

**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: ZOOLOGY**

**2. Year of establishment: 1968**

**3. Courses offered: PG, M. Phil., Ph.D., Others**

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

**4. Courses introduced during last 5 years: Nil**

**5. Does the department have Academic flexibility? If yes since when?**

Yes. Department offers flexibility in selecting elective course during third and fourth semester of the M.Sc. Applied Zoology Programme.

**6. Interdisciplinary programs offered and departments involved: Nil**

**7. Courses conducted in collaboration with other universities and Institutions: Nil**

**8. Details of programmes discontinued, if any, with reasons: Nil**

**9. Examination System: Annual/ Semester/Choice Based Credit System/ Credit and Grading system/ any other system, specify: Choice based Credit Semester System (CCSS)**

**10. Participation of the department in the curriculum development for courses offered by the Departments.**

The Department updated OBE in curriculum and currently offers Outcome Based Education

11. Does the department have different syllabus than the one used by university for PG courses? : Yes. Department offers PG Programme on M.Sc. Applied Zoology

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

Designation	Sanctioned	Filled	Filled under CAS
Professor	2	0	2
Associate Professor	3	2	4
Assistant Professor	9	9	1
Total	14	11	7

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. Nasser	Professor (PVC, University of Calicut)	MSc., Ph.D	28 yrs	Permanent
Dr. E. Pushpalatha	Associate Professor & Head	M.Sc. , Ph.D.	15 yrs	Permanent
Dr. V.M. Kannan	Professor	MSc. Ph.D., PDF	20 yrs	Permanent
Dr. Y. Shibu Vardhanan	Associate Professor	M.Sc. , Ph.D.	15 yrs	Permanent
Dr. Sebastian C. D.	Associate Professor	M.Sc. , B.Ed., M.Phil., Ph.D.	15 yrs	Permanent
Dr. Manogem E.M.	Associate Professor	M.Sc. , Ph.D.	15 yrs	Permanent
Dr. K.C.Chitra	Associate Professor	M. Sc., M.	15 yrs	Permanent

		Phil., Ph. D.		
Dr. M. Zubair	Assistant Professor	M.Sc., Ph.D.	8 yrs	Permanent
Dr. K. Sindhu	Assistant Professor	M.Sc., PhD.	Recently Joined	Permanent
Dr. Aneesh E.M.	Assistant Professor	M.Sc., PhD.	Recently Joined	Permanent
Dr. R. Binu	Assistant Professor	M.Sc., PhD.	Recently Joined	Permanent
Dr.M. Ramani	Professor	M.Sc., Ph.D.	30 yrs	Permanent (Retired)

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

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

**14. List of Visiting Fellows/Teachers, Adjunct and Emeritus Professors, (for last 5 years).**

Nil

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

NA

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

**M.Sc. Applied Zoology : 5:2**

**M.Phil Zoology : 1:1**

**Ph.D. : 6:1**

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

Sr. No.	Posts	Sanctioned posts	Filled	Actual
1	Laboratory Assistant	3	3	3
2	Clerk (office)	2	2	2
3	Laboratory Attendant	0	0	0
4	Peon	1	1	1
5	Professional Assistant Library	1	1	1
6	Assistant Curator	1	1	1

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

**Applied Entomology, Restoration Biology, Geometric Morphometric (GMM), Molecular Taxonomy, Regeneration Biology, Bio-pesticides and Toxicology, Endocrinology, IGRs, Biomolecules, Molecular and Neurobiology, Infectious Diseases**

**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. E. Pushpalatha	Effect of Botanical Insecticides against Mosquito Vectors: Implication for Integrated Vector Control Programme	UGC, New Delhi, 3 yrs, 01.07.2015 to 30.06.2018	13.36	Project completed Final Report, SE, UC submitted for final settlement

2	Dr. E. Pushpalatha	Early Response of Regeneration in the Freshwater Crab <i>Paratelphusa hydrodromous</i> (Herbst)	DBT, New Delhi, 3 yrs, 07.03.2016 to 31.03.2019	42.36	Project completed Final Report, SE, UC submitted for final settlement
3	Dr. Sebastian C. D. (PI)	Diversity and bioactivity studies of yeasts from the mangroves of Kerala coast with potential industrial applications	KSCSTE 21.03.2018 to 20.09.2021	21.07	Ongoing
4	Dr. Sebastian C. D. (PI)	Biosystematic studies of predatory mites (Mesostigmata: Phytoseiidae) associated with economically important plants of North Kerala	DST 26.03.2018 to 25.09.2021	29.95	Ongoing

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5	Dr. Sebastian C. D. (Co-PI)	Microbial consortia as bioremediators from the mangroves of Northern Kerala	KSCSTE 05.06.2018 to 04.12.2021	20.07	Ongoing
6	Dr. Sebastian C. D. (PI)	Molecular barcoding and phylogenetic assessment of selected insect pests (Lepidoptera: Hemiptera) of major cucurbits cultivated in Malappuram District, Kerala	KSCSTE 10.12.2015 to 09.12.2018	14.97	Completed

7	Dr. Sebastian C. D. (PI)	Molecular barcoding and biodiversity analysis of aquatic beetles of the Order Coleoptera (Arthropoda: Insecta) of Northern Kerala	UGC 01. 04. 2013 to 31. 03. 2017	11.92	Completed
8	Dr. Sebastian C. D. (PI)	Biodiversity analysis and Molecular barcoding of the Order Odonata (Arthropoda: Insecta) of Northern Kerala	KSCSTE 04. 04. 2014 to 03. 04. 2017	11.74	Completed
9	Dr. Manogem E.M	Development & Characterization of <i>Spodoptera mauritia</i> cell line & establishment of cell cultures response to insect growth regulators,	DST-SERB, 3yrs 06.8.2013 to 05.08.2016	24.0	Completed
10	Dr. V.M. Kannan	Study of toxicity of nanoparticle-insect growth regulator conjugate on mosquito larvae.	UGC Industry linked 2016- 17	5.05	Completed

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11	Dr. V.M. Kannan	Identification and Characterization of Ecdysone analogue responsive proteins from the larval haemolymph of <i>Spodoptera mauritia</i> Bois. (Lepidoptera)	KSCSTE 2014-2017	19.3	Completed
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		a: Noctuidae)			
12	Dr.Kannan.V.M	Characterization of juvenile hormone analogue responsive protein from the haemolymph of <i>Spodoptera mauritia</i> Boisd. (Lepidoptera: Noctuidae.	UGC, Govt.of India. 2012-16.	10.84	Completed
13	DR. Y. Shibu Vardhanan	Optimixation of Bioreactor parameter forthe Microbial expressionof Bio Adhesive foot protein from Indian Mussels <i>Perna viridis</i> and <i>Perna indica</i>	UGC, New Delhi 3 yrs 17-11-2015 to 16-11-2018	13.30	Completed

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14	DR. Y. Shibu Vardhanan	Innovative Research Activities- wastewater characterization and management	UGC XII plan 27.01.2016	3.0	Completed
15	Dr. E.M. Aneesh	Diversity, Molecular Characterisation and GIS Mapping of ticks in WayanadWildlife Sanctuary and the role of environmental nurture andmicrobialconsor	DBT, Govt. of India, 3 years, 18.03.2021	35	Ongoing

		tia in Kyasanur Forest Disease (KFD) emergence			
16	Dr. Binu Ramachandran	Role of Gut microbiota in the behavioral plasticity of Zebrafish models	DST-SER B 3 years 18.02.2019	35.948	Ongoing

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

Sr. No.	Name of the Principle Investigator (C0-investigator)	Title of the Project	Funding Agency, Duration & date of sanction	Amount (in Lacs)	Remarks if any
1	Dr. E.M. Aneesh	Psychoactive substances consumption among drivers: Kerala, India based study	Randox Toxicology Pvt Ltd., United Kingdom 2 year, 29.09.2020	60	

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

Scheme and Funding Agency	Non Recurring	Recurring	Project Fellow	Total
UGC SAP/CAS	35,00,000	11,20,000	6 nos.	94,66,000

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<b>National Biodiversity Authority (NBA)</b>	1,00,000	<sup>nd</sup> 42 Annual conference of ESI & National Symposium on Animal Behaviour, Biodiversity and Human Future, jointly organized by Department of Zoology, University of Calicut and Ethological Society of India (ESI). 4 <sup>th</sup> to 6 <sup>th</sup> December 2018	1,00,000
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21. Research facilities available in the department and recognition received, if any? Nil 22.

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

**23. Publications**

Name of Faculty	Papers published in peer reviewed journals	Monographs, Books, Chapters in books	Citations	h index	Impact factor range/Average Impact factor
Dr. M. Ramani	27	--	--	--	--
Dr. M. Nasser	24	--	--	--	--
Dr. Kannan V. M.	13	0	--	--	--
Dr. Y. Shibu Vardhanan	15	0	35	3	--
Dr. E. Pushpalatha	33	2	397	4	1.01
Dr. C. D. Sebastian	26	6	222	9	--
Dr. E. M. Manogem	6	4	--	--	--
Dr. K. C. Chitra	73	2	1367	13	1.656
Dr. M. Zubair	4	0	--	--	--
Dr. E.M. Aneesh	33	--	249	9	2.11
Dr. R. Binu	5	--	518	10	9.18
Dr. K.Sindu	1	--	--	--	--

**24. Details of patents filed & granted and income generated: 1**

Anand, P. P & Dr. Y. Shibu Vardhanan. "A new cost-effective, long life, reusable filter cartridge for water treatment". University of Calicut, Kerala, India. Ref. No: KSCSTE/143/2021-PF-PIC (Processes pending)

**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.	Faculty Name	Duty attended	Organised	Year
1	Dr. V.M. Kannan	Resource Person UGG-HRDC	University of Calicut	
2	Dr. Y. Shibu Vardhanan	Resource Person National workshop on Taxonomy of Diptera 09- 22 January 2020	University of Calicut	2020
3	Dr. E. Pushpalatha	Refresher Course UGG HRDC	University of Calicut	2017
4	Dr. C.D. Sebastian	Invited Lecture: Advances in Biosciences	International	2019
5	Dr. C.D. Sebastian	Invited Lecture: Biodiversity, Climate Change and Sustainable Development	National	2020
6	Dr. C.D. Sebastian	Invited Lecture: Multi disciplinary seminar Series	State	2020
7	Dr. C.D. Sebastian	Resource person: Refresher course in Life Sciences UGC-HRDC	University	2020
8	Dr. K. Sindu	Resource Person to the seminar organized by MASS college of Arts and Science, Chennai Salai,	National	2021

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

<i>Name of Faculty</i>	<i>Name of the Course</i>	<i>Place</i>	<i>Duration</i>	<i>Sponsoring Agency</i>
Dr. Y. Shibu Vardhanan	Advance training course equivalent to 4 European Credit Transfer System (4 ECTS) in Geometric Morphometrics (GMM)	Transmitting Science, S. L.U-NIF B65731903 -NIF-IVA ESB 65731903, C/Gardenia, 2- Urb. Can. Claramunt – 08784 Piera (Barcelona); Spain	September 12-16-2016	Transmitting Science, (Barcelona); Spain

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Dr. E. Pushpalatha	Global Exchange Lecture Course on Malaria Genomics and Public Health	Centre for Research in Medical Entomology (ICMR), Madurai, Tamilnadu	29.01.2017 to 11.02.2017	Jointly by EMBO and ICMR
Dr. E. Pushpalatha	Short Run Course for Professional Development	MHRD-TLC, Department of Education University of Calicut	21.08.2017 to 27.08.2017	MHRD-TLC PMMMMNMTT
Dr. E. Pushpalatha	Online Hands-on Training Programme on LMS-Moodle	Department of Computer Sciences and IQAC, University of Calicut	25.05.2020 to 09.06.2020	University of Calicut
Dr. Y. Shibu Vardhanan	Advances in Biomedical Mass Spectrometry and metabolomics	Saha Institute of Nuclear Physics Kolkata, India	2019	Saha Institute of Nuclear Physics Kolkata

Dr. Y. Shibu Vardhanan	Next generation sequencing (NGS) – Data analysis	Unibiosys Biotech Research Lab, Cochin, Kerala, India	2020	Unibiosys Biotech Research Lab, Cochin, Kerala, India
Dr. Y. Shibu Vardhanan	Online Hands-on Training Programme on LM S-Moodle	Department of Computer Sciences and IQAC, University of Calicut	25.05.2020 to 09.06.2020	University of Calicut
Dr. C.D.Sebastian	One Week Short Run Course in Professional Development	MHRD-Teaching Learning Centre, Department of Education, University of Calicut	29.11.2016 to 05.12.2016	MHRD-TLC PMMMMNMTT
Dr.M. Zubair	Refresher Course in Environmental Science and Geosciences	UGC Human Resource Development Centre, University of Calicut	09.11.2016 to 29.11.2016	ASC, University of Calicut

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

Faculty Name	Activities
Dr. V.M. Kannan	Chairman, Board of studies in Zoology (PG), Director, School of Biosciences, University of Calicut
	Director, Centre for Advances in Molecular Biology
	Convener Committee on integrated bioscience programme

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Dr. E. Pushpalatha	Director, Institute of Tribal Studies and Research (2012 -2019)
	Member, Academic Council, University of Calicut
	Member, Planning Board, University of Calicut
	Chair Holder of UNESCO chair on Indigenous Cultural Heritage

	and Sustainable Development
	Ph. D. Adjudication Board, Kerala University, Banaras Hindu University, Mysore University
	Chairperson, University Level Anti-Ragging Monitoring Cell (ULARMC) 2014 -2017
	Member of Research Admission Committee of Various Affiliated
	Colleges
	Member Board of Research, Ayya Nadar Devaki Amma College of Arts & Sciences, Sivakasi, Tamilnadu
	Member, Complaints Committee, University of Calicut
Dr. C.D. Sebastian	Chairman, Ph. D. Adjudication Board, Kerala University, M.G. University, Kannur University, Mysore University
	Board of studies in Zoology, Genetics, Food Science and Tech, Optometry & Ophthalmology, Biotechnology, University of Calicut
	Doctoral Committee (Zoology), MG University
	Board of studies in Zoology, Kerala University, Kannur University, Thiruvalluvar University
Dr. Y. Shibu Vardhanan	Chairman, Doctoral Committee (Zoology), MG University
	Board of studies in Zoology, Bharathiar University, TamilNadu
	Doctoral Committee (Zoology), Zoological Survey of India (ZSI)
	Doctoral Committee (Zoology), Kerala Forest Research Institute (KFRI)
	Doctoral Committee (Zoology), Government Victoria College, Palakkad

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

<i>Sl. No.</i>	<i>Name of Teacher</i>	<i>Role</i>	<i>Name of Journal</i>
1	Dr. Sebastian C. D.	Associate Editor	Journal of Entomology and Zoology Studies (International )

2	Dr. E. Pushpalatha	Editor	Journal of Medical Arthropodology
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**30. Awards / Prizes and recognitions received by teachers at university, state, national and international level:**

Nil 11

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

Title of the innovation	Name of the Awardee	Name of the Awarding Agency with contact details	Year of Award	Category institution/teacher/research scholar/student
Best oral presentation award in Agriculture and food science	Sajitha R	Kerala Science Congress	2020	Research Scholar
Best Paper award	Ayisha Banu. C	Annamalai University, Dept. of Zoology, International Conference (RIBER 2019)	2019	Research Scholar

**Awards and Prizes: Ph.D. Scholars of the Department of Zoology**

Sl.No	Name of Research fellow	Year of enrolment	Duration of fellowship	Type of the fellowship	Granting agency	Qualifying exam if any (NET, GATE, etc.)
1	Jalala Najath	2016	5 Years	UGC/ SRF	UGC	NET
2	Binoy. C	“	“	RGNF/UGC JRF	UGC	NET
3	Neethu. C. B	“	“	University Fellowship	University Of Calicut	NET
4	Nidheesh. G	“	“	University Fellowship	University of Calicut	
5	Safeer Muhammed	“	“	MANF – UGC JRF	UGC	

6	Sathyakala. K. P	“	“	RGNF/UGC JRF	UGC	
7	Seena. S	“	“	University Fellowship	University of Calicut	
8	Reshma. V	“	“	E Grants	Kerala State Govt.	
9	Sreevidya. P	“	“	University Fellowship	University of Calicut	
10	Priyatha. C. V	“	“	KSCSTE	Kerala State Govt.	
11	Jyothis Devasia	“	“	CSIR JRF	CSIR	NET
12	Arun. A	“	“	KSCSTE	Kerala State Govt.	NET
13	Sreelekha. P. C	“	'	E – Grants	State Govt.	

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14	Anjitha. K. Bhadran	2017	“	CSIR – UGC JRF	CSIR	NET
15	Shiji. M	“	“	University fellowship	University of calicut	
16	Rahila. K	“	“	CSIR SRF	CSIR	NET
17	Jaseem Lal. N	2019	“	University fellowship	University of calicut	
18	Jemi Jacob	“	“	UGC JRF	UGC	NET

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20	Renu. V. V	“	“	CSIR - JRF	CSIR	NET
21	Gayathi. M	“	“	UGC JRF	UGC	NET
22	Anand, P.P	2019	5 years (M.Phil + Ph.D integrated)	UGC-NFST	UGC	GATE

23	Kiran Kishore	“	“	CSIR – JRF	CSIR	NET
24	Shabna Asmi.	“	“	CSIR – JRF	CSIR	NET
25	Keerthana Haridas	“	“	CSIR JRF	CSIR	NET
26	Maiby Thankachan	“	“	Nil	Nil	
27	Deepthi. M	“	“	CSIR – JRF	CSIR	NET
28	Sona Ghosh	“	“	CSIR JRF	CSIR	NET
29	Bobika. V. K	“	“	UGC – JRF	UGC	NET
30	Parvathy Nanddakumar	“	“	CSIR – JRF	CSIR	NET
31	Shibu Anand	2020	'	CSIR JRF	CSIR	NET
32	Anusruthi Ramakrishnan	“	“	UGC – JRF	UGC	NET
33	Gayathri. A. K	“	“	E grants	Kerala State Govt.	NET
34	Nikhil John	“	“	UGC – JRF	UGC	NET
35	Alina Ann Joseph	“	“	KSCSTE	Kerala State Govt.	NET
36	Dr. Vidya P.	2018	3 years	PDF	KSCSTE - WSD	NET, GATE
37	Dr. Sheeja U. M.	2018	3 years	PDF	DST - WOS-A	NET

<b>Awards and Prizes: MSc Students of the Department of Zoology</b>			
<b>Sl. No.</b>	<b>Name</b>	<b>Type of award</b>	<b>Year</b>
1	Lakshana G. Nair	Prof. K. J Joseph Endowment	2020
2	Vijayakumar N	Prof. K. J Joseph Endowment	2019
3	Femi E. Benny	Prof. K. J Joseph Endowment	2018
4	Reshma	Prof. K. J Joseph Endowment	2017
5	Renu V.V	Prof. K. J Joseph Endowment	2016
6	Neethu P	Prof. K. J Joseph Endowment	2016



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

Year	Name of the workshop/ seminar	Number of Participants	Date From – To
2020	National Workshop on Taxonomy of Diptera	35	09.01.2020 to 22.01.2020
2020	IARC in association with the Department of Zoology conducted a sensitization programme on wildlife focusing on snakes and its ecology.	76	04.01.2020
2020	IARC in association with the Department of Zoology conducted a Special Lecture on ‘The Impacts of Historical Ecology and Global Change – Land Use and Climate’ by Prof. (Dr.) Marc D. Abrams, Steimer Professor, Department of Ecosystem Science and Management, Penn State University, USA.	98	16.01.2020
2019	Techniques in molecular biology	11	21.03.2019 to 23.03.2019
2019	One day orientation for school students	57	14.02.2019
2019	Cell culture and gene expression studies using real time PCR	23	17.10.2019 to 19.10.2019
2019	FRONTIER TECTURE BY NOBEL LAUREATE, Sir RICHARD T. ROBERTS, NEW ENGLAND BIOLABS, IPSMCH, MA, USA (Eridute program, Higher Education Council, Kerala). Sir Richard John Roberb FRS is an English biochemist and Molecular biologist. He was awarded the 1993 Nobel Prize in Physiology or Medicine with Phillip Allen Sharp for the discovery of introns in eukaryotic DNA and the mechanism of gene-splicing. Talk was on 'BACTERIAL LECTURE by Canadian Research	1250	14.01.2019

	Scientist Dr. Jon Sweeney, Natural Resources Canada, Canadian Forest Service, Atlantic Forestry Centre, 1350 Regent Street Fredricton, NB, Canada, E3C2G6. Topic METHYLOIIES'		
2019	FRONTIER Lecture related to “Forest Biodiversity” 07/03/2019, followed by group discussion with the faculties on the scope of future network research.	129	03.07.2019
2019	“Parasitoid ichneumonoid wasps: biology, identification, and biological control potential” External Expert : Prof. Donald Quicke, Formerly of Imperial College London.	25	07.06.2019 to 13.06.2019
2019.	“Chemical and Molecular Ecology of Insect—Plant Interactions: Towards Ecological Sustainability” External expert, Dr. Ananthanaraya Raman, Professor, Charles Sturt University Australia. Alloted fund (GYAN Programme)	15	26.02.2019 to 04.03.2019
2018	Basic technique in molecular biology	22	02.08.2018 to 04.08.2018
2019	Insect Taxonomy and Field Sampling Skills in collaboration with Jointly organised by DEPARTMENT OF ZOOLOGY and NATIONAL BUREAU OF AGRICULTURAL INSECT RESOURCES (NBAIR), Bengaluru.	30	25.03.2019 to 28.03.2019
2018	Erudite Programme by Pro. Gilberto Jose de Moraes, Dept. Of Entomologia e Acrarologia, Escola Superior de Agricultura ‘Luiz de Queiroz universidade de Sao Paulo, SP, Brazil	125	11.02.2018 to 21.02.2018
2018	Golden Jubilee National Seminar	225	12.03.2018 to 14.03.2018
2018	42 <sup>nd</sup> Annual Conference of ESI & National Symposium on “ Animal Behaviour Biodiversity & Human Future”	250	04.12.2018 to 06.12.2018

2018	Workshop on - Lab – Field for Future Environmental Stability and Food Security” Mr. Dayal K. V Founder and Chairman Natures Foundation signature, Alleppy	145	03.02.2018
2017	One day workshop on real time PCR	23	19.12.2017

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2017	Workshop on Biostatistical Methods	34	23.03.2017 to 24.03.2017
2016	Frontier Lecture by K. V. Rajendran	30	09.06.2016

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

PG	Applications Received	No. of students Admitted	Seats Available	Male	Female	Total	Year
MSc Applied Zoology	435	22	20	4	18	22	2016-17
MSc Applied Zoology	526	21	20	1	20	21	2017-18
MSc Applied Zoology	--	21	20	3	18	21	2018-19
MSc Applied Zoology	722	22	20	3	19	22	2019-20
MSc Applied Zoology	764	21	20	2	19	21	2020-21

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

PG	Year	Appeared	Passed	Pass %	Grade %			
					O	A	B	C
MSc Applied Zoology	2016-17	22	22	100				
MSc	2017-18	21	21	100				

Applied Zoology								
MSc Applied Zoology	2018-19	21	21 100					
MSc Applied Zoology	2019-20	22	21	100				
MSc Applied Zoology	2020-21	21	21	100				

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

Year	Applications Received	No. of students admitted	Male	Female	Total
2016-17	45	3	0	4	8
2017-18	79	8	2	6	8

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2018-19	56	8	1	7	8
2019-20	68	10	1	9	10
2020-21	72	8	1	7	8

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

Year	Applications Received	No. of students admitted	Male	Female	Total
2016-17	62	13	5	8	13
2017-18	70	3	0	3	3
2018-19		10			10
2019-20	57	13	1	12	13

2020-21	75	5	2	3	5
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- Verification needed from the office

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

Year	M.Phil	Ph.D.	Male	Female	Total
2016	3	1	--	4	4
2017	8	--	1	7	8
2018	2	3	--	5	5
2019	4	2	--	6	6
2020	2	7	--	9	9
2021	2	2	3	1	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

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	2016-17			
PG	21	1		
M. Phil.				
Ph. D.				
	2017-18			
PG	20	1		
M. Phil.				

