

BIODATA

I. Personal Details

Name : Dr.S.Lizy Roselet
Designation : Assistant Professor
Department : Chemistry
Contact Information : 373,Convent Road,
Maravankudieruppu
Nagercoil-629002
Phone:9486011648
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II. Educational Qualifications

| Degree | Institution | Year of Passing | Specialization |
|----------|---|-----------------|-----------------------------|
| B. Sc. | Pioneer Kumaraswamy College, Nagercoil. | 1998 | Chemistry |
| M. Sc. | Mar Ivanios College, Thiruvananthapuram. | 2000 | Chemistry |
| B. Ed. | NVKSD College of Education | 2002 | Physical Sciences |
| M. Phil. | S.T. Hindu College, Nagercoil. (Study Centre) | 2007 | Chemistry |
| Ph. D | Scott Christian College (Autonomous)Nagercoil. | 2018 | Supramolecular Chemistry |

Certificates (Attached)

III. Teaching Experience

| Institution | Designation | Duration | Subjects Taught |
|---|---------------------|-------------------------------|-----------------------|
| Sun Institute of Technology, Erachakulam | Lecturer | 11 years 9 months | Engineering Chemistry |
| Holy Cross College (Autonomous) Nagercoil | Assistant Professor | 6 years 5 months till date | Chemistry |

IV. Research and Publications

Research

- M.Phil: Title of M.Phil thesis
Nanotechnology in Drug Delivery Systems
Supervisor: Name with designation and address
Dr.T.F.Abbs Fen Reji
Lecturer in Chemistry
N.M.Christian College
Marthandam 629165
- Ph.D: Title of the Ph.D thesis
Synthesis and Characterization of Selected Drugs and Fluorophores with Hydroxypropyl- α -Cyclodextrin and α -Cyclodextrin Inclusion Complexes
Supervisor: Name with designation and address
Dr. J. Prema Kumari
Associate Professor
Holy Cross College (Autonomous)
Nagercoil.

Patent Filed

1. “A biodegradable neem twig bristles for toothbrush” by B. T. Delma, **S. Lizy Roselet**, M. Shirly Treasa, M.Antilin Princela, R. Gladis Latha, L. Deva Vijila, Sr. S. Sebastianmal; Pat. No: 202341042670, 2023.

Articles Published in Journals

1. Spectroscopic Studies on Plant Extract Mediated ZnO Nanoparticles as a Potential Cytotoxic Agent, *Journal of Applied Spectroscopy*, Vol. 91, No. 4, September 2024, Scopus Indexed.
2. α -Cyclodextrin Complexation - A Viable Route to Taste Masking of Bitterness of Chlorpheniramine Maleate, *Crossian Resonance*, Dec. 2023, Vol. 14, No. 2, pp. 114-122, ISSN 0976-5417.
3. Biocompatibility of Ionic Liquid Tagged Terpyridine Complexes with Potent Biological Activity, *Chemical Physics Impact*, Vol. 7, 2023, Article 100371, SCI Indexed.
4. Comparative Evaluation of Antimicrobial Efficacy of AgNPs Synthesized from Leaf Extracts of *Laurus nobilis* and *Persea americana*, *Journal of Xidian University*, Scopus Indexed, 2022.

