



## SCOTT CHRISTIAN COLLEGE (Autonomous), Nagercoil.

### Department of Chemistry and Research Centre



Name : J.PremaKumari

Gender : Female

Designation : Associate Professor

Department : Chemistry

Date of Birth : 20-05-1967

Date of Appointment : 08-09-1999

Mobile Number : 9489283471

E-mail : [premaisac67@gmail.com](mailto:premaisac67@gmail.com), [prema@scottchristian.org](mailto:prema@scottchristian.org)

Qualification : M.Sc., M.Phil., M.Ed.,  
Ph.D

**Approved Guide by** : ManonmaniumSundaranarUniversity, Thirunelveli.

**Ongoing Research Scholars : 3**

S.No	Name	Title	Reg. No	FullTime/ Part time
1	SrinthilaSelvi. C	Synthesis and Characterization of Silver nanoparticles from Seaweeds-Inclusion with alpha cyclodextrin	21213162032023, 02-02-2022	Full Time



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<b>2</b>	Lawrance B S	Ultra Sound Promoted Green Synthesis of Silver Nanoparticle, Nanocomposites, its characterization using MyristicaFragrans(Nutmug) Seed Extract and Sensor Application	21213162031015, 02-02-2022	Full Time
<b>3</b>	S.K.Devi	Pharmacological activity of selected medicinal plants with alpha cyclodextrin	22213162032013, 21-12-2022	Full time

#### Completed Research Scholars: 10

S.No	Name	Title	Completed year	Reg No	Full time / Part time
<b>1</b>	S. LizyRoselet	Synthesis and characterization of selected drugs and fluorophores with hydroxypropyl alpha cyclodextrin inclusion complexes	2018	10128, 06-04- 2013	Full Time
<b>2</b>	A.GloryPunitha	Physicochemical behavior of selected drugs and organic fluorophores with hydroxypropylalpha cyclodextrin and alpha cyclodextrin complexes	2019	10062, 06-03- 2013 9072, 15-05-	Full time
<b>3</b>	M. ShirlyTresa	Physicochemical behavior of antimalarial drugs and some fluorophores with alpha cyclodextrin	2020	2012	Full Time



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4	G. Mary Metilda	Physicochemical behavior of selected drug and fluorophores with alpha cyclodextrin	2020	9073, 19-05- 2012	<b>Part time</b>
5	P.Presheth	Synthesis, Characterization and sensing application of nanomaterials	2021	10585,1 0-04- 2013	<b>Part time</b>
6	K. Francy	Extraction of natural products from Annona muricata leaves and augmenting its pharmacological properties on inclusion with alpha cyclodextrin	2022	1822316 2032028 , 05-07- 2018	<b>Part Time</b>
7	Jesu Raj	A study on the airborne heavy metals and radionuclides in urban and rural environments of kanyakumar district	2022	11640, 16-07- 2014	<b>Part Time</b>
8	Prasheena Russell	Isolation of natural products from Ficus auriculata leaves and augmenting its pharmacological properties with alpha cyclodextrin and hydroxyl propyl alpha cyclodextrin	2024	2011316 20320  13, 06- 03-2020	<b>Full Time</b>



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#### Papers published in journals

Title	Periodicity of the article	Name of the Journal	Page	Year	Journal No. ISBN/IS SN/ Impact factor No.
1.Characterization, Pharmacology and In-silico study of 2,4 DitertiaryButylphenol isolated from the leaves of FicusauriculataLour		Oriental Journal of Chemistry	179-188	2023	0970-020X <a href="http://dx.doi.org/10.13005/ojc390122">http://dx.doi.org/10.13005/ojc390122</a>
2.Synthesis of 2,4 DitertiaryButylphenol: Hydroxypropyl- $\alpha$ -Cyclodextrin inclusion complex and its characterization		A Journal for New Zealand Herpetology	2333	2023	2230-5807
3.Computational and biological efficacy of stigmaterol against HeLa cells and Vero cells first time isolated from the ethanol extract of Anonamuricata Linn leaves	<a href="https://doi.org/10.1016/j.molstruc.2021.132186">https://doi.org/10.1016/j.molstruc.2021.132186</a>	Journal of Molecular Structure	1252	2022	2021.132186



