

PROFILE

Name of Faculty: Dr. S. Poornima



Date of Joining	:	16.05.2011
Department		Biotechnology
Designation	:	Assistant Professor
Residential Address	:	D/o S. Shanmugam 146, Nehruji Nagar Vedasandur- 624 710 Dindigul District.
Contact Nos.& Email	:	+91 99946 25815 & spoornima@ksrct.ac.in

Educational Profile:

Degree	Institution / University	Discipline/Specialization
Ph.D.	Anna University, Chennai	Chemical Engineering
M.Tech.	Kongu Engineering College, Erode.	Chemical Engineering
B.Tech.	Erode Sengunthar Engineering College, Erode.	Chemical Engineering

Work Experience

Designation	Place with address	Period of working
Assistant Professor	Department of Biotechnology K.S. Rangasamy College of Technology, Tiruchengode – 637 215, Namakkal District, TN.	May 2011 to till date

Memberships in Professionals Societies

S. No	Name of the Professional/Learned bodies/Societies
1.	Indian Society for Technical Education, New Delhi, India (Life member)
2.	IEEE Engineering in Medicine and Biology Society, USA. (Professional member)
3.	Indian Lichenological Society, Lucknow, India. (Life member)

Awards

- ❖ Received 'Best faculty award' from Nature Science Foundation, Coimbatore (2020).

- ❖ ‘Best New Branch Chapter Award’ for IEEE-EMBS Student Branch Chapter (SBC 60891A) from EMBS Headquarters, New Jersey, USA (2017).
- ❖ Best Branch Chapter Award - Regional winner-Asia Pacific for IEEE-EMBS Student Branch Chapter (SBC 60891A) from EMBS, New Jersey, USA during EMBC-2023, Sydney, Australia.

Sponsored projects

- ❖ Received Project entitled ‘**Process optimization for the production of Biodiesel from food waste as cost effective source**’ from Tamil Nadu State Council for Science and Technology (TNSCST), Chennai, Tamil Nadu (2021-22).

Patent filed

- ❖ **Title:** Standardization of culturing techniques for the isolation of mycobiont from *Parmotrema reticulatum*. **Ref. No.:** E-2/2176/2019-CHE

NPTEL Certification

- ❖ Course topper in Waste to Energy Conversion, IIT Roorkee, 2023.
- ❖ Elite Category in Bioreactor Design and analysis, IIT Madras, 2022.
- ❖ Elite Category in Biology for Engineers and other non-biologists, IIT Madras, 2018.

Funds received to organize Conference / Seminar / Workshop

Name of sponsoring agency	Title of programme	Total amount	Academic Year
IEEE – EMBS, New Jersey, USA	IoT applications in agricultural biotechnology: Prospects and challenges	Rs.53,200/-	2022-23
AICTE, New Delhi	Scheme for Promoting Interest, Creativity and Ethics among Students	Rs.1,00,000/-	2020-21
SERB, New Delhi	National Workshop on “Recent Trends and Future Perspectives of Animal Cell culture Techniques” Sponsored by SERB, New Delhi. (Co-coordinator)	Rs.1,00,000/-	2017-18
IEEE – EMBS, New Jersey, USA	Conference cum Scientific Meet on Industry Institute Interaction (Co-coordinator)	Rs.66,000/-	2016-17
IEEE – EMBS, New Jersey, USA	IEEE-EMBS Members Meet-2015 Programme (Co-coordinator)	Rs.66,200/-	2015-16
DBT, New Delhi	Popular Lecture Series Programme in Biotechnology	Rs.1,26,840/-	2014-15