5. A Study on Photophysical Properties of 4-Dimethyl Amino Benzaldehyde Inclusion Complex with α -Cyclodextrin, *Crossian Resonance*, Dec. 2022, Vol. 13, No. 2, pp. 84-91, ISSN 0976-5417.
6. Structural Characterisation of Inclusion Complex of Stigmasterol with α -Cyclodextrin Using Spectroscopy and Molecular Modelling, *Biomedical and Biotechnology Research Journal*, Web of Science Indexed, 2022.
7. Augmentation of Oral Availability of Stigmasterol on Inclusion with α -Cyclodextrin, *Crossian Resonance*, June 2021, Vol. 12, No. 1, pp. 81-86, ISSN 0976-5417.
8. ¹H NMR - A Validation Tool for Supramolecular Complexes of α -Cyclodextrin with Antidiabetic Drugs, *Materials Today Proceedings*, 2021, Scopus Indexed.
9. Hydroxypropyl α -Cyclodextrin Complexation - A Versatile Technique for Enhancement of Solubility and Bioavailability of Glimepiride, *Crossian Resonance*, Dec. 2020, Vol. 11, No. 1&2, pp. 131-139, ISSN 0976-5417.
10. An Investigation on Host-Guest Complexation of Metformin Hydrochloride with Hydroxypropyl- α -Cyclodextrin for Enhanced Oral Bioavailability, *Materials Today Proceedings*, 2019, Scopus Indexed.
11. Spectral Characteristics and Molecular Docking Studies on the α -Cyclodextrin Inclusion Complexes of 2-Methyl-4-Nitrophenol and 4-Methyl-2-Nitrophenol, *International Research Journal of Engineering and Technology*, 2017.
12. Synthesis and Characterization of Hydroxypropyl α -Cyclodextrin Inclusion Complexes with Azo Dyes, *Journal of Chemistry and Chemical Sciences*, 2017, Vol. 7(11), pp. 910-919, ISSN 2319-7625.
13. Inclusion Studies on α -Cyclodextrin Complexes of Glipizide and Gliclazide with Effect of pH, *Asian Journal of Pharmaceutical and Clinical Research*, 2017, Vol. 10, No. 1, pp. 2280, Print ISSN 0974-2441; Online ISSN 2455-3891, Scopus Indexed.
14. Augmentation of Antimicrobial Behaviour of α -Cyclodextrin Capped Silver Nanoparticles, *International Journal of Modern Science and Technology*, 2016, Vol. 1, No. 5, pp. 183-192.
15. Inclusion Studies on Oral Antidiabetic Drugs with α -Cyclodextrin and Hydroxypropyl α -Cyclodextrin, *International Journal of Applied Research*, 2015, Vol. 1, No. 12, pp. 977-983, Print ISSN 2394-7500; Online ISSN 2394-5869.
16. Studies on Metformin Hydrochloride and α -Cyclodextrin Inclusion Complexes, *Green Chemistry & Technology Letters*, 2015, Vol. 1, No. 1, pp. 48-53.

17. Spectral Characteristics and Solvent Effects of 4-(Phenylazo) Benzoic Acid and 2-(4-Hydroxyphenylazo) Benzoic Acid on α -Cyclodextrin, *Indian Journal of Applied Research*, 2015, Vol. 5, No. 5, ISSN 2249-555X.

Citations and h-index and i10-index

| | | |
|-----------------------|---|-------------------------------|
| Scopus | : | Citations - and h-index - |
| Web of Science | : | Citations - and h-index - |
| Google Scholar | : | Citations – 23 h-index – 3 |

Articles/Abstracts Published in Proceedings.

Papers Presented in International Seminars/Conferences

1. An Investigation on the Green Synthesis of Zinc Oxide Nanoparticles Using Leaf Extracts of *Pimenta Diocia* and its Antimicrobial Potential in the 4th International Conference on Nanoscience and Nanotechnology for Energy, Environment and Biomedical Applications organized by Vinayaka Mission's Kirupananda Variyar Arts and Science College, India in association with ,Core-Facility Center for Photochemistry & Nanomaterials, Research Institute of Natural Science (RINS), Gyeongsang National University& South Korea and Faculty of Engineering, Chulalongkorn University Thailand held on 8th& 9thNovember 2024.
2. "Spectral Investigation on The Including Ability Of α -Cyclodextrin And Hydroxypropyl α -Cyclodextrin On Glimepiride For Enhanced Bioavailability" in the Indo-Korea-Thailand 3rd International Conference on Nanoscience and Nanotechnology for Energy, Environment and Biomedical Applications organized by Vinayaka Mission's Kirupananda Variyar Arts and Science College, India in association with ,Core-Facility Center for Photochemistry & Nanomaterials, Research Institute of Natural Science (RINS), Gyeongsang National University& South Korea and Faculty of Engineering, Chulalongkorn University Thailand on 1st and 2nd October 2023.
3. Masking of bitterness of Erythromycin Maleate by α -cyclodextrin complexation in the Second International Conference on Frontiers in Chemistry and Material Science held at Mannar Thirumalai Naicker College, Pasumalai, Madurai on 19th&20thDecember 2022.

4. International Conference on Emerging Trends in Mathematical, Physical and Chemical Sciences, organized by Faculty of Science and Humanities held at Noorul Islam Centre for Higher Education, Kumarakovil on 22nd February 2019.
5. Inclusion Complexation-A viable route to separation of contaminants from water in International Conference on Innovative Strategies in Astro and Synthetic Organic Chemistry organised by PG & Research Department of Chemistry, held at Holy Cross College (Autonomous), Nagercoil, on 27th February 2023.

