

Dr. L. CATHRINE, M.Sc., M.Phil., Ph.D.,
Assistant Professor (SG)
Senate member of Bharathidasan University
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Professional Summary:

- ❖ I am working as an Assistant Professor for the past 19 years. I am a dynamic and enthusiastic **Professor cum Researcher** in the field of Chemistry and always encourage the **young research scholars to pursue their awards** by providing intellectual assistance. More than studies I will advice my students to follow the human values which will be a blessing in their life. I will encourage the students to do regular exercise and meditation to keep their mind and body healthy. My area of research is Phytochemistry and Biosensors. Presently 2 scholars have been awarded Ph.D under my guidance, 3 Ph.D scholars are doing also have guided more than 50 UG, 25 PG and 5 M.Phil Students. Completed two minor research projects under UGC and also have received awards.

- ❖ **Qualification:** M.Sc., M.Phil.,Ph.D

Experience

- Presently working as an **Assistant Professor** in Department of Chemistry, Holy Cross College, Tiruchirappalli from 2004 to till date.

- Presently **the Senate member of Bharathidasan University**

- Ph.D Chemistry, Bharathidasan University, Tiruchirappalli (2012)

- M.Phil Chemistry , Bharathidasan University, Tiruchirappalli (2006)
- M.Sc.Chemistry, St. Joseph's College (Autonomous), Tiruchirappalli-2(2004)
- B.Sc. Chemistry, Holy Cross College (Autonomous), Tiruchirappalli-2 (2002)

Subjects of Expertise:

1. Inorganic Chemistry
2. Organic Chemistry
3. Chemistry of biomolecules
4. Environmental chemistry
5. Soft skills
6. Medicinal chemistry
7. Food chemistry
8. Gender studies
9. Value education

Core Competencies:

- Delivered a **Special Talk** on “**Renewable energy resources**” at **One Day Workshop organized by** Oxford Engineering college, Tiruchirappalli.
- Delivered a **Special Talk** on “**Food chemistry**” at All India Radio, Tiruchirappalli.
- Delivered a lecture on (**Innovations in Phytochemistry**) at **JJ College of arts and science, Pudukottai.**
- Delivered a lecture on **Error analysis** at **JJ College of arts and science, Pudukottai.**
- Delivered a Special lecture on “The Dawn of Women’s Success in New Era of Chemistry” Jamal Mohammed College, Tiruchirappalli.
- Delivered a lecture on “ Intricacies and its solution in the design and development of Natural product for health care, St.Joesph’s college, Tiruchirappalli.
- Delivered a lecture on “ Recent Trends in Phytochemistry” Arasu college of arts and Science for women, Karur.

Leadership Profile:

- Examination core committee in charge for college 2012- 2015
- Staff club vice president for college 2014
- Department **coordinator** for the year 2011- 2012
- M.Phil Coordinator, Department of Chemistry, Holy Cross College (autonomous), Trichy
- Core committee member for NAAC Parameter. 2014 to till date.
- Coordinator of the NAAC Parameter
- **Dean of Science from 2020 to2022**
- **Senate member of Bharathidasan University from 2022.**

Key Acheivements:

- Conference **Convener** for the “National Conference on Evolutionary Trends in Biological and Pharmaceutical Chemistry
- Treasurer for the National conference on **Youth and values** organised by the department of value Education.
- Finance coordinator for the International conference organised in the college 2018(ICNRI)
- M.Phil External Examiner for many colleges.
- **Resource person** in the Training Programme for “**Science Graduate Teachers on Samacheer Kalvi**”, held at Holy Cross College on 27th August 2011.
- Resource Person in the National Workshop on “ Green Techniques in Chemistry Laboratory Experiments (GTCLT- 2013)”, (9th, January, 2013)
- Resource Person in the training Programmer for Post Graduate Teachers on Microscale Experiments with Green Techniques”, 23rd August 2013.
- Conference **Organising Secretary** for the International conference on Material Science for Sustainable Environment ICMSSE 2022.

