemistry
5. Address for correspondence: Harichandanam, Thadathil, Thenhippalam, Malappuram 673636, Kerala
6. E-mail and contact number: gayathrianith@gmail.com, gayathrivaisakh@yahoo.com, cue3894@uoc.ac.in
7. Specialization: Biochemistry
8. Total teaching experience: 8 years
9. Courses taught: M.Sc., M.Phil. and Ph. D. Biochemistry
10. Research experience: 14 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

Title : Screening of five indigenous plants of Kerala for trypsin inhibitors-  
their isolation, characterisation and effects on cancer cells

Date of sanction : 15-05-2014

Duration : 3 years (2014-2017)

Funding Agency : DST-SERB

Amount Sanctioned : Rs. 18,30,000/-

PI or Co-PI : 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: Nil

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

Number : 4

Sl.No.	Name of the student	Topic of research	date of registration
1.	Chanchitha Chandran	Isolation of an Effective Trypsin Inhibitor from Selected Plant Seeds of Malabar Region and <i>in vitro</i> Studies on its Effects on Cancer Cells	09-11-2016
2.	Neethu George	Development and Characterisation of Phyto-Nano Compounds and Studies on their Enzyme Inhibitory Activity	20-12-2016
3.	Sajil.K.K	Studies on the Effect Of <i>Ipomoea Sepiaria</i> Koenging Ex. Roxb. And <i>Evolvulus Alsinoide</i> Linn. on Colon Cancer Cells <i>in vitro</i>	09/08/2017
4.	Merin Rinky K.	Studies on phototoxic effect of psoralen from <i>Ficus carica</i> L. And fagopyrin from <i>Fagopyrum esculentum</i> moench on skin cancer cells	16.08.2017

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

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

Title : Screening of five indigenous plants of Kerala for trypsin inhibitors- their isolation, characterisation and effects on cancer cells

Date of sanction : 15-05-2014

Duration : 3 years (2014-2017)

Funding Agency : DST-SERB

Amount Sanctioned : Rs. 18,30,000/-

PI or Co-PI : PI

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

Sl. No.	Conferences, symposia, seminars and workshops	International / National	Attended/ Presented paper/ chaired session/ Resource person
1.	Kerala Science Congress, Thalassery, January 2018	State	Attended
2.	Microbiology Association Inauguration, EMEA, Kondotty, March 2018	State	Invited talk (Presented a paper)
3.	International Conference on Advances in Biosciences, EMEA, Kondotty, February 2019	International	Chaired a session
4.	Three day Workshop on Redesigning of Courses for Outcome Based Education, University of Calicut and Kerala Higher Education Council, February 2019	State	Attended
5.	Two day Workshop on Revised Accreditation Framework of NAAC and Quality Systems in Higher Education, University of Calicut, March 2019	State	Attended
6.	ICAISSET-19, Sree Ayyappa College, Chengannur, December 2019	International	Presented a paper
7.	Online Hands on training Programme on Learning Management System- Moodle, Department of Computer Science and IQAC, University of Calicut, 25 <sup>th</sup> May -9 <sup>th</sup> June 2020	State	Attended
8.	3-Day Online Training Programme on the Topic "CBCSS-UG Regulations 2019 MHRD TLC, University of Calicut , July 2020	University	Attended
9.	International Webinar on Photodynamic Therapy of Cancer using Natural Photosensitizers, Alphonsa College Pala, July 2020	International	Attended
10.	International Webinar on " <b><i>Autoimmunity and Antimicrobial Response Factors</i></b> " Department of Biochemistry and Industrial Microbiology in association with IQAC, Sree Narayana College for Women, Kollam, July 2020	International	Attended