Papers Presented in National Seminars/Conferences

1. Facile Green Synthesis of Copper Oxide Nanoparticles Using *Carissa carandas* Leaf Extract -Characterization and Evaluation of its Antimicrobial Screening Efficacy in Two-Days National Conference on Frontiers in Chemical Sciences, held on 23rd&24th January 2024 at Andhra Loyola College, Vijayawada, Andhra Pradesh.
2. A Comparative Study on the Solubility Enhancing Efficacy of α -Cyclodextrin on Anti-Diabetic Drug in two days National Level Seminar held on 11th and 12th February 2023 organised by Sandip Institute of Pharmaceutical Sciences, Nashik, Maharashtra.
3. Evaluation of pH modulation of Hydroxypropyl α -cyclodextrin complexation with Gliclazide.in Two Days National Conference on Recent Trends in Materials Science held on 13th&14th February 2023 at Andhra Loyola College (Autonomous)Vijayawada, Andhra Pradesh.
4. Inclusion Complexes of 4-(Phenylazo) Benzoic Acid and 2-(4-Hydroxy Phenylazo) Benzoic Acid with Hydroxypropyl α -cyclodextrin, Scott Research Forum, Scott Christian College (Autonomous) Nagercoil.2017.
5. Studies on Metformin hydrochloride and α -cyclodextrin inclusion complexes GIAP JOURNALS Department of Chemistry and Research Centre, Scott Christian College (Autonomous) Nagercoil.2015.

(Attach evidences for Patents, Articles, Book/Book chapters, Citation, Proceedings and Papers Presented)

V. FDP/Orientation and Refresher Courses

1. FDP on Intellectual Property Rights organised by the Institution's Innovation Council, Sacred Heart College (Autonomous), Tirupattur, Tirupattur District, Tamilnadu, in collaboration with

Association of Global Academicians and Researchers (AGAR), Visakhapatnam, Andhra Pradesh, conducted from 04-05-2024 to 10-05-2024.

2. FDP on Design Thinking and Innovation organised by the Institution's Innovation Council, Sacred Heart College (Autonomous), Tirupattur, Tirupattur District, Tamilnadu, in collaboration with Association of Global Academicians and Researchers (AGAR), Visakhapatnam, Andhra Pradesh, conducted from 29-04-2024 to 03-05-2024.

3. FDP on AI-Driven Breakthroughs in Drug Development: Innovations in Diagnostics, Biomarker Discovery and Sustainability" Organized by Scinicorn Labs Private Limited, Marthandam, Kanyakumari from 30-Sep-2024 to 04-Oct-2024

4. FDP on Online NEP-2020 Orientation and Sensitization Programme organised by UGC-Malaviya Mission Teacher Training Centre, Maulana Azad National Urdu University from 1-02-2024 to 12-02-2024 (National Level).

5. FDP on Revolutionizing Higher Education with AI: Quality Assurance and Pedagogical Innovations organised by IQAC of Holy Cross College, Nagercoil from 24-11-2023 to 29-11-2023

6. FDP on Empowering Educators: Nurturing Innovation and Entrepreneurship in Academia organised by IQAC& IIC of Sree Ayyappa College for Women, Nagercoil from 15-11-2023 to 21-11-2023.

7. FDP on Structural Analysis of Nanomaterial organised by Swayam NPTEL from 24-07-2023 to 18-08-2023.

8. FDP on Empowering Educators for the AI Age organised by School of Business Administration, Don Bosco College, Yelagiri from 12-07-2023 to 15-07-2023.

9. PDP on Curriculum Revamping organised by Dean of Academic Affairs, Holy Cross College (Autonomous), Nagercoil from 07-02-2023 to 11-02-2023.

10. Short Term Course on E-Content Development organised by IQAC of Holy Cross College, Nagercoil from 01-07-2021 to 08.07.2021.

11. Training programme -Innovation Ambassador Training – Advanced Level organised by MoE's Innovation Cell and AICTE (30 contact hours) 2021-2022.

12. National Faculty Development Programme on Innovation and IPR organised by IIC and IQAC, Holy Cross College (Autonomous), Nagercoil from 21-06-2021 to 27-06-2021.

13. Training programme -Innovation Ambassador Training -Foundation Level organised by MoE's Innovation Cell and AICTE from 30-06-2021 to 30-07-2021.

14. Ten Days Online Workshop for Teachers organised by Universal Teachers Academy, Puduchery India from 21-04-2020 to 30-04-2020.

15. Five Days Workshop for Teachers organised by Universal Teachers Academy, Puduchery India from 14-05-2020 to 18-05-2020.

16. Short Term Course on Instructional Design and Delivery System Organised by National Institute of Technical Teachers Training & Research, Chennai, Government of India, Ministry of Human Resources Development.

17. FDP on Emotional Intelligence conducted by ICT Academy from 17-12-2019 to 19-12-2019.

VI. Awards and Honors

National/International Awards

1. Best Paper Presentation in International Conference on Emerging Trends in Mathematical, Physical and Chemical Sciences, organized by Faculty of Science and Humanities, Noorul Islam Centre for Higher Education, Kumarakovil on 22nd February 2019.