Ph. D.				
	2018-19			
PG	21	0		
M. Phil.				
Ph. D.				
	2019-20			
PG	20	2		
M. Phil.				
Ph. D.				
	2020-21			
PG	17	3	1	
M. Phil.				
Ph. D.				

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

Year	MPSC/UPSC	SET	GATE	UGC/CS IR JRF & NET	UGC/CS IR NET	Total
2016-17			3	1	2	3

19

2017-18		2		1	2	5
2018-19				3	3	6

2019-20	Civil Services (IAS) Ms. Sreedhanya Suresh			3	2	5
2020-21			1		1	2

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

Year	% proceeded for higher studies		% of students placed
	UG to PG	PG to Ph.D./ M. Phil	
2016-17		5	22.72
2017-18		5	22.72
2018-19		3	14.29
2019-20		2	10
2020-21		5	22.72

**41. Diversity of Faculty:**

Teaching faculty	%
from the same University	50
from other Universities within the State	50
from other States	Nil
from outside the country	Nil

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

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

to

a) Central Library Books and Journals, etc, relevant to Department : Yes

b) Departmental Library (books, journals etc.) : 6327

- c) Computers and Internet facilities for staff : Yes
- d) Total number of class rooms : 3
- e) Class rooms with ICT facility : 3
- f) Students' laboratory : 2
- g) Research laboratories : 5 common labs +9 faculty laboratory
- h) Seminar Hall : Yes, 110 capacities

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- i) Smart class room : 3 with Android touch Interactive Screen
- j) Any other facility LCDs, : 3 with Android touch Interactive Screen

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

**a) Post-doctoral students**

Sr. No.	Name of the Faculty	Post-doctoral Students	Research Topic
1	Dr. Vidya P.	PDF	Diversity and bioactivity studies of yeasts from the mangroves of Kerala's coast with potential industrial applications
2	Dr. Sheeja U. M.	PDF	Bio systematic studies of predatory mites (Mesostigmata: Phytoseiidae) associated with economically important plants of North Kerala

**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**

**Msc. 2019 Admn. 14 Students.**

**Msc 2020 Admn. 11 Students**

**Total : 25 Students**



**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.**

Yes. Most of the students working in advance topic for their Ph.D. programme

**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**

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

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

Yes. Biopesticides, Bioadhesive and Geometric and Morphometric

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

**1) Number of teachers preparing & following Academic Teaching plan : 11**

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

**a) Interactive lecture method using blackboard, Group discussions, Problem solving, Seminars. : 11**

**b) Use ICT methods to support lectures. 11**

**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.

Appropriate measure have been taken wherever required

6) What is the method for conducting internal evaluation?

Continuous evaluation

#### 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 5 b) Good 6

c) Average 0 remarks from students.

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

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HOD and forwarded to the university with comments?

Yes

6) What is the individual faculty wise h index?

**Dr. K. C. Chitra**

**Scopus: (Author ID: 57194548389)** Citations: 1367 h-index-13 **Mendeley:**  
Citations: 1365 h-index-13

**Google scholar:** Citations-2109 h-index-14 i10-index-21 **Research gate:**  
Citations-1651 h-index-13 RG Score-23.85 **ORCID:**  
orcid.org/0000-0002-5090-8709

**Web of Science Researcher ID:** ABE-8808-2020 h-index-10

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

Calicut University Zoology Association (CUZA) is a joint venture between students, scholars, ministerial and faculties for all non-academic collaboration to conduct following activities;

- 1) One week-one insect display to introduce an insect’s systematic position, distribution, economic importance
- 2) Monthly Quiz from subject
- 3) Film show and Discussion

- 4) Sports – Regular shuttle Badminton Competition
- 5) Regular Campus Cleaning
- 6) Provision for Com6yy7y64edsemon drugs and first aid kit
- 7) Display of Photography (mainly insects) of faculty and students
- 8) Campus afforestation programme
- 9) Campus gardening
- 10) Celebration of all festivals
- 11) Celebration of Science, Environment and Wildlife Days
- 12) Community Responsibility activity – extending financial support to weaker sections and during natural Calamities

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

- a. Dr. Satheesh K. Raghavan, Faculty, IISc., Bangalore (**SS Bhatnagar** Award winner)
- b. **Dr. ESA** (Ex –Director, KFRI)
- c. **Prof. Dr. Gokuldas** (President, Calicut University Zoology Alumni Association)
- d. **Dr. Jayapraksh** (Principal Scientist & Head)
- e. **Dr. Chandish Ballal** (Ex Director NBAIR)
- f. **Sri. Kunhikrishnan** (Associate Professor)
- g. **Smt. Sreedhanya Suresh (IAS) Officer**

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- h. Dr. Rajamohana (Scientist ZSI)

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

**FRONTIER TECTURE BY NOBEL LAUREATE, Sir RICHARD T.**

**ROBERTS, NEW ENGLAND BIOLABS, IPSMCH, MA, USA** (Eridute program, Higher Education Council, Kerala). Sir Richard John Roberb FRS is an English biochemist and Molecular biologist. He was awarded the 1993 Nobel Prize in Physiology or Medicine with Phillip Allen Sharp for the discovery of introns in eukaryotic DNA and the mechanism of gene-splicing. The talk was on 'BACTERIAL METHYLOIIES'

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

Student feedback and Alumni activities

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

Advanced Mathematical shape analysis and Macro photography

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

Research in Bio molecules and its application

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

Bio adhesives a promising future glue for various medical and industrial application **55.**

**Highlight the participation of students and faculty in extension activities. Lab to field**

exploring the provision to interact and involve the activities organic farming

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

**a. Strengths:** Cutting edge technology and application of various bio adhesives and biomolecules. Advanced shape analysis and Environmental stress monitoring **b.**

**Weaknesses:** Industrial collaboration

**c. Opportunities:** Biomolecules application in Industry and Agriculture

**d. Challenges:** Field trial and application

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

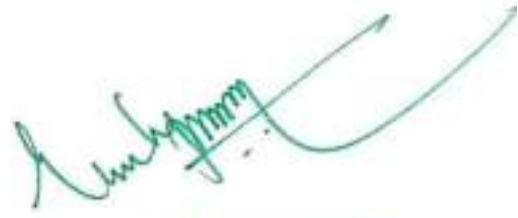
24

a. **Long term plans-** Sustainable development of biomolecules of industrial and pharmaceutical potential

b. **Short term plans-** Screening and characterization of biomolecules

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

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



**Dr. E. Pushpalatha**  
Associate Professor & Head  
Department of Zoology  
University of Calicut, Kerala-673 635

**Date: 10.05.2021**

## FACULTY PROFILE

*(From 2016-17 to 2020-21)*

1. Name of the faculty: Dr. Sebastian C. D.
2. Name of the Department: Department of Zoology
3. Educational qualifications: M. Sc., B. Ed., M. Phil., Ph. D.
4. Present position: Associate Professor
5. Address for correspondence: Department of Zoology, University of Calicut, Calicut University PO
6. E-mail and contact number: Email: drcdsebastian@gmail.com      Cell: 9447648961
7. Specialization: Entomology
8. Total teaching experience: 15 years
9. Courses taught: M. Sc., M. Phil., Ph. D.
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.

<i>Sl. No</i>	<i>Title of the project</i>	<i>Duration</i>	<i>Grant received Rs</i>	<i>Funding agency</i>	<i>PI or Co-PI</i>
1.	Diversity and bioactivity studies of yeasts from the mangroves of Kerala coast with potential industrial applications	21. 03. 2018 to 20. 09. 2021	21,07,200	KSCSTE	PI
2.	Biosystematic studies of predatory mites (Mesostigmata: Phytoseiidae) associated with economically important plants of North Kerala	26. 03. 2018 to 25. 09. 2021	29,95,000	DST, New Delhi	PI
3.	Microbial consortia as bioremediators from the mangroves of Northern Kerala	05. 06. 2018 to 04. 12. 2021	20,07,000	KSCSTE	Co-PI
4.	Molecular barcoding and phylogenetic assessment of selected insect pests (Lepidoptera: Hemiptera) of major cucurbits cultivated in Malappuram District, Kerala	10. 12. 2015 to 09. 12. 2018	14,97,265	KSCSTE	PI

5.	Molecular barcoding and biodiversity analysis of aquatic beetles of the Order Coleoptera (Arthropoda: Insecta) of Northern Kerala	01. 04. 2013 to 31. 03. 2017	11,92,300	UGC, New Delhi	PI
6.	Biodiversity analysis and Molecular barcoding of the Order Odonata (Arthropoda: Insecta) of Northern Kerala	04. 04. 2014 to 03. 04. 2017	11,73,598	KSCSTE	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.

<i>Sl. No</i>	<i>Name of the student</i>	<i>Topic of research</i>	<i>Date of registration</i>	<i>Date of award</i>
1.	Rukhsana K.	Studies on the phylogenetic relationship among the Hymenopteran parasitoids using COI gene sequences	19. 10. 2012	09. 09. 2016
2.	Jisha Krishnan E. K.	Molecular characterization and molecular phylogenetic assessment of selected families of Odonates in North Kerala	20. 12. 2014	18. 07. 2019
3.	Priya Bhaskaran K. P.	Molecular barcoding and phylogenetic analysis of the insect pests of Cucurbitaceae from selected districts of Kerala	19. 03. 2014	28. 02. 2020
4.	Bindu P. U.	Molecular phylogenetic analysis of true bugs under Infraorder Pentatomomorpha (Hemiptera: Heteroptera) of Northern Kerala using mitochondrial gene sequence	03. 07. 2014	29. 01. 2021
5.	Akhilesh V. P.	Mitochondrial COI gene based molecular phylogenetic analysis of economically important insects from selected coleopteran families of North Kerala	04. 03. 2014	25. 02. 2021

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

<i>Sl. No</i>	<i>Name of the student</i>	<i>Topic of research</i>	<i>Date of registration</i>
1.	Surya P.	Phylogenetic analysis of ants (Hymenoptera: Formicidae) in North Kerala based on mitochondrial cytochrome oxidase gene sequences	29.06.2015
2.	Sreevidhya, P.	Morphotaxonomy and molecular phylogeny of rove beetles (Coleoptera: Staphylinidae) of North Kerala	05.08.2016
3.	Kiran Kishore	Phylogenetic and functional characterization of Actinomycetes from the mangrove sediments of North Kerala	23.06.2019
4.	Maiby Thankachan	Morphological characterization of olfactory sensilla with respect to mammalian host preference patterns among the mosquitoes from Mananthavady Taluk, Wayanad	11-10-2019
5.	Parvathy Nandakumar T.	Assessment of community structure and xylan utilization potential of mangrove bacteria along the coastal belt of North and Central Kerala	24-08-2020
6.	Alina Ann Joseph	Diversity and functional characterisation of microbes associated with fungus cultivating termites	04-11-2020

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

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

<i>Sl. No.</i>	<i>Title</i>	<i>Academic session/Seminar/Organiser</i>	<i>Status/ Level</i>	<i>Year</i>
1.	Invited Lecture: Advances in Biosciences	EMEA College, Kondotty	International	2019
2.	Invited Lecture: Biodiversity, Climate Change and Sustainable Development	Govt. College, Kasaragod	National	2020
3.	Invited Lecture: Multi-disciplinary seminar series	Ripples 2019. SNG College, Chelannur	State	2020
4.	Resource person: Refresher course in Life Sciences	UGG-HRDC	University	2020
5.	Invited Lecture: Advances in Biosciences	EMEA College, Kondotty	International	2019
6.	Screening and characterization of pigments from yeast,	33 <sup>rd</sup> Kerala Science Congress 2021	State	2021



	<i>Rhodotorula mucilaginosa</i> present in mangrove sediments of Kerala			
7.	Occurrence of pathogenic bacteria in the mangrove sediments of North Kerala	33 <sup>rd</sup> Kerala Science Congress 2021	State	2021
8.	Distribution and seasonal variation of bioactive potential yeast strains in the mangrove sediments of North Kerala	32 <sup>nd</sup> Kerala Science Congress 2021	State	2020
9.	Functional characterization of bacterial isolates from the mangrove sediments of Northern Kerala	32 <sup>nd</sup> Kerala Science Congress 2021	State	2020
10.	Composition and bioactivity of yeasts from mangrove sediments of North Kerala	International Conference on Benthos (ICB 2019)	International	2019
11.	A study on the yeast community present in the mangrove sediments of North Kerala	International Conference on Biodiversity Conservation (ICBD)	International	2019
12.	Bacterial isolation, hydrolytic enzymes production and its relation to organic matter of mangrove sediments from Northern Kerala	31 <sup>st</sup> Kerala Science Congress 2019	State	2019
13.	DNA barcoding and phylogenetic inference of <i>Carebara diversa</i> (Hymenoptera: Formicidae) using mitochondrial cytochrome oxidase I gene sequence	31 <sup>st</sup> Kerala Science Congress 2019	State	2019
14.	A check list of heteropteran bugs from different regions of North Kerala, India	International Conference on Recent Trends in Zoology, Biodiversity, Genetics & Environmental Sciences	International	2018
15.	Assessment of genetic similarity and molecular phylogeny between Rove beetles (Coleoptera: Staphylinidae) and Earwigs (Dermaptera:	National Symposium on Animal behaviour, Biodiversity and Human future	National	2018

	Forficulidae) exhibiting congruent behaviour			
16.	Genetic structure and molecular phylogeny analysis of <i>Henosepilachna septima</i> (Coleoptera: Coccinellidae), an alarming pest of cucurbitaceae family	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala	National	2018
17.	DNA barcoding and phylogenetic analysis of <i>Vestalis apicalis</i> (Zygoptera: Calopterygidae) using cytochrome oxidase I gene	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala	National	2018
18.	A study on seasonal abundance and molecular phylogeny of <i>Paederus fuscipes</i> Curtis (Staphylinidae: Paederinae)	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala	National	2018
19.	Mitochondrial CO I gene structure and Phylogeny assessment of some agriculturally important insects from Kerala	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala	National	2018
20.	Analysis of taxonomic and phylogenetic status of <i>Carebara diversa</i> (Hymenoptera; formicidae) using mitochondrial cytochrome oxidase I gene sequences	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala	National	2018
21.	A study on the assessment of microbial pollution and molecular identification of selected isolates from Canoly Canal, Kozhikode	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala	National	2018
22.	Phylogeny and Molecular Taxonomy of <i>Trichogramma chilonis</i> Ishii (Hymenoptera: Trichogrammatidae), an egg parasitoid of <i>Chilo infuscatellus</i> (Lepidoptera: Pyralidae) derived from mitochondrial DNA sequences.	National Conference on Biodiversity: Its Prospects and Concerns. Providence Women's College, Kozhikode.	National	2018
23.	Molecular phylogeny and genetic analysis of the fruit piercing moth, <i>Hypocala</i>	28 <sup>th</sup> Kerala Science Congress	State	2018

	<i>deflorata</i> using COI gene			
24.	Molecular phylogeny and genetic analysis of <i>Apis cerana</i> using COI gene	International Seminar on Molecular Biology: an underpinning to Life Sciences	International	2018
25.	Molecular barcoding and phylogenetic relationships of <i>Onychogomphus malabarensis</i> (Anisoptera: Gomphidae) using cytochrome oxidase I gene	International Seminar on Molecular Biology: an underpinning to Life Sciences	International	2018
26.	Mitochondrial DNA based analysis of <i>Trichogrammatoidea bactrae</i> Nagaraja, an egg parasitoid of <i>Helicoverpa armigera</i>	International Seminar on Molecular Biology: an underpinning to Life Sciences	International	2018
27.	Molecular phylogeny and genetic analysis of <i>Melanitis leda</i> using COI gene	National Seminar on Faunal diversity and Recent trends in Animal Taxonomy	National	2017
28.	Genetic structure and molecular phylogeny analysis of <i>Meteoridea hutsoni</i> Nixon, a larval-pupal parasitoid of coconut black headed caterpillar, <i>Opisina arenosella</i> Walker	National Seminar on Faunal diversity and Recent trends in Animal Taxonomy	National	2017
29.	Molecular phylogenetic analysis of <i>Nezara viridula</i> using mitochondrial COI gene	National Seminar on Current trends in Biotechnology	National	2017
30.	Mitochondrial DNA based analysis of <i>Evania appendigaster</i> Linnaeus, an egg parasitoid of cockroach	National Seminar on Current trends in Biotechnology	National	2017
31.	DNA barcoding for phylogenetic analysis of invasive ant species <i>Anoplolepis gracilipes</i> (Hymenoptera: Formicidae) using Cytochrome Oxidase I gene sequence	National Conference on Status of Invasive Alien Species in India	National	2017
32.	Molecular phylogenetic status of <i>Henosepilachna septima</i>	International Conference on Frontiers in Biosciences 2017	International	2017
33.	Genetic structure and molecular phylogeny analysis of	International Conference on	International	2017

	<i>Brachymeria nephantidis</i> Gahan, a pupal parasitoid of coconut black headed caterpillar, <i>Opisina arenosella</i> Walker.	Frontiers in Biosciences 2017		
34.	DNA Barcoding of <i>Eudocima cocalus</i> from North Kerala	27 <sup>th</sup> Swadeshi Science Congress,	State	2017
35.	Polymorphism of the Southern Green stink bug, <i>Nezara viridula</i> L. (Heteroptera: Pentatomidae) from Thrissur District, Kerala	International Seminar on Frontiers in Genomics and Molecular Techniques	International	2017
36.	Analysis of phylogenetic status of <i>Odontomachus simillimus</i> (Hymenoptera: Formicidae) using cytochrome oxidase I gene sequences	International Seminar on Frontiers in Genomics and Molecular Techniques	International	2017
37.	Molecular barcoding of Rice black bug, <i>Scotinophara bispinosa</i> (Heteroptera: Pentatomidae) using CO I gene sequences	National Seminar on Recent Trends in Life Sciences	National	2017
38.	Analysis of phylogenetic status of <i>Anoplolepis gracilipes</i> (Hymenoptera: Formicidae) using cytochrome oxidase I gene sequences	National Seminar on Recent Trends in Life Sciences	National	2017
39.	Genetic structure and molecular phylogeny analysis of <i>Asota orbona</i> using mitochondrial cytochrome oxidase subunit I gene sequences. 186pp	26 <sup>th</sup> Swadeshi Science Congress, CMFRI, Cochin	State	2016
40.	Analysis of phylogenetic status of different hymenopteran parasitoid species using cytochrome oxidase I gene sequence. 253pp	Next Gen Genomics, Biology, Bioinformatics and Technologies (NGBT) Conference, Cochin, India	International	2016
41.	Molecular phylogenetic assessment of lepidopteran insect pest using mitochondrial cytochrome oxidase subunit I gene. 248pp	Next Gen Genomics, Biology, Bioinformatics and Technologies (NGBT) Conference, Cochin, India	International	2016

17. Innovative processes developed in teaching and learning: NIL

18. Participation in curricular development:

*Design of new curricula and courses*

<i>Sl. No.</i>	<i>Name of Course</i>	<i>Level (UG/PG)</i>	<i>University</i>
1	B. Sc. Genetics	UG	University of Calicut
2	Clinical Genetics	PG	University of Calicut
3	B. Sc. Food Science & Technology	UG	University of Calicut
4	M. Sc. Food Science & Technology	PG	University of Calicut
5	B. Voc. Optometry & Ophthalmology	UG	University of Calicut
6	B. Sc. Zoology	UG	Thiruvalluvar University
7	M. Sc. Applied Zoology	PG	University of Calicut

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

20. Refresher and Orientation courses attended:

<i>Name of the Course</i>	<i>Place</i>	<i>Duration</i>	<i>Sponsoring Agency</i>
Refresher Course in Life Sciences (Thrust area: Molecular biology)	UGC-Academic Staff College, University of Calicut	4 <sup>th</sup> August, 2011 to 24 <sup>th</sup> August, 2011	UGC-Academic Staff College, University of Calicut
72 <sup>nd</sup> Orientation Programme	UGC-Academic Staff College, University of Calicut	2 <sup>nd</sup> March, 2012 to 29 <sup>th</sup> March, 2012	UGC-Academic Staff College, University of Calicut
Refresher Course in Environmental Studies (Interdisciplinary)	UGC-Academic Staff College, University of Calicut	8 <sup>th</sup> January, 2015 to 29 <sup>th</sup> January, 2015	UGC-Academic Staff College, University of Calicut
One Week Short Run Course in Professional Development	MHRD-Teaching Learning Centre, Department of Education, University of Calicut	29 <sup>th</sup> November, 2016 to 5 <sup>th</sup> December, 2016	MHRD - University of Calicut, PMMM National Mission on Teachers and Teaching

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.