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4. Urban and Rural Airborne Particulate Matter: Seasonal Variation of Alpha activity in Kanyakumari District		Nature Environment and Pollution Technology		2021	0972-6268 2395-3454
5. Effect of Ph Modulation on hydroxyl propyl alpha cyclodextrin completion with stigmaterol		Journal of applied science and computations		2021	1076-5131
6. Molecular Docking Study of $\alpha$ -Cyclodextrin with Psoralen: MDA-MB-231 Cancer cell		International Journal of Research in Pharmaceutical Sciences	978	2021	0975-7538
7. Structural characterization of inclusion complex of stigmaterol with alpha cyclodextrin using spectroscopy and molecular modeling,		Biomedical and Biotechnology Research Journal		2021	10.4103/bbrj 228 21
<b>8. <math>^1\text{H}</math> NMR – A validation tool for supramolecular complexes of <math>\alpha</math>-cyclodextrin Antidiabetic drugs</b>	<b>2020</b> <a href="https://doi.org/10.1016/j.matpr.2020.04.077">https://doi.org/10.1016/j.matpr.2020.04.077</a>	Available online 25 April		2020	
9. Urban and Rural Airborne particulate matter, seasonal variation of alpha activity in Kanya kumara District		Journal of Nature and Pollution Technology	20(3), 1225-1229	<b>2020</b>	Scopus indexed



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10. An investigation on host-guest complexation of Metformin hydrochloride with hydroxypropyl- $\alpha$ -cyclodextrin for enhanced oral bioavailability		Materials Today Proceedings	514-518 Volume 21, Part 1, .	2020	SCOPUS INDEX
11. Fluorescence detection of ferrous(III) ions using green synthesized photoluminescent carbon dots.		Journal of applied science and computation	VI. VI 1187-1200	<b>2019</b>	
12. Turn off fluorescence sensing of mercury(II) using nitrogen doped carbon nanodots derived from natural bioprecursor		Journal of applied science and computation	Vol. VI 1364—1379	<b>2019</b>	
13. Phase solubility studies on cumarine derivatives with $\alpha$ -cyclodextrin and hydroxyl propyl $\alpha$ -CD		International journal of research	NO 2236-6124 Vol. 7 Issue XII,	<b>2018</b>	
14. Characterization and solubility studies of quinine sulphate and hydroxyl chloroquine sulphate inclusion complexes with alpha cyclodextrin.		Journal of applied chemistry			
15. Studies on the preparation, characterization and solubility of inclusion complexes of chloroquine phosphate alpha cyclodextrin and hydroxypropyl alpha cyclodextrin .		Journal of applied science and computation	<b>1649-1660 VI</b>	<b>2018</b>	



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16. Seasonal evaluation of trace metal concentration in airborne particulate matter in kanyakumari district.		International Journal of Scientific research and review	<b>Vol. 7, pp 841-849.</b>	<b>2018,</b>	
17. Physicochemical characterization of capecitabine $\alpha$ -cyclodextrin complexes and phase solubility studies		International Journal of Research and Analytical Review	<b>Vol. 5, Issue 4, pp 885-889.</b>	<b>October 2018</b>	<b>ISSN 2349-5138</b>
18. Inclusion studies on $\alpha$ -cyclodextrin complexes of Glipizide and Gliclazide with effect of pH		Asian Jurnl of Pharmaceutical and Clinical Research	Vol 10, Issue 1, PAGES 274-280 ISSN Online - 2455-3891	<b>2017</b>	Print - 0974-244 (SCOPUS INDEXED )
19. Effect of pH on 4—Aminosalicylicacid : $\alpha$ -CD/HP $\alpha$ -CD inclusion complexes		International Journal of Scientific Research.	<b>Volume/Issue/Page No.27-29.</b>	<b>2017,</b>	<b>ISSN No. 2277-8179,</b>
20. Spectral characteristics and Molecular Docking studies on the alpha cyclodextrin inclusion complexes of 2-methyl-4-nitrophenol and 4-methyl-2-nitrophenol		International Research Journal Engineering and Technology,		2017	
21. Synthesis and charactersation of silver nanoparticles using alpha cyclodextrin as a encapping agent and drug delivery		International journal of Chemical and Pharmaceutical Analyses,	4, 1-11,	2017	
22. Preparation and characterization inclusion complexes of Fluorouracil alpha cyclodextrin hydroxyl propyl alpha cyclodextrin,		, International Journal of Applied Research , Online :2394-5869, Print :2394-7500,		2016	Online :2394-5869, Print :2394-7500