11.	Covid -19 Diagnosis: Fundamentals, Current Diagnostic Techniques and Future Directions, Nirmala College Muvattupuzha, August 2020	State	Attended
12.	International Webinar on “NOVEL TOOLS OF MOLECULAR BIOLOGY IN THERAPEUTICS AND MOLECULAR BREEDING” Organised by Department of Biochemistry, Markaz Arts and Science College, Athavanad, 5th September 2020	International	Attended
13.	Two-Day Virtual International Conference On Energy, Environment And Health, Sree Ayyappa College, Chengannur, September 2020	International	Chaired a session
14.	Prof. K. T. Augusti endowment lecture-2020 ‘The emerging role of the complement system in depression and other neuropsychiatric disorders’ Organized by Kerala Academy of Sciences, Thiruvananthapuram  December 11th, 2020	National	Attended
15.	Discovery and Development of Phyto-Pharmaceuticals with special reference to Reverse Pharmacology, System Biology and Nutrigenomics’ Organized by Kerala Academy of Sciences, Thiruvananthapuram In association with Inter University Centre for Genomics & Gene Technology (IUCGGT) University of Kerala, Thiruvananthapuram November 2nd, 2020	National	Attended
16.	International Webinar on Phytochemistry - Impacts and Applications. Kerala Academy of Sciences, 27th -28th September, 2021.	International	Attended

17. Innovative processes developed in teaching and learning.: Nil

18. Participation in curricular development: Was a member of the team to revise syllabi for B.Sc. and M.Sc. Biochemistry of Calicut University.

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

20. Refresher and Orientation courses attended:

Sl. No.	Name of the Course	Duration
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1.	Orientation Programme conducted by UGC-HRDC, Calicut University	28 days (from 19-10-2016 to 15-11-2016)
2.	Refresher Course in Life Sciences conducted by UGC-HRDC, Calicut University	21 days (from 02-12-2015 to 22-12-2015)
3.	Refresher Course in Life Sciences conducted by UGC-HRDC, Calicut University	14 days (from 18-10-2019 to 31-10-2019)
4.	Short Term Course on Strategic Planning for Quality Improvement, UGC HRDC, University of Calicut	11.02.2021 to 17.02.2021
5.	Short Term Course on Soft Skills Development for Assistant / Associate Professors, UGC HRDC, University of Calicut	19-03-2021 to 25-03-2021

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.

### Publications

1. M.S. Soumya, **Gayathri Devi. D.**, K.M. Shafeekh, Suresh Das and Annie Abraham. Photodynamic therapeutic efficacy of symmetrical diiodinated squaraine in *in vivo* skin cancer models. *Photodiagnosis and Photodynamic Therapy* **18**, 302–309 (2017). **Peer reviewed**, DOI: [10.1016/j.pdpdt.2017.03.009](https://doi.org/10.1016/j.pdpdt.2017.03.009) **Impact factor:** 3.631, ISSN: 1572-1000
2. Sajil K.K. and **Gayathri Devi. D.** Study on Antioxidant Activity of *Ipomoea sepiaria* Koenig Ex. Roxb. and *Evolvulus alsinoides* Linn. by DPPH, FRAP and ABTS Methods. *Science, Technology and Development* **9 (2)**, 103-107 (2020). **Peer reviewed**, <http://www.journalstd.com/gallery/19-feb2020.pdf> **ISSN:** 0950-0707
3. Merin Rinky K., Jiji R and **Gayathri Devi. D.** *Garcinia cambogia* L. seeds as a source of oil and a trypsin inhibitory protein having microbicidal and antioxidant potentials. *Science, Technology and Development* **9 (2)**, 76-81 (2020). **Peer reviewed**, <http://www.journalstd.com/gallery/14-feb2020.pdf> **ISSN:** 0950-0707
4. Merin Rinky K, Lijith K P, Chanchitha Chandran and **Gayathri Devi D.** **Identification of *Artocarpus hirsutus* and *Garcinia gummi-gutta* as the sources of trypsin inhibitory proteins whose activity can be modulated by industrial additives.** *Indian Journal of Natural Products and Resources (IJNPR)* [Formerly Natural Product Radiance (NPR)]

12(2), 195-201(2021). Peer reviewed, <http://nopr.niscair.res.in/handle/123456789/57742>.  
ISSN: 0976-0512 (Online) 0976-0504 (Print).