List of papers published in National and International Journals

1. **Shanmugam Poornima**, Sivasubramanian Manikandan, Vivekanandhan Karthik, Ramalingam Balachandar, Ramasamy Subbaiya, Muthupandian Saravanan, Nguyen Thuy Lan Chi, Arivalagan Pugazhendhi. 'Emerging nanotechnology based advanced techniques for wastewater treatment,'. *Chemosphere*, 2022, 135050, ISSN 0045-6535, <https://doi.org/10.1016/j.chemosphere.2022.135050>. (IF: 8.8)
2. Govindan Rajivgandhi, Balasubramanian Mythili Gnanamangai, Thirumoorthy Heela Prabha, **Shanmugam Poornima**, Muthuchamy Maruthupandy, Naiyf S Alharbi, Shine Kadaikunnan, Wen-Jun Li. (2022). "Biosynthesized zinc oxide nanoparticles (ZnO NPs) using actinomycetes enhance the anti-bacterial efficacy against *K. Pneumoniae*". *Journal of King Saud University-Science*, 34 (1) 101731. (IF: 3.8)
3. **Poornima S**, Rajivgandhi G, Maruthupandy M, Mothana RA, Noman OM, Nasr FA, Ponnurugan P, Moorthy IG, Sivarajasekar N. (2022). "Statistical modeling and optimization for the production of secondary metabolites by lichen mycobiont isolated from *Parmotrema austrosinense*". *Physiological and Molecular Plant Pathology*, 117, 101760. (IF: 2.7)
4. Vivekanandhan Karthik, **Shanmugam Poornima**, Arumugam Vigneshwaran, Daniel Paul Raj Dharun Daniel Raj, Ramasamy Subbaiya, Sivasubramanian Manikandan, Muthupandian Saravanan. (2021). "Nanoarchitectonics is an Emerging Drug/Gene Delivery and Targeting Strategy -A critical review". *Journal of Molecular Structure*. 2021; 1243. doi.org/10.1016/j.molstruc.2021.130844. (IF:3.8)
5. Karthik Vivekanandhan, **Poornima Shanmugam**, Hamed Barabadi, Vigneshwaran Arumugam, Dharun Daniel Raj, Manikandan Sivasubramanian, Subbaiya Ramasamy, Anand Krishnan, Boomi Pandi, Balakumar Chandrasekaran, Selvaraj Arokiyaraj and Muthupandian Saravanan." Emerging Therapeutic Approaches to Combat COVID-19: Present status and future perspectives". *Frontiers in Molecular Biosciences*. (2021). doi: 10.3389/fmolb.2021.604447 (IF:5.0)
6. Rajendran K, **Poornima S**, Ponnusamy P. 'Antimicrobial and Antiproliferative Activities of Depside Compound Isolated from the Mycobiont Culture of *Parmotrema austrosinense* (Zahlbr.) Hale'. *J Pure Appl. Microbiol.* 2020;14(4): 2525-2541.doi: 10.22207/JPAM.14.4.29. (IF:0.8)
7. **Poornima Shanmugam**, Divya Palanisamy, Natchimuthu Karmegam, Ramasamy Subbaiya, "Aqueous two-phase partitioning and characterization of xylanase produced by *Streptomyces geysiriensis* from low cost lignocellulosic substrates". *Journal of Bioscience and Bioengineering*. 130 (6) 571-576 (2020). (IF:2.8)
8. Navreen Dasthageer, **Poornima Shanmugam**, Mythili Gnanamangai, Nagarjun Nagarajan, Vigneshwaran Arumugam, Karthik Vivekanandhan, Divya Palanisamy, Ponnusamy Ponnurugan, Analysing drying characteristics of *Solanum trilobatum* leaves and nutritive assessment of cookies, *Materials Today Proceeding* (2020).

