

Name : Mrs. K. SWATHI

Department : Biochemistry

Designation : Assistant Professor

Qualification : M.Sc., (Ph.D.,)

Experience : R&D (in Years) 2

Specialization(s) : Diabetes and its complications, Cancer Biology, Phytotherapy

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### Academic Qualifications

Degree	Course Name	College Name	Year of Pass Out
Ph.D.	Biochemistry	Avinashilingam Institute for Home Science and Higher Education for Women	December 2022 (Thesis submitted)
PG	Biochemistry	PSG College of arts and science, Coimbatore (Bharathiar University)	May 2018
UG	Biochemistry	PSG College of arts and science, Coimbatore. (Bharathiar University)	May 2016

### Additional Qualifications

Diploma / Vocational / Certification	Area of Specialization	Institution / University / Agency Name	Year
Diploma in Computer Application	Computer science	CSC Centre	2013
B.A., Hindi	Hindi	Dakshin Bharath Hindi Prachar Sabha	2016

## Research Publications

Swathi, K. and Ragavan, B., ***In vitro* antidiabetic potential of hydroethanolic fruit extract of *pedalium murex* (L)**, International Journal of Pharma and Bio Sciences, Vol.9 No. 3, pp. 56-60, July 2018, ISSN 0975-6299

Sumathi, S., Swathi, K., Suganya, K., Sudha, B., Poornima, A., Hamsa, D. and Banupriya, S. K. **A broad perspective on COVID-19: a global pandemic and a focus on preventive medicine**, Traditional Medicine Research, Vol. 6 No.12, pp. 1-18, January 2021, ISSN 2413-3973 (Indexed in ESCI)

Sumathi, S., Suganya, K., Swathi, K., Sudha, B. and Sneha, S., **Current understanding of gut microbiota in tackling COVID-19**, Annals of Phytomedicine, Vol.10 No.1, pp. S163-S175, June 2021, ISSN 2278-9839 (Indexed in ESCI)

Sumathi, S., Suganya, K., Swathi, K., Sudha, B., Gracesuganthi, J., Divya, P. and Gayathri, K., **Synergistic activity of *Curcuma longa* L. and *Piper nigrum* L. against pharyngitis causing microorganisms**, Annals of phytomedicine, Vol.1 No. 3, pp. 8-11, September 2021, ISSN 2278-9839 (Indexed in ESCI)

Swathi, K., Sudha, B., Suganya, K. and Sumathi, S. **Microbial degradation of pharmaceuticals**, MDPI Preprints, June 2022, 10.20944/preprints202206.0014.v1.

Swathi, K. and Sumathi, S. **Comparative study of anti-inflammatory activity of two formulations of Jatyadi thailam *in vitro* on RAW 264.7 macrophages and its dual inhibitor role of 5-LOX and COX**, International Journal of Pharmaceutical Sciences and Drug Research, Vol. 14 No. 4, pp. 440-448, July 2022, ISSN 0975-248X. (Indexed in UGC-CARE)

Swathi, K., Sumathi, S., Somit Kumar and Shubashini, K.S. **Antimicrobial and anti-inflammatory response by two formulations of Jatyadi thailam in healing diabetic foot ulcers**, Indian Journal of Traditional Knowledge, Vol. 21 No. 3, pp. 489-498, July 2022, ISSN 0975-1068. (Indexed in SCI and SCOPUS; IF-1.091)

Sudha, B., Poornima, A., Suganya, K., Swathi, K., Kumar, N.S., Sumathi, S. and Chellapandi, P. **Identification of hub genes and role of CDKN2A as a biomarker in cervical cancer: An *in silico* approach** Human Gene, p.201048, September 2022, ISSN 2773-0441 (Indexed in SCOPUS and ESCI)

Prasad, H. N., Ananda, A. P., Sumathi, S., Swathi, K., Rakesh, K. J., Jayanth, H. S., & Mallu, P. **Piperazine selenium nanoparticle (Pipe@ SeNP's): A futuristic anticancer contender against MDA-MB-231 cancer cell line**, Journal of Molecular Structure, Vol. 1268, November 2022, ISSN 00222860 (Indexed in SCI and SCOPUS; IF-3.841)

Sudha, B., Swathi, K., Suganya, K., Poornima, A., Senthil Kumar, N. and Sumathi, S. **Identification of key candidate genes in the progression of cervical cancer: an *in silico* analysis**, Indian Journal of Gynecologic Oncology, Vol. 20 No. 40, pp.1-8, September 2022, ISSN 23638400, 23638397 (SCOPUS and ESCI)

Hamsa, D., Swathi, K., Balusamy, S. R. and Sumathi, S. **Degalactotigonin induces cytotoxicity and cell cycle arrest in triple negative breast cancer cells (MDA MB 231)**, Journal of Applied Pharmaceutical Science, Vol. 12 No. 11, pp. 157-168, November 2022, ISSN 2231-3354. (Indexed in SCOPUS; IF-1.376)