**a. Research papers in peer reviewed journals**

<i>Sl. No.</i>	<i>Authors</i>	<i>Title</i>	<i>Journal &amp; ISSN</i>	<i>Year, Vol. &amp; Page No</i>	<i>Impact Factor if any</i>
1.	Jisha Krishnan E. K and <b>Sebastian C. D.</b>	DNA barcoding as a molecular diagnostic tool for the species authentication and phylogenetic analysis of <i>Copera marginipes</i> ( <i>Odonata</i> : <i>Plactycnemidae</i> )	International Journal of Entomology Research ISSN: 2455-4758	5(3): 01-04 2021	SCI: 0.66 Web of Science
2.	Sreevidhya P., Akhil, S. V. and <b>Sebastian C. D.</b>	Two new light attracted rove beetle species of <i>Astenus</i> Dejean, 1833 (Coleoptera: Staphylinidae: Paederinae) from Kerala, India	Journal of Threatened Taxa ISSN: 0974-7907 (E) 0974-7893 (P)	13(5): 18215–18226 2021	SCI: 0.74 Web of Science
3.	Vidya P. and <b>Sebastian C. D.</b>	Isolation, identification and screening of extracellular lipase producing yeasts from mangrove sediments of Kasaragod, North Kerala	Advances in Bioresearch ISSN: 2277-1573(E) 0976-4585(P)	12(1): 81-89 2021	SCI: 0.36 Web of Science
4.	Sreedevi N. K., Nijisha S. A., Anjali, M., Bhavitha, M.K., Thara Paul and <b>Sebastian, C.D.</b>	Identification and phylogeny of potential bacteria isolated from mangroves of Kadalundi, Kerala, India	Journal of Marine Biology Association of India. ISSN: 0025-3146(P), 2321-7898(E)	62(2): 139-142 2020	SCI: 0.28 Web of Science
5.	Thara Paul, Sreedevi N. K. and <b>Sebastian C. D.</b>	Distribution and hydrolytic potential of bacteria during monsoon and post monsoon seasons in the mangrove sediments of North Kerala.	Bioscience Biotechnology Research Communication ISSN: 2321-4007	13(4): 1914-1919 2020	SCI: 0.19 Web of Science
6.	Sheeja, U.M., Ramani, N. and <b>Sebastian, C.D.</b>	Study on the Phytoseiid faunal diversity on economically important plants distributed over northern districts of Kerala, India	Strad Research ISSN: 0039-2049	7 (12): 361 - 373 2020	SCI: 1.1 Web of Science

7.	Sreedevi N. K., Nijisha S. A., Anjali, M., Bhavitha, M.K. and <b>Sebastian, C.D.</b>	Diversity of culturable bacterial isolates from mangroves of Kadalundi – Vallikkunnu Community Reserve, Kerala, India	Journal of Aquatic Biology and Fisheries ISSN: 2321– 340X	8: 22-25 2020	RJIF: 6.43
8.	Vidya P. and <b>Sebastian C. D.</b>	A study on the distribution and hydrolytic enzyme potential of yeasts in the mangrove sediments of Northern Kerala.	Indian Journal of Microbiology ISSN: 2394- 546X	7(2): 161-167 2020	SCI: 1.83 Web of Science
9.	Sreevidhya P. and <b>Sebastian C. D.</b>	DNA barcoding and phylogenetic analysis of paederinae (Coleoptera: Staphylinidae) in relation to morphological data using cox I sequences	International Journal of Entomology Research ISSN: 2455-4758	5(3): 191-194 2020	SCI: 0.66 Web of Science
10.	Surya P. and <b>Sebastian C. D.</b>	Revisiting DNA barcoding of ants (Formicidae: Hymenoptera) from India	International Journal of Entomology Research. ISSN: 2455-4758	5(3): 161-169 2020	SCI: 0.66 Web of Science
11.	Alina Ann Joseph and <b>Sebastian, C. D.</b>	Analysis of symbiotic microbial community in the gut and fungal comb of <i>Odontotermes longignathus</i> Holmgren based on culture dependent approach	Journal of Advanced Scientific Research ISSN: 0972- 9595	11(2): 81-87 2020	RJIF: 6.72
12.	Sreedevi N. K. and <b>Sebastian, C. D.</b>	Assessment on bacteriological contamination of river water in the urban areas of Kozhikode, Kerala.	International Journal of Science and Research. ISSN: 2319- 7064	9(4): 1638- 1642 2020	RJIF: 2.61
13.	Bindu, P. U. and <b>Sebastian, C. D.</b>	Analysing the phylogenetic status of seven species of the Superfamily Coreoidea (Insecta: Hemiptera: Heteroptera) from South India	Journal of Experimental Biology and Agricultural Sciences. ISSN: 2320- 8694	7 (6): 603-609 2019	RJIF: 3.43
14.	Bindu, P. U. and <b>Sebastian, C. D.</b>	First record of polymorphism in <i>Nezara viridula</i> (L.), the southern green stink bug (Heteroptera: Pentatomidae), from Kerala, India and its	Uttar Pradesh Journal of Zoology. ISSN: 0256-971X (P)	40 (3): 114-119 2019	SCI: 0.21 Web of Science

		confirmation using mitochondrial gene sequences			
15.	Sreedevi, N. K. and <b>Sebastian C. D.</b>	Microbial pollution assessment in major tourist beaches of Kerala	Online International Interdisciplinary Research Journal. ISSN: 2249-9598	9(4): 29-34 2019	RJIF: 5.81
16.	Muhammedali, V. C., Akhilesh, V. P. and <b>Sebastian C. D.</b>	Molecular taxonomy and phylogenetic status of <i>Metaleptea brevicornis</i> (Orthoptera: Acrididae) using cytochrome oxidase subunit I gene	Online International Interdisciplinary Research Journal. ISSN: 2249-9598	8(12): 09-14 2018	RJIF: 5.81
17.	Jisha Krishnan, E. K. and <b>Sebastian C. D.</b>	DNA Barcoding and Phylogenetic inference of the endemic species <i>Onychogomphus malabarensis</i> (Anisoptera: Gomphidae) using mitochondrial cytochrome oxidase subunit I marker gene.	International Journal of Recent Scientific Research. ISSN: 0976-3031	9(2): 23990-23993 2018	RJIF: 6.86
18.	Priya Bhaskaran, K. P. and <b>Sebastian, C. D.</b>	DNA barcoding of <i>Eudocima cocalus</i> from North Kerala	Indian Journal of Scientific Research. ISSN: 2250-0138	20 (1): 50 – 52 2018	RJIF: 0.32
19.	Priya Bhaskaran, K. P. and <b>Sebastian, C. D.</b>	Molecular phylogenetic study of <i>Bactrocera tau</i> using mitochondrial cytochrome oxidase subunit I gene sequence	International Journal of Science and Research. ISSN: 2319-7064	6 (11): 1952 – 1954 2017	RJIF: 6.391
20.	Muhammedali, V. C., Akhilesh, V. P. and <b>Sebastian C. D.</b>	DNA barcoding for identification of <i>Conocephalus dorsalis</i> (Orthoptera: Tettigoniidae) from Northern Kerala using Cytochrome oxidase subunit I gene.	International Research Journal of Biological Sciences. ISSN: 2278-3202	6 (10): 8-10 2017	RJIF: 0.676
21.	Priya Bhaskaran, K. P. and <b>Sebastian, C. D.</b>	Molecular phylogenetic analysis of <i>Asota orbona</i> and <i>Asota caricae</i> (Lepidoptera: Erebidae) using mitochondrial COI gene.	International Research Journal of Pharmacy. ISSN: 2230 –	8(4): 41-43 2017	RJIF: 0.751



			8407		
22.	Akhilesh, V. P. and <b>Sebastian C. D.</b>	Genetic diversity analysis of the flea beetle, <i>Podagricca fuscicornis</i> (Chrysomelidae) using mitochondrial Cytochrome oxidase subunit I gene marker.	International Journal of Applied and Natural Sciences ISSN: 2319-4014(P), 2319-4022(E)	6 (1): 17-24 2017	RJIF: 4.876
23.	Jisha Krishnan, E. K. and <b>Sebastian C. D.</b>	Analysis of Taxonomic Relationships and species divergence of Libellulidae (Odonata: Anisoptera) members using cytochrome oxidase I gene.	International Journal of Advanced Biotechnology and Research ISSN: 0976-2612	7(2): 545-550 2016	RJIF: 6.94
24.	Akhilesh, V. P. and Sebastian C. D.	Cytochrome oxidase subunit I gene based phylogenetic description of common mormon butterfly <i>Papilio polytes</i> (Lepidoptera: Papilionidae)	International Journal of Science and Research ISSN: 2319-7064	5 (3): 977 – 980 2016	RJIF: 6.39
25.	Jisha Krishnan E. K. and Sebastian C. D.	Analysis of phylogenetic status of different <i>Neurothemis</i> (Odonata: Libellulidae) species using cytochrome oxidase I gene sequence	Global Journal of Recent Analysis ISSN: 2277 – 8160	5 (3): 85-87 2016	RJIF: 4.54
26.	Rukhsana, K. and Sebastian C. D.	A study on the mitochondrial COI DNA sequence and phylogenetic status of <i>Anastatus bangalorensis</i> Mani & Kurian and <i>Anastatus acherontiae</i> Narayanan, Subba Rao & Ramachandra Rao (Hymenoptera: Eupelmidae)	International Journal of Applied and Natural Sciences ISSN: 2319-4014 (P) 2319-4022 (E)	5 (1): 69-74 2016	RJIF: 4.87

**b. Research papers in conference proceedings**

Sl. No.	Authors	Title	Proceedings, Page & ISBN	Year & Date
1.	Vidya, P., Sreedevi, N. K. and <b>Sebastian,</b>	Screening and characterization of pigments from yeast, <i>Rhodotorula mucilaginosa</i>	33 <sup>rd</sup> Kerala Science Congress 2021. 26-27pp. ISBN: 978-81-942768-0-	January 22 – 30, 2021

	<b>C. D.</b>	present in mangrove sediments of Kerala	7	
2.	Thara Paul, Sreedevi, N. K. and <b>Sebastian, C. D.</b>	Occurrence of pathogenic bacteria in the mangrove sediments of North Kerala	33 <sup>rd</sup> Kerala Science Congress 2021. 27-28pp. ISBN: 978-81-942768-0-7	January 22 – 30, 2021
3.	Vidya, P. and <b>Sebastian, C. D.</b>	Distribution and seasonal variation of bioactive potential yeast strains in the mangrove sediments of North Kerala	32 <sup>nd</sup> Kerala Science Congress 2021. 162-163pp. ISBN: 978-81-942768-0-7	January 25 – 27, 2020
4.	Thara Paul, Sreedevi, N. K. and <b>Sebastian, C. D.</b>	Functional characterization of bacterial isolates from the mangrove sediments of Northern Kerala	32 <sup>nd</sup> Kerala Science Congress 2021. 163-164pp. ISBN: 978-81-942768-0-7	January 25 – 27, 2020
5.	Vidya, P., Sreedevi, N. K. and <b>Sebastian, C. D.</b>	Composition and bioactivity of yeasts from mangrove sediments of North Kerala	International Conference on Benthos (ICB 2019). 43pp. ISBN: 978-81-936217-5-2	March 6 – 8, 2019
6.	Vidya, P. and <b>Sebastian, C. D.</b>	A study on the yeast community present in the mangrove sediments of North Kerala	International Conference on Biodiversity Conservation (ICBD)	February 21 – 22, 2019
7.	Muhammedali, V. C., Sreedevi, N. K. and <b>Sebastian, C. D.</b>	Bacterial isolation, hydrolytic enzymes production and its relation to organic matter of mangrove sediments from Northern Kerala	31 <sup>st</sup> Kerala Science Congress 2019. 181pp. ISBN: 81 - 86366 - 97 - 0	February 2 – 3, 2019
8.	Surya, P. and <b>Sebastian, C. D.</b>	DNA barcoding and phylogenetic inference of <i>Carebara diversa</i> (Hymenoptera: Formicidae) using mitochondrial cytochrome oxidase I gene sequence	31 <sup>st</sup> Kerala Science Congress 2019. 190pp. ISBN: 81 - 86366 - 97 - 0	February 2 – 3, 2019
9.	Bindu, P. U. and <b>Sebastian, C. D.</b>	A check list of heteropteran bugs from different regions of North Kerala, India	International Conference on Recent Trends in Zoology, Biodiversity, Genetics & Environmental Sciences	December 04 – 6, 2018
10.	Priya Bhaskaran, K. P. and <b>Sebastian C. D.</b>	Genetic structure and molecular phylogeny analysis of <i>Henosepilachna septima</i> (Coleoptera: Coccinellidae), an alarming pest of cucurbitaceae family	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala. pp 153 – 159. ISBN: 978-93-5321-240-7.	March 12 – 14, 2018
11.	Jisha Krishnan, E. K. and <b>Sebastian C. D.</b>	DNA barcoding and phylogenetic analysis of <i>Vestalis apicalis</i> (Zygoptera: Calopterygidae) using cytochrome oxidase I gene	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala. pp 137 – 144. ISBN: 978-93-5321-	March 12 – 14, 2018

			240-7	
12.	Sreevidya, P. and <b>Sebastian, C. D.</b>	A study on seasonal abundance and molecular phylogeny of <i>Paederusfuscipes</i> Curtis (Staphylinidae: Paederinae)	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala. pp 49 – 55. ISBN: 978-93-5321-240-7	March 12 – 14, 2018
13.	Akhilesh, V. P. and <b>Sebastian C. D.</b>	Mitochondrial CO I gene structure and Phylogeny assessment of some agriculturally important insects from Kerala	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala. pp 96 – 105. ISBN: 978-93-5321-240-7	March 12 – 14, 2018
14.	Surya, P. and <b>Sebastian, C. D.</b>	Analysis of taxonomic and phylogenetic status of <i>Carebara diversa</i> (Hymenoptera; formicidae) using mitochondrial cytochrome oxidase I gene sequences	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala. pp 106 – 115. ISBN: 978-93-5321-240-7	March 12 – 14, 2018
15.	Muhammedali, V. C., Sreedevi, N. K. and <b>Sebastian, C. D.</b>	A study on the assessment of microbial pollution and molecular identification of selected isolates from Canoly Canal, Kozhikode	Frontiers in Biological Research, Department of Zoology, University of Calicut, Kerala. pp 106 – 115. ISBN: 978-93-5321-240-7	March 12 – 14, 2018
16.	Rukhsana, K. and <b>Sebastian C. D.</b>	Phylogeny and Molecular Taxonomy of <i>Trichogramma chilonis</i> Ishii ( <i>Hymenoptera: Trichogrammatidae</i> ), an egg parasitoid of <i>Chilo infuscatellus</i> ( <i>Lepidoptera: Pyralidae</i> ) derived from mitochondrial DNA sequences.	Proceedings of National Conference on Biodiversity: Its Prospects and Concerns. Providence Women's College, Kozhikode. pp 30-33. ISBN 978-93-85899-28-7	

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

Sl. No.	Authors	Chapter	Title of book, Page & ISBN	Year
1.	Priya Bhaskaran, K. P. and <b>Sebastian C. D.</b>	Genetic structure and molecular phylogeny analysis of <i>Henosepilachna septima</i> (Coleoptera: Coccinellidae), an alarming pest of cucurbitaceae family	Frontiers in Biological Research pp 153 – 159. ISBN: 978-93-5321-240-7.	2018
2.	Jisha Krishnan, E. K. and <b>Sebastian C. D.</b>	DNA barcoding and phylogenetic analysis of <i>Vestalis apicalis</i> (Zygoptera:	Frontiers in Biological Research, pp 137 – 144. ISBN: 978-93-5321-240-7	2018

		Calopterygidae) using cytochrome oxidase I gene		
3.	Sreevidya, P. and <b>Sebastian, C. D.</b>	A study on seasonal abundance and molecular phylogeny of <i>Paederus fuscipes</i> Curtis (Staphylinidae: Paederinae)	Frontiers in Biological Research, pp 49 – 55. ISBN: 978-93-5321-240-7	2018
4.	Akhilesh, V. P. and <b>Sebastian C. D.</b>	Mitochondrial CO I gene structure and Phylogeny assessment of some agriculturally important insects from Kerala	Frontiers in Biological Research, pp 96 – 105. ISBN: 978-93-5321-240-7	2018
5.	Surya, P. and <b>Sebastian, C. D.</b>	Analysis of taxonomic and phylogenetic status of <i>Carebara diversa</i> (Hymenoptera; formicidae) using mitochondrial cytochrome oxidase I gene sequences	Frontiers in Biological Research, pp 106 – 115. ISBN: 978-93-5321-240-7	2018
6.	Muhammedali, V. C., Sreedevi, N. K. and <b>Sebastian, C. D.</b>	A study on the assessment of microbial pollution and molecular identification of selected isolates from Canoly Canal, Kozhikode	Frontiers in Biological Research, pp 106 – 115. ISBN: 978-93-5321-240-7	2018

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

## 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. PUSHPALATHA
2. Name of the Department: Zoology
3. Educational qualifications: M.Sc. Ph.D.
4. Present position: Associate Professor & Head
5. Address for correspondence: Department of Zoology, University of Calicut, Calicut UniversityPO
6. E-mail and contact number: [drepushpalatha@gmail.com](mailto:drepushpalatha@gmail.com) 9495927507
7. Specialization: Environmental Biology
8. Total teaching experience: 15 years
9. Courses taught: M.Sc., M.Phil., Ph.D.
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.

<i>Sl. No</i>	<i>Title of the project</i>	<i>Date of Sanction &amp; Duration</i>	<i>Grant received Rs</i>	<i>Funding agency</i>	<i>PI or Co-PI</i>
7.	Effect of Botanical Insecticides against mosquito vectors: Implication for Integrated Vector Control Programme	F.No.– 43-601/2014 SR dated Nov. 2015 (3 years)	13,36,000	UGC, New Delhi	PI
8.	Early Response of Regeneration in the Freshwater Crab, <i>Paratelphusa hydrodromous</i> (Herbst)	102/IFD/SAN/4397/2015-16 dated March 07, 2016 (3years)	43,00,000	DBT, New Delhi	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.

<i>Sl. No</i>	<i>Name of the student</i>	<i>Topic of research</i>	<i>Date of registration</i>	<i>Date of award</i>
6.	AnjuViswan K.	Biochemical Detection of Insecticide Resistant Mechanisms in the selected species of Mosquito vectors	DOR/B1/3778/PhD- 2012 dt. 19.11.2012	November 21 st 2018
7.	Rahana V.K.	Studies on Induced Sterility in Selected species of Mosquitoes using plant based bioactive compounds	DOR/B1/864/PhD-2012 dt. 13.03.2013	July 29 th . 2019
8.	Aiswarya D.	Studies on sublethal toxicity of carbosulfan on the adults of Banana pseudostem weevil, <i>Cosmopolitussordidus</i> Germer (Coleoptera:Curculionidae)	U.O.No. 9948/2014/Admndt. 03.07.2014	July 15 th, 2020
9.	Mariyam	Influence of Probiotics on physiological and immune responses in tilapia, <i>Oreochromismossambicus</i> (Peters)	U.O.No.5639/2015/Admndt. 11.05.2015	Submitted

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

<i>Sl. No</i>	<i>Name of the student</i>	<i>Topic of research</i>	<i>Date of registration</i>
7.	Greshma K.P		U.O.No. 6194/2015/Admn 27.05.2015
8.	Nidhish G.	In vitro and In vivo studies on antiplasmodial activity of different plant based compounds on the malarial parasite, <i>Plasmodium falciparum</i> William H Welsh	U.O.No. 9039/2016/Admndt. 25.07.2016
9.	Athira A	Larvicidal and Insect Growth Regulatory activity of plant based compounds on <i>Culexquinquefasciatus</i> Say (Diptera: Culicidae)	U.O.No.8070/2019/Admndt. 20.06.2019
10.	ShabnaAsmi	A study of possible molecular mechanism of mode of action on larvicidal and reproductive toxicity effect of selected plant extracts on <i>Aedesaegypti</i> (L.) Diptera:Culicidae	U.O.No.10804/2019/Admndt. 29.07.2019
11.	ShibuAnand C.	Proteomic study on autotomy and regeneration in freshwater crab,	U.O.No. 1911/2020/Admndt. 13.02.2020

		<i>Paratelphusahydrodromous</i> (Herbst)	
12.	AthoofaThaqib	Biogenic synthesis of silver nanoparticles from medicinally important plant extracts and evaluation of anti-oxidant and anti-cancerous activities	Synopsis Submitted

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

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

<i>Sl. No.</i>	<i>Title</i>	<i>Academic session/Seminar/Organiser</i>	<i>Status/ Level</i>	<i>Year</i>
42.	The autotomy and regeneration of fresh water crab <i>Paratelphusahydrodromous</i> an identification of riboflavin expression	Recent trends in Stem cells and Regenerative Medicine(RTSRM) Research and Development wing, SreeBalaji medical college and hospital, chrompet, Chennai, Tamilnadu, India	International	2017
43.	Regeneration of walking leg of fresh water crab <i>Paratelphusahydrodromous</i>	Advance functional materials for Energy, Environment and Biomedical Applications Madurai Kamaraj University, mudurai, Tamilnadu, India.	International	2017
44.	Finding the localization of Oct- 4 protein expression of fresh water crab <i>Paratelphusahydrodromous</i> during leg regeneration	Innovative research in Biological sciences PasumponmuthuramalingaThevar college, Sangarankovil, Tamilnadu, India	International	2019
45.	Characterization of Albumin protein in earthworm regeneration	“Sustainable scientific Advancements” Sri Vinayaga college of Arts & Science, Ulundurpet, Vilupuram, Tamilnadu, India	International	2019
46.	Effect of Sub-lethal Toxicity of Zinc Chloride on enzyme activity of <i>Catlacatla</i> Hamilton	Innovative research in Biological sciences PasumponmuthuramalingaThevar college, Sangarankovil, Tamilnadu, India	International	2019
47.	Biochemical effects of organophosphorus pesticide quinalphos on freshwater fish, <i>Oreochromisniloticus</i> (Linnaeus).	Innovative research in Biological sciences PasumponmuthuramalingaThevar college, Sangarankovil, Tamilnadu, India	International	2019

48.	Genotoxic effects of organophosphorus insecticide Quinalphos on freshwater fish, <i>Oreochromismossambicus</i> (Peters) using micronucleus assay	“Biology and Medicine” Department of Zoology and Human Genetics and Molecular Biology Bharathiar University, Coimbatore, Tamilnadu	National	2019
49.	Physiological Effects of Medicinal Plants Leaf extracts, <i>Ocimum sanctum</i> and <i>Piper betle</i> on Climbing perch <i>Anabas testudineus</i> (Bloch)	“Biology and Medicine” Department of Zoology and Human Genetics and Molecular Biology Bharathiar University, Coimbatore, Tamilnadu	National	2019
50.	Effect of sub-lethal toxicity on zinc chloride on enzyme activity in <i>Catlacatla</i> , paper presented in.	Innovative Research in Biological sciences Department of Zoology and	International	2019
51.	Influence of <i>Lactobacillus plantarum</i> as probiotic on physiological parameters of tilapia <i>Oreochromismossambicus</i> ,	“Recent biotechnological innovation in aquaculture” Department of Zoology, Bharathiar University, Coimbatore, Tamilnadu and ICAR, National Bureau of Fish Genetics Research, Lucknow	International	2020
52.	Quinalphos induced histoarchitectural alterations in fresh water fish, <i>Oreochromismossambicus</i> (Peters).	“Recent Biotechnological Innovation in Aquaculture” Department of Zoology Bharathiyar University, Coimbatore, Tamilnaduand ICAR, National Bureau of Fish Genetics Research, Lucknow	International	2020

17. Innovative processes developed in teaching and learning : Nil

18. Participation in curricular development:

<i>Sl. No.</i>	<i>Name of Course</i>	<i>Level (UG/PG)</i>	<i>University</i>
1	Medical Entomology	PG	University of Calicut
2	Insect Pests : Control and management	PG	University of Calicut
3	Bioethics	PG	University of Calicut

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

<i>Sl. No</i>	<i>Type of Responsibility/Duty</i>	<i>Role Performed</i>
1	Student Seminars	Organizer
2	Field Visit /Collection Trip	Organizer



20. Refresher and Orientation courses attended:

<i>Name of the Course</i>	<i>Place</i>	<i>Duration</i>	<i>Sponsoring Agency</i>
<b>Refresher Course</b> on Organic Pest Control	Annamalai University, Chidambaram, Tamilnadu	21.01.2008 to 10.02.2008	UGC
<b>Orientation Course</b>	Academic Staff College, University of Calicut	02.07.2009 to 29.07.2009	UGC
<b>Refresher Course</b> in Life Sciences	Academic Staff College, University of Calicut	04.07.2014 to 24.07.2014	UGC
Hands on Training on Basic Molecular Biology Techniques	School of Applied Animal Production and Biotechnology, Kerala Veterinary and Animal Sciences University	01.04.2016 to 07.04.2016	Revolving Fund Project KVASU
<b>Global Exchange Lecture Course</b> on Malaria Genomics and Public Health	Centre for Research in Medical Entomology (ICMR), Madurai, Tamilnadu	29.01.2017 to 11.02.2017	Jointly by EMBO and ICMR
<b>Short Run Course</b> for Professional Development	MHRD-TLC, Department of Education University of Calicut	21.08.2017 to 27.08.2017	MHRD-TLC PMMNMTT
Online Hands-on Training Programme on Learning Management Systems-Moodle	Department of Computer Sciences and IQAC, University of Calicut	25.05.2020 to 09.06.2020	University of Calicut

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.