ORIENTATION & REFRESHER COURSES

- Completed One Month orientation course from Bharathidasan University

- Attended 21 days Refresher course from Pondicherry University, Pondicherry
- Attended 14 days Refresher course from Madurai Kamaraj University, Madurai
- Attended 14 days Refresher course from Bharathidasan University, Tiruchirappalli.

Publication:

- **Published nearly papers in International journals and also has authored books.**
 1. Dr. L.Cathrine and K.Sahira Banu., General Techniques Involved in Phytochemical Analysis, International Journal of Advanced Research in Chemical Science , Volume 2, Issue 4, April 2015, PP 25-32.
 2. Dr. L. Cathrine, K. Kayalvizhi and K. Sahira Banu., Phytochemical and antibacterial studies on the leaf extracts of female *Carica papaya*.linn, International Journal of Pharmtech Research, Vol.8, No.7, January 2015,pp 166-170.
 3. Dr. L.Cathrine, K.Sahira Banu and Dr.John Britto., In vitro anticancer activity of Carica papaya (fruitless type) extract against human mcf-7 cell line, International Journal of Advance Research in Science and Engineering , Volume 6, Issue 10, October 2017, PP 578-584.
 4. Dr. L.Cathrine and K.Sahira Banu., Phytochemicals screening, Antibacterial and Antioxidant activity of Carica papaya Leaf Extract (Fruitless Type), The Journal of Phytochemistry, Photon 117 (2016) 371- 377.
 5. Dr. L.Cathrine,J. Ramesh, S.Gurupriya, P. Pratheema and K. Sahira Banu ., Biosynthesis of silver nanoparticles using *Simarouba glauca* seed extract and their anti-microbial activity, International Journal of Recent Scientific Research Vol. 9, Issue, 3(C), March, 2018. pp. 24828-24831.
 6. Dr. L.Cathrine and K. Sahira Banu., Antioxidant Activity of Carica Papaya Leaf Extract (Rajasthan Variety)., International Journal for Research in Applied Science & Engineering Technology, Volume 6 Issue 3, March 2018, PP 2259-2263.
 7. Dr. L.Cathrine, S.Gurupriya and J. Ramesh .,Qualitative and Quantitative Phytochemical Analysis of *Simarouba glauca* Leaf Extract., International Journal for Research in Applied Science & Engineering Technology, Volume 5 Issue 9 November 2017 PP 475-479.
 8. Dr.L.Cathrine, S.Gurupriya, P. Pratheema and J. Ramesh.,Isolation, Characterization, Leaves characterization of lupeol from methanolic extract of leaves of *Andrographis*

echioides ., International Journal of Current Advanced Research, Volume 7; Issue 4(B); April 2018; PP 11397-11402.

9. Dr.L.Cathrine, S.Gurupriya and J. Ramesh., In vitro antidiabetic and antioxidant activities of lupeol isolated from the methanolic extract of *Andrographis echioides* leaves, Journal of Pharmacognosy and Phytochemistry 2018; 7(4): 768-775.
10. Dr.L.Cathrine, S.Gurupriya, P. Pratheema and J. Ramesh .,Preliminary phytochemical screening and GC- MS analysis of ethanolic stem extract of *Andrographis paniculata*., International Journal of Recent Scientific Research ,Vol. 9, Issue, 3(J), March, 2018, pp. 25300-25303.
11. Dr.L.Cathrine, S.Gurupriya and P. Pratheema., HPTLC method for the determination of lupeol from *Andrographis echioides* leaves, International Journal of Pharmacy and Pharmaceutical Sciences, Vol 10, Issue 5, April 2018,pp.102-107.
12. P. Pratheema , L.Cathrine, S.Gurupriya , J. Ramesh, Anti-Inflammatory And Anti-Bacterial Activity of Titanium Nanoparticles Synthesized From Rhizomes of *Alpinia calcarata*. *Int. J. Res.App.Sci.& Eng.Tech.*(IJRASET),6(3),2018, 2472-2477
13. Dr.L.Cathrine, J.Ramesh and S.Gurupriya` GC-MS analysis and Anti-Oxidant Activity of Simarouba *Glauca* Leaf Extract , International Journal of Advance Research in Science and Engineering , Volume 6, Issue 10, October 2017, PP.445452.
14. Dr.L.Cathrine, S.Gurupriya, P. Pratheema and J. Ramesh ., In vitro study of antimicrobial and antioxidant activity of the 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-4h-chromen-4-one isolated from the methanolic extract of *Andrographis echioides* leaves, World journal of pharmacy and pharmaceutical sciences, Volume 8, Issue 1,December 2018,pp. 984-997.
15. Dr.L.Cathrine, P. Pratheema, S. Gurupriya and K. Sahira Banu., Isolation and characterization of stigmasterol from methanolic extract of rhizomes of *Alpinia calcarata*, World Journal of Pharmacy and Pharmaceutical Sciences, Volume 6, Issue 12, December 2017,pp. 1872-1885.
16. Dr.L.Cathrine and P. Pratheema., Identification, Quantification and Validation of Stigmasterol from *Alpinia calcarata* using High-performance thin layer chromatography method, International Journal of Pharmacy and Pharmaceutical Sciences, Vol 9, Issue 9, July 2017, pp. 126-131.