Sumathi, S., Suganya, K., Swathi, K., Sudha, B., Poornima, A., Chalos Angel, V., and Aswathy, R. **A review on Deep learning-driven drug discovery: Strategies, Tools and Applications**, Current pharmaceutical Design, Vol. 29 No. 13, pp.1013-1025, May 2023, ISSN 1873-4286. (Indexed in SCI and SCOPUS, IF-3.310)

#### Publications in Conference proceeding

- **Analysing the antioxidant activity of wheat grass using *Drosophila melanogaster* (Fruit fly) as a model organism**, Asian Journal of Multidimensional Research, ISSN. 2278-4853 (UGC approved), Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 7<sup>th</sup> - 8<sup>th</sup> December 2018

#### Presentations in Conference

##### International

- **Phytochemical screening of *Achyranthes aspera*, *Mimosa pudica* and *Mangifera indica Linn***", Conference on current trends in herbal science-2015, Department of Pharmacognosy, PSG College of Pharmacy, Coimbatore, 26-Sep-2015
- **Free radical scavenging activity of Jatyadi thailam**, Ayurveda Biology and Medicine, N. Ramavarier Ayurveda Foundation, Madurai, 18-Jan-2019 and 19-Jan-2019
- **In vitro free radical scavenging effect of Jatyadi thailam**, International conference on Expanding Horizons in Health, Disease and Pharmaceutics - E(H)<sup>2</sup>DP 2019, Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, 21-Feb-2019 to 22-Feb-2019
- **Free radical scavenging, anti-inflammatory and antimicrobial potential of Jatyadi thailam, an ayurvedic formulation**, International conference on Role and Management of Oxidative Stress in Human Disease (SFRR-INDIA-2020), Bio-Science Group, Bhabha Atomic Research Centre, Mumbai, 12-Feb-2020 to 15-Feb-2020.
- **In vitro anti-inflammatory and diabetic wound-healing activity of Jatyadi thailam formulations**, International e-conference on Developments in Chemical, Biological and Environmental Sciences (DCBES-2021), GITAM School of Science, Hyderabad and GITAM Institute of Science, Visakhapatnam, 28-Jun-2021 to 30-Jun-2021.

##### National

- **Antioxidant activity of wheat grass using *Drosophila melanogaster* (Fruit fly) as a model organism**, NSI and DST CURIE Sponsored National Conference on Challenges and Sustainable Approaches towards Food and Nutrition Security- A Global Perspective, Department of Food Science and Nutrition, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 7-Dec-2018 to 8-Dec-2018

- **Comparison of Jatyadi thailam formulations for its pharmacological activity *in vitro* using Reverse pharmacology approach**, UGC Sponsored National Conference on Environment and Biosciences, School of Biosciences, Avinashilingam Institute for Home Science and Higher Education for Women, 20-Feb-2020 to 21-Feb-2020 (**Best Oral Presentation**)

## Participations in Conferences/Symposia

### International

- International Conference on Biochemistry of Homeostasis in Health, Department of Biochemistry, PSG College of Arts and Science, Coimbatore, 10-Aug-2017.
- International Symposium on Trends in Tackling Tenacious Diseases, Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 10-Aug-2018

### National

- 11<sup>th</sup> IAAM National conference on Recent developments in Microbiology, Biochemistry and Biotechnology, PSG College of Arts and Science, Coimbatore, 29-Nov-2013 and 30-Nov-2013.
- One day symposium on Cancer therapeutics and challenges, Department of Biochemistry, PSG College of Arts and Science, Coimbatore, 04-Dec-2015.
- DST-CURIE Sponsored National Symposium on Career Prospects in Biosciences, Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 21-Jan-2020

## Participation in Seminars

- National seminar on Industry Institute Interaction in Biosciences at Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 14-Mar-2019
- National seminar on Global Trends in Science and Engineering at Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 20-Sep-2019
- Webinar on Remote access to Library online resources, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 28-Apr-2020
- Webinar on Scifinder- A Cas solution, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 29-Apr-2020
- Virtual webinar on Cancers- A Tale of incidence and Death, Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, 30-Apr-2020
- Virtual webinar on Gut microbiome in health and disease, VGM Gastro centre, 02-May-2020
- Virtual webinar on EBSCO Research databases webinar and IEEE xplore Digital Library Training, Avinashilingam Institute for Home Science and Higher Education for Women, 08-May-2020