<i>Sl. No.</i>	<i>Authors</i>	<i>Title</i>	<i>Journal &amp; ISSN</i>	<i>Year, Vol. &amp; Page No</i>	<i>Impact Factor if any</i>
27.	Athira A and E. Pushpalatha	Knockdown, repellent and adulticidal activity of essential oils derived from selected aromatic plants against the filarial vector mosquito, <i>Culex quinquefasciatus</i> Say (Diptera: Culicidae)	International Journal of Entomological Research	2021, Vol.6 (1) pp 133-137	SCI: 0.66 Web of Science
28.	Rahana V.K. and	<i>Sterculiaguttata</i> Roxb. As	International	2021;	Peer

	E. Pushpalatha	insect growth regulatory agent and its influence on developmental indices of filarial vector, <i>Culexquinquefasciatus</i> Say	Journal of Mosquito Research ISSN : 2348-5906	8(1): 19-24	Reviewed and UGC listed
29.	Pushpalatha E.	Acetone extracts of selected medicinal plants and their potential as larvicidal agent against <i>Culexquinquefasciatus</i> Say (Diptera: Culicidae) and impediment on emergence	International Journal of Recent Scientific Research ISSN : 0976-3031	2021, Vol. 12 (02 (A), pp. 40767-40771	Peer Reviewed and UGC listed
30.	Aiswarya D and Pushpalatha E	Detoxifying enzymes status of the adult banana pseudostem weevil, <i>Odoiporuslongicollis</i> (Oliver, 1807), against carbosulfan pesticide	International Journal of Recent Scientific Research ISSN : 0976-3031	2021, Vol. 12 (03 (A), pp. 41172-41177	Peer Reviewed and UGC listed
31.	AnjuViswan K and Pushpalatha E.	Elevated Metabolic Enzymes and its Association with Insecticide Detoxification in <i>Culexquinquefasciatus</i> Say	Acta Scientific MICROBIOLOGY ISSN : 2581-3226	2021, Vol 4 (4) pp 83-89	Peer Reviewed
32.	Athira A.& E. Pushpalatha	Essential oils of a few aromatic plants and their potential as knockdown, repellent and adulticidal agent to the filarial vector, <i>Culexquinquefasciatus</i> Say (Diptera: Culicidae)	International Journal of Mosquito Research ISSN : 2348-5906	2021; 8(1): 35-40	Peer Reviewed and UGC listed
33.	Aiswarya D, Y. ShibuVardhanan and Pushpalatha E	Effect of xenobiotics on adult banana pseudo stem weevil <i>Odoiporuslongicollis</i> Oliv. (Coleoptera: Curculionidae), using landmark based geometric morphometric analysis	International Journal of Entomology Research ISSN : 2455-4758	2021, Vol.6 (1) pp 93-103	Peer Reviewed and UGC Listed
34.	Mariyam K H, Greeshma K P, Ramesh P.R. and E Pushpalatha	Effect of Dietary Probiotics Isolated from the Gut of Tilapia, <i>Oreochromismossambicus</i> (Peters, 1852) on its Growth Performance and Digestive Enzyme Activities	International Journal of Zoological Investigations ISSN: 2454-3055	2021, Vol. 7, No. 1, 40-50	Peer Reviewed and UGC listed
35.	Greeshma K.P., K. H. Mariyam., K. J.	Quinalphos induced histoarchitectural alterations in	<i>International Journal of Science and</i>	2021 Vol 10 (1)	SJIF (2019):

	Josmi and E. Pushpalatha	fresh water fish, <i>Oreochromismossambicus</i> (Peters)	<i>Research IJSR</i> ISSN: <b>2319-7064</b>	pp156-161	7.583
36.	AnjuViswan K., E. Pushpalatha, S. Arivudayanambi and Selvamuthukumaran	Fractional Extraction, Isolation and Identification of Biologically Active Compounds from <i>Anamirtacocculus</i> (L.) Wight & Arn to Control <i>Culexquinquefasciatus</i> Say and <i>Aedesalbopictus</i> Skuse	Journal of Communicable Diseases ISSN : 0019-5138	2020, Vol. 52(3) pp. 53-57	Peer Reviewed and UGC listed
37.	Athira Jose, Pushpalatha E and Sudhikumar A	Diversity and population fluctuation of jumping spiders (Araneae: Salticidae) of Calicut University campus, Kerala, India	Serket ISSN : 1110-502X	2020, Vol. 17(3): 252-259.	Peer Reviewed
38.	AnjuViswan, K., Pushpalatha E, Arivudainambi S and Selvamuthukumar an T	Fractional Extraction, isolation and identification of biologically active compounds from <i>Melaleucaleucadendron</i> L. to control the vectors of dengue and filariasis	Journal of Pharmacognosy and Phytochemistry ISSN : 2278-4136	2020; 9(2):68-73	Peer Reviewed
39.	Sahla A.K. and Pushpalatha	Repellant and fumigant toxicity of essential oil from <i>Melaleucaleucadendron</i> as storage protectant against <i>Callosobruchusmaculatus</i> (Fab.) (Coleoptera: Bruchidae) on Cow pea, <i>Vignaunguiculata</i>	International Journal of New Innovations in Engineering and Technology ISSN : 2319-6319	2020, Vol.14 (1), pp.75-82	Peer Reviewed and UGC listed
40.	Sahla A.K. and Pushpalatha	Essential oil of <i>Citrus limon</i> (L.) Osbeck, a potential repellant and fumigant toxicity agent against <i>Callosobruchusmaculatus</i> (Fab.) (Coleoptera: Bruchidae) on cow pea, <i>Vignaunguiculata</i> (l.) walp.	International Journal of Recent Scientific Research ISSN: 0976-3031	2020, Vol. 11 (7) pp. 39095-39099	Peer Reviewed and UGC listed
41.	KH Mariyam, KP Greeshma, S Vidya, and E Pushpalatha	Influence of plant extract supplemented diet on physiological activities in <i>Anabas testudineus</i> (Bloch, 1792)	International Journal of New Innovations in Engineering and Technology ISSN : 2319-6319	2020, Vol. 15 (2), pp. 3-9	Peer Reviewed and UGC listed
42.	Ahalya S.R. and E. Pushpalatha	Growth regulatory potential of <i>Chromolaenaodorata</i> (Asteraceae) extract against	International Journal of Recent Scientific Research	2020, Vol. 11 (12) pp.	Peer Reviewed and

		the filarial vector, <i>Culexquinquefasciatus</i> say (Diptera: Culicidae)	ISSN : 0976-3031	40305-40309,	UGC listed
43.	Aiswarya D. and Pushpalatha E.	Acetylcholinesterase enzyme level and insecticide resistance status of adult banana pseudostem weevil, <i>Odoiporuslongicollisoliv.</i> (Coleoptera: Curculionidae)	Asian Journal of Science and Technology ISSN: 0976-3376	2020, Vol. 11 (6) pp.10992-10996, 2020	Peer Reviewed
44.	Ahalya S.R. and E. Pushpalatha	IGR Activity of Three Indigenous Plants belonging to Asteraceae Family and its Potential Role on Control of Filarial Vector, <i>Culexquinquefasciatus</i> Say (Diptera: Culicidae)	Journal of Communicable Diseases ISSN : 0019-5138	2019, Vol 52(2) pp. 57-62	Peer Reviewed and UGC listed
45.	AnjuViswan K, E Pushpalatha, PK Srivastava	Insecticide Resistance Monitoring in <i>Culexquinquefasciatus</i> - the Vector of Lymphatic Filariasis	Journal of Communicable Diseases ISSN : 0019-5138	2019, Vol 52(1) pp. 61-64	Peer Reviewed and UGC listed
46.	K.H. Mariyam, K.P. Greeshma, K.A. Deepthi and E. Pushpalatha	Sublethal Toxicity of Zinc Chloride on Antioxidant Enzyme activity of <i>Catlacatla</i> (Hamilton)	Journal of Advanced Laboratory Research in Biology ISSN : 0976-7614	2019, Vol. 10 (3), PP 91-94	Peer Reviewed
47.	K.P. Greeshma, K.H. Mariyam, Laya Paul and E. Pushpalatha	Biochemical effects of Organophosphorus pesticide, Quinalphos on freshwater fish, <i>Oreochromisniloticus</i> (L.)	Journal of Advanced Laboratory Research in Biology ISSN : 0976-7614	2019, Vol. 10 (3), PP 95-99	Peer Reviewed
48.	E. Pushpalatha	<i>Bougainvillea spectabilis</i> Wild., a potential larvicidal agent to control the filarial vector, <i>Culexquinquefasciatus</i> say.	Indian Journal of Applied Research ISSN : 2249-555X	2019, Vol.9 (4), pp.53-55	Peer Reviewed
49.	E. Pushpalatha	Toxic effect of <i>Uvarianarum</i> (Dunal) Wall and its synergistic property with temephos against the filarial vector, <i>Culexquinquefasciatus</i> say (Diptera: Culicidae)	European Journal of Pharmaceutical and Medical Research ISSN : 2394-3211	2019,6 (4), 492-495	Peer Reviewed

50.	AnjuViswan K1, E Pushpalatha2	Biochemical and Molecular Analysis of Acetylcholine Esterase to Rule out Organophosphorus Detoxification Level in Field Populations of <i>Culexquinquefasciatus</i> Say (pp. 22-27)	Journal of Communicable Diseases ISSN : 0019-5138	2019, Vol 51(2) pp. 22-27	Peer Reviewed and UGC listed
51.	AnjuViswan,K, Evangeline Surya Hermon, Pushpalatha, E.	Insecticide Susceptibility/ Resistance status and distribution pattern of kdr genotype in <i>Culexquinquefasciatus</i> of Palakkad District, Kerala	International Journal of Research and Innovation in Applied Science ISSN : 2454-6194	2019, Vol.6(6) pp.26-29	Peer Reviewed
52.	AnjuViswan, K. , Syama, M.C. , E. Pushpalatha	Carboxyl esterase and gst levels of <i>Culexquinquefasciatus</i> say and <i>Aedesaegypti</i> L. collected from the selected sites of Malappuram district	International Educational Applied Scientific Research Journal ISSN : 2456-5040	2019, Vol.4 (7) pp. 11-13	Peer Reviewed
53.	AnjuViswan, K, Pushaplatha, E	Phytochemical Screening and Larvicidal Activity of <i>Croton hirtus</i> L'Her Leaves against <i>Culexquinquefasciatus</i> Say (pp 878-880)	International Journal of Science and Research ISSN : 2319-7064	2018, Vol 8 (8), pp. 878-880	Peer reviewed SJIF :7.426
54.	Nidhish G, E Pushpalatha, AnjuViswan K	Incidence and Prevalence of Malaria in Thrissur District, Kerala: A Time Series Analysis (pp 16-21)	Journal of Communicable Diseases ISSN : 0019-5138	2018, Vol50 (1) pp 16-21	Peer Reviewed and UGC listed
55.	K. AnjuViswan, G. Nidhish, E. Pushpalatha	Biochemical Monitoring of Detoxifying Enzyme Levels in Field Population of Mosquitoes: <i>Culexquinquefasciatus</i> Say and <i>Aedesaegypti</i> (L.) pp 36-42	International Journal of Pharmaceutical & Biological Archives ISSN: 0976-3333	2018, Vol9(1) pp36-42	Peer Reviewed
56.	Sreedhanya S, Athira A and E. Pushpalatha	Larvicidal and Repellent efficacy of some of the weed plant extracts against <i>Culexquinquefasciatus</i> Say	Journal of Advanced Laboratory Research in Biology ISSN : 0976-7614	2017; 8 (1) pp. 6-12	--
57.	Aiswarya D and E. Pushpalatha	Biological Efficacy of <i>Quassiaindica</i> (Geartn) <i>Nooteb</i> and <i>Centellaasiatica</i> (L.) Urban against selected	IOSR Jornal of Pharmacy and Biological Sciences (IOSR-JPBS)	2017, 12(1) 95-97	

		strains of bacteria	ISSN:2319-7676		
58.	AnjuViswan K., Pushpalatha E and Azhakiyanampi P	Application of synthetic insecticide and change in detoxifying enzyme levels in <i>Culexquinquefasciatus</i> (Say)	International Journal of Mosquito Research ISSN : 2348-5906	2016, 3 (6): 31- 35	
59.	Rahana V.K. AnjuViswan and E. Pushpalatha	Response on Growth regulatory activity of three indigenous plant extracts against dengue vector <i>Aedesalbopictus</i> (Skuse)	International Journal of Mosquito Research ISSN : 2348-5906	2016, 3(4) : 01- 05	

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

24. P a t e n t s	Sl. No.	Title of Book/ Chapter/Editor	Author(s)/Editor(s)	National/ International	ISSN / ISBN No.
	1	Handbook of Taxonomy of Diptera(Edited)	E. Pushpalatha	International	978-93-5396- 943-1
	2	Mosquito Vectors of Public Health Importance (Authored)	E. Pushpalatha	International	817748208-4

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,	Conferences ,seminars, symposia and workshops organized	Oraginisied/Coordinated	Year & Date	No. of Participants attended
1	Techniques in molecular biology	Coordinated with CAMB	21.03.2019 to 23.03.2019	11
2	Cell culture and gene expression studies using real time PCR	Coordinated with CAMB	17.10.2019 to 19.10.2019	23
3	National Workshop on Taxonomy of Diptera	Organised	09.01.2020 to 22.01.2020	34

27. Number of collaborations: 4

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. E.M. Manogem
2. Name of the Department: Zoology
3. Educational qualifications: M.Sc; Ph.D
4. Present position: Associate Professor
5. Address for correspondence: Department of Zoology, University of Calicut
6. E-mail and contact number:- manogemvinod@yahoo.com 9895325917
7. Specialization: Insect Endocrinology and Reproductive Biology, Entomology
8. Total teaching experience: 15
9. Courses taught: Biophysics, General Entomology, Insect Pest Control & Management, Agricultural Entomology & Insect Ecology & Ethology
10. Research experience: 15
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

**Title of the Project:** Development & Characterization of *Spodoptera mauritia* cell line & establishment of cell cultures response to insect growth regulators, for a total outlay of Rs. 24 lacs. Date of sanction- 06.8.2013, Duration -three years, Funding agency- DST-SERB, PI- Dr. Manogem E.M

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. See Enclosure -II
14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration. Enclosure- II
15. Provide information as indicated in 11 and 12 above.
16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person. Enclosure- III
17. Innovative processes developed in teaching and learning. Updating of subject content, Interactive and integrated chemical intending system to minimize wastage of chemicals.
18. Participation in curricular development: OBE based Syllabus revision, M.Phil special paper of Advances in Taxonomy and Systematics.

19. Participation in co-curricular and extra-curricular activities. Interaction with organic farmers for better understanding of insect pests.
20. Refresher and Orientation courses attended: Enclosure
21. Examination /Evaluation reforms initiated:
22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.Enclosure-IV
23. Books published: with ISBN No., Without ISBN No., Chapters in books.Enclosure-IV
24. Patents Applied/Granted: National. International, commercialized:
25. Consultancy services provided and revenue generated:
26. Conferences ,seminars, symposia and workshops organized as convener/coordinator: Enclosure-V
27. Number of collaborations: Nil
28. Awards /recognitions received: International, National, State, University level.

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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## Enclosure- II

No.	Name of the student	Topic of research	Date of registration	Date of declaration of Ph.D. degree
1	Mrs. Praseeja C	Studies on the effects of the chitin synthesis inhibitor, flufenoxuron on <i>Spodoptera mauritia</i> Bois. (Lepidoptera: Noctuidae).	14.01.2013	06.07.2018

13. Number of students awarded Ph.D. degree

14. Number of students registered for Ph.D. degree

No. students	Name of the student	Topic of research	Date of registration
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1	Mrs. Ayisha Banu C	Effect of juvenile hormone analogue, fenoxycarb on <i>Spodoptera mauritia</i> Boisd. (Lepidoptera: Noctuidae): specific cytotoxicity on Sf21 cell line	04/06/2015
2.	Mrs. Sathyakala K.P	Effects of insect growth regulators, chromofenozide and fenoxycarb on rice swarming caterpillar, <i>Spodoptera mauritia</i> Boisd. (Lepidoptera: Noctuidae)	20.06.2016
3	Ms. Sreelekha.P. C	comprehensive study on faunal diversity and geometric morphometrics analysis of noctuid moths in Peruvannamuzhi forest range, Kerala	25.08.2016
4	Ms. Reshma V	Effect of chitin synthesis inhibitor on male reproductive system of <i>Spodoptera mauritia</i> Boisd. (Lepidoptera: Noctuidae)	01.7.2016
5	Ms. Anushruthi Ramakrishnan	Impact of Aquatic weedicide, Diquat on non-target vector, <i>Aedes albopictus</i> (Diptera: Culicidae)	13.02.2020
6	Ms. Gayathri A.K	Effect of Imidacloprid on Honey Bee, <i>Apis cerana indica</i> F (Hymenoptera: Apidae): Immune response and Gut Microbiome.	13.02.2020

20. Academic Staff College Orientation/ Refresher Course attended:

Name of the Course	Place	Duration	Sponsoring Agency
Refresher Course in Life Sciences (Thrust area: Molecular biology)	UGC-Academic Staff College, University of Calicut	4 August, 2011 to 24 August, 2011	UGC-Academic Staff College, University of Calicut
72 <sup>nd</sup> Orientation Programme	UGC-Academic Staff College, University of Calicut	2 March, 2012 to 29 March, 2012	UGC-Academic Staff College, University of Calicut
Refresher Course in Biotechnology	UGC-Academic	30 July, 2015 to	UGC-Academic Staff College, University

(Interdisciplinary)	Staff College, University of Calicut	19 August,2015	of Calicut
Short term course in Professional development MHRD	Teacher Learning Centre, Department of Education, University of Calicut.	2017	MHRD

#### Enclosure – IV

#### 21. Research papers in published journals

Sl. No.	Authors	Title with page nos.	Journal	ISSN NO	Peer reviewed	Impact factor
1	Praseeja C.,Arathi S, AyishaBanu and Manogem E.M	Effect of chitin synthesis inhibitor, flufenoxuron on haemocytes of <i>Spodoptera mauritia</i> BOISD. (Lepidoptera: Noctuidae). pp 68-75.	International journal of plant, animal and environmental sciences. Vol 6 (1)2016	ISSN 2231-4490	Yes	
2	Manogem., and Y. ShibuVardhanan	Toxicity bioassay and semi-quantitative histopathological changes in the gills of paddy field crab, <i>Paratelphusa hydrodromus</i> (Herbst) exposed to arsenic. pp. 18264-18268.	International Journal of Recent Scientific Research. Vol. 8, ( 7), July 2017.	ISSN 0976-3031	Yes	3.65
3	Sathyakala K.P.,E.M Manogem., and Y. ShibuVardhanan	Effect of Chromafenozide on the ultramorphology of larval midgut of <i>Spodoptera mauritia</i> Boisid. (Lepidoptera: Noctuidae). Pp. 20732- 20737.	International Journal of Recent Scientific Research. Vol. 8, ( 10), Oct, 2017.	ISSN 0976-3031	Yes	3.65
4	E.M	Geometric morphometrics	Int.J.Engg.Technol. 7	ISSN:	Yes	

	Manogem. , Soumya P.K., and Y. ShibuVardhanan	approach on genotoxicity evaluation of ecdysoneagonist,chromafenozide on <i>Corcyra cephalonica</i> Stainton (Lepidoptera: Pyralidae).	(410) pp. 8-14,2018	2227-524X DOI: SPC,2 7.10.2 018		
5	AyishaBanu C, and Sathyakala K P and Manogem E.M	Efficacy of JHA, fenoxycarb on egg hatchability and post embryonic development of <i>Spodoptera mauritia</i> BOISD.(Lepidoptera: Noctuidae).	International Journal of Advanced Research. Vol. 7, ( 6), pp. 80-86, 2019 ISSN: 2320-5407	DOI <a href="http://dx.doi.org/10.21474/IJAR01/9198">http://dx.doi.org/10.21474/IJAR01/9198</a>	Yes	4.06
6	AyishaBanu C, Sathyakala K P and Manogem E.M	Evaluation and screening of growth disrupting juvenile hormone analogue, fenoxycarb on the development and metamorphosis of <i>Spodoptera mauritia</i> Boisd (Lepidoptera: Noctuidae)	Crop Research Vol.54 (6) 2019 ISSN-0970-4884	DOI : 10.31830/2454-1761.2019.027	Yes	0.240

#### Publications other than journal articles (books, chapters in books)

Sl. No	Title with page nos.	Title, editor and publisher of Book	ISSN/I SBN No.	Peer reviewed
1	Toxicological Evaluation of Chitin Synthesis inhibitor (flufenoxuron) on the biochemical analysis of <i>Spodoptera mauritia</i> Boisd.(Lepidoptera: Noctuidae). PP. 432- 437.	Proceedings of 10 <sup>th</sup> NABS- National Conference on Recent Trends in Life Sciences: Research, Practices & Application for Sustainable Development. Eds. Dr.P. Ponumurugan, Dr. V. Ramasubramanian, Dr. T. Marimuthu. MacMillan Publishers Pvt. Ltd.	ISBN 978-93870-0007-0	Yes

