



# SHRIMATI INDIRA GANDHI COLLEGE

(Affiliated to Bharathidasan University)

Nationally Accredited at 'A' Grade (4<sup>th</sup> Cycle) by NAAC | An ISO 9001 : 2015 Certified Institution  
Tiruchirappalli - 620 002

**Name** : Dr.S.Gomathi  
**Designation** : Assistant Professor  
**Department** : Biochemistry  
**Qualification** : M.Sc., M.phil., Ph.D.,  
**Experience** : Teaching: UG-22, PG-19 Research: PG-19  
**Area of Specialization(s)** : Plant Biochemistry  
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## Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
Ph.D.,	Biochemistry	Bharathidasan University	2025
M.Phil.,	Life science	Manonmaniam Sundaranar University	2004
M.Sc.,	Biochemistry	STET Women's College,Mannargudi	2000
B.Sc.,	Biochemistry	STET Women's College,Mannargudi	1995

## Research Guidance

Programme	No. of Scholars	
	Completed	Pursuing
M.Sc Biochemistry	50	

## Research Publications (Indexed)

### International

1. Thirunethiran Karpagam, B.Varalakshmi, J.Suguna Bai, S.Gomathi. Effect of Different Doses of *Cucurbita Pepo* Linn Extract as an Anti-inflammatory and Analgesic Nutraceutical Agent on Inflamed Rats, International Journal of Pharmaceutical research and development. (IJPRD), 2011; 3(3):22; 184 – 192.
2. B.Varalakshmi, Thirunethiran Karpagam, P.Lakshmi Prabha, S.Jannathul Firdous, S.Gomathi. A comparative study on the effects of herbal and conventional medicine on cardio vascular disease. International Journal of Pharmaceutical research and development (.IJPRD, 2011; 3(6):13; 221 – 225
3. S.Gomathi, A.Shanmuga Priya, V.Bharathi, B.Varalakshmi and T. Karpagam. Antimicrobial activity and phytochemical studies of flowers of *Tribulus terrestris*. IJBS, Joseph's International journal of biological sciences. 2012;1(1): 47 - 50.
4. V.Bharathi, B.Varalakshmi, S.Gomathi, A.Shanmugapriya, T. Karpagam. Antibacterial Activity of *Tridax Procumbens* Linn. International Journal of Pharma Sciences and Research (IJPSR) 2012; Vol 3(4): 364 –3.
5. B. Varalakshmi, T. Karpagam, S.Gomathi, G.Gayathiri, V.Rathina kumar, B.Supraja. Studies on salinity removal capacity of cost effective adsorbent, International Journal of Pharmaceutical research and development. 2014; 5(11):067 – 067.
6. Varalakshmi B, Anand V, Karpagam T, Shanmugapriya A, Gomathi S, Sugunabai J, V.Suganya, S.Geetha, S.Sathia Nachiyar. Phytochemical Analysis of *Cinnamomum zeylanicum* Bark and Molecular Docking of Procyanidin B2 against the Transcription Factor Nf-  $\kappa$ B. Free Radicals and Antioxidants.2017; 7(2):195-199. Indexing UGC no:48850
7. Suganya V, Jannathul Firdous, T Karpagam, Varalakshmi B, Shanmugapriya A, Gomathi S, Sugunabai J. Genotyping of Angiotensin Converting Enzyme (ACE 1) Gene in study subject with hypertension and Chronic Kidney Disease. Research Journal of Pharmacy and Technology.2017;10(8):2607-2610. Indexing UGC no: 10467, Scopus, Indian Citation Index
8. Gomathi S, Jannathul Firdous, Bharathi V, Shanmugapriya A, Sugunabai J , Karpagam T, Geetha S, Sathia Nachiyar S, Anusuya. Phytochemical screening of Silver nanoparticles extract of *Eugenia jambolana* using Fourier Infra-Red spectroscopy. International Journal of Research in Pharmaceutical Sciences (IJRPS).2017;8(3):373-377. Indexing UGC no: 23466, Scopus

9. J. Sugunabai, M. Jeyaraj, T. Karpagam, B.Varalakshmi, S. Senthil Rani, A. Shanmugapriya, G. Kalaiyarasi, R. Renuga, S. Gomathi. Outlining of Phytochemicals and GC-MS Profile of *Centella asiatica*. International Journal of Pharmaceutics and Drug Analysis. 2018; 6 (2): 252 – 256. ISSN: 2348-8948; Indexing UGC : 44824.
10. Karpagam.T, Jannthul Firdous, Revathy, Shanmugapriya, varalakshmi B, Gomathi S, Geetha S, Noorzaid Mohamad. Anticancer activity of *Aloe vera* Ethanolic leaves extract against invitro cancer cells. Research Journal pharmacy and Technology; 12(5):2019. Scopus
11. Geetha S, Jannathul Firdous, Karpagam T, Varalakshmi B, Shanmuga Priya, Sugunabai J, Gomathi S. Studies on hepatoprotective and antiinflammatory activity of *coix lacryma-jobi* (linn). Asian J Pharm Clin Res, Vol 11, Issue 11, 2018, 290-293. Scopus
12. Jannathul Firdous, Karpagam T, Varalakshmi B, Sugunabai J, Gomathi S, Revathy, Noorzaid Mohamad. Phytochemical study in ethanolic leaves extract of Aloe vera using Gas Chromatography. International Journal of Research in Pharmaceutical Sciences.10(2); 2019:1470-1473. Scopus
13. Jannathul Firdous, Karpagam T, Varalakshmi B, Shanmuga priya A, Sugunabai J, Anitha P, Gomathi S, Suganya V, Sumathy C, Nang ThinnThinn Htike, Noorzaid Muhamad. V.Bharathi. A Review On Chaotic Covid-19 Infection: Pathophysiology And Treatment Insight. Journal of Natural Remedies .Vol. 21, No. 4(S2), 2020. Scopus.
14. Karpagam T, Varalakshmi B, Shanmuga Priya, Sugunabai J, Gomathi S, BharathiV, Priyadarshini, Jannathul Firdous. anti-oxidant evaluation and molecular docking studies of phytocompounds from *madhuca longifolia* as potential thymidylate synthase inhibitor. Journal of Natural Remedies. Vol. 21, No. 6(S2),(2020). Scopus, Web of Science, PubMed, UGC-CARE List Group II (Scopus Source List), Index Copernicus Value (ICV) for 2018 = 120.77
15. Gomathi S, Jannathul Firdous, Shanmuga Priya A, Varalakshmi B, Karpagam T, Bharathi V, Anitha P, Mahalakshmi P. Antibacterial action of *Pedilanthus tithymaloides* leaves extract and FTIR Phytochemical Finger printing. Research J. Pharm. and Tech. 14(4): - April 2021. Scopus
16. Varalakshmi B, Karpagam T, Shanmuga Priya A, Suganya V, Anitha P , Gomathi S , Manikandan R , Abarna T. Nano phytoremediation for textile dye degradation using abutilon indicum silver nanoparticles: photo catalytic activities Journal of medical pharmaceutical and allied sciences, Volume 10 - Issue 4, 1939, Nov - Dec 2021, Page - 3960-3964. ISSN NO. 2320–7418. Scopus and UGC care II.

