

## CURRICULUM VITAE

**SOUMYA S.**

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<b>Academic achievements:</b>	<ul style="list-style-type: none"><li>• <b>Doctor of Philosophy (PhD.) in Biochemistry(2018-2024)</b> Department of Biochemistry, University of Kerala,Thiruvananthapuram, Kerala, India.</li><li>• <b>Master of Science (M.Sc.) in Biochemistry (2008 – 2010)</b> School of Biosciences, Mahatma Gandhi University, Kottayam. Kerala, India.</li></ul>
<b>Teaching experiences (Summary):</b>	<ul style="list-style-type: none"><li>• Total experiences : <b>14 years</b></li><li>• Courses Taught : B.Sc., M.Sc.</li></ul>
<b>Teaching experiences (Details):</b>	<ul style="list-style-type: none"><li>• <b>June 2011 – Till date.</b> Assistant Professor, Department of Biochemistry, T.K.M. College of Arts and Science (Affiliated to University of Kerala), Kollam – 5. Kerala. India.</li></ul>
<b>Publications: (Peer-Reviewed Journal Articles)</b>	<ul style="list-style-type: none"><li>• Soumya S. and Mini S. 2023. “Menthol confers neuroprotection through Nrf2/ARE pathway in diabetic encephalopathy”. Bioactive Compounds in Health and Disease 7(6): 108-125. <a href="https://www.doi.org/10.31989/bchd.v6i7.1113">https://www.doi.org/10.31989/bchd.v6i7.1113</a></li></ul>

	<ul style="list-style-type: none"> <li>• Soumya S. and Mini S. 2023. “Menthol attenuates cholinergic dysfunction and neurotransmitter imbalance in experimental diabetes”. Journal of Endocrinology and Reproduction. 27(2), 119-129. <a href="https://www.doi.org/10.18311/jer/2023/32989">https://www.doi.org/10.18311/jer/2023/32989</a></li> <li>• S. Farsana , P.N. Ansil , S. Sumalekshmy , S. Soumya. 2023. “Biogenic synthesis of silver nanoparticles using Sterculiafoetida seed extract and evaluation of its therapeutic potential”. Materials Today: Proceedings. <a href="https://doi.org/10.1016/j.matpr.2023.11.080">https://doi.org/10.1016/j.matpr.2023.11.080</a></li> </ul>
<b>Book Chapters:</b>	<ul style="list-style-type: none"> <li>• <b>Soumya S.</b> and Mini S. “Menthol: A Dietary Monoterpene with Versatile Biological and Pharmacological Potential” in the book “Frontiers in Life Science Volume VIII (ISBN: 978-93-91768-15-7)” published by Bhumi publishing house June 2022, pp.50-64.</li> <li>• <b>Soumya S.</b> and Mini S. “Exploring the Link Between Diabetes and Cognitive Decline: Insights into the Mechanisms of Diabetic Encephalopathy” in the book “Frontiers in Life Science Volume XI (ISBN: 978-93-88901-34-5)” published by Bhumi publishing house in April 2023.</li> <li>• FarsanaSharafudeen, Sandra S, Ansil PN, <b>Soumya S.</b> “Pharmacological Importance of Sterculiafoetida” Traditional Medicinal Plants (Volume - 6), edited by P. Shivakumar Singh, AkiNik Publications, New Delhi., <b>2022</b>, pp. 85-108.</li> <li>• Ansil PN., <b>Soumya S</b>, Shafna S. “Sesbania grandiflora: A Potential Source of Phytopharmaceuticals”. Traditional Medicinal Plants (Volume - 6), edited by P. Shivakumar Singh, AkiNik Publications, New Delhi., <b>2022</b>, pp. 43-64.</li> </ul>