2	Effects of Juvenile hormone analogue, Fenoxycarb on haemocytes profile of <i>SpodopteraMauritia</i> Boisd. (Lepidoptera: Noctuidae). Pp.342-349.	Proceedings of10 <sup>th</sup> NABS- National Conference on Recent Trends in Life Sciences: Research, Practices & Application for Sustainable Development. Eds. Dr.P. Ponumurugan, Dr. V. Ramasubramanian, Dr. T. Marimuthu. MacMillanPublishersPvt. Ltd.	ISBN 978-93870-0007-0	Yes
3	Impact of Flubendiamide toxicity on biochemical changes in fat body of Silkworm larvae, <i>Bombyxmori</i> (Lepidoptera: Noctuidae). PP.337-341.	Proceedings of10 <sup>th</sup> NABS- National Conference on Recent Trends in Life Sciences: Research, Practices & Application for Sustainable Development. Eds. Dr.P. Ponumurugan, Dr. V. Ramasubramanian, Dr. T. Marimuthu. MacMillanPublishersPvt. Ltd.	ISBN 978-93870-0007-0	Yes
4	Toxicity analysis on edysone agonist, chromafenozide in <i>spodopteraMauritia</i> Boisd (Lepidoptera: Noctuidae). PP. 577-583.	Proceedings of10 <sup>th</sup> NABS- National Conference on Recent Trends in Life Sciences: Research, Practices & Application for Sustainable Development. Eds. Dr.P. Ponumurugan, Dr. V. Ramasubramanian, Dr. T. Marimuthu. MacMillanPublishersPvt. Ltd.	ISBN 978-93870-0007-0	Yes

### 23. Book(s) authored/Edited Volumes/Chapters

Sl.No	Author(s) in order	Title	Publisher, Volume, pages	Date of Publication	International/ National
1	Dr. ShibuVardhanan .,Dr. Manogem E.M.,Dr. SreejithKanholi., Dr.	Handbook of training manual on Insect	Department of Zoology, University of Calicut	28.3.2019	National

	K.J. David., Dr. Shalini and Dr.GandhiR.Gracy	Taxonomy and Field sampling skills			
2	Dr.E.Pusphalatha, Dr.Y.ShibuVardhanan Dr.Manogem E.M Dr.SreejithKanholi	Handbook of training manual on taxonomy of Diptera	Department of Zoology, University of Calicut	22.02.2020	National

### Enclosure -III

#### 16. Details of Seminar/Workshops attended

Sl. No.	Name	Title of the event	Organizer & venue	International/ National	Period
1	Manogem E.M	World Summit on advances in Science, Engineering & Technology, Cambridge Summit2018	VIT, Cambridge University	International	Jan 2018
2	Manogem E.M	42 <sup>nd</sup> Annual Conference of ESI & National Symposium on Animal Behaviour, Biodiversity and Human Future	ESI & Department of Zoology, University of Calicut	National	4-6 <sup>th</sup> Dec,2018
3	Manogem E.M	International conference on recent innovations in bio sustainability and environmental research- 2019 (RIBER- 2019)	. Department of Zoology, Annamali University.	International	20- 22 feb,2019

**Enclosure- V****26. Details of Seminar/Workshops organized by the Centre**

Sl. No.	Title of the event	Co-ordinator	Organizer/sponsor & venue	International/ National	Duration
	Workshop on Insect Taxonomy & Field Sampling Skills	Dr. Manogem E.M	Department of Zoology, University of Calicut and National Bureau of Agricultural Insect Resources (NBAIR)	National	4 days
2	Taxonomy on Diptera	Dr. Manogem E.M	Department of Zoology, University of Calicut	National	Two weeks 09.02.20 20- 22.02.20 20

## Faculty profile

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

1. Name of the faculty: Dr. K. C. CHITRA
2. Name of the Department: Zoology
3. Educational qualifications: M. Sc., M. Phil., Ph. D.,
4. Present position: Associate Professor
5. Address for correspondence: Department of Zoology, University of Calicut
6. E-mail and contact number: kcchitra@yahoo.com; +91-9495135330
7. Specialization: Toxicology and Endocrinology
8. Total teaching experience: 15 years
9. Courses taught: Biostatistics; Cytogenetics; Molecular Biology; Insect Physiology and Biochemistry
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.
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

Evaluation of the Environmental estrogens in the Freshwater fish, *Pseudotroplus maculatus* (Bloch, 1795); July 2014 to July 2017; 3 years; Total outlay: Rs. 12,31,600/; Science Research Scheme - Kerala State Council for Science, Technology and Environment (KSCSTE), Thiruvananthapuram; Principal Investigator.

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.

1. K. P. Asifa. Evaluation of the effect of an endocrine disrupting chemical, chlordecone, in the reproductive and non-reproductive tissues of the cichlid fish, *Pseudotroplus maculatus* (Bloch, 1795). 15 November, 2012 (Registration); November 21, 2018 (Degree awarded).

2. P. V. Vidya Balakrishnan. Effects of selected nanoparticles on the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). 15 November, 2012 (Registration); 10 January, 2020 (Degree awarded).
3. N. Sumi. Assessment of fullerene C<sub>60</sub>, a carbon nanomaterial, induced toxic response in the freshwater fish, *Anabas testudineus* (Bloch, 1792). 3 July, 2014 (Registration); 30 September 2020 (Degree awarded).
4. V. Revathy. Toxic effects of the phthalate plasticizers in the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). 3 July, 2014 (Registration); 30 September 2020 (Degree awarded).
5. K.P. Raibeemol. Biochemical and immunotoxicological effects of chlorpyrifos in the freshwater fish *Pseudotropheus maculatus* (Bloch, 1795). 19 December, 2014 (Registration); 12 November, 2020 (Degree awarded).

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

1. C. V. Priyatha. Evaluation of triclosan-induced reproductive toxicity in the freshwater fish, *Anabas testudineus* (Bloch, 1792). 5 September, 2016 (Registration);
2. Nikhil John. Influence of diazepam, an antipsychotic drug, on the stress parameters in the mosquitofish, *Gambusia affinis* (Baird and Girard, 1853). 4 March, 2020 (Registration);

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

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

- 1 P.V. Vidya, K.P. Asifa and K.C. Chitra (2016). Genotoxicity evaluation of nonylphenol in freshwater fish, *Oreochromis mossambicus*. ACMBCON 2016. National conference of Clinical Microbiologists and Biochemists by Association of Clinical Microbiologists and Biochemists (ACMB), School of Health Sciences, Centre for Health Sciences, University of Calicut and KSCSTE, Kerala, 16 and 17 January 2016.
- 2 K.P. Asifa, P.V. Vidya and K.C. Chitra (2016). Oxidative stress as biomarkers of chlordecone toxicity in the gill of cichlid fish, *Etroplus maculatus* (Bloch, 1795). ACMBCON 2016. National conference of Clinical Microbiologists and Biochemists by Association of Clinical Microbiologists and Biochemists (ACMB), School of Health Sciences, Centre for Health Sciences, University of Calicut and KSCSTE, Kerala, 16 and 17 January 2016.
- 3 P.V. Vidya, K.P. Asifa and K.C. Chitra (2016). Hepatic histopathology of *Oreochromis mossambicus* (Peters, 1852) under silica nanoparticles toxicity. ICEES-2016, 5<sup>th</sup> International Conference on Ecotoxicology and Environmental Sciences. Organized by Institute of Ecotoxicology and Environmental Sciences, West Bengal, India held on 15-17 February 2016 at Kochi, Kerala.



- 4 K.P. Asifa, P.V. Vidya and K.C. Chitra (2016). Assessment of median lethal concentration (LC<sub>50</sub> 96 h) and behavioural modification of nonylphenol in the cichlid fish, *Etroplus maculatus* (Bloch, 1795). ICEES-2016, 5<sup>th</sup> International Conference on Ecotoxicology and Environmental Sciences. Organized by Institute of Ecotoxicology and Environmental Sciences, West Bengal, India held on 15-17 February 2016 at Kochi, Kerala. **First author received silver medal for oral presentation**
- 5 K.P. Asifa, P.V. Vidya and K.C. Chitra (2016). Micronucleus test for assessing the genotoxicity of chlordecone in the cichlid fish, *Etroplus maculatus* (Bloch, 1795). 2<sup>nd</sup> International Young Scientist Congress, organized by International Science Community Association, in collaboration with Mother Teresa PG and Research institute of Health Science, Puducherry held on 8 and 9 May, 2016.
- 6 P.V. Vidya, K.P. Asifa and K.C. Chitra (2016). Evaluation of genotoxicity of titanium dioxide nanoparticles on *Oreochromis mossambicus* by the comet assay. National conference in Frontiers in Genetics and genomics, Organized by Department of Genomic Science, Central University of Kerala, Kasaragod, Kerala held on 7-8 April, 2016.
- 7 K.P. Raibeemol and K. C. Chitra (2016). Histopathological alteration in gill of the freshwater fish *Etroplus maculatus* (Bloch, 1795) under chlorpyrifos toxicity. National Seminar in 26<sup>th</sup> Swadeshi Science Congress, 7-9 November, 2016 at CMFRI, Kochi. Focal Theme: Blue Growth. Organized by Swadeshi Science Movement , Kerala Unit of Vijnana Bharati.
- 8 N. Sumi and K. C. Chitra (2016). Effects of fullerene (C<sub>60</sub>) on antioxidant enzyme activities and lipid peroxidation in gill of the cichlid fish, *Etroplus maculatus* (Bloch, 1795). National Seminar in 26<sup>th</sup> Swadeshi Science Congress, 7-9 November, 2016 at CMFRI, Kochi. Focal Theme: Blue Growth. Organized by Swadeshi Science Movement , Kerala Unit of Vijnana Bharati.
- 9 V. Revathy and K.C. Chitra (2016). Influence of Diisononyl phthalate (DINP) on histological and steroidogenic enzyme activity in ovary of the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). National Seminar in 26<sup>th</sup> Swadeshi Science Congress, 7-9 November, 2016 at CMFRI, Kochi. Focal Theme: Blue Growth. Organized by Swadeshi Science Movement , Kerala Unit of Vijnana Bharati.
- 10 N. Sumi and K. C. Chitra (2017). Acute exposure to fullerene (C<sub>60</sub>) altered antioxidant defense system in hepatocytes of the cichlid fish, *Pseudotroplus maculatus* (Bloch, 1795). National seminar on “Recent trends in Life Sciences” Organized by Department of Zoology, University College, Thiruvananthapuram, Kerala on 19 and 20 January, 2017.
- 11 V. Revathy and K.C. Chitra (2017). Studies on histopathological changes in the gill and liver of the fish, *Oreochromis mossambicus* exposed to diisononyl phthalate (DINP). National seminar on “Recent trends in Life Sciences” Organized by Department of Zoology, University College, Thiruvananthapuram, Kerala on 19 and 20 January, 2017.
- 12 K.P. Raibeemol and K. C. Chitra (2017). Histopathological lesions and oxidative stress in the gill after chlorpyrifos exposure in the freshwater fish, *Pseudotroplus maculatus* (Bloch 1795). National seminar on “Recent trends in Life Sciences” Organized by Department of Zoology, University College, Thiruvananthapuram, Kerala on 19 and 20 January, 2017.

- 13 P.V. Vidya and K.C. Chitra (2017). Nuclear anomalies and proliferation rate in peripheral blood lymphocyte culture treated with metal oxide nanoparticles: an *in vitro* study. National seminar on “Recent trends in Life Sciences” Organized by Department of Zoology, University College, Thiruvananthapuram, Kerala on 19 and 20 January, 2017.
- 14 N. Sumi and K. C. Chitra (2017). Oxidative stress in muscle tissue of the freshwater fish, *Etroplus maculatus* (Bloch, 1795): a toxic response exposed to fullerene (C<sub>60</sub>) nanoparticles. 29<sup>th</sup> Session of Kerala Science Congress, 28-30 January, 2017, at Mar Thoma College, Thiruvalla, Kerala, organized by KSCSTE, Thiruvananthapuram.
- 15 N. Sumi and K. C. Chitra (2017). Fullerene (C<sub>60</sub>) induced alteration in the brain antioxidant system of the cichlid fish, *Pseudetroplus maculatus* (Bloch, 1795). International Conference on Recent Trends on Agriculture, Veterinary & Life Sciences -2017. Feb 02 - 04, 2017 at Lar De Sta Terezinha, Margao, Goa, INDIA. Organized by Life Sciences International Research Journal, co-organized by IMRF India, Center for Scientific Research Education and Institute for Foreign Affairs & Diplomacy.
- 16 V. Revathy and K.C. Chitra (2017). Diisononyl phthalate (DINP) and Di (2ethyl-hexyl) phthalate (DEHP) altered behaviour and histopathology of the fish, *Oreochromis mossambicus* (Peters, 1852). International Conference on Recent Trends on Agriculture, Veterinary & Life Sciences -2017. Feb 02 - 04, 2017 at Lar De Sta Terezinha, Margao, Goa, INDIA. Organized by Life Sciences International Research Journal, co-organized by IMRF India, Center for Scientific Research Education and Institute for Foreign Affairs & Diplomacy.
- 17 K.P. Raibeemol and K. C. Chitra (2017). Effect of acute exposure to chlorpyrifos on hepatic antioxidant system in the freshwater fish, *Pseudetroplus maculatus* (Bloch, 1795). International Conference on Recent Trends on Agriculture, Veterinary & Life Sciences -2017. Feb 02 - 04, 2017 at Lar De Sta Terezinha, Margao, Goa, INDIA. Organized by Life Sciences International Research Journal, co-organized by IMRF India, Center for Scientific Research Education and Institute for Foreign Affairs & Diplomacy.
- 18 V. Revathy and K.C. Chitra (2017). Comparative histopathological changes induced by diisononyl phthalate (DINP) and di(2ethyl-hexyl) phthalate (DEHP) in gill of the fish, *Oreochromis mossambicus* (Peters, 1852). International Science Symposium on Recent Trends in Science and Technology Feb 26 and 27, 2017. Organized by Christ College, Rajkot, Gujarat.
- 19 N. Sumi and K.C. Chitra (2017). Histopathological alteration in gill and liver of the freshwater fish, *Pseudetroplus maculatus* (Bloch, 1795) on exposure to fullerene C<sub>60</sub>. International Science Symposium on Recent Trends in Science and Technology Feb 26 and 27, 2017. Organized by Christ College, Rajkot, Gujarat.
- 20 P.V. Vidya and K.C. Chitra (2017). *In vitro* cytotoxicity study of selected nanoparticles on Chinese Hamster Ovary (CHO-K1) cells. International Seminar on “Frontiers in genomics and molecular techniques” held on 1-3 March 2017. Organized by PG and Research Department of Zoology, University College, Thiruvananthapuram.
- 21 K.P. Raibeemol and K. C. Chitra (2017). Exposure to chlorpyrifos altered histoarchitecture of hepatocytes in the freshwater fish, *Etroplus maculatus* (Bloch, 1795). International Seminar on

“Frontiers in genomics and molecular techniques” held on 1-3 March 2017. Organized by PG and Research Department of Zoology, University College, Thiruvananthapuram.

- 22 V. Revathy and K.C. Chitra (2018). Role of diisononyl phthalate (DINP) on the induction of oxidative stress in gill of the fish, *Oreochromis mossambicus* (Peters, 1852). 3<sup>rd</sup> National Conference on Frontiers in Ecobiological Sciences and its Applications (FESA-2018), Organized by School of Life Sciences, Periyar University, Salem, Tamil Nadu on February 7-9, 2018.
- 23 K.P. Raibeemol and K.C. Chitra (2018). Hematological changes induced by chlorpyrifos in the freshwater fish, *Pseudotroplus maculatus* (Bloch, 1795). 3<sup>rd</sup> National Conference on Frontiers in Ecobiological Sciences and its Applications (FESA-2018), Organized by School of Life Sciences, Periyar University, Salem, Tamil Nadu on February 7-9, 2018.
- 24 N. Sumi and K. C. Chitra (2018). Evaluation of median lethal concentration of fullerene C<sub>60</sub> and the nuclear abnormalities using micronucleus test in the freshwater fish, *Pseudotroplus maculatus* (Bloch, 1795). 3<sup>rd</sup> National Conference on Frontiers in Ecobiological Sciences and its Applications (FESA-2018), Organized by School of Life Sciences, Periyar University, Salem, Tamil Nadu on February 7-9, 2018.
- 25 V. Revathy and K.C. Chitra (2018). Diisononylphthalate (DINP) altered antioxidant defense system and steroidogenic activity in ovary of the fish, *Oreochromis mossambicus* (Peters, 1852). 8<sup>th</sup> National level paper presentation competition – Biovision 2018. Organized by Department of Zoology, Mercy College, Palakkad, Kerala on 20<sup>th</sup> February, 2018. **Received First prize in Oral presentation in the Thrust area: Toxicology.**
- 26 K.P. Raibeemol and K.C. Chitra (2018). Sublethal exposure of chlorpyrifos modifies the hormonal response in the cichlid fish, *Pseudotroplus maculatus* (Bloch, 1795). International conference on Recent trends in Zoology, Biodiversity, Genetics and Environmental Sciences 2018 (ICBUB 2018). Organized by Department of Zoology, Bangalore University, Bangalore on 4-5 December, 2018.
- 27 C.V. Priyatha and K.C. Chitra (2018). Protective role of vitamins C on acid orange 7 induced sublethal toxicity in *Anabas testudineus* (Bloch, 1792). International conference on Recent trends in Zoology, Biodiversity, Genetics and Environmental Sciences 2018 (ICBUB 2018). Organized by Department of Zoology, Bangalore University, Bangalore on 4-5 December, 2018.
- 28 N. Sumi and K. C. Chitra (2018). Acute toxicity of fullerene C<sub>60</sub> and the haematological profile of the freshwater fish, *Anabas testudineus* (Bloch, 1972). International conference on Recent trends in Zoology, Biodiversity, Genetics and Environmental Sciences 2018 (ICBUB 2018). Organized by Department of Zoology, Bangalore University, Bangalore on 4-5 December, 2018.
- 29 N. Sumi and K. C. Chitra (2019). Fullerene C<sub>60</sub> nanomaterial induced oxidative imbalance in ovary of the freshwater fish, *Anabas testudineus* (Bloch, 1792). 100th International Conference on Advances in Agriculture, Environment & Biosciences 2019 (ICAEB -2019). Organized by IMRF Institute for Education & Research and Carmel College for Women Nuvem, Madgoan, Goa held on March 14-16, 2019.
- 30 P. V. Vidya and K. C. Chitra (2019). Irreversible nanotoxicity of silicon dioxide nanoparticles in the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). 100th International Conference on Advances in Agriculture, Environment & Biosciences 2019 (ICAEB -2019). Organized by IMRF

Institute for Education & Research and Carmel College for Women Nuvem, Madgoan, Goa held on March 14-16, 2019.

- 31 M. Sruthi and K.C. Chitra (2019). Involvement of dibutyl phthalate (DBP) on the male reproductive toxicity in the freshwater fish, *Pseudotroplus maculatus* (Bloch, 1795). International seminar on Fish taxonomy and aquaculture practices. Organized by PG Research Department of Zoology, NSS college, Changanaserry in collaboration with Mahatma Gandhi University, Kottayam. Held on 6 and 7 August, 2019.

17. Innovative processes developed in teaching and learning.

ICT-based teaching process

18. Participation in curricular development:

In the revision of M. Sc., M. Phil., and Ph. D., syllabus.

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

20. Refresher and Orientation courses attended:

Attended Short-run course for Professional development from 29-11-2016 to 05-12-2016 (one week) organized by MHRD-Teaching Learning Centre under Pandit Madan Mohan Malaviya National Mission on teachers and teaching, Department of Education, University of Calicut.

21. Examination /Evaluation reforms initiated:

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

<b>SCOPUS: (Author ID: 57194548389)</b>	Citations: 1367	h-index-13	
<b>Mendeley:</b>	Citations: 1365	h-index-13	
<b>Google scholar:</b>	Citations-2109	h-index-14	i10-index-21
<b>Research gate:</b>	Citations-1651	h-index-13	RG Score-23.85

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**Web of Science ResearcherID:** ABE-8808-2020 h-index-10

**2016**

- 1 K.P. Asifa, P.V. Vidya and K.C. Chitra (2016). Chlordecone-induced changes in muscular antioxidant system of cichlid fish, *Etroplus maculatus* (Bloch, 1795). International Journal of Research. ISSN: 2348-6848 (IF-3.541) 3 (1): 21-29.
- 2 P.V. Vidya, K.P. Asifa and K.C. Chitra (2016). Effect of silica-nanoparticles (SiO<sub>2</sub>-NPs) on oxygen consumption in freshwater fish, *Oreochromis mossambicus* (Peters, 1852). Journal of Global Biosciences (ISSN 2320-1355) (IF-1.115). 5(1): 3611-3614.
- 3 R. Rejitha, K.P. Asifa and K.C. Chitra (2016). Induction of reactive oxygen species in brain of *Etroplus maculatus* after exposure to bisphenol A. Journal of Applied and Natural Sciences. Print ISSN: 0974-9411; Online ISSN: 2231-5209. (IF: 5.08) 8(1): 386-391.
- 4 C.V. Priyatha and K. C. Chitra (2016). *In vitro* exposure to triclosan regulates hydroxysteroid dehydrogenase activity in epididymal sperm of goat. World Journal of Pharmaceutical Sciences. ISSN (Print): 2321-3310; ISSN (Online): 2321-3086 (IF: 2.819) 4(4): 69-75.
- 5 C.V. Priyatha and K. C. Chitra (2016). Triclosan induced oxidative stress in epididymal sperm of goat, *Capra hircus* L. (1758) *In vitro*. World Journal of Pharmaceutical Research. ISSN: 2277-7105; DOI: 10.20959/wjpr20164-5987. (IF: 6.805) 5(4): 1453-1464.
- 6 V. Revathy and K. C. Chitra (2016). Studies on histopathological changes in the gill, liver, muscle and ovary of *Oreochromis mossambicus* (Peters) exposed to Diisononyl phthalate (DINP). International Journal of Current Research. ISSN: 0975-833X (IF-5.349). 8(3): 28208-28214.
- 7 K.P. Asifa, P.V. Vidya and K.C. Chitra (2016). Assessment of median lethal concentration (LC<sub>50</sub> 96 h) and behavioural modification of nonylphenol in the cichlid fish, *Etroplus maculatus* (Bloch, 1795). International Journal of Advanced Life Sciences. ISSN: 2277-758X. 9(2): 190-195.
- 8 K.P. Asifa and K.C. Chitra (2016). Short-term exposure to nonylphenol altered muscular antioxidant system in Cichlid fish, *Etroplus maculatus* (Bloch, 1795). World Journal of Pharmaceutical Research. ISSN: 2277-7105; DOI: 10.20959/wjpr20168-6857. (IF: 6.805) 5(8): 1599-1608.
- 9 K.P. Asifa, P.V. Vidya and K.C. Chitra (2016). Genotoxic effects of chlordecone in the cichlid fish, *Etroplus maculatus* (Bloch, 1795) using micronucleus test. Research Journal of Recent Sciences. E-ISSN: 2277-2502. 5(8): 16-20.
- 10 K.P. Asifa and K.C. Chitra (2016). Alteration in hepatic antioxidant defense system induced by nonylphenol in cichlid fish, *Etroplus maculatus* (Bloch, 1795). The Journal of Zoology Studies. ISSN: 2348-5914 (IF 1.5945) 3(4): 30-38.
- 11 K.P. Asifa and K.C. Chitra (2016). Induction of testicular oxidative stress by nonylphenol in cichlid fish, *Etroplus maculatus* (Bloch, 1795). International Journal of Fisheries and Aquatic Studies. ISSN: 2347-5129 (IF: 5.62; GIF: 0.352) 4(4): 453-456.
- 12 K.P. Asifa and K.C. Chitra (2016). Effects of nonylphenol-induced oxidative stress in ovary of Cichlid fish, *Etroplus maculatus* (Bloch, 1795). International Letters of Natural Sciences. IF: 0.876; ISSN: 2300-9675. doi:10.18052/www.scipress.com/ILNS.58.11. Vol 58: 11-15.
- 13 K.P. Asifa and K.C. Chitra (2016). Impact of nonylphenol on antioxidant system and acetylcholinesterase activity in the brain of *Etroplus maculatus* (Bloch, 1795). International Journal of Research. ISSN: 2348-6848 e-ISSN: ISSN: 2348-795X (IF-3.541) 3(13): 114-123.
- 14 K.P. Asifa and K.C. Chitra (2016). Evaluation of nonylphenol toxicity in cichlid fish, *Etroplus maculatus*: response on gill antioxidant defense system. Trends in Fisheries Research. **ISSN: 2319-474X (Print); 2319-4758 (Electronic). 5(3): 1-8.**
- 15 K.P. Raibeemol and K.C. Chitra (2016). Histopathological alteration in gill of the freshwater fish *Pseudotroplus maculatus* (Bloch, 1795) under chlorpyrifos toxicity. International Journal of Advanced Research in Biological Sciences. ISSN: 2348-8069 (IF-4.62). DOI:<http://dx.doi.org/10.22192/ijarbs.2016.03.12.018>.3(12): 141-146.