17. Dr.L.Cathrine and P. Pratheema., In-vitro anti-inflammatory activity of *Alpinia Calarata* using bovine albumin-protein denaturation method and HRBC-membrane stabilization method, *International Journal of Advance Research in Science and Engineering* , Volume 6, Issue 10, October 2017, PP 560-566.
18. Dr. L.Cathrine, J. Ramesh, S.Gurupriya and P. Pratheema., Green synthesis, characterization and antibacterial activity of silver nanoparticles from leaf extract of *Simarouba glauca*, *International Journal for Research in Applied Science & Engineering Technology*, Volume 6, Issue 3, March 2018, PP 933-937.
19. Dr.L.Cathrine, P. Pratheema, S.Gurupriya and J. Ramesh., Anti- Inflammatory And Anti- Bacterial Activity of Titanium Nanoparticles Synthesized From Rhizomes of *Alpinia Calcarata* *International Journal for Research in Applied Science & Engineering Technology*, Volume 6, Issue 3, March 2018, PP 2472-2477.
20. Dr.L.Cathrine. ., Prabhavathi Nagarajan., 2010 A Review of Chemical Profile of Vitex Species, *International Journal of Chemistry and Applications*, (2) 3: pp.161166.
21. Dr.L.Cathrine. ., Prabhavathi Nagarajan., Preliminary Phytochemical Screening and Antibacterial Activity of *Vitex leucoxydon*”, 2011 *International Journal of Current Pharmaceutical Research*, (3), 2, pp.71-73.
22. Dr.L.Cathrine., Prabhavathi Nagarajan., Merlin Rose., Preliminary Phytochemical Screening and Antibacterial Activity of *Vitex Negundo*”, *International Journal of Current Pharmaceutical Research*, (3), 2, pp.91-93.
23. Dr.L.Cathrine., K.Sahira Banu., J.Ramesh., A chemical profile on Indian medicinal plants for the study of anticancer activity, *International Journal of Research and Development in Pharmacy & Life Sciences*
24. Dr. C Muthukumar, Dr. L Cathrine and S Gurupriya, Qualitative and quantitative phytochemical analysis of *Costus igneus* leaf extract, *J. of Pharma. and Phytoche.* 2019; 8(4): 1595-1598
25. S. Gurupriya, L. Cathrine, J. Ramesh and P. Pratheema, *in vitro* study of antimicrobial and antioxidant activity of the 2-(3,4-Dihydroxyphenyl)-3,5,7- Trihydroxy-4h-Chromen-4-One isolated from the methanolic extract of *Andrographis Echioides* Leaves, *World Journal of Pharmacy and Pharmaceutical Sciences*, Volume 8, Issue 1,(2019), 984-997.