- Webinar on Library facilities and Remote access, Avinashilingam Institute for Home Science and Higher Education for Women, 09-May-2020
- Virtual webinar on Web of science and J-Gate and e-Shodh sindhu, Avinashilingam Institute for Home Science and Higher Education for Women, 12-May-2020 and 14-May-2020
- Webinar on Research Workflows, Research Metrics and Excellence organized by Elsevier Science & Technology, DST, MHRD, Govt of India, 14-May-2020
- Participated in one day webinar on Turn the challenges to opportunities: Covid-19 Pandemics and measures to combat in higher education of India organized by NAAC web platform, Bangalore by Hon'ble Minister Human Resource Development, 28-May-2020
- Attended webinar on Access to Information for Professional development and Indian Research Information Network System, Avinashilingam Institute for Home Science and Higher Education for Women, 04-Jun-2020
- Webinar on Salivary metabolomes as a tool for screening cancers at an early stage, Mizoram University, 04-Jun-2020
- National Seminar on Virtual National Seminar on Bioinformatics and Quorum Sensing at Department of Chemistry, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 05-Jun-2020
- Webinar on Understanding the mysteries of Microbial Ecology, Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, 22-Jun-2020.
- International Webinar on Priming Immune system for vital health, Department of Food Service Management and Dietetics, Avinashilingam Institute for Home Science and Higher Education for Women, 25-Jun-2020
- Webinar on Google Scholars and Google books organized by JPM Arts and Science College, Labbakada, 14-Jul-2020
- Participated in a webinar on Biology of Respiratory Infections, Department of Biochemistry, Bharathiar University, 17-Jul-2020 and 18-Jul-2020
- Virtual National Seminar on Applications of Statistics in Data Science at School of Science, GITAM University, Hyderabad, 21-Jul-2020 and 22-Jul-2020.
- SALIS Webinar – Springer Nature Webinar on Discovery Services and related aspects, Springer Nature, 28-Jul-2020
- International Webinar on The World the Mahatma Envisaged, Avinashilingam Institute for Home Science and Higher Education for Women with University of Latvia, Riga, 28-Aug-2020
- Webinar entitled Biotechnology in drug discovery and clinical applications organized by Mizoram University, 07-Sep-2021

### Participation in Workshop

- National workshop on Intellectual Property Rights, Department of Botany, Bharathiar University, Coimbatore, 03-Mar-2016 and 04-Mar-2016.

- Science Academies Lecture workshop on Progress and Challenges in Life Science, Department of Biochemistry, PSG College of Arts and Science, 06-Oct-2016 and 07-Oct-2016
- Entrepreneurship Awareness Camp Sponsored by DST with EDII Ahmedabad as Nodal agency under the aegis of NSTEDB, Govt of India jointly organized by the Entrepreneurship Development Cell and Department of Biochemistry, PSG College of Arts and Science, 25-Jul-2017 to 27-Jul-2017.
- State level workshop on Public Financial Management System (PFMS) and EAT Modules - A Paradigm Shift, School of Commerce & Management, conducted by Avinashilingam Institute for Home Science and Higher Education for Women, 27-Sep-2018 and 28-Sep-2018
- Advanced Techniques in Biosciences Research, Department of Biochemistry, Biotechnology and Bioinformatics, organized by Avinashilingam Institute for Home Science and Higher Education for Women, 10-Dec-2018 to 12-Dec-2018
- Phytochemical Techniques at Department of Chemistry, Avinashilingam Institute for Home Science and Higher Education for Women, 20-Dec-2018
- Social Innovation & Entrepreneurship, Dhanvantri Biomedical Pvt Ltd with Avinashilingam Institute for Home Science and Higher Education for Women, 30-Oct-2019 and 31-Oct-2019
- Hands-on workshop on Computer Aided Drug Design, organized by Coimbatore Institute of Technology, Coimbatore, 17-Dec-2019 and 18-Dec-2019
- Foldscope as a Research Tool, Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, 09-Mar-2020
- Hands-on workshop on Animal Handling and Experimentation, Animal house facility, Avinashilingam Institute for Home Science and Higher Education for Women, 17-Feb-2020 & 18-Feb-2020
- Basic Immunological Techniques organized by Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, 11-Mar-2020
- Virtual lecture workshop on Current trends in chemical biology and drug discovery, Mizoram University, 07-Sep-2021
- International workshop on Cell culture-Basic design, Conduct and Analysis jointly organized by the Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore and North Dakota State University USA, 15-Sep-2021
- Onsite HPTLC workshop, CAMAG HPTLC and Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, 22-Dec-2021

- UGC-STRIDE sponsored six days online training program, on Environmental Sustainability and Research Ethics, School of Biosciences, Avinashilingam Institute for Home Science and Higher Education for Women, 21-Mar-2022 to 26-Mar-2022
- National intellectual property awareness/training program under National Intellectual property awareness mission, Intellectual property office, 28-Mar-2022
- Quality Research and UGC-CARE Journals, Directorate of Research and Development and Internal Quality Assurance Cell, Avinashilingam Institute for Home Science and Higher Education for Women, 18-May-2022
- Academic workshop on Manuscript preparation, School of Biosciences and R&D cell of Avinashilingam Institute for Home Science and Higher Education for Women, 24-Aug-2022 and 25-Aug-2022

### **Participation in Faculty Development Programme**

- Online FDP Programme on Statistics on Data Science, Hindustan Institute of Technology, Coimbatore, 29-May-2020 and 30-May-2020
- National level virtual FDP Programme on Funded research project proposal preparation and submission protocol, organized by Centre for Research and Development, CMS College of Science and Commerce, Coimbatore, 31-Mar-2022

### **Conference / Seminar / Workshop Organized**

- Resource person for 15days summer internship on Recent Techniques in Biological Sciences, "Tissue Culture Techniques", organized by Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, May-2019 and 14-Jul-2022 to 28-Jul- 2022