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23. Physicochemical Characterization of Alpha Cyclodextrin complexes of Tamoxisen Citrate and phase solubility studies,		International Journal of Pharmaceutical Science and Research,		2016,	Online : 0975-8232 Print : 2320-5148,
24. Augumentation of Antimicrobial behaviour of silver nanoparticles, ,		International Journal of Modern Sciences and Technology		2016	
25 Characterization and solubility studies of Mefloquine hydrochloride inclusion complexes with alpha- CD/HP alpha CD,		International Journal of Scientific and Research		Publicati ons, 2015	
26 Preparation and characterization of Thalidomide hydroxyl propyl alpha cyclodextrin inclusion complex, ,		Journal of chemistry and chemical sciences	8(3), 577-584,	2015	
.27. Inclusion studies on oral antidiabetic drugs with alpha cyclodextrin and hydroxyl propyl alpha cyclodextrin, ,		International Journal of Applied Research		, 2015,	Online :2394-5869, Print :2394-7500
28. Studies on Metformin Hydrochloride and Alpha Cyclosextrin inclusion complexes, ,		Journal of Green Chemistry Technology Letters,		2015,	DOI : 10.18510
,29. Effect of Alpha Cyclodextrin on Gefitinib, , Indian, ,		Journal of Applied Research	2249-555	2015	
30. Spectral Characteristics and Solvent Effects of 4-(Phenylazo)benzoic acid and 2-(4-		Indian Journal of Applied Science,	2249-555,	2015	





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Hydroxyphenylazo)benzoic acid on alpha cyclodextrin,					
31. Preparation and Characterization of Umbelliferone and Hydroxy propyl alpha cyclodextrin inclusion complex, ,		Indian Journal of Applied Science	2249-555	, 2015.	
32. Effect of alpha cyclodextrin on Fluorouracil,		International Journal of Science and Technology	, 2(10), 36,	2014	
33. Effect of $\alpha$ -Cyclodextrin on 4-Nitro Benzoic Acid and 3,5-Dinitro Benzoic acid,International		J of Chemical & Physical Sci.,		2014,,	
34. Synthesis and Characterization of metal complexes of Phloroglucinol,		An International Science Journal, ActaXavertana,		2013,	ISSN, 0976-1152,
35. Photophysical behavior of syringaldehyde on pH and $\alpha$ - Cyclodextrin: Comparison with $\beta$ -Cyclodextrin,		<i>International J. of Pure &amp; Applied Chem.,</i>		2011,	
.36. Spectral characteristics of sulphadiazine, sulphisomidine: effect of solvents, pH and $\beta$ -Cyclodextrin, ,		<i>Physics and chemistry of Liquids</i>		2011.	
.37. Effect of solvents and pH on $\beta$ - Cyclodextrin inclusion complexation of 2,4- Dihydroxyazobenzene and 4-Hydroxyazobenzene,		<i>J. Solution Chem.,</i>		2011.	
38.Photophysical behavior of p-Dihydroxy Benzene in different solvents, pH and $\alpha$ - Cyclodextrin,		<i>Asian. J. Chem.,</i>		2010,	



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. 39. Study on the spectral characteristics of 4-hydroxy-3-methoxy benzoic acid in different pH and $\alpha$ -Cyclodextrin,		<i>J. Indian Chem. Soc.</i> ,		<b>2009.</b>	
40. Photophysical properties of syringic acid: Effect of Cyclodextrin complexation and pH,		<i>ANJAC J. Sci.</i> , .		<b>2009</b>	

**BooksPublished**

Title	Name of the Journal	Page	Rate	year	Book No.
Investigation of trace metal concentration in airborne particulate matter in kanyakumardistrict under seasonal basis	International conference on multidisciplinary approaches in humanities, management and sciences	387-393		2021	978-81-952307-3-0

**Project Details**

1. UGC Minor Project, File No.MRP-2587/08 (UGC-SERO) dated 18/03/2008.
2. UGC Minor Project, File No. MRP-3824/11 (MRP/UGC-SERO) dated August 2012.

**Seminar/Conference Organised:**



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Sl. No	Title	Seminar/ Conference	State level / National/ International		
	Quiz Programme(18-03-2024)	Quiz Master	State		
	Prof. R. Nithyanandham Inaugural Endowment lecture(22-2-2022)	Seminar	State		
	PG Level Quiz Programme(19-04-2023)	Quiz Master	State		
	Reconnecting Mentor-Mentee in Pandemic	Online workshop	State	Participation	24-05-2021
	Innovations, Research and Intellectual Property Rights	Online workshop	National	Participation	30-06-2021
1	Recent Trends on applications of chemistry in Engineering	E-Symposium	National	Participation	4 to 6-06-2021
2	Re-Connecting Mentor-Mentee in Pandemic SCC,Nagercoil	Online Workshop 24-05-2021	National		
3	Faculty Enrichment Programme on "Role of Surfactants in COVID 19	Faculty Enrichment Programme 08-05-2021	National		
4	Value Based Education	Seminar 13-3-2020	National		
4	Entrepreneurship training on preparation of simple chemical products.	Workshop	State level		
5	National Seminar on Modern Trends in Chemical Sciences	Seminar 19-3-2019	National		
6	Entrepreneurship training on preparation of simple	Workshop	State level		