<p><b>Scientific Proceedings:</b></p>	<ul style="list-style-type: none"> <li>• Farsana S, Ansil PN, Sumalekshmy S, <b>Soumya S</b> (2023). Biogenic synthesis of silver nanoparticles using <i>Sterculia foetida</i> seed extract and evaluation of its therapeutic potential. Proceedings of the “International Conference on Science and Technology of Advanced Materials – STAM 23. p 137. Mar Athanasius College (Autonomous), Kothamangalam.</li> <li>• Shafna S, <b>Soumya S</b>, Sumalekshmy S (2022). Green synthesis of silver nanoparticles using <i>Sesbania grandiflora</i> leaves: characterization and in vitro anti-inflammatory and cytotoxic evaluation. Abstract book of the 7th International Conference on Sustainable Utilisation of Tropical Plant Biomass; Multi-Disciplinary Perspective. Dept. of Computational Biology &amp; Bioinformatics, University of Kerala, India &amp; LUND UNIVERSITY, Sweden. p 59.</li> <li>• Soumya S., Mini S. (2022). Anti-inflammatory effect of menthol in streptozotocin-induced diabetic rats. Proceedings of the International Seminar on Plant chemistry, Geneprospecting, and Clinical Biology. Dept. of Chemistry, Mar Ivanios College on 10/11/2022. ISBN No.: 978-81-959794-0-0 ,p 61.</li> <li>• Soumya S., Mini S. (2021). Ameliorative effect of menthol on oxidative stress in streptozotocin-induced diabetic encephalopathic rats. Proceedings of the 33rd Kerala Science Congress. ISBN 978-81-942768-5-2, p 45.</li> <li>• Soumya S., Mini S. (2021). Menthol affords cardioprotection by alleviating oxidative stress and apoptosis in streptozotocin-induced diabetic rats’. Proceedings of the Virtual Conference on Food, Agriculture and Veterinary, p EGE University, Turkey. ISBN: 978-625-7720-43-4, p 207.</li> <li>• Soumya S., Mini S. (2021). Menthol alleviates hyperglycemia by regulating cerebral glucose metabolism through PI3K/AKT pathway in</li> </ul>
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	<p>streptozotocin-induced diabetic rats. Proceedings of the International Webinar on 'Phytochemistry-Impacts and Applications' and 'Prof. Dr. A. Hisham Endowment Award Function-2021'. ISBN No.: 978-81-951912-5-3, p 80.</p> <ul style="list-style-type: none"> <li>7. Soumya S., Mini S. (2024). "Menthol attenuates hyperglycemia-induced oxidative stress and apoptosis in SHSY5Y neuroblastoma cell line" in the two-day National Conference on Recent Trends in Science and Technology (NCRTS 24) organized by the Dept. of Chemistry, St. Thomas College, Palai, Kottayam. ISBN: 978-81-956473-3-0.</li> </ul>
<b>Paper presentations:</b>	<ul style="list-style-type: none"> <li>Presented a paper on bioaugmentation at the two-day National seminar organized by the Department of Botany in association with the Kerala State Council for Science, Technology and Environment held on 6<sup>th</sup> and 7<sup>th</sup> February 2025.</li> <li>Presented a paper titled 'The role of menthol in Ayurvedic diabetes management: Implications for global health challenge' at the International Conference on Global Issues and Sanskrit Knowledge Systems organized by the Dept. of Sanskrit, University of Kerala on 17-19 December 2024.</li> <li>Presented a paper titled "Menthol attenuates hyperglycemia-induced oxidative stress and apoptosis in SHSY5Y neuroblastoma cell line" in the two-day National Conference on Recent Trends in Science and Technology (NCRTS 24) organized by the Dept. of Chemistry, St. Thomas College, Palai, Kottayam on 1/10/2024.</li> <li>Presented a paper entitled 'Menthol regulates autophagy in experimental diabetes' in the INFOFEST- 012: An Interdisciplinary International Symposium on Energy, Environment, Health and Visual</li> </ul>