1. Best Article Award in the 1st National Conference on Innovations in Chemical Sciences & Technology 2015

Consultancy

1. **Subject Expert for Board of Studies in Stella Mary's College of Engineering,**

Journals/Conferences

1. Spectroscopic Studies on Plant Extract Mediated ZnO Nanoparticles as a Potential Cytotoxic Agent, *Journal of Applied Spectroscopy*, Vol. 91, No. 4, September, 2024 Scopus Indexed.
2. α -Cyclodextrin Complexation - A Viable Route to Taste Masking of Bitterness of Chlorpheniramine Maleate, *Crossian Resonance*, Dec. 2023 Vol.14, No.2, pp.114-122, ISSN 0976-5417
3. Biocompatibility of ionic liquid tagged terpyridine complexes with potent biological activity, *Chemical Physics Impact*, *Chemical Physics Impact* 7 (2023) 100371. SCI
4. Comparative Evaluation of Antimicrobial Efficacy of AgNPs synthesized from leaf extracts of *Laurus nobilis* and *Persea americana*, *Journal of Xidian University*, Scopus Indexed, 2022.
5. A Study on Photophysical Properties of 4-Dimethyl Amino Benzaldehyde Inclusion complex with α -CD, *Crossian Resonance*, Dec 2022, Vol.13, No.2, pp.84-91, ISSN 0976-5417

6. Structural characterisation of inclusion complex of stigmasterol with Alpha Cyclodextrin using spectroscopy and molecular modelling, Biomedical and Biotechnology Research Journal, Web of Science Indexed,2022.
7. Augmentation of Oral availability of Stigmasterol on inclusion with α -Cyclodextrin. Crossian Resonance, June 2021, Vol.12, No.1, pp.81-86,ISSN 0976-5417
8. ¹H NMR-A validation tool for supramolecular complexes of α -cyclodextrin with Antidiabetic drugs. Materials Today Proceedings,2021, Scopus Indexed
9. Hydroxypropyl α -cyclodextrin complexation -A versatile technique for enhancement of solubility and bioavailability of Glimepiride. Crossian Resonance, Dec2020, Vol.11, No.1&2, pp.131-139.ISSN 0976-5417
10. An Investigation on host-guest complexation of Metformin hydrochloride with hydroxypropyl- α -cyclodextrin for enhanced oral bioavailability, Materials Today Proceedings,2019. Scopus Indexed
11. Spectral characteristics and molecular docking studies on the α -Cyclodextrin inclusion complexes of 2-methyl-4-nitrophenol and 4-methyl-2-nitrophenol, International Research Journal of Engineering and Technology,2017.
12. Synthesis and Characterization of Hydroxypropyl α -Cyclodextrin Inclusion Complexes with Azo Dyes,Journal of Chemistry and Chemical Sciences, 2017,Vol.7(11), 910-919, ISSN 2319-7625
13. Inclusion Studies on α -cyclodextrin complexes of glipizide and gliclazide with effect of pH, Asian Journal of Pharmaceutical and Clinical Research, (2017) Vol. 10,No.1;pp.2280.PrintISSN 0974-2441;Online ISSN 2455-3891 Scopus Indexed
14. Augmentation of antimicrobial behaviour of α -cyclodextrin capped silver nanoparticles ,International Journal of Modern Science and Technology,(2016), Vol.1, No.5,pp. 183-192'.
15. Inclusion Studies on oral antidiabetic drugs with α -Cyclodextrin and Hydroxypropyl α -Cyclodextrin; International Journal of Applied Research Vol.1. No .12 (2015) pp. 977-983. ISSN Print: 2394-7500 ISSN Online: 2394-5869
16. Studies on Metformin hydrochloride and α -cyclodextrin inclusion complexes, Green Technology and Chemical Letters, Green Chemistry & Technology Letters (2015) Vol 1, No 1, pp. 48-532015.
17. Spectral Characteristics and Solvent Effects of 4-(Phenylazo) Benzoic Acid and 2-(4-Hydroxyphenylazo) Benzoic Acid on α -Cyclodextrin, Indian Journal of Applied Research, (2015) Vol. 5,No. 5, ISSN - 2249-555X,

X. Training and Certification

Innovation Ambassador Advance Level

XI. Research Guidance

Projects Supervised

- **TNSCST Student Project Scheme 2021-2022**

Masking of Bitterness of Erythromycin by α -Cyclodextrin Inclusion

- **Seed Money for Research, 2022-2023**

Crossian Centre for Research and Development,

Holy Cross College (Autonomous) Nagercoil.

Phytochemical Analysis and Antioxidant Activity of Extracts of *Achyranthes Aspera*.L