- 16 N. Sumi and K. C. Chitra (2016). Effects of fullerene (C<sub>60</sub>) on antioxidant enzyme activities and lipid peroxidation in gill of the cichlid fish, *Etroplus maculatus* (Bloch, 1795). The Journal of Zoology Studies. ISSN: 2348-5914 (IF 1.5945). 3(6): 31-37.

## 2017

- 17 P.V. Vidya, Alex George and K. C. Chitra (2017). An *in vitro* study on the induction of micronuclei and other nuclear anomalies in peripheral blood lymphocyte culture by metal oxide nanoparticles. International Journal of Advanced Research in Biological Sciences. ISSN: 2348-8069 (IF-4.62). 4(1): 1-8.
- 18 P.V. Vidya and K. C. Chitra (2017). Assessment of acute toxicity (LC<sub>50</sub>-96 h) of aluminium oxide, silicon dioxide and titanium dioxide nanoparticles on the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). International Journal of Fisheries and Aquatic Studies. ISSN: 2347-5129 (E); 2394-0506 (P) (IF: 5.62; GIF: 0.549). 5(1): 327-332.
- 19 C. K. Vijitha, K.P. Asifa and K.C. Chitra (2017). Assessment of genotoxic and haematological consequence of triclosan in the fish, *Oreochromis niloticus* (Linnaeus, 1758). International Journal of Applied Research. ISSN Print: 2394-7500; Online: 2394-5869; (IF: 5.2). 3(2): 101-109.
- 20 N. Sumi and K. C. Chitra (2017). Fullerene (C<sub>60</sub>) induced alteration in the brain antioxidant system of the cichlid fish, *Pseudetroplus maculatus* (Bloch, 1795). Journal of Global Biosciences (ISSN 2320-1355) (IF-1.115) 6(4): 4908-4917.
- 21 N. Sumi and K. C. Chitra (2017). Acute exposure to fullerene (C<sub>60</sub>) altered antioxidant defense system in hepatocytes of the cichlid fish, *Pseudetroplus maculatus* (Bloch, 1795). International Journal of Research. ISSN: 2348-6848 e-ISSN: 2348-795X (IF-5.6) 4(5): 953-962.
- 22 K.P. Asifa and K.C. Chitra (2017). Hepatic biotransformation of chlordecone and induction of hepatotoxicity in the cichlid fish, *Pseudetroplus maculatus* (Bloch, 1795). International Journal of Applied Research. ISSN Print: 2394-7500; Online: 2394-5869; (IF: 5.2). 3(5): 521-526.
- 23 K.P. Asifa and K.C. Chitra (2017). Evidence for chlordecone-stimulated reactive oxygen species production and oxidative damage in different tissues of cichlid fish, *Pseudetroplus maculatus* (Bloch, 1795). Croatian Journal of Fisheries. IF: 1.10; ISSN: 1330-061X (P); 1848-0586 (Online) 75: 67-76.
- 24 T.V. Neethumohan, N. Sumi and K.C. Chitra (2017). Effects of ethoxyquin on haematological and biochemical parameters in the fish, *Anabas testudineus* (Bloch, 1792). International Journal of Zoological Investigations. ISSN 2454-3055. (IF: 2.41) 3(1): 1-10.
- 25 N. Sumi and K. C. Chitra (2017). Histopathological alterations in gill, liver and muscle tissues of the freshwater fish, *Pseudetroplus maculatus* exposed to fullerene C<sub>60</sub>. International Journal of Fisheries and Aquatic Studies. ISSN: 2347-5129 (E); 2394-0506 (P) (IF: 5.62; GIF: 0.549) 5(3): 604-608.
- 26 P.V. Vidya and K.C. Chitra (2017). Induction of cytotoxicity by selected nanoparticles in Chinese Hamster Ovary-K1 cells. International Journal of Applied Sciences and Biotechnology. ISSN: 2091-2609 (IF-1.422) DOI: 10.3126/ijasbt.v5i2.17619. 5(2): 203-207.
- 27 K.P. Raibeemol and K.C. Chitra (2017). Exposure to chlorpyrifos altered histoarchitecture of hepatocytes in the freshwater fish, *Pseudetroplus maculatus* (Bloch, 1795). The Journal of Zoology Studies. ISSN: 2348-5914 (IF 1.5945). 4(4): 18-22.
- 28 K.P. Raibeemol and K.C. Chitra (2017). Histopathological lesions and oxidative stress in the gill after chlorpyrifos exposure in the freshwater fish, *Pseudetroplus maculatus* (Bloch, 1795). International Journal of Advanced Research and Review. ISSN: 2455-7277 (IF 4.825) 2(9): 65-76.
- 29 K.P. Raibeemol and K.C. Chitra (2017). Effect of acute exposure to chlorpyrifos on hepatic antioxidant system in the freshwater fish, *Pseudetroplus maculatus* (Bloch, 1795). International

Journal of Sciences and Applied Research. ISSN(O): 2394-2401, (P): 2394-384X. (IF 4.129). 4(9): 7-14.

- 30 K.P. Asifa and K.C. Chitra (2017). Sublethal effects of chlordecone on histomorphology of the freshwater cichlid fish, *Pseudotroplus maculatus* (Bloch, 1795). Global Journal for Research Analysis. ISSN: 2277-8160; DOI: 10.15373/22778160. (IF 4.547) 6(9): 497-499.
- 31 N. Sumi and K. C. Chitra (2017). Oxidative stress in muscle tissue of the freshwater fish, *Pseudotroplus maculatus* (Bloch, 1795): a toxic response from exposure to fullerene (C<sub>60</sub>) nanoparticles. Asian Fisheries Science. ISSN: 0116-6514. (IF 0.280) 30(3): 206-214.

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- 32 C.M. Gopika, N. Sumi and K.C. Chitra (2018). Acute neurotoxicity effect of acrylamide in *Oreochromis niloticus* (Linnaeus, 1758). International Journal of Fisheries and Aquatic Research. ISSN 2456-7248. 3(1): 1-8.
- 33 C.M. Gopika, N. Sumi and K.C. Chitra (2018). Involvement of reactive oxygen species in the toxicity of acrylamide in muscle tissue of the fish, *Oreochromis niloticus* (Linnaeus, 1758). World Journal of Pharmaceutical Research. ISSN: 2277-7105; (IF: 7.523). DOI:10.20959/wjpr20181-10646. 7(1): 1617-1628.
- 34 P.J. Jayasree, N. Sumi and K.C. Chitra (2018). Effects of octylphenol on oxidative stress-mediated neurotoxicity in brain of the fish *Oreochromis niloticus* (Linnaeus, 1758). International Journal of Fisheries and Aquatic Studies. ISSN: 2347-5129 (E); 2394-0506 (P) (IF: 5.62; GIF: 0.549). 6(1): 52-58.
- 35 P.J. Jayasree, N. Sumi and K.C. Chitra (2018). Response of antioxidant defense system in the muscle tissue of *Oreochromis niloticus* after exposure to octylphenol. International Journal of Applied Research. Part E. ISSN Print: 2394-7500; Online: 2394-5869; (IF: 5.2). 4(1): 268-274.
- 36 P.V. Vidya and K.C. Chitra (2018). Persistent toxic effects of titanium dioxide nanoparticles after treatment withdrawal in the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). World Journal of Pharmaceutical and Life Sciences. ISSN: 2454-2229. IF-4.223; 4(2): 141-152.
- 37 P.V. Vidya and K.C. Chitra (2018). Aluminium oxide nanoparticles induced irreversible alterations in the antioxidant defense system of the fish, *Oreochromis mossambicus* (Peters, 1852). European Journal of Biomedical and Pharmaceutical Sciences (EJBPS). ISSN: 2349-8870. IF-4.382. 5(2): 1162-1170.
- 38 C.V. Priyatha and K. C. Chitra (2018). Acute toxicity of triclosan on the native freshwater fish, *Anabas testudineus* (Bloch, 1792): behavioural alterations and histopathological lesions. International Journal of Life Sciences. Print ISSN: 2320-7817; Online ISSN: 2320-964X. 6(1): 166-172.
- 39 V. Revathy and K. C. Chitra (2018). Effects of diisononyl phthalate on the antioxidant status in gill, liver and muscle tissues of the fish, *Oreochromis mossambicus*. Asian Journal of Advanced Basic Sciences. ISSN No. (O) 2347-4114; (P) 2454-7492; 6(1): 37-48.
- 40 K.P. Asifa and K.C. Chitra (2018). Evaluation of acute toxicity of octylphenol in the cichlid fish, *Pseudotroplus maculatus* (Bloch, 1795). International Journal of Applied Research. ISSN Print: 2394-7500; Online: 2394-5869; (IF: 5.2); 4(3): 197-203.
- 41 P.V. Vidya and K.C. Chitra (2018). Sublethal effects of silicon dioxide nanoparticles on the structure of gill, liver and brain tissues in the fish, *Oreochromis mossambicus* (Peters, 1852). International Journal of Applied Research. ISSN Print: 2394-7500; Online: 2394-5869; (IF: 5.2); 4(4): 228-232.
- 42 P.V. Vidya and K.C. Chitra (2018). Aluminium oxide nanoparticles induced irrevocable damages in gill, liver and brain tissues of the freshwater fish, *Oreochromis mossambicus*

- (Peters, 1852). International Journal of Fisheries and Aquatic Research. ISSN 2456-7248. IF: 5.44; 3(2): 13-17.
- 43 K.P. Asifa and K.C. Chitra (2018). Sublethal toxic effects of bisphenol A on oxygen consumption, haematological and histological parameters in the cichlid fish, *Pseudotropheus maculatus* (Bloch, 1795). International Journal of Zoological Investigations. ISSN 2454-3055. (IF:2.41) 4(1): 21-30.
- 44 P.V. Vidya and K.C. Chitra (2018). Studies on histomorphological changes in the fish, *Oreochromis mossambicus* exposed to titanium dioxide nanoparticles – An irrecoverable damage. Journal of Biology and Nature. ISSN: 2395-5376 (P), ISSN: 2395-5384 (O), (NLM ID: 101679666). 9(2): 40-46.
- 45 K.P. Asifa and K.C. Chitra (2018). Sublethal toxic impact of chlordecone on hormonal parameters and histological alterations in gonads of the cichlid Fish, *Pseudotropheus maculatus* (Bloch, 1795). Advances in Bioresearch. P-ISSN: 0976- 4585, E-ISSN 2277-1573. IF: 0.971; 9(1): 209-218. DOI: 10.15515/abr.0976-4585.9.1.209218.
- 46 K.P. Asifa and K.C. Chitra (2018). Impact of nonylphenol on oxygen consumption, haematological and histological parameters in the cichlid fish, *Pseudotropheus maculatus* (Bloch, 1795). International Journal of Biology Research. ISSN: 2455-6548.RJIF: 5.22. 3(2): 150-155.
- 47 K.P. Raibeemol and K.C. Chitra (2018). Effects of chlorpyrifos as inducer for oxidative stress in liver, kidney and spleen of freshwater fish, *Pseudotropheus maculatus* (Bloch, 1795). Research and Reviews: A Journal of Toxicology. ISSN: 2231-3834 (Online), ISSN: 2349-1264 (Print). 8(1): 20-29.
- 48 P.V. Vidya and K.C. Chitra (2018). Irreversible nanotoxicity of silicon dioxide nanoparticles in the freshwater fish *Oreochromis mossambicus* (Peters, 1852). Asian Fisheries Science. ISSN: 0116-6514. 31(2): 146-160.
- 49 V. Revathy and K. C. Chitra (2018). Di(2-ethylhexyl)phthalate-induced lipid peroxidation and associated oxidative stress in gill, liver and muscle tissues of the fish, *Oreochromis mossambicus* (Peters, 1852). International Journal of Theoretical and Applied Sciences. ISSN No. (Print): 0975-1718; (Online): 2249-3247. 10(2): 1-9.
- 50 P.V. Vidya and K.C. Chitra (2018). Evaluation of genetic damage in the fish, *Oreochromismossambicus* exposed to selected nanoparticles by using micronucleus and comet bioassays. Croatian Journal of Fisheries. ISSN: 1330-061X (P); 1848-0586 (Online). (IF: 1.10) 76(2): 115-124. DOI: 10.2478/cjf-2018-0015.
- 51 K.P. Raibeemol and K.C. Chitra (2018). Hematological and biochemical changes in the freshwater fish, *Pseudotropheus maculatus* exposed to sublethal concentrations of chlorpyrifos. Research and Reviews: A Journal of Life Sciences. ISSN: 2249-8656 (Online), ISSN: 2348-9545 (Print); 8(3): 108-116.
- 52 V.S. Amaya, C.V. Priyatha and K. C. Chitra (2018). Haematological responses in the freshwater fish, *Anabas testudineus*(Bloch, 1792) exposed to sublethal concentration of acid orange 7. Journal of Global Biosciences (ISSN 2320-1355). IF: 1.115. 7(8): 5536-5549.
- 53 V. Revathy and K. C. Chitra (2018). Di-isononyl phthalate (DINP) impairs reproduction in the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). Asian Fisheries Science. ISSN: 0116-6514. 31(4): 284-296.
- 54 P. Shinjina Fathima, C.V. Priyatha and K. C. Chitra (2018). Ameliorating effect of vitamin C on oxidative stress induced by acid orange 7 in the gill of the fish, *Anabas testudineus* (Bloch, 1792). Research and Reviews: A Journal of Toxicology. ISSN: 2231-3834 (Online), ISSN: 2349-1264 (Print). 8(3): 15-27.



- 55 P.V. Vidya and K.C. Chitra (2019). Irreversible histopathological modifications induced by iron oxide nanoparticles in the fish, *Oreochromis mossambicus* (Peters, 1852). Biological Forum – An International Journal. (Thomson Reuters indexed). ISSN(P): 0975-1130; ISSN(O): 2249-3239. 11(1): 1-6.
- 56 V. Revathy and K. C. Chitra (2019). Di-isononyl phthalate (DINP) and di-(2-ethylhexyl)-phthalate (DEHP) disrupts endocrine functions in the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). Journal of Advanced Scientific Research. ISSN: 0976-9595. 10(1): 26-31.
- 57 N. Sumi and K. C. Chitra (2019). Fullerene C<sub>60</sub> nanomaterial induced oxidative imbalance in gonads of the freshwater fish, *Anabas testudineus* (Bloch, 1792). Aquatic Toxicology. (Elsevier) ISSN: 0166-445X. IF-3.884; 210: 196-206. <https://doi.org/10.1016/j.aquatox.2019.03.003>.
- 58 P.V. Vidya, K.P. Asifa and K.C. Chitra (2019). Hepatic histopathology in *Oreochromis mossambicus* (Peters, 1852) under silica nanoparticles toxicity. Indian Journal of Experimental Biology. ISSN: 0975-1009 (Online); 0019-5189 (Print) (IF 0.783). 57(4): 293-296.
- 59 N. Sumi and K. C. Chitra (2019). Impact of fullerene C<sub>60</sub> on behavioural and haematological changes in the freshwater fish, *Anabas testudineus* (Bloch, 1792). Applied Nanoscience. (Springer) 9(8): 2147-2167. ISSN:2190-5509 (P); 2190-5517 (O). IF-2.951; 1-21. <https://doi.org/10.1007/s13204-019-01041-1>.
- 60 C.V. Priyatha and K. C. Chitra (2019). Sublethal Toxicity of acid orange 7 in the freshwater fish, *Anabas testudineus* (Bloch, 1792), and the role of vitamin C as antioxidant in the prevention of oxidative stress. International Journal of Scientific Research in Biological Sciences. UGC No. 63784. ISSN: 2347-7520 (O). IF: 1.013. 6(2): 92-101. <https://doi.org/10.26438/ijsrbs/v6i2.92101>
- 61 V. Revathy and K. C. Chitra (2019). Role of di-(2-ethylhexyl)-phthalate on the antioxidant status in testes and ovary of the fish, *Oreochromis mossambicus* (Peters, 1852). International Journal of Pharmacy and Biological Sciences. e-ISSN:2230-7605; p-ISSN:2321-3272. 9(1): 1186-1194. doi No:10.21276/ijpbs.2019.9.1.152.
- 62 K.P. Asifa and K.C. Chitra (2019). Effect of chlordecone on the reproductive potential of the cichlid fish, *Pseudotroplus maculatus* (Bloch, 1795). Journal of Aquatic Research and Marine Sciences. ISSN: 2639-4618. 163-177.
- 63 A. Rishin, C.V. Priyatha and K. C. Chitra (2019). Induction of genetic damage in peripheral erythrocytes of the fish, *Anabas testudineus* (Bloch, 1792) exposed to sublethal concentration of acid orange 7. Research and Reviews: A Journal of Life Sciences. ISSN: 2249-8656 (Online), ISSN: 2348-9545 (Print); 9(2): 83-96.
- 64 V. Revathy and K. C. Chitra (2019). The cytotoxic and genotoxic effects of di-isononyl phthalate and di-(2-ethylhexyl) phthalate: An *in vitro* and *in vivo* approach on toxicological assessment. Journal of Bioscience and Biotechnology. ISSN: 1314-6238 (P); 1314-6246 (O). (IF 1.063) 8(1): 69-79.
- 65 N. Sumi and K. C. Chitra (2019). Genotoxic effects of fullerene C<sub>60</sub> nanomaterial on the freshwater fish, *Anabas testudineus* (Bloch, 1792) using micronucleus and comet assay. Mutation Research – Genetic Toxicology and Environmental Mutagenesis (Elsevier). ISSN: 1383-5718. IF-2.256; 503104. <https://doi.org/10.1016/j.mrgentox.2019.503104>
- 66 K. Sajla, K.P. Raibeemol and K.C. Chitra (2019). Induction of ovarian toxicity in the freshwater fish, *Pseudotroplus maculatus* (Bloch, 1795) after sublethal exposure of dibutyl phthalate. International Journal of Scientific Research in Biological Sciences. UGC No. 63784. ISSN: 2347-7520 (O). IF: 1.013. 6(5): 26-38. DOI: <https://doi.org/10.26438/ijsrbs/v6i5.2638>

## **2020**

67. Fathima Shincy, Sreya Asok, T. Sreelakshmi, C.V. Priyatha and K.C. Chitra (2020). Toxic effects of an organophosphorus pesticide, malathion (50% EC) on the freshwater fish, *Oreochromis mossambicus* (Peters, 1852). International Journal of Fisheries and Aquatic Studies. ISSN: 2347-5129 (E); 2394-0506 (P) (IF: 5.62; GIF: 0.549) 8(2): 57-60.
68. N. Sumi and K. C. Chitra (2020). Possible role of C<sub>60</sub> fullerene in the induction of reproductive toxicity in the freshwater fish, *Anabas testudineus* (Bloch, 1792). Environmental Science and Pollution Research (Springer). ISSN: 0944-1344 (P); ISSN: 1614-7499 (E). 27(16):19603–19615. IF-3.000; <https://doi.org/10.1007/s11356-020-08509-6>.
69. K.P. Raibeemol and K.C. Chitra (2020). Immunological, hormonal and histological alterations after sublethal exposure of chlorpyrifos in the freshwater fish, *Pseudotroplus maculatus* (Bloch, 1795). Fish and Shellfish Immunology (Elsevier). ISSN: 1050-4648. DOI: 10.1016/j.fsi.2020.04.005 (IF 3.370)
70. M. Sruthi, K.P. Raibeemol and K.C. Chitra (2020). Involvement of dibutyl phthalate (DBP) on the male reproductive toxicity in the freshwater fish, *Pseudotroplus maculatus* (Bloch, 1795). Journal of Applied Aquaculture (Taylor and Francis). ISSN: 1045-4438 (Print) 1545-0805 (Online). DOI: 10.1080/10454438.2020.1742268 (IF 0.760).
71. N. Vijayakumar, K. Amritha, C.V. Priyatha and K. C. Chitra (2020). Sodium benzoate induced reproductive and metabolic changes in *Anabas testudineus* (Bloch, 1792). Research and Reviews: A Journal of Life Sciences. ISSN: 2249-8656 (Online), ISSN: 2348-9545 (Print); 10(1): 56-71.
72. Fathima Shincy and K. C. Chitra (2020). Impacts of phthalate plasticisers – An emerging issues and concerns. Research and Reviews: Journal of Veterinary Science and Technology. ISSN: 2349–3690; eISSN: 2319–3441. IF: 6; 9(2-3): 14-49.