	<p>Communication organized by SreeAyyappa College, Eramallikkara (24/2/2023- 10/2/2023).</p> <ul style="list-style-type: none"> <li>Presented a paper entitled ‘Protective effect of menthol on brain mitochondrial function in streptozotocin-induced diabetic rats’ at the International Conference on Climate Change and Health Challenges (ICCHC-2023) organized by the Department of Zoology, University College, Thiruvananthapuram on 8-10 February 2023</li> <li>Presented a paper entitled ‘Anti-inflammatory effect of menthol in streptozotocin-induced diabetic rats’ in the international seminar on Plant chemistry, Gene prospecting, and Clinical Biology- 2022 held at Dept. of Chemistry, Mar Ivanios College on 10/11/2022.</li> <li>Presented a Paperentitled ‘Antiapoptotic effect of menthol in experimental diabetic encephalopathy’ in the INFOFEST 2021 “11th Annual interdisciplinary symposium of SreeAyyappa College, Eramallikkara on 31/12/2021 Virtual international conference on energy, environment and health (15-12-21 to 31-12-21)</li> <li>Presented a Paper entitled ‘Menthol alleviates hyperglycemia by regulating cerebral glucose metabolism through PI3K/AKT pathway in streptozotocin-induced diabetic rats’ in the International Webinar on ‘Phytochemistry-Impacts and Applications’ and ‘Prof. Dr. A. Hisham Endowment Award Function-2021’, held on September 27<sup>th</sup> and 28<sup>th</sup>, 2021.</li> <li>Presented a paper entitled ‘Menthol affords cardioprotection by alleviating oxidative stress and apoptosis in streptozotocin-induced diabetic rats’ at the International Virtual Conference on Food, Agriculture and Veterinary, EGE University, Turkey. June 19-20, 2021</li> <li>Presented a Paperentitled “Menthol Ameliorates Cognitive</li> </ul>
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	<p>Impairment by Alleviating Acetylcholinesterase Activity in Streptozotocin-Induced Diabetic Encephalopathic Rats” in the international seminar on Recent Biochemical Approaches in Therapeutics" (RBAT VII) held at the Department of Biochemistry, University of Kerala, on 11/02/2021- 13/02/ 2021.</p> <ul style="list-style-type: none"> <li>Presented a Poster entitled ‘Ameliorative effect of menthol on oxidative stress in streptozotocin-induced diabetic encephalopathic rats during the Life Science session at the 33rd Kerala Science Congress held 25/01/2021-30/01/2021.</li> </ul>
<b>Dissertations Guided</b>	<p><b>M.Sc.</b></p> <ul style="list-style-type: none"> <li>In vitro Therapeutic Studies of Methanolic extract of <i>Spondiaspinnata</i> fruit (2023)</li> <li>Biogenic synthesis of silver nanoparticles from <i>Sterculiafoetida</i> seed extract and its therapeutic potential (2022)</li> <li>Green synthesis of silver nanoparticles from <i>Sterculiafoetida</i> follicle extract and its pharmacological studies (2022)</li> <li>Green synthesis of Silver Nanoparticles using <i>Cucurbita moschata</i> seed extract and their antioxidant, antibacterial, anticoagulant, anti-inflammatory studies (2021)</li> </ul> <p><b>B.Sc.</b></p> <ul style="list-style-type: none"> <li>Phytochemical screening and determination of antioxidant activities of aqueous extract of <i>Alstoniascholaris</i> (2025)</li> <li>Phytochemical screening and antioxidant activities of aqueous extract of <i>Menthaspicata</i> (2022)</li> <li>Comparative study of biochemical parameters in fruits (2021)</li> <li>Green synthesis of silver nanoparticles and preliminary phytochemical analysis of <i>Sterculiafoetida L.</i> seed extract (2020)</li> </ul>

	<ul style="list-style-type: none"> <li>• Cotton dyeing with natural dyes extracted from selected flowers, fruits and vegetables (2019)</li> <li>• Effect of <i>Carica Papaya</i> leaf and Seed extract on the activity of serum enzymes (2017)</li> <li>• Preliminary phytochemical analysis of the leaf and flower extracts of <i>Sesbania Grandiflora</i> (2016)</li> <li>• Comparison of COD in various water samples (2013)</li> <li>• Determination of alcohol content in beverages (2013)</li> </ul>
<b>Research interests:</b>	<ul style="list-style-type: none"> <li>▪ Phytochemistry</li> <li>▪ Microbiology</li> <li>▪ Nanotechnology</li> <li>▪ Molecular Biology</li> </ul>
<b>Fellowship/ Award Received:</b>	<ul style="list-style-type: none"> <li>• <b>Best paper award</b> in the INFOFEST 2021 “11th Annual interdisciplinary symposium of SreeAyyappa College, Eramallikkara on 31/12/2021 Virtual international conference on energy, environment and health (15-12-21 to 31-12-21) for the presentation of the paper entitled ‘Antiapoptotic effect of menthol in experimental diabetic encephalopathy’</li> <li>• <b>Best paper award</b> at the International Conference on Climate Change and Health Challenges (ICCHC-2023) organized by the Department of Zoology, University College, Thiruvananthapuram on 8-10 February 2023 for the presentation of the paper entitled ‘Protective effect of menthol on brain mitochondrial function in streptozotocin-induced diabetic rats’</li> </ul>
<b>Courses Attended</b>	<ul style="list-style-type: none"> <li>• Attended NEP 2020 Orientation &amp; Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC), Organized by UGC-MMTTC, University of Kerala, Kariavattom, Thiruvananthapuram, from 03/02/2025 to 13/02/2025.</li> </ul>