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	chemical products for students.		
7	Modern Trends in Chemistry	Seminar	National Level
8	National Seminar on Value Based Education	Seminar	National level

#### Participation Details (Conference/Seminar/Workshop/Symposium)

Title/ Institution	Conference/ Seminar/ Workshop/ Symposium	Level: State/ National/ International	Status of Participation Presentation/ Participant	Year
<ul style="list-style-type: none"> <li>✓ "Pharmacological study of natural product isolated from the leaves of Ficusauriculata Lour.,</li> <li>✓ .</li> </ul>	Journal of Scott Research Forum	State level ISBN: 0973-2705, pp. 252-257.	Presentation	2024
<ul style="list-style-type: none"> <li>• "Synthesis and Characterization of Silver Nanoparticles from brown seaweed</li> </ul>	International Conference on Biomaterials, Biodegradables and		Presented	23rd January 2024.



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Sargassum” on on	Biomimetrics, held at Scott Christian College (Autonomous) Nagercoil			
Phytochemical screening of Dictyotadichotoma and Sargassum qualitatively”	“National conference on innovative research in medical chemistry”, held at Muslim Arts College, Thiruvithancode		Presented	2023
✓ “Biosynthesis of silver nanoparticles from seaweeds and their characterization in (Autonomous) Nagercoil on	International conference on “Innovative strategies in astro and synthetic organic chemistry Holy Cross College	(ICISA SOC-2023)”,	Presented	27th February 2023
Preparation and characterization of 2,4 ditertiarybutylphenol: hydroxy propyl- $\alpha$ -cyclodextrin inclusion complex”,	Proceedings of National Conference on Biomaterials	, ISBN: 978-93-5813-184-0, pp.133-139	Presented	2023
Characterization and Pharmacological property of Natural product isolated from the leaves of Ficusauriculata Lour. And its inclusion with $\alpha$ -CD”,		ISBN: 978-81-956678-2-6, pp. 36.	Presented	2023
“Cytotoxic and solvent effect of 2,4 Bis(1,1-Dimethylethyl) Phenol”,	Proceedings of National Conference on Innovative	ISBN: 978-93-84737-	Presented	2023



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	Research in Medical Chemistry”,	39-9, pp.91-93		
Spectral and anti-microbial properties of Natural product isolated from the leaves of FicusauriculataLour”, ,	Prof. Nithyanandham endowment lectureScottChristian college	pp.9	Presented	2023
✓ “Studies on phytochemical, absorption and emission spectra on inclusion complex with $\alpha$ -cyclodextrin,.	Online International Conference on Innovation Research in Chemical Sciences: Polymers in Electronics,	pp.4		2021
“Inclusion complex of Alpha Cyclodextrin Psoralen-Molecular docking with MDA-MB-231 Cancer cell”, ,	International Conference on Chemistry for Next-Gen Applications	pp. 22		2021
Electrochemical Biosensors Recent Trends, Challenges and Opportunitites for Multidisciplinary Research Approach, SadakathullahAppa College (Autonomous), Rahmath Nagar, Tirunelveli.	Webinar	National	Participated	2021
How to strengthen our Innovation through Intellectual Property rights, Scott Christian College (Autonomous) Nagercoil.	Webinar	National	Participated	2021
Benthic Productivity in Ocean Hotspot,Nesamony Memorial Christian College, Marthandam	Webinar	National	Participated	2021
Covid 19 Pandemic –Prevention and Vaccination, Scott Christian College (Autonomous) Nagercoil.	Webinar	National	Participated	2021
Pedagogy and Research Methods, Scott Christian College	Webinar	National	Participated	2021