## **2021**

73. Sreya Asok and K. C. Chitra (2021). An overview on the applications and environmental risk assessment of nanomaterials in the aquatic organisms. Journal of Biology and Nature. ISSN: 2395-5376 (P), ISSN: 2395-5384 (O), (NLM ID: 101679666). 13(1): 1-30.

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

## **Chapters in Book – 2018:**

- 1 K.P. Asifa, P.V. Vidya and K.C. Chitra (2018). Assessment of median lethal concentration (LC<sub>50-96 h</sub>) and behavioural modification of nonylphenol in the cichlid fish, *Etroplus maculatus* (Bloch, 1795). Chapter I: Toxicology of metals and metalloids and impact on human and animals, pp 7-22. (Badal Bhattacharya, Jacob de Boer and Pasquale Avino, Eds.), In: Impact of Pollutants on Ecosystems and Human Health. A Publication of Institute of Ecotoxicology and Environmental Sciences, Kolkata-700097, West Bengal, INDIA. ISBN: 978-81-928924-5-0.
- 2 P.V. Vidya, K.P. Asifa and K.C. Chitra (2018). Hepatic histopathology of *Oreochromis mossambicus* (Peters, 1852) under silica nanoparticles toxicity. Chapter II: Environmental toxicants and pathogens–impact on human and animal health, pp 23-40. (Badal Bhattacharya, Jacob de Boer and Pasquale Avino, Eds.), In: Impact of Pollutants on Ecosystems and Human

Health. A Publication of Institute of Ecotoxicology and Environmental Sciences, Kolkata-700097, West Bengal, INDIA. ISBN: 978-81-928924-5-0.

24. Patents Applied/Granted: National. International, commercialized:
25. Consultancy services provided and revenue generated:
26. Conferences, seminars, symposia and workshops organized as convener/coordinator:
27. Number of collaborations:
28. Awards /recognitions received: International, National, State, University level.

**(Dr. K. C. Chitra)**

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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.Kannan.V.M
2. Name of the Department: Zoology
3. Educational qualifications: M.Sc.,Ph.D, PDF (University of Michigan,USA)
4. Present position: Professor
5. Address for correspondence: Department of Zoology, University of Calicut, PIN 673635
6. E-mail and contact number: [kannanvm@yahoo.com](mailto:kannanvm@yahoo.com), [kannanvm@uoc.ac.in](mailto:kannanvm@uoc.ac.in), 9746867623, 9388157623
7. Specialization: Biochemistry and Molecular Biology
8. Total teaching experience: 20 years
9. Courses taught: Biochemistry, Molecular Biology.
10. Research experience: 20 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

Sl.No	Title of the project/Role	Funding agency	Year/duration	Amount sanctioned
1.	Center for Advances in Molecular Biology (for establishing a new center) <b>Director</b>	State Plan Grant to University of Calicut, Kerala	2016-18	Rs 100, 00000
2.	Study of toxicity of nanoparticle-insect growth regulator conjugate on mosquito larvae. <b>Principal Investigator</b>	UGC- Industry linked Research Project UGC fund University of Calicut	2016-17	Rs 5,05,000
3.	" Identification and Characterization of Ecdysone analogue responsive proteins from the larval haemolymph of <i>Spodoptera mauritia</i> Bois. (Lepidoptera: Noctuidae) <b>Principal Investigator</b>	KSCSTE, Government of Kerala..	2014-17	Rs. 19,30,600
4	Characterization of juvenile hormone analogue- responsive protein from the haemolymph of <i>Spodoptera mauritia</i> Bois. (Lepidoptera: Noctuidae). <b>Principal Investigator</b>	UGC, Govt. of India	2012-16.	Rs.10,84,800

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

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

1. Dr.Remya P.P

2. Topic: " IDENTIFICATION, PURIFICATION AND CHARACTERIZATION OF PLANT PROTEASE INHIBITORS AGAINST LARVAL

GUT PROTEASES OF *SPODOPTERA MAURITIA* (BOISDUVAL)  
(LEPIDOPTERA: NOCTUIDE)

3. Date of registration: 15th November 2012.

4. Date of declaration of Ph.D. degree : 30.12.2019

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

Sl. No	Name of Candidate	Title	Date of Registration
1.	Anjana Lokanathan. M.K	EFFECT OF INSECTICIDES ON THE LEVEL OF HEXAMERINS AND STUDY OF siRNA MEDIATED KNOCKDOWN OF HEXAMERINS ON TOXICITY OF INSECTICIDES IN THE LARVAE OF <i>AEDES ALBOPICTUS</i> (SKUSE)	U.O.No. 4937/2021/Admn Dated, Calicut University.P.O, 27.04.2021
2	Sona Ghosh	ISOLATION AND CHARACTERIZATION OF POTENTIAL ANTICANCER COMPOUNDS FROM SELECTED PLANTS	U.O.No. 17849/2019/Admn Dated, 21.12.2019
3.	Deepthi.M	CLONING AND EXPRESSION OF MUTANT TRYPSIN MODULATING OOSTATIC FACTOR (TMOF) AND STUDY ITS EFFECT ON <i>AEDES ALBOPICTUS</i> LARVAE	U.O.No. 17852/2019/Admn Dated, 21.12.2019
4	Jemy Jacob	GENE CLONING, EXPRESSION AND PURIFICATION OF SOYABEAN TRYPSIN INHIBITOR/S	No 668/2019admn Dt 23.05.2019
5	Shiji TM	EFFECT OF PLANT PROTEASE INHIBITORS ON CANCER CELL LINES.	No 12056/2017/Admn dt 25.09.2017

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

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

**SEMINARS AND CONFERENCES ATTENDED**

1. Kerala science congress,2020- as Judge for evaluating presentations
2. Kerala science congress,2018- as Judge for evaluating presentations
3. Kerala science congress,2017- as Judge for evaluating presentations
4. Kerala science congress,2016- as participant
  
17. Innovative processes developed in teaching and learning.
  
18. Participation in curricular development: Syllabus revision for M.Sc, M.Phil, Chairman. Board of studies in Zoology(PG)
  
19. Participation in co-curricular and extra-curricular activities.
  
20. Refresher and Orientation courses attended:
  
21. Examination /Evaluation reforms initiated:
  
22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.

## **PUBLICATIONS:**

### **In peer reviewed and indexed Journals:**

1. Sumisha NK, Shiji TM and Kannan Vadakkadath Meethal, Malathion exposure alters the level of major soluble proteins in the larvae of *Aedes aegypti*, International Journal of Mosquito Research 8(2): 30-33, 2021.
  
2. Smrithy PS, Kannan Vadakkadath Meethal. Isolation of soya bean trypsin inhibitor-binding protease from the gut of *Aedes albopictus*(Diptera: Culicidae) larvae. International Journal of Entomology Research. Volume 5; Issue 5; 2020; Page No. 32-35.
  
3. Bindu Punathumpambath and Kannan Vadakkadath Meethal Generalized p-value approach for multiple hypothesis testing in microarray. JP Journal of Biostatistics. Volume 17, Number 2, 2020, Pages 443-451
  
4. Anju Sara Prakash, Ashitha Kormath, Kannan Vadakkadath Meethal. Identification of plant extracts inhibiting trypsin-like larval gut proteases of *Aedes albopictus* (Diptera: Culicidae) larvae. International Journal of Entomology Research,Volume 5; Issue 3; 2020; Page No. 01-04
  
5. Sajitha R. and Kannan Vadakkadath Meethal. Identification of Plant extracts containing protease inhibitor against the larval gut proteases of *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae). Pestology Feb 2020 .Vol.XLIV , Issue 2 pp 42-48
  
6. Sajitha R. and Kannan Vadakkadath Meethal. Screening of Plant Extracts to Identify Extracts containing Inhibitors Against Larval Gut Proteases of *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae). International Journal of Research in Agricultural Sciences. Feb 2020, Vol.7, Issue 1 pp 47-53.

7. Remya p.p. and Kannan Vadakkadath meethal. Screening of plant seeds for protease inhibitor against larval gut proteases of *Spodoptera mauritia* (boisd.) (lepidoptera: noctuidae) International Journal of Agriculture Sciences Volume 11, Issue 2, 2019, pp.-7773-7776. Volume 11, Issue 2, 2019, pp.-7773-7776
8. Sajna TK, Shiji TM and Kannan Vadakkadath Meethal. Effect of serine protease inhibitors on gut protease activity of *Aedes albopictus* fourth instar larvae. International Journal of Mosquito Research 2019; 6(5): 06-09.
9. P.P. Remya, Kannan Vadakkadath Meethal. Identification of Plant extracts containing Trypsin inhibitor. International Journal of Life Sciences Research. Vol. 6, Issue 3, pp: (287-293), July - September 2018.
10. Amrutha M, Shiji TM, Kannan Vadakkadath Meethal. Serine proteases represent the predominant protease in the gut of *Culex pipiens* mosquito larvae. International Journal of Entomology Research. Volume 3; Issue 1; January 2018; Page No. 92-94.
11. Linvy Vincent, Sridhu Prakash, Reshma RM, Resmitha C, Kannan Vadakkadath Meethal Storage protein in the haemolymph of 6<sup>th</sup> instar larvae of *Spodoptera mauritia* Boisd.(Lepidoptera: Noctuidae) is increased by the Ecdysone mimic, Methoxyfenozide. International Journal of Entomology Research. Volume 3; Issue 2; March 2018; Page No. 01-04
12. C.Resmitha, and Kannan.Vadakkadath Meethal. The juvenile hormone mimic, pyriproxyfen, increases the level of the major haemolymph protein in the larvae of *Spodoptera mauritia* Boisd. Lepidoptera: Noctuidae. International Journal of Entomology Research. Volume 2; Issue 6; November 2017; Page No. 11-15
13. C.Resmitha, and Kannan.Vadakkadath Meethal. Toxicity of Insect Growth Regulator, Pyriproxyfen, on larvae of *Spodoptera mauritia* Boisd (Lepidoptera: Noctuidae). International Journal of Agriculture Innovations and Research. Volume 5, Issue 1, ISSN (Online) 2016, 2319-1473
23. Patents Applied/Granted: National. International, commercialized:
24. Consultancy services provided and revenue generated:
25. **Conferences ,seminars, symposia and workshops organized as convener/coordinator:**

#### **SEMINARS/WORKSHOPS ORGANISED**

#### **PROGRAMS ORGANIZED INVITING INTERNATIONAL SCIENTISTS**



1. Organized Erudite lecture on “Oral Cancer” by inviting Prof. Thomas, Carey, University of Michigan, USA (2016).
2. Organized Erudite lecture on “Beta adrenergic receptors” by inviting Prof. Roger Sunahara, University of California, San Diego, USA (2018).
3. Organized Erudite lecture on “Bacterial methylomes” by inviting Nobel Laureate Prof. Sir, Richard J Roberts, New England Biolabs, USA (2019).

#### **NATIONAL/STATE LEVEL PROGRAMS ORGANIZED**

1. Workshop on “Basic Techniques in Molecular Biology” July 2018
2. Workshop on “Techniques in Molecular Biology” March 2019
3. Workshop on “Gene expression studies using Cell culture and Real time PCR” 2019.
4. Workshop on “Experimental techniques for Biological sciences” Feb 2020

26. Number of collaborations:

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

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. Y. ShibuVardhanan**
2. Name of the Department : Zoology
3. Educational qualifications : MSc, Ph.D.
4. Present position : Associate Professor
5. Address for correspondence : Department of Zoology, University of Calicut,  
Malappuram, Kerala, India PIN: 673635
6. E-mail and contact number : [svardhanan@gmail.com](mailto:svardhanan@gmail.com), 9447108980
7. Specialization : Toxicology, GeometricsMorphometrics (GMM)  
Environmental Science
8. Total teaching experience : 16 years
9. Courses taught : Applied Zoology
10. Research experience : 20 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.

Coordinator UGC-SAP

- “INTEGRATED AND INTERACTIVE DIGITILIZATION AND DNA  
BARCORDING OF INSECTS AND MITES OF WESTERN GHATS”

Total Outlay in the Proposal = 94.66Lakhs

Total Outlay Approved and Sanctioned = 60 Lakhs + Project fellow

Letter No. F.3-6/2012 (SAP-II) dated 10.10.2012. Project sanction letter

Lr. No.F.4-1/2006 (BSR)/7-363/2012(BSR) dated 4/7/2012 from UGC.

20 lakhs for infrastructure development

- “Optimisation of Bioreactor parameter for the Microbial expression of Bio-Adhesive foot protein from Indian Mussels *Pernaviridis* and *Pernaindica*”

Sanction No. : F. No. 43-602/2014 (SR) 17-11-2015 Date of 25-01-2016

Total Amount: Rs.13,30,000.00/-

UGC-MRP (Principal Investigator)

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

- Innovative Research Activities- wastewater characterization and management

1) No. Lr. No. 149087/PLD-C-ASST-1/2014/Admn (1) dated: 27.1.2016

2) U.O. No. 248/2016/Fin. dated 15/03/2016

Rs. 3,00,000.00 UGC XII plan

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.

2No.

STUDY ON THE FORENSIC ASPECTS OF  $\mu$ VNTR POLYMORPHISM OF MAO-A GENE IN RECIDIVIST OFFENDERS: ADVERSE CHILDHOOD ENVIRONMENT

Date of Joining: 01-07-2013

Date of declaration of Ph.D. degree.: 20-06-2018

“Ameliorative effect of botanicals (*Catharanthusroseus* (L). G. Don) against endosulfan toxicity in non-target insect model, *Drosophila melanogaster* Meigen”

Date of Joining: 14 11-2012

Date of declaration of Ph.D. degree.: 20-06-2020

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

Name	Topic	Date of Registration
Neethu, C B	Characterisation and gene sequencing of mussel foot proteins from indigenous marine organism, <i>Pernaindica</i> (Linnaeus, 1758)	04/05/2016
Seena, S	landmark based geometric morphometrics analysis in Buprestid beetles (Coleoptera: Buprestidae), molecular Barcoding	01/07/2016
Rahila, K	Comparative study of toxicity of chlorantraniliprole and acephate on <i>Drosophila melanogaster</i> (Meigen, 1830): Geometric	22/12/2017

	morphometrics (GMM)	
Gayathri, M	Effect of Xenobiotics on the predatory potential of selected dragonfly species	30/04/2019
Renu, V V	Impact of Intoxicant on the Life Stage Performance of Carrion Feeding Dipterans : Forensic Implications	30/04/2019
Anand, P P	Physico-chemical characterization of byssus threads of native and invasive bivalve species along the coastal belt of Kerala	08/02/2021

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

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

- Advance training course equivalent to **4 European Credit Transfer System(4 ECTS)** in **Geometric Morphometrics (GMM)** organized by Transmitting Science, S. L.U- NIF B65731903 -NIF- IVA ESB 65731903, C/Gardenia, 2- Urb. Can. Claramunt – 08784 Piera (Barcelona) – **Spain** (2016).
- “Next generation sequencing (NGS)- Data analysis, UniBiosys Biotech Research lab, Kochi, Kerala, India. 21<sup>st</sup> to 22<sup>nd</sup> October 2019.
- Deliver a Lecture in National workshop on Taxonomy of Diptera 09-22 January 2020.
- **International workshop** on Advances in Biomedical Mass Spectrometry 2019 & Metabolic Workshop organized by SahaInstitute of Nuclear Physics Kolkata, India During 11<sup>th</sup> -17<sup>th</sup> - 11-2019
- “Next generation sequencing (NGS)- Data analysis, UniBiosys Biotech Research lab, Kochi, Kerala, India. 21<sup>st</sup> to 22<sup>nd</sup> October 2019.
- Anand, P.P.,&Y. **ShibuVardhanan**(2021). **Immunogenicity, allergenicity, antigenicity and expression analysis of wet adhesive mussel foot proteins of Asian green mussel, *Pernaviridis*(Linnaeus, 1758).** 4<sup>th</sup> International conference on Biological and Biomimetic Adhesives. 18-19<sup>th</sup> February, 2021. **Oral presentation. University of Aveiro, Portugal**
- Anand, P. P.,Shameema, K., &Y. **ShibuVardhanan.** (2021). **Insilicostructural characterization of wet adhesive mussel foot proteins of Asian green mussel, *Pernaviridis*(Linnaeus, 1758).** 4<sup>th</sup> International conference on Biological and Biomimetic Adhesives. 18-19<sup>th</sup> February, 2021. **Poster presentation. Doi: 10.13140/RG.2.2.103499.10729. University of Aveiro, Portugal**

17. Innovative processes developed in teaching and learning.

- New shape analysis software Geometric Morphometrics (GMM) started in 2016 in Department of Zoology as a part of UGC-SAP programme and 2017 included in the M.Phil syllabus.
- Digital Chemical Indenting system Students can avail the chemical stock online and generate indent application along with stock alert for avoiding chemical wastage.
- Live interaction with organic farmers so as to facilitate the formulation new research questions of practical relevance.

18. Participation in curricular development

Elective Course: ZOO 4E Restoration Ecology (MSc) 2021

New programme started in MPhil (2018) Restoration Ecology

MPhil (2018) Advances in Taxonomy and Biosystematics

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

- Providing facility for shuttle court for Students, Research Scholars and Faculties
- Organic farmers meet (Lab to field)
- Microphotography and Shape analysis

20. Refresher and Orientation courses attended:

21. Examination /Evaluation reforms initiated:

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

**Appended 1**

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

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

P. P. Anand., & Dr. Y. ShibuVardhanan. "A new cost-effective, long life, reusable filter cartridge for water treatment". University of Calicut, Kerala, India. **Ref. No: KSCSTE/143/2021-PF-PIC** (Processes pending)

25. Consultancy services provided and revenue generated:

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

Convener

- a. 42<sup>nd</sup> Annual conference of ESI & National Symposium on Animal Behaviour,

Biodiversity and Human Future, jointly organized by Department of Zoology, University of Calicut and Ethological Society of India (ESI). 4 to 6 December 2018.

- b. Golden Jubilee National Seminar on Frontiers in Biological Research. Erudite Lecture on Mite (Acari). Organized by Department of Zoology, University of Calicut, Kerala. 12 to 14 March 2018.
- c. “**Lab to field for future environmental stability and food security**” on 2nd March 2018 by Department of Zoology, University of Calicut.
- d. Hands on Training Programme on ‘ **Insect Taxonomy and Field Sampling Skills**’ 25th March to 28th March 2019.
- e. “Drug discovery workshop on StarDrop&SeeSAR” organized by Zastra Innovations Pvt. Ltd., Bengaluru 2018

1. Number of collaborations:

- Research collaboration with CMFRI (Thiruvananthapuram) and ZSI (Calicut) two papers communicated for publication.

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

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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## PUBLICATIONS

	Paper title	Authors		Journals	Year		
1	Effect of chromafenozide on ultramorphology of larval midgut of <i>Spodoptera mauritia</i> Bois.	Sathyakala K.P., E.M Manogem., & Y. ShibuVardhanan Zoology	Zoology	Intl.J.Recent.Sci.Res	2020	ISSN: 0976-3031	DOI: <a href="http://dx.doi.org/10.24327/ijrsr.2017.0810.0952">http://dx.doi.org/10.24327/ijrsr.2017.0810.0952</a>

2	Toxicity bioassay and semi-quantitative histopathological changes in the gills of paddy field crab, <i>Paratelphusa hydrodromus</i> (Herbst) exposed to arsenic.	E.M Manogem and Y. ShibuVardhanan	Zoology	Intl.J.Recent.Sci.Res	2020	ISSN: 0976-3031	DOI: <a href="http://dx.doi.org/10.24327/ijrsr.2017.0807.0479">http://dx.doi.org/10.24327/ijrsr.2017.0807.0479</a>
3	Evaluation of efficacy of collection techniques for human genomic DNA: MAOA-uVNTR polymorphism	Siva Prasad, M.S., & Y. ShibuVardhanan	Zoology	IJSRBS	2018	2347-7520	
4	Insecticidal efficacy of aqueous and methanol extract of <i>Catheranthus roseus</i> (L.) G. Don against an insect model <i>Drosophila melanogaster</i> Meigen	Shameema, K., & Y. ShibuVardhanan	Zoology	IJIRI	2018	2348-1218	
5	Comparison of smear layer removal by MTAD, Tetraclean, Qmix, NaOCL, coconut water, and saline as irrigating solutions in primary teeth; an in vitro study	Aparna T. Purakkal, Faizal C. Peedikayil, Y. ShibuVardhanan., T.P., Chandru., SoniKottayi., N. Srikant	Zoology	J. Dental Res. Rev.	2018		Doi: 10.4103/jdrr.jdrr_39_20
6	Geometric morphometrics approach on Genotoxicity evaluation of ecdyson agonist, Chromafenozide on <i>Corcyra cephalonica</i> Stainton (Lepidoptera: Pyralidae)	Manogem, E.M., Soumya, P.K., & Y. ShibuVardhanan	Zoology	IJET	2017		

7	Extraction of virgin coconut oil from the Testa free albuminous endosperm through yeast mediated aqueous fermentation system; Fourier transform-infrared spectra (FTIR)	Meharban, M.P., &Y. <u>ShibuVardhanan</u>	Zoology	IJRASET	2017	2321-9653	
8	Effect of minerals on free radicals induced damages in <i>Drosophila melanogaster</i>	Neethu, C.B., &Y. <u>ShibuVardhanan</u>	Zoology	IJTPR	2017	0975-5160	
9	Response of Anaerobic protozoa to oxygen tension in anaerobic system	Priya, M., Y. <u>ShibuVardhanan</u> , Manilal, V.B.	Zoology	International Microbiology	2019	ISSN 1139-6709	<a href="https://doi.org/10.1007/s10123-019-00058-4">https://doi.org/10.1007/s10123-019-00058-4</a>
10	Evaluation of toxic effects of <i>Catharanthus roseus</i> L. extract in <i>Drosophila melanogaster</i> M. with wing contour bioassay	Soumya, K., &Y. <u>ShibuVardhanan</u>	Zoology	Indian J. Entomology	2017		Doi: 10.5958/0974-8172.2018.00205.5
11	Phytotoxicity and anaerobic sludge co-digestion inhibition of coconut husk <i>Cocos nucifera</i> (L.) (Palmae) leachate: Photo-oxidative remediation	Praveen Krishnakumar, Neethu, C.B., Sruthi, P., &Y. <u>ShibuVardhanan</u>	Zoology	Poll. Res.	2017	0257-8050	
12	Computational modelling of wet adhesive mussel foot proteins (Bivalvia): Insights into the evolutionary convolution in diverse perspectives	Anand, P.P., &Y. <u>ShibuVardhanan</u>	Zoology	Nature Scientific Research	2021		Doi: <a href="https://doi.org/10.1038/s41598-020-59169-y">https://doi.org/10.1038/s41598-020-59169-y</a>
13	Protective effect of <i>Catharanthus roseus</i> plant extracts against endosulfan and its isomers induced impacts on non-targeted insect model, <i>Drosophila melanogaster</i> and	Shameema, K., Anand, P.P., &Y. <u>ShibuVardhanan</u>	Zoology	Comparative Biochemistry and Physiology, Part C	2021		<a href="https://doi.org/10.1016/j.cbpc.2020.108916">https://doi.org/10.1016/j.cbpc.2020.108916</a>



	live brain cell imaging						
1 4	Evaluation of bioactive compounds present in the botanical <i>Cathranthus roseus</i> (L.) G. Don by GC-MS and FTIR spectroscopic analysis	Shameema, K., Anand, P.P., & <u>Y. ShibuVardhanan</u>	Zoology	Int. J. Chem. Studies	2021	2349-8528	<a href="https://doi.org/10.22271/chemi.2020.v8.i5p.10447">https://doi.org/10.22271/chemi.2020.v8.i5p.10447</a>
1 5	Deleterious missense single nucleotide polymorphism alters the structural conformation of human anti-apoptotic Bcl-2 protein	Anand, P.P., & <u>Y. ShibuVardhanan</u>	Zoology	Current Science	2021	0011-3891	DOI:10.18520/cs/v120/i4/666-675

## 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. M.Nasser
2. Name of the Department: Zoology
3. Educational qualifications: Ph.D.
4. Present position: Professor
5. Address for correspondence: d
6. E-mail and contact number: cue2682@uoc.ac.in
7. Specialization: Entomology
8. Total teaching experience: 22 years
9. Courses taught: Biosphere Ecology, Systematics, General Entomology, Insect Ecology and Ethology, Medical, Veterinary and Forensic entomology
10. Research experience: 28 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.