	<ul style="list-style-type: none"> <li>• Attended UGC sponsored short term course in Academic writing, Research and Publication ethics conducted by UGC-MMTTC, University of Kerala, Kariavattom from 8/1/2025-14/1/2025.</li> <li>• One Week National Level Online Faculty Development Program on Outcome Based Education and Application of Generative AI in Teaching and Research, organized by St. Mary's College (Autonomous), Thrissur, Kerala, in association with the Collegiate Education Department, Government of Kerala, from 17 October 2024 to 24 October 2024.</li> <li>• Attended 5day online FDP on AI in Research and Academics organized by IQAC, St.George's College, Aruvithura, Kottayam from 25<sup>th</sup> November to 29<sup>th</sup> November 2024.</li> <li>• Attended FDP on 'Re-energizing higher education' organized by the Teaching Learning Centre, T.K.M. College of Arts and Science, Kollam, in collaboration with KHEC, from 4/7/2023-12/7/2023.</li> <li>• Soumya S has participated in the 7-Day National Level Online Faculty Development Program on ChatGPT&amp; AI Tools for Educators, in line with OBE organised by St Joseph's College (Autonomous), Irinjalakuda, in association with The Kerala State Higher Education Council from 19 July to 26 July 2023</li> <li>• Attended FDP on Outcome Based Education organized by IQAC of TKM College of Arts and Science, Kollam in collaboration with KSHEC from 03/08/2021 to 09/08/2021.</li> <li>• FDP 'Hands-on Training on Learning Management System (Moodle) organized by the Kerala State Higher Education Council, Thiruvananthapuram from 22-09-2021 - 27-09-2021.</li> <li>• Attended UGC sponsored short term course in Student counselling and Mentoring conducted by UGC HRDC, University of Kerala from 16/11/2021-22/11/2021.</li> <li>• Attended UGC sponsored live online refresher course in Life Sciences</li> </ul>
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	<p>from 12/8/2020-25/8/2020 conducted by UGC HRDC, University of Kerala.</p> <ul style="list-style-type: none"> <li>• Five days online National level FDP on ‘Moodle- Learning Management System’ from 19-5-2020-23-5-2020, organized by Dept. of Computer Applications, MES college of Marampally in association with Spoken Tutorial IIT, Bombay.</li> <li>• Attended ten day course titled “A Short Term Course in E-Teaching with Learning Management Systems” conducted by The All Kerala Private College Teachers from 30.5.2020- 10.6. 2020.</li> <li>• Short term course on ‘Moodle based Learning Management System’ organized by IQAC and LMS monitoring committee of SreeNeelakanta Govt. Sanskrit college, Patambi from 7-21 June 2020</li> <li>• the ‘Two Day Faculty Development Programme on Examination Reforms: Towards Online Assessment’ organized by PG Department of Commerce in association with IQAC, TKMCAS, Kollam on 6th and 7th July 2020.</li> <li>• Attended one-week FDP on ‘Online Education in Higher Education Institutions’ conducted by KSHEC from 13 July to 17 July 2020.</li> <li>• One Week Faculty Development Programme on ‘Statistical Analysis Using SPSS’ from 5-11 August 2020 organized by M.S. University, Tirunelveli.</li> <li>• Attended online short-term FDP in ‘Digital Learning- New Normal Mode’ – organized by DB college, Thalayolaparambu from September 4-10, 2020.</li> <li>• Attended UGC Sponsored Live Online Short-Term Course in MOOC, E- Content Development and Open Educational Resources” conducted by UGC HRDC, University of Kerala from 23/9/2020 – 29/9/2020.</li> <li>• RUSA Sponsored ‘Refresher Course in Life Sciences’ from 8/11/17 – 28/11/17 organized by UGC HRDC, University of Kerala, Kariavattom.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Attended UGS sponsored ‘Orientation programme (IT -Oriented)’ from 22/04/2015-19/05/2015 organized by UGC HRDC,University of Kerala,Kariavattom.</li> </ul>
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