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Role of Surfactant in Covid 19, Scott Christian College (Autonomous) Nagercoil	Webinar	National	Participated	2021
Innovation Research in Chemical sciences: Polymers in Electronics, Scott Christian College (Autonomous) Nagercoil	Conference	International	Presented	2021
Sustainable development and Intellectual Property rights, Scott Christian College (Autonomous) Nagercoil.	Webinar	National	Participated	2021
Reconnecting Mentor-Mentee in Pandemic, Scott Christian College (Autonomous) Nagercoil.	Workshop	National	Participated	2021
Phytochemicals in Health promotion and disease prevention, Scott Christian College (Autonomous) Nagercoil.	Webinar	State	Participated	2021
Investigation of trace metal concentrations in airborne particulate matter in Kanyakumari district under seasonal basis, Sri.SRamasamy Naidu Memorial College SatturVirudunagar.	Conference	International	Presented	2021
Some curious life around the ocean and forest: Why conserving them is important? , Scott Christian College (Autonomous) Nagercoil	Webinar	National	Participated	2021
Reprocess chemistry in Indian Nuclear power, Scott Christian College (Autonomous) Nagercoil	Endowment lecture	State	Participated	2023
Faculty orientation programme , Scott Christian College (Autonomous) Nagercoil			Participated	2022
National Webinar on Smart material and applications, Gonzaga College of Arts and Science for Women,	Webinar	National	Participated	2023



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Kathampallam, Elathagiri				
AKAN-ANU awareness programme, Scott Christian College (Autonomous) Nagercoil	Webinar	State	Participated	2022
National Conference on Biomaterials, Scott Christian College (Autonomous) Nagercoil	Conference	National	Participated	2023
Preparation of simple chemical products, Scott Christian College (Autonomous) Nagercoil	Webinar	State	Participated	2023
Separation, Purification and identification of organic compounds, SrimadAndavan Arts and Science College, Tiruchirapalli.	Conference	National	Participated	2021
Applied chemistry: A Catalyst for scientific transformation, SGT university, Gurugram, Delhi.	Webinar	National	Participated	2021
Mr. M. George Endowment lecture, Scott Christian College (Autonomous) Nagercoil	Webinar	State	Participated	2021

#### Served as Doctoral Committee Member:

1. Mercija, Research Scholar, NMCC, Marthandam
2. JaasmineJerlite K.J, Research Scholar, NMCC, Marthandam
3. Purnami G.S, Research Scholar, NMCC, Marthandam
4. Sushmi Nelson, Research Scholar, SCC, Nagercoil
5. Mary Julie Jenisha, Research Scholar, SCC, Nagercoil
6. Lydia, Research Scholar, SCC, Nagercoil
7. SreeVidhya K.L, Research Scholar, SCC, Nagercoil
8. Jeni. A, Research Scholar, SCC, Nagercoil





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#### **Served as Resource Person:**

1. Valedictory function of P G Chemistry Association Guest of honour in Holy Cross College (Autonomous) Nagercoil. Topic : "Chemistry for better health " 10-04-2023.
2. Board of study member towards review of revamped Draft model syllabus for UG and PG degree programme TANSICHE, Chennai, 2023.
  3. Resource person for workshop on Microscale organic analysis organized by department of Chemistry, Women's Christian College, Nagercoil on 4th July 2023.
  4. Post Graduate Chemistry Board of study member in Manonmaniam Sundaranar University, Thirunelveli, From 2019 to till
  5. Subject expert of an Inspection commission for sanctioning the additional seats – Science Programmes, 2022.
  6. Skill Development programme for School Students  
Date : 28-04-2021  
Venue : Home Church Hr.Sec. School, Nagercoil
7. Organizes Women's Day Celebration in Scott Christian College, Nagercoil  
Date : 09-03-2022
8. Organizes Online International conference on Innovation Research in Chemical Sciences : Polymers in Electronics.  
Date : 10-12-2021
- 9 Organizes Online Vlog Competition on event of Gandhi Jayanthi,  
Topic : Let us not forget Gandhian Principles in Today's Digital World  
Date : 02-10-2021
10. Seminar on pollution and water conservation Bethlahem Institute Of Engineering , Karungal, 2020
11. Syllabus Evaluation for +1, +2 classes, Teacher Training Institute, Theroor, 2019
12. Microscale Analysis in chemistry, Tamil Nadu Higher Secondary school teachers in Nagercoil 2018



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13. Young Student Scientist Programme conducted by TNSCST for School students at Scott Christian College(Autonomous), Nagercoil. 2018

14. Post Graduate Association Nesamoney Memorial Christian College, Marthandam.2017

15. Association Meeting, Anna College, Aralvamozi, 2017

#### **Additional Responsibilities:**

1. Dean of Research from September 2023 onwards

2. Convener of Mentor-Mentee Cell

3. Coordinator of Human Value Education

4. Coordinator of Departmental IQAC

5. NSS Programme Officer

6. College Store Committee Member

#### **Question Paper setter**