**Number of citations: 184**

**h-index: 6**

**Papers Presented/Published in National/ International Conferences/Proceedings**

1. Chanchitha Chandran and **Gayathri Devi. D.** Screening and Isolation of Trypsin Inhibitors from Some Indigenous Plants of Kerala, World Congress on Drug Discovery and Development, Bangalore, November 2016.
2. Chanchitha Chandran and **Gayathri Devi. D.** Chromatographic purification of Trypsin Inhibitors (TIs) from *Atrocarpus hirsutus* and *Garcinia cambogia*, International Conference on Nutraceuticals and Chronic Diseases, Goa, September 2017.
3. Merin Rinky K and **Gayathri Devi. D.** Effects of Different Additives on Partially Purified Trypsin Inhibitor from *Atrocarpus hirsutus* Seeds, 30<sup>th</sup> Kerala Science Congress, Thalassery, January 2018.
4. Merin Rinky K, Smitha. P and **Gayathri Devi. D.** Isolation, partial purification and Characterization of Trypsin Inhibitor from *Atrocarpus hirsutus* Seeds and its Effect on selected microbes. International Seminar on Recent Biochemical Approaches in Therapeutics. Thiruvananthapuram, 23<sup>rd</sup>-25<sup>th</sup> January 2018.
5. Lijith K.P. and **Gayathri Devi. D.** *Garcinia cambogia* Trypsin Inhibitor: Partial Purification and Modulation of its Activity by Different Additives. International Seminar on Recent Biochemical Approaches in Therapeutics. Thiruvananthapuram, 23<sup>rd</sup>-25<sup>th</sup> January 2018.
6. **Gayathri Devi. D.** Viral Carcinogenesis, Invited talk at EMEA College of Arts and Science, Kondotty, March 2018.
7. Chanchitha Chandran and **Gayathri Devi. D.** Purification and Characterization of Trypsin Inhibitor from *Garcinia cambogia*. Trends in Biochemical and Biomedical Research: Advances and Challenges, Department of Biochemistry, Institute of Sciences, Banaras Hindu University, Varanasi February 13-15, 2018.

8. Sajil K.K. and **Gayathri Devi. D.** Study on Antioxidant Activity of *Ipomoea sepiaria* Koenig Ex. Roxb. and *Evolvulus alsinoides* Linn. by DPPH, FRAP and ABTS Methods. International Conference on advanced Innovation in Science, Engineering and Technology. Sree Ayyappa College Eramalikkara, 8th-9th November 2019.
9. Merin Rinky K., Jiji R and **Gayathri Devi. D.** *Garcinia cambogia* L. seeds as a source of oil and a trypsin inhibitory protein having microbicidal and antioxidant potentials. International Conference on advanced Innovation in Science, Engineering and Technology. Sree Ayyappa College Eramalikkara, 8th-9th November 2019.
10. Neethu George and **Gayathri Devi. D.** Facile Green Synthesis Of Silver Nanoparticles And Their Characterization. Two day Virtual International Conference on Energy, Environment and Health. Sree Ayyappa College Eramalikkara, 11th-12th September 2020.
11. Merin Rinky K and **Gayathri Devi. D.** Comparative Study of Phototoxic Potentials of Plant Extracts for Photodynamic Therapy. International Seminar on Recent Biochemical Approaches in Therapeutics. Thiruvananthapuram, 9th -11th February, 2021.
12. Merin Rinky K and **Gayathri Devi. D.** Photodynamic therapy for microbial infections: Natural photosensitizers as effective candidates. International Webinar on Phytochemistry -Impacts and Applications. Kerala Academy of Sciences, 27th -28th September, 2021.

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

#### **Book Chapter Authored**

1. Perspectives in Life Sciences, UGC HRDC, University of Calicut in association with SPCS Kottayam, ISBN: 978-93-88992-90-9
  2. International Webinar on Phytochemistry- Impacts and Applications. Proceedings and Abstracts Published by: Kerala Academy of Sciences, Thiruvananthapuram, Kerala, India (www.kas.org.in) ISBN: 978-81-951912-5-3
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.: 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.

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### **Format for preparing the faculty profile:**

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

1. Name of the faculty: Dr. Emmanuel Simon
2. Name of the Department: Department of Life Sciences
3. Educational qualifications: PhD
4. Present position: Assistant Professor
5. Address for correspondence: Nazareth, Mudra corner, Thenhipalam, Malappuram
6. E-mail and contact number: [emmoos123@gmail.com](mailto:emmoos123@gmail.com), 9447655339
7. Specialization: Biochemistry
8. Total teaching experience: 12 years
9. Courses taught: Analytical biochemistry, Cell biology and cell signaling, Molecular biology and genetics, Cancer biology.
10. Research experience: 14 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.: 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. : Nil
16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person. **Chaired a session in Two days national seminar on “Recent trends in microbiology” September 2017.**



17. Innovative processes developed in teaching and learning. ICT enabled teaching : Nil
18. Participation in curricular development: Participated in framing the syllabus : 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. **Curcumin and its synthetic analogue dimethoxycurcumin differentially modulates antioxidant status of normal human peripheral blood mononuclear cells. Free radical research 52 (5), 583-591,2018, Scopus Impact factor 3.494. h-index – 2, i10-index – 1, Citations-53.**
23. Books published: with ISBN No., Without ISBN No., Chapters in books.: Nil
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.: 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.