9. Rajamanickam Mohanrajaj, Balasubramian Mythili Gnanamangai, **Shanmugam Poornima**, Vankathir Oviyaa, Kanthasamy Ramesh, GiriRajan Vijayalakshmi, Muthusamy Nithya, Natesan Karthik, Ponnusamy Ponmurugan, Jayachandran Philip Robinson, Decolourisation efficiency of immobilized silica nanoparticles synthesized by actinomycetes. *Materials Today Poceedings* (2020).
10. Rajamanickam Mohanraj, Balasubramanian Mythili Gnanamangai, Kanthasamy Ramesh, Paneerselvam Priya, Ravichandran Srisunmathi, **Shanmugam Poornima**, Ponnusamy Ponmurugan, Jayachandran Philip. Optimized production of gamma poly glutamic acid (γ -PGA) using sago. *Biocatalysis and Agricultural Biotechnology*. Vol. 22, 101413, pp.1-9. 2019. 10.1016/j.bcab.2019.101413. (2019). **(IF:4.0)**
11. **Poornima Shanmugam**, Nagarjun Nagarajan, Ponnusamy Ponmurugan, Gnanamangai, Mythili, Narasimman Selvaraj. Toxicity and anti-inflammatory study of *Parmotrema austrosinense* extract against oxozalone induced intestinal inflammation in zebra fish (*Danio rerio*) model. *Biocatalysis and Agricultural Biotechnology*. Vol. 21, 101278, pp.1-4. 2019. 10.1016/j.bcab.2019.101278. **(IF:4.0)**
12. Sureshraj Soundararajan, **Poornima Shanmugam**, Nagarjun Nagarajan, Divya Palanisamy, and Ponmurugan Ponnusamy. *In vitro* study on screening antimicrobial and anti-oxidant potential of *Ramalina fastigiata*. *Journal of Drug Delivery and Therapeutics*. Vol.9, No.1, pp. 216-219, 2019.
13. P. Divya, M. Priyadharshini, S. Tamilarasu, **S. Poornima**, B. Mythili Gnanamangai, K.S. Ghanapathy Ram, M. Sanjeev Kumar, R.C. Gowtham. Quality Assessment and Shelf Life Evaluation of *Momordica charantia* Based Candies. *American International Journal of Research in Science, Technology, Engineering & Mathematics* pp. 297-301, 2019.
14. **Poornima Shanmugam**, Ponmurugan Ponnusamy, Mythili Gnanamangai Balasubramanian, Gopal Gayathri, Kumarasamy Dheenadhayalan, Ayyappadasan Ganesan. Screening biologically potent endolichenic fungi isolated from lichens habitat on silver oak tree. *Vegetos-An International Journal of Plant research and Biotechnology* (2018). Vol.: 31(3).pp.89-94.
15. **Poornima Shanmugam**, Ponmurugan Ponnusamy, Mythili Gnanamangai Balasubramanian, Nagarjun Nagarajan, Ayyappadasan Ganesan. Evaluation of antimicrobial, antioxidant and anticancer activities of few macrolichens collected from Eastern Ghats of Tamil Nadu, India. *International Research Journal of Pharmacy* (2017). Vol.: 8(3). pp. 39-43.
16. **Shanmugam Poornima**, Ponnusamy Ponmurugan, Syed Zameer Ahmed, Ganesan Ayyappadasan, Fahad Khalid Aldhafiri, Santhanaraj Balakrishnan. Evaluation of anti-cancer properties of Lichens using *Albino wistar* rats as an animal model. *Cancer Research Journal* (2016). pp. 84-89.
17. Pavitha, P. and **Poornima, S.** Repellent Potential of *Tagetes erecta L.* and *Callistemon brachyandrus Lindl.* Against Mosquito Larvae for Formulation of Herbal Repellent Compounds. *International Journal of Innovative Research in Science, Engineering and Technology* (2014). pp. 12030-12037.

Books published

P. Ponmurugan, J. Philip Robinson, **S. Poornima**. 2020. 'Research Methodology (Volume - 1)'. ISBN: 978-93-90541-08-9.

Book Chapters published

1. V Karthik, A Vigneshwaran, D Dharun Daniel Raj, TGN Nagarjun, **S Poornima**, R Subbaiya, M Saravanan. (2022). Nanomaterials for Gene therapy. John Wiley & Sons, Ltd. 153-167. <https://doi.org/10.1002/9781119558026.ch6>.

Source Title: Nanomaterials and Nanotechnology in Medicine (ISBN:9781119558033)

2. Karthik Vivekanandhan, **Poornima Shanmugam**, Balasubramanian Mythili Gnanamangai and Subbaiya Ramasamy. (2021). 'Role of Micro and Nano Motors in Therapeutics and Diagnostics'. DOI: 10.4018/978-1-7998-5049-6.ch011.

Source Title: Handbook of Research on Nano-Strategies for Combatting Antimicrobial Resistance and Cancer.

3. Muthupandian Saravanan, **S. Poornima**, V. Karthik, A. Vigneshwaran, S. Manikandan Subbaiya Ramasamy, R. Balachandar, P. Prakash, Karthikeyan Mahendhran and Murugappan Ramanathan. (2021). 'Emerging Nano-Based Drug Delivery Approach for Cancer Therapeutics'. DOI: 10.4018/978-1-7998-5049-6.ch013.

Source Title: Handbook of Research on Nano-Strategies for Combatting Antimicrobial Resistance and Cancer.

4. Naresh S., Gnanamangai BM., Mohanraj R., **Poornima S.** and Shalini M. (2019). 'Electro-culture for increased agriculture productivity-A business idea'. pp. 26-31.

Source Title: Scientific Aids for Sustainable Business

Journal Reviewer

1. Materials letters (Elsevier)
2. Fuel (Elsevier)
3. Sustainable Energy Technologies and assessments (Elsevier)
4. Chemosphere (Elsevier)