26. Gurupriya S, Cathrine L and Pratheema P: In-vitro antidiabetic activity of 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy-4H-chromen-4-one isolated from the methanolic extract of *Andrographis echinoides* leaves. *Int J Pharm Sci & Res* 2019; 10(8): 3856-64. doi: 10.13040/IJPSR.0975-8232.10(8).3856-64.
27. S. Gurupriya and Dr.L. Cathrine, In Vitro Anti-Microbial activity of (1R,3aR,5aR,5bR,7aR,9S,11aR,11bR,13aR,13bR)-3a,5a,5b,8,8,11a-hexamethyl-1-prop-1-en-2-yl 1,2,3,4,5,6,7,7A,9,10,11,11B,12,13,13A,13B hexadecahydrocyclopenta[a]chrysen-9-ol isolated from methanolic leaf extract of *Andrographis Echinoides*, *Int. J. of Bio Pharm and Allied sci*, July, 2020, 9(7): 1460-1471
28. P. Pratheema and L. Cathrine, Hesperidin, A Constituent isolated from methanol extract of *Alpinia calcarata* rhizomes and its Anti-Arthritic activity evaluation, *JNR Online Journal* ISSN: 2320-3358 (e) ISSN: 0972-5547(p) Vol. 21, No. 8, (2020) 202
29. Pratheema P, Cathrine L and Gurupriya S: Isolation and characterization of some phytochemical compounds from the methanolic extract of *Solanum torvum* Swartz fruits. *Int J Pharm Sci & Res* 2020; 11(12): 6213-21. doi: 10.13040/IJPSR.0975-8232.11(12).6213-21
30. **Philomindoss. Pratheema, Dr. L. Cathrine and S. Gurupriya, In Silico Evaluation of Natural analogues against SARS – CoV - 2 inhibitors, *Proteus Journal*,11(9), 2020, 86-103**
31. **Philomindoss. Pratheema, L. Cathrine and S. Gurupriya, In Silico anti-inflammatory activity of Natural phytoconstituents and its molecular mechanism, *J.Inf. and Comp. Sci*, 10(9),2020, 71-80**
32. S. Gurupriya and Dr.L. Cathrine, Qualitative and Quantitative Phytochemical analysis of *Andrographis echinoides* Leaves. *Int J Life Sci Pharma Res.*, Volume11., No 1 (January) 2021, pp 148-155
33. S. Gurupriya and Dr. L. Cathrine, Molecular Docking Studies of isolated compounds Andrographolide and Betulin from methanolic leaves extract of *Andrographis Echinoides* as Alpha-Amylase and Alpha-Glucosidase Activator, *Int J App Pharm*, Vol 13, Issue 3, 2021, 121-129

34. Loorthusamy Cathrine, Georgepeter Gnana kumar* Murugan Pappathi, Ponniah Vajeeston, Antony Samy Sahaya Raja*, Asokan Vignesh, Asad Syed, Ali H. Bahkali, Jenivia Antoflorin Sekar, Arulraj Roveena, Siew-Moi Phang, Trimetallic ZIF-Derived Ni–Cu/NC Rhombic Dodecahedron Nanostructures on Butter Sheet Paper as a Flexible Electrochemical Probe for Nonenzymatic Glucose Sensors, *ACS Applied Nano Materials*, Vol 6, ISSUE 16, 2023, 14628–14644. (Impact factor :6)
35. F. Virginia, L. Cathrine, Sebin Fernandez Isolation, purification, and characterization of betulin, a pentacyclic triterpenoid from the ethanolic extracts of *Coleus forskohlii* tuberous roots; its antimicrobial, antioxidant, anti-inflammatory and cytotoxicity appraisals *Mor. J. Chem.*, 2024, Volume 12, Issue 4, Page 1531-1553
36. F. Virginia, L. Cathrine, Sebin Fernandez, P. Pratheema , J. Morris Princey , A. Jerlin Philo , V. Mareeshwari And S. Harithasakthi Isolation and Characterization of Diosgenin, A Phytosterol Sapogenin from the Ethanolic Root Extract of *Coleus forskohlii*, and It's Anti-ovarian Cancer Efficacy on the SKOV-3 Cell Line *Oriental Journal Of Chemistry* ISSN: 0970-020 X CODEN: OJCHEG 2024, Vol. 40, No.(3): Pg. 846-855