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### **Format for preparing the faculty profile:**

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

1. Name of the faculty: Dr B S Harikumaran Thampi
2. Name of the Department: Department of Life Sciences
3. Educational qualifications: M.Sc Ph.D
4. Present position: Associate Professor
5. Address for correspondence: Thiruvathira, Pantheerenkavu P.O, 673019, Kozhikode.
6. E-mail and contact number: drhari@uoc.ac.in
7. Specialization: Nutritional Biochemistry, Macro molecular Characterization, Colon Cancer,

8. Total teaching experience: 25 years
9. Courses taught: M.Sc Biochemistry, M.Sc Microbiology
10. Research experience: 15 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI. **Preliminary studies for the production of value added products from pineapple agro-waste Funded by State Planning board. (10.34 lakhs) PI Dr B S Harikumar Thampi, CO PI Dr D Gayathri Devi. 2015-2018**
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

**Studies on fibrinolytic properties of ink secretions from cuttle fish (Sepia Pharaonis). Innovative Research fund of UGC (2.89 Lakhs).**

**PI Dr BS HarikumarThampi. 2016 one year.**

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. **Details of PhD Submitted/Awarded**

S No. of	Name	Reg.	Order	Title	Date	Date
15. Rajendran N.S	42950/	RESEARCH -B- ASST-I/ 2013/CU	Dated	06/03/2020	“Isolation, Characterization and grading of Pectin from Sucker, Stem pith and Peel of Banana”	“ Studies on the production of value added products from
2 Rinju R	42942/	RESEARCH -B- ASST-I/ 2013/CU	Dated	08/10/2013	Re-Regn No: 14388/RESEARCH-B ASST-3- /2020/Admn	ard

the Pineapple plant (Ananas Comosus) agro waste”	16. 07/0 1/20 20	23/0 3/20 20 17. 11/ 09/ 202	0	10/ 11/ 202 0
	RESEARCH -B-ASST-I 2013/CU Dated 25/07/2013	120903/ RESEARCH -B-ASST 3/2018/		activity of Butyric acid derivatives in colon cancer cell lines”  07/0 2/20 20 19/ 11/ 202 0
3. Liji P 26687/	Re-Regn No:  22/02/2020 11263/2014/ Admn Dated	“The anti-proliferative  some selected Varieties of rice ( <i>Oryza sativa L.</i> ) found in Kerala”		
4. Chitra Pillai Admn Dated	28/11/2014	“Nutritional and biochemical characterisation of		28/0 7/20 21 -

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

1 Mrs. Renu I C , BIOCHEMICAL EVALUATION OF FOOD ALLERGENS . Date 22/7/2020.

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

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

1 International conference on Nutraceuticals and Chronic diseases.  
Butyric acid derivatives induces Caspase-3 dependent apoptotic

pathway in HCT116 cell lines. Goa. (September 1-3, 2017)

2 Kerala Childrens Science congress, University of Calicut Food and Microbes. Dept. of Life Sciences, University of Calicut. (April 20-22, 2017)

3 Science Awareness week Sponsored by KSCST & Kerala higher education Department. Life and Evolution. St.Mary's College, Sulthan Batheri (07/11/2017)

4 Science Awareness week Sponsored by KSCST & Kerala higher education Department. Life and Evolution SN College, Chelannur. (10/11/2017)

5 Sastrajalakam Sponsored by Kerala State education Department Biomolecules Department of Physics, University of Calicut. (27/11/18)

6 Information Literacy programme. Quality and Ethical issues of Research. Christ College, . (15/11/18)

7 Value addition of agro waste for food and feed- International Conferance on food and Industrial Biotechnology, MACFAST, Thruvalla, 24-26 Nov 2019.