Name of the student	Topic of research	Date of registration	Date of declaration of Ph.D. degree
Dr. Shameer K.S.	Ecological interactions in the coconut cropping systems and the role of volatile organic compounds of selected varieties of coconut ( <i>Cocos nucifera</i> L.) in the biological control	10/05/2010	28/11/2017

	of <i>Opisina arenosella</i> Walker (Lepidoptera: Oecophoridae)		
Dr. U.K.A. Saleem	Diversity of galls associated insects in Kerala	29/04/2009	31/05/2016
Dr. Shyamna K. Baboo	Native insect pollinators visiting flowers of selected invasive plant species in three districts of Kerala	16/01/2013	17/09/2020

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

Name of the student	topic of research	date of registration
Mr. Binoy C.	'INVESTIGATION ON THE ALPHA TAXONOMY OF CHALCIDIDAE (HYMENOPTERA : CHALCIDOIDEA) OF SOUTHERN WESTERN GHATS'	04/05/2016
Mr. Ranjith A.P.	Diversity and abundance of hymenopteran parasitoids and pests of rice with special reference to farming practices	30-09-2013
Ms. Keerthana Haridas,	THE ADAPTIVE STRATEGIES OF GALL INDUCERS AGAINST NATURAL ENEMIES IN PLANT GALLS OF SOUTHERN WESTERN GHATS.	27-09-2019
Jalala	Life history strategies and latitudinal distribution influencing the biological control potential of gregarious larval parasitoids with special reference to rice fields of Kerala	03/05/2016
Manjusha (Co-guide)	Ecophysiology and biology of <i>Magalorea hopeae</i> inducing galls in southern Western ghats	10-07-2018

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

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

17. Innovative processes developed in teaching and learning.

18. Participation in curricular development: As Chairman, PG Board of Studies in Zoology played active role in curriculum development of M.Sc. Zoology and M.Sc. Applied zoology, M.Phil. in Zoology and Ph.D. course work

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

20. Refresher and Orientation courses attended: Nil

21. Examination /Evaluation reforms initiated:

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

No	Authors	Full title	Full title or journal, year of publication, volume and page numbers	Impact factor (Thomson Reuters)
1	A.P. Ranjith, K.G. Samartsev & M. Nasser	Discovery of the braconid subfamily Dirrhopinae van Achterberg (Hymenoptera: Ichneumonoidea) from the Indian subcontinent with the description of a new species from south India	Zootaxa, 2021, 4908 (2): 251–262	1.03
2	K.M. Aarif , Aymen Nefla, M. Nasser, P.K. Prasadana, T.R. Athira, Sabir Bin Muzaffar	Multiple environmental factors and prey depletion determine declines in abundance and timing of departure in migratory shorebirds in the west coast of India	Global Ecology and Conservation 26 (2021) e01518 <a href="https://doi.org/10.1016/j.gecco.2021.e01518">https://doi.org/10.1016/j.gecco.2021.e01518</a>	3
3	A.P. Ranjith, C. Van	Discovery of the chelonine tribe Adeliini Viereck, 1918	Zootaxa, 2021, 4926 (1): 001–	1.03

	Achterberg , K.G. Samartsev & M. Nasser	(Hymenoptera: Braconidae) from the Indian subcontinent with the description of a new genus from south India	025  ISSN 1175-5326 (print edition) ISSN 1175-5334 (online edition)	
4	A.P. Ranjith, Cornelis Van Achterberg, H. Sankararama n& M. Nasser	Discovery of the ichneutine genus <i>Paroligoneurus</i> Muesebeck (Hymenoptera: Braconidae) from the Indian subcontinent with the description of a new species from Northwest India	<i>Zootaxa</i> , 2020, 4786 (3): 396– 408	1,03
5	A.P. Ranjith, Sergey A. Belokobylski j, Dharma Rajan Priyadarsana n , Punnath Aswaj & M. Nasser	A new micropterous species of the genus <i>Spathius</i> Nees (Hymenoptera: Braconidae: Doryctinae) from the North Eastern Himalayas, India	<i>Zootaxa</i> , 2020, 4763 (1): 001– 016	1.03
6	Chereekandy Binoy, Santhosh Shreevihar, Mannankadi	A new report on the parasitisation of <i>Epitranus</i> Walker (Chalcidoidea: Chalcididae) on <i>Phereoeca uterella</i> (Walsingham) (Lepidoptera: Tineidae) with the description of a	ORIENTAL INSECTS  <a href="https://doi.org/10.1080/00305316.2020.1838965">https://doi.org/10.1080/003053 16.2020.1838965</a>	0.39

	yan Nasser and Kattumunda Jyolsna	new species from India		
7	C. Binoy & Scott R. Shaw & P. Girish Kumar & S. Santhosh & M. Nasser	First discovery of a long-tailed wasp from the Indian subcontinent (Hymenoptera: Megalyroidea: Megalyridae)	International Journal of Tropical Insect Science (2020) 40:751-758 DOI 10.1007/s42690-020-00126-7	0.92
8	K. B. Shyamna And M. Nasser	Altitudinal difference in Insect pollinators of Lantana camara, an invasive plant in southern Western Ghats	Biosystematica, 2019, 11(1&2): 33-41	--
9	C. Binoy, P.M. Sureshan, S. Santhosh and M. Nasser	Description of a new species of Lasiochalcidia Masi (Chalcidoidea: Chalcididae) from India with a key to Oriental species	HALTERES, Volume 10, 80-85, 2019	0.5
10	A.P. Ranjith, Sergey A. Belokobylskij & M.	First record of Undabracoon Quicke, 1986 (Hymenoptera: Braconidae, Braconinae)	Zootaxa, 2019, 4664 (1): 142–150	1.03

	Nasser	from the Indian subcontinent with the description of a new species		
11	A.P. Ranjith , J. Fernandez- Triana, T. Veena , D.R. Priyadarsana n, M. Nasser	Four new species of <i>Philoplitis</i> Nixon (Braconidae, Microgastrinae) with an updated key and illustrations of all described species	ZooKeys 841: 125–150 (2019)	1.137
12	A.P. Ranjith, Cees van Achterberg, Priyadarshan an Dharma Rajan, Il- Kwon Kim, Rajmohana, K., Shweta, M. & M. Nasser	First Indian record of Centistidea Rohwer (Hymenoptera: Braconidae, Miracinae) with description of eight new species	Insect Systematics & Evolution (2019) DOI 10.1163/1876312X-00002194	1.667
13	K.M. Rajesh , Shahid Bin Zeya , A.P. Ranjith & M. Nasser	New distributional records of fairyflies (Hymenoptera: Chalcidoidea: Mymaridae) from rice–agroecosystems of Kerala	HALTERES, Volume 10, 48-61, 2019	0.5

14	Ranjith A.P.,B.M. Manjusha, P. Girish Kumar & M.Nasser	Extending rarity: discovery of the rare braconine genus, <i>Carinibracon</i> van Achterberg (Hymenoptera: Braconidae) in the Oriental region with the description of a new species from India	Zootaxa, 4514 (4): 593-600 2018	1.03
15	Ranjith, A.P., Rajan, P.D. & Nasser, M.	Revision of <i>Cystomastacoides</i> van Achterberg (Hymenoptera: Braconidae, Rogadinae) with the description of two new species from south India.	Zootaxa, 4387 (2): 365–374. 2018	1.03
16	Ranjith A.P., Priyadarsana n Rajan, Junli Yao, Donald Quicke, Nasser M	Revision of <i>Dolabraulax</i> Quicke (Hymenoptera: Braconidae, Braconinae) with the description of three new species from south India	Journal of Asia-Pacific Entomology (2018) Elsevier 21: 538–547	1.101
17	Shameem KM, Prathapan KD and Nasser M,	First Report Of The Indian Date Palm Leaf Miner, <i>Javeta Pallida</i> Baly (Coleoptera: Chrysomelidae: Cassidinae: Coelaenomenoderini), On Pygmy Date Palm, <i>Phoenix Roebelenii</i> O'Brien (Arecaceae)	The Coleopterists Bulletin, 71(3): 528–529. 2017	0.669



18	K. S. Shameer, M. Nasser; Chandrika Mohan; Ian C. W. Hardy	Direct and indirect influences of intercrops on the coconut defoliator <i>Opisina arenosella</i>	2017 Journal of Pest Science DOI 10.1007/s10340-017-0904-6	5.16
19	Shameem KM, Prathapan KD, Nasser M, Chaboo CS	Natural history of <i>Javeta pallida</i> Baly, 1858 on Phoenix palms in India (Chrysomelidae, Cassidinae, Coelaenomenoderini).	2016 ZooKeys 597: 39–56. doi: 10.3897/zookeys.597.6876	1.137
20	A.P. Ranjith, Sergey A. Belokobylskij, Donald L.J. Quicke, Rebecca N. Kittel, Buntika A. Butcher & M. Nasser	An enigmatic new genus of Hormiinae, (Hymenoptera: Braconidae) from South India	Zootaxa 4272 (3): 371–385 2017	1.03
21	A.P. Ranjith, S. Santhosh	Range extension of the rare braconine genus, <i>Lycricibracon</i> Quicke	Zootaxa 4227 (3) 422-430 2017	1.03

	and M.Nasser	(Hymenoptera: Braconidae) with description of a new species from India		
22	A.P. Ranjith, Donald L.J. Quicke, U.K.A. Saleem, Buntika A. Butcher, Alejandro Zaldívar- Riverón, M. Nasser	Entomophytophagy ('Sequential predatory then phytophagous behaviour') in an Indian braconid 'parasitoid' wasp (Hymenoptera): specialized larval morphology, biology and description of a new species	PLoS ONE 11(6): 1-16 e0156997. doi:10.1371/ journal.pone.0156997 (2016)	2.8
23	M.Shameem, K.D.Prathap an, M.Nasser, Caroline Simmrita Chaboo	Natural history of <i>Javeta pallida</i> Baly, 1858 on Phoenix palms in India (Chrysomelidae,Cassidinae, Coelaenomenoderini)	ZooKeys 597: 39–56 (2016)	1.137
24	A.P. Ranjith, M. Nasser,	A new genus of Braconinae (Hymenoptera: Braconidae) from	Zootaxa	1.03

	K. Rajmohana & D. L. J. Quicke	India with remarkable head ornamentation	4061 (2): 173–180.  2016	
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23. Books published: with ISBN No., Without ISBN No., Chapters in books.

1. Ranjith, A.P., Jennings, J.T. & Nasser, M. (2017) Review of the rarely collected genus *Adesha* Cameron (Hymenoptera: Braconidae, Braconinae) with description of a new species from southern India. In Santhosh, S., Nasser, M. & Sudheer, K. (Eds), *Insect Diversity and Taxonomy*. Prof. TC Narendran Trust for Animal Taxonomy, 1: 97–110.

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:

**Govt. of India approved program titled Global Initiative of Academic Networks (GIAN) in Higher Education**

1. “*Chemical and Molecular Ecology of Insect – Plant Interactions: Towards Ecological Sustainability*” held during 26<sup>th</sup> February to 04<sup>th</sup> March, 2019.

External expert, Dr. Ananthanaraya Raman, Professor, Charles Sturt University Australia.

Alloted fund - **Rs. 5.44 lakh.**

**Course Co-ordinator and Internal Expert – Dr. M.Nasser**

2. “*Parasitoid ichneumonoid wasps: biology, identification, and biological control potential*” from 7th June to 13th June 2019.

External Expert : Prof. Donald Quicke, Formerly of Imperial College London. Alloted fund - **Rs. 5.44 lakh.**

**Course Co-ordinator and Internal Expert – Dr. M.Nasser**

3. Indian academy of Sciences sponsored Lecture Workshop on “Recent Trends in Biological Sciences” on 9 th and 10 th March 2017. Course Co ordinator . Dr. M.Nasser. Sanctioned amount – Rs. 1,09,500/-

4. Dr. Ian Hardy, Associate Professor, University of Nottingham, UK visited the department on an Erasmus+International credit Mobility fund from 11 to 17<sup>th</sup> January 2017 and gave a series of lectures to the students of department of Zoology

**Number of collaborations:** Collaborations with

1. Dr. Ian Hardy, Associate Professor, University of Nottingham, UK
  2. Dr. Donald Quicke, Former Professor, Imperial College, UK
  3. Dr. Ananthanaraya Raman, Professor, Charles Sturt University Australia
  4. SERGEY A. BELOKOBYSKIY, Zoological Institute, Russian Academy of Sciences, St Petersburg 199034, Russia
  5. J. Fernandez-Triana, Canadian National Collection of Insects, 960 Carling Ave., Ottawa, ON K1A 0C6, Canada
  6. D.R. Priyadarsanan, Ashoka Trust for Research in Ecology and the Environment, Bangalore, Karnataka,
  7. K.G. SAMARTSEV, Laboratory of Experimental Entomology, Zoological Institute, Russian Academy of Sciences, 1 Universitetskaya naberezhnaya, Saint Petersburg 199034, Russia
  8. CORNELIS VAN ACHTERBERG, Naturalis Biodiversity Center, Darwinweg 2, 2333 CR Leiden, Netherlands.
27. Awards /recognitions received: International, National, State, University level. - Nil

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

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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. Zubair. M.
2. Name of the Department : Zoology
3. Educational qualifications : M.Sc., Ph. D.
4. Present position : Assistant Professor
5. Address for correspondence : Department of Zoology, University of Calicut
6. E-mail and contact number : [zubairm@uoc.ac.in](mailto:zubairm@uoc.ac.in), Mob. 9447513478
7. Specialization : Wildlife Biology, Avian Biology
8. Total teaching experience : 8 years
9. Courses taught : Animal Behaviour, Microbiology
10. Research experience : 5 years
11. Major research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.
12. Minor research projects completed: Title of the project, Date of sanction and Duration, Grant received, Funding agency. PI or Co-PI.
13. Number of students awarded Ph.D. degree: Name of the student, topic of research, date of registration, date of declaration of Ph.D. degree.
14. Number of students registered for Ph.D. degree: Name of the student, topic of research, date of registration.
  1. Jaseem Lal, Fish Diversity Studies in Chaliyar River (Kerala), 08.02.2019
  2. Jobin. M.J., A Study on the Avifauna and Habitat Fragmentation in Wayanad Wildlife Sanctuary, Kerala. 12.03.2021
15. Provide information as indicated in 11 and 12 above.
16. Participation in conferences, symposia, seminars and workshops: International, national, state or university level, attended. Presented paper, chaired session. Resource person.

### **Invited Talks presented - International**

1. Delegated by University of Calicut for an invited Public Lecture on “Biology and Behaviour of Peregrine Falcon” at Charles Sturt University, Orange, Australia on 30, September 2019

2. Invited Talk/Professional interaction with scientists of GIOSTAR at GIOSTAR - Global Institute of Stem Cell Therapy and Research, 4660, La Jolla Village Drive, P.O. Box 270575, San Diego, California 92198, USA. 28 - 30, August 2018
3. Invited lecture entitled “Falcons and Houbara with Arab Culture” at Houbara Breeding Centre at Gulmim, Morocco 30, December 2017
4. Invited lecture entitled “Falcons and Falconry in Arabian Gulf” at International Centre for Birds of Prey, Bouldson House, Newent Glos – GL 18 1JJ, United Kingdom, 04, August 2017

### **Session Chaired**

1. Chaired a session in the 2nd National Conference on Frontiers in Eco biological Sciences and its Applications (FESA 2017) at School of Life Sciences, Periyar University, Tamil Nadu, 15, June 2017.
2. Co-chaired with Dr. Azeez (SACON) in Technical Session Code: 006. Animal Behaviour and Biodiversity Conservation in the three day National Symposium on ‘Animal Behaviour, Biodiversity and Human Future’ jointly organized by the Department of Zoology, University of Calicut and Ethological Society of India (ESI), on 05, December 2018
3. Co-chaired with Dr. Pramod Krishnan IFS, CCF, Kerala Forest Dept. in the Technical Session Code: 007. Human-Wildlife Conflicts in the three day National Symposium on ‘Animal Behaviour, Biodiversity and Human Future’ jointly organized by the Department of Zoology, University of Calicut and Ethological Society of India (ESI), 06, December 2018.

### **Visit/Survey/Discussions Attended – International**

1. Visited Australian Pelican Feeding at New Entrance, Sydney, Australia 02, October 2019
2. Arab Hunting Show at Abu Dhabi National Exhibition Centre, Abu Dhabi, United Arab Emirates, 8-12, September 2019
3. Meeting with the Dr. Devorah, President of University of La Verne, LA, USA 01, January 2019
4. Arab Hunting Show at Abu Dhabi National Exhibition Centre, Abu Dhabi, United Arab Emirates, 01-06, October 2018
5. Visited University of La Verne, LA, USA and discussed with its President Dr. Devorah on 30, August 2018
6. Visited Sky Falconry, California, United States of America 29, August 2018
7. Visited University of San Diego, California, USA 28, August 2018
8. Visited Raptor Trust, New Jersey, New York, USA and discussed with Chairman Dr Christopher, Raptor Trust, New Jersey, United States of America on 23, August 2018
9. Visited Malaysia National Park on 29, November 2017
10. Visited Singapore National Park on 27, November 2017
11. Visited Scotland Falcon Breeding Centre and discussed with Falcon Breeder Dr Jo Oliver (of Dr Nick Fox), Scotland, United Kingdom on 10, August 2017
12. Visited Edinburg Falcon Breeding Centre and discussed with Falcon Breeder Dr Sara Skalman Labarg, Edinburg, United Kingdom on 09, August 2017
13. Visited Cardiff Falcon Breeding Centre and discussed with Falcon Breeder Dr Ian Labarg, Cardiff, United Kingdom on 09, August 2017
14. Visited Falcon Breeding Centre, Wales and discussed with Falcon Breeder Dr Martin, Wales, United Kingdom on 08, August 2017
15. Arab Hunting Show at Abu Dhabi National Exhibition Centre, UAE, 03-07, October 2016
16. Visited Dubai Falcon Hospital, Dubai, UAE on 25, January 2016

17. Innovative processes developed in teaching and learning.
18. Participation in curricular development:
19. Participation in co-curricular and extra-curricular activities.
20. Refresher and Orientation courses attended:
 

9<sup>th</sup> Refresher Course in Environmental Science and Geosciences organized by UGC Human Resource Development Centre, University of Calicut from 09/11/2016 to 29/11/2016 at the UGC Human Resource Development Centre, University of Calicut
21. Examination /Evaluation reforms initiated:
22. Publication of research papers: in peer reviewed journals, non-peer reviewed journals, conference proceedings, impact factors, citations, h-index. Numbers in SCOPUS.
  1. Zubair M., Varghese P.R., Saji K.G., Alex George (2016) ‘Epidemiological Study on Spray Paint Workers’. IOSR Journal for Dental and Medical Sciences (IOSR-JDMS) Vol.15 (9), Pp. 17-19 (e-ISSN-2279-0853, p-ISSN: 2279-0861).
  2. Zubair M., Varghese P.R., Saji K.G., Sreelatha B. Nair (2018) ‘An epidemiological study on effect of occupational exposure of cement. International Journal of Community Medicine Vol.15 (9), Pp. 17-19 (e-ISSN-2394-6040, p-ISSN: 2394-6032).
  3. Zubair, M., Shukkur, E.A.A., Azeez, (2018). Diurnal rhythm and movement pattern of Peregrine Falcon *Falco peregrinus* in captivity in United Arab Emirates. Journal of Millennium Zoology. Vol. 14 (1), Pp. 41-44 (ISSN 0973-1946).
  4. Zubair, M. (2019). Review of Moulting and Pterylographic Studies of Shaheen Falcons in Captivity *Abstract of International Conference on Recent Innovations in Bio sustainability and Environmental Research–2019 (RIBER-2019)*. Pp. 18.
  5. Zubair, M., Febi A. Bakkar (2019). Molecular Detection of Pathogenic Bacteria *Proteus mirabilis* Contamination in Chicken Meat in Selected Districts of Kerala, India. *Abstract of Kerala Science Congress 2019*. Pp. 58.
  6. Zubair. M. (2019) Abstract of IASTEM-581<sup>st</sup> International Conference on Environment & Natural Science (ICENS). Pp. 36.
  7. Molecular Study Based on *Proteus mirabilis* Contamination in Chicken Meat in Selected Districts of Kerala, India. Febi A. Bakkar, Zubair. M. *International Journal of Development Research*. Vol. 09, Issue, 06, pp. 28367-28369, June, 2019. ISSN: 2230-9926.
  8. Molecular Detection of Pathogenic Bacteria *Proteus mirabilis* Contamination in Chicken Meat in Selected Districts of Kerala, India. *Indian Journal of Applied Research*. Volume-9 | Issue-7 | July - 2019 | PRINT ISSN No. 2249 - 555X PAGE NO. 8-9.
23. Books published: with ISBN No., Without ISBN No., Chapters in books.
24. Patents Applied/Granted: National. International, commercialized:
25. Consultancy services provided and revenue generated:

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

Coordinator, International Avian Research Centre-IARC (University of Calicut) –nJoint Initiative of University of Calicut and Kerala Veterinary and Animal Sciences University, Pookode, Wayanad.

As Coordinator of IARC, submitted a proposal for Integrated M. Sc (Bioscience) Programme to Government of Kerala, and it is approved and is going to start in Calicut Universit in 2021.

27. Number of collaborations:

Coordinator for MoU Signing between University of Calicut and Kerala Veterinary and Animal Sciences University, Pookode, Wayanad on 21, August 2109

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

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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