17. Published an article on “Phytochemical Analysis and In vitro Anti-oxidant Activities of Medicinal Plants *Cyperus rotundus*, *Tinospora cordifolia* and their Formulation” in Oriental Journal of Chemistry 2023.
18. Published an article on “Isolation, Characterization of Beta Sitosterol from the Herbal extracts and Evaluation of *In vitro* Antioxidant and Anti-diabetic activities in Journal of Microbiology, Biotechnology and Food Sciences 2023

### National

- S.Gomathi. Jannathul Firdous Phytochemical screening and antibacterial activity of silver nano particle synthesis from *psidium gujava* (l).leaves extract. Indian Journal of Natural sciences. 2016(7)37:11256-11260 ISSN: 0976-0997.

### Book Chapter Publications

- Dr.J.Radhika, Ms.P.Anitha, Ms.S.Gomathi- Title of the chapter “Plants – a reservoir of therapeutics- Chapter in the book “Plants, Animal and Microbes” with ISBN Number 978-93-93622-22-8

### Presentations in Conference

1. Attended an International Conference and presented a model on “**Greeting Food Processing Sector for sustainable safe and food supply**” at IICPT, Thanjavur on 30.10.2010 and 31.10.2010.
2. Participated in National symposium on “**Current perspectives in Animal Biotechnology**” at Bharathidasan University, Trichy on 3.2.2011 and 4.2.2011.
3. Attended UGC sponsored State level seminar on “**Modern Trends in Biological Science towards human health and disease**” at Rajah Serfoji College, Thanjavur 17.02.2012.
4. Attended a UGC Sponsored National Conference on “**Current Approaches and Challenges in Nanomaterial and Nanomedicine**” (NACNAN-13) & presented a paper on “Ethical issues in nano Medicine” at Rajah Serfoji Government College, Thanjavur on 29.08.2013 & 30.08.2013.
5. Participated / presented a poster in Green Biosynthesis of Silver Nanoparticles Using Psidium Guajava Leaf Extract and Its Antibacterial Activity in the National Conference on “**Phytochemicals in Medicinal Plants and Food**” organized by the Department of Biochemistry held on 30 & 3<sup>1st</sup> July 2015 at Bharathidasan University Constituent College for Women, Orathanadu.

6. Attended and presented a paper entitled **“Phytochemical analysis and anti-cervical cancer activity of Mukia madrarpatana”** on 31.7.15 to 1.8.15 in a TNSCST sponsored National conference on **“Phymed-2015”** at Bharathidasan University constituent college, Orathanadu, Thanjavur.
7. Participated and presented posters on Green foods title at a National seminar on **“Whole Grains for Healthy Life – Whole Grains -2015”** organized by IICPT, Thanjavur on 16.10.2015.
8. Participated and presented papers on various titles in an **International conference on “Clinical Research” – ICCR-2016** organized by the Department of Biochemistry, Shrimati Indira Gandhi College, Trichy, on 25.1.2016.
9. Participated and presented poster in the **One day International Conference on “New Vistas in Life Science”** organized by the PG Department of Biochemistry, Holy cross College (Autonomous), Trichy held on 11.10.2018.
10. Participated in **International conference on “Innovative Research Publication in Finance”** organized by the Department of Management Studies and Department of Commerce Shrimati Indira Gandhi College, Trichy held on 05.07.2019.
11. Participated in **International conference on “Noval approaches in Cancer Research and therapy” Science and Technology** organized by the PG and research Department of Biochemistry, Sengamala Thayaar Educational Trust Women’s College - Mannargudi on 26.09.2019.
12. Participated and presented a paper “Evaluation on phytochemical screening, FTIR analysis and *in vitro* antimicrobial activity of ethanolic extract of *Tinospora cordifolia* in the **International Conference on “Emerging Outlook and Recent Trends in Microbiology”** organized by Department of Microbiology, Shrimati Indira Gandhi College, and Trichy on 26.08.2022.
13. Participated and presented a poster **“Phytochemical profiling, FTIR analysis and in vitro alpha amylase inhibitory activity of ethanolic extract of *Tinospora cordifolia*”** in the **International Conference on Research Trends, strategies and technical advancements in biological and Biomedical Sciences for Sustainability(RTSTA’22)** organized by Department of Zoology, Seethalakshmi