8 Workshop on proteomics, IIT, Mumbai, 27<sup>th</sup> June 2017-1<sup>st</sup> July 2017.

21. Innovative processes developed in teaching and learning. MOODLE Based teaching

22. Participation in curricular development:

1 Chairman BOS Biochemistry University of Calicut since 2016 onwards

2 Member of BOS Biochemistry University of Kerala since 2018 onwards

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

1 Extension activity on Health and Environmental awareness, one month period programme under 12<sup>th</sup> plan UGC grant. 2016

2 Kerala Childrens Science congress, University of Calicut Food

and Microbes. Dept. of Life Sciences, University of Calicut. (April 20-22, 2017) Sponsored by KSCSTE.

3 Coordinator, Erudite Scholar in Residence programme 16/2/2020-21/2/2020 Department of Life Sciences.

24. Refresher and Orientation courses attended: Online hands on training programme on learning management system MOODLE, University of Calicut , 26/6/2020- 4/7/2020
25. Examination /Evaluation reforms initiated: As chairman of Board of Examiners in Calicut University.
26. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.

1 Seena T. Pandarekandy, P. G. Sreejesh, B. S. Harikumar thampi and E. Sreekumaran. Hypoglycaemic Effect of Glibenclamide: A Critical Study on the Basis of Creatinine and Lipid Peroxidation Status of Streptozotocin-induced Diabetic Rat **Indian Journal of Pharmaceutical Sciences**, 2017;79(5):768-777. ( Impact Factor 0.721)

2 Rinju R and B S Harikumar Thampi. Characterization studies on starch extracted from the stem of pineapple plant (*Ananas comosus*) at different growth stages. **Environmental Communication. Biosci. Biotech. Res. Comm.** 12(3): 801-808 (2019). <http://10.21786/bbrc/12.3/37>

3 Liji. P and B. S. Harikumar Thampi. Invitro evaluation of apoptotic induction of butyric acid derivatives in colorectal carcinoma cells. **Anticancer research.** 39. pp 3795-3801, 2019. DOI: <http://10.21873/anticanres.13528> ( IF. 1.994)

4 N. S. Rajendran and B.S. Harikumar Thampi. Extraction and characterisation of pectin from Banana peel. **Carpathian journal of food science and technology.** 2019, 11(4), 45- 63. <https://doi.org/10.34302/2019.11.4.4> ( IF.0.321)

5 Chitra Pillai, K.V. Faseela, and Harikumar Thampi. Nutritional composition of selected traditional rice varieties of Kerala. **Journal**

**of Tropical Agriculture, 2020, 58 (1): 33-43.**

6 Radhakrishnapillai Rinju, Balakrishnan-Saraswathi Harikumaran Thampi. Characteristics of Starch Extracted from the Stem of Pineapple Plant (*Ananas comosus*) - an Agro Waste from Pineapple Farms. **Brazilian Archives of Biology and Technology. Vol.64: e21190276, 2021. <https://doi.org/10.1590/1678-4324-2021190276> ( IF 0.797)**

7 Liji P, Sinosh Skariyachan, Harikumaran Thampi BS. Cytotoxic effects of butyric acid derivatives through GPR109A receptor in Colorectal Carcinoma cells by in silico and in vitro methods. **Journal of Molecular Structure 1243 (2021) 130832. <https://doi.org/10.1016/j.molstruc.2021.130832> ( IF 3.196)**

8 Rajendran Neravathu Sivan, Balakrishnan Saraswathy Harikumaran Thampi. Extraction, rheological and textural analyses and grading of pectin from stem pith of banana. **Ukrainian Food Journal. 2021, 10 (1). 124-135 (IF 0.453)**

9 N. S. Rajendran, B. S. Harikumaran Thampi. Pectin – Extraction from underground stem of banana and its structural, rheological and textural analyses and grading. **Journal of Food Processing and Preservation. 2021, 45(4). DOI: 10.1111/jfpp.15332**

**Over all H index - 6**

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

N. S. Rajendran and B.S. Harikumaran Thampi. Pectin Extraction from stem pith of banana; structural and rheological charecterization in Modern trends in biological sciences; A handbook in connection with International Seminar. Eds. Smitha K.R. Sooryagatha Publishers, Kochi, 2019. ISBN : 97881725511216

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

29. Consultancy services provided and revenue generated: Nil

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

31. Number of collaborations: Two

32. 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.

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