Book Publications:

- Authored a book titled “**Phytochemical studies on *Vitex leucoxylon* Verbenaceae** “ L.Cathrine & N.Prabavathi (**ISBN:** 978-3-659-42148-8)
- Editorial Board Member of Lab Manual for Green Chemistry Practical. (ISBN: 978-93-80622-40-8) (Holy cross college)
- Chief Editor of ethics book for value education.(Holy cross college)

Research and Projects:

Research Interest:

- **Phytochemistry**
- **Nano and Sensors**

Research Guiding Experiences

M.Sc Projects

B. Sc SBE Projects

At Present Guiding 3 Ph.D Scholars.

- Full Time – 2
- Part time - 1

Completed - 2

Minor Project:

- **Principal Investigator** for **Minor Research Project** under the titled “**Phytochemical and pharmacological study on different cultivars of Carica Papaya**” funded by University Grants Commission, Hyderabad for an amount of **Rs.3,80,000/-**
- **Co-Investigator** for **Minor Research Project** under the titled “**Phytochemical studies on *Vitex leucoxylon* as Biopesticide in traditional pest management**” funded by University Grants Commission, Hyderabad for an amount of **Rs.1,00,000/-**

Membership in various bodies:

- Doctoral Committee Member , Holy Cross College, Trichy ○
Doctoral Committee Member , ST. Joseph’s College, Trichy ○
Doctoral Committee Member, Jamal Mohammed College, Trichy. ○
Doctoral Committee Member, A.V.V.M Sri Pushpam College,
Tanjore.
- Life member of AACT.
- Life member of Bose Scientific Society ○ Member of editorial Board,
Review committee.
- Life member of Global illuminators research journal and conferences
and Panel Expert ,Malaysia.
- Executive member for the Alumni Association of St. Joseph’s college,
Tiruchirappalli. From 2018 -2020

- Professional Member of INSC International Publishers(IIP), Reviewer and life member.
- Fellow of Academy of Science, Chennai.

Awards:

- **Best Paper Award** for the paper presentation in a National level symposium held at Srinivasan College of arts and science, Perambalur on Feb 2012 paper entitled “Phytochemical and antibacterial studies on *Vitex Altissima*”.
 - **Best women Award** for service in the field of Education and society by Rotary club of Trichy on 8th March 2018.
 - **Best Special Recognition award** in the field of chemistry 2018-2019 by Holy Cross College, Trichy.
 - **Young Scientist award from** Bose Scientific Society 2019-2020
 - **Best Special Recognition award** in the field of chemistry 2019-2020 by Holy Cross College, Trichy.
 - **Young Achiever Award 2022 INSC Institute of Scholars for the Paper titled “Molecular Docking Studies of Isolated Compounds Andrographolide and Betulin from methanolic leaves extract of Andrographis Echioides as Alphaamylase and Alpha- Glucosidase Activators”**
 - **Bharat Ratna Mother Teresa Gold medal Award** from Global Economic Progress & Research Association in 2023
 - Received **Best paper award** in International conference on “Interdisciplinary approaches in Mathematics and physical sciences” (IAMPS-2023)at Shrimathi Indira Gandhi College, Tiruchirappalli
 - Received **Best paper award** in International conference on “Emerging trends in chemistry (ICETC-2023)” Srimad andavan arts and science college, Tiruchirappalli .
 - Received **Best paper award** in International conference “Recent advances in Physical Sciences (ICRAPS-2024)” Holy Cross College (Autonomous), Tiruchirappalli
- Received A P J Abdul Kalam Award 2024 in recognition for outstanding and exemplary professional and research achievements in the field of Chemistry by ARAI Association of Researchers and Academicians India.

Personal Details

Date of birth : 19/10/1981
Marital status : Married
Spouse Name : Dr.S.Britto Ramesh Kumar
Religion : Christian (Roman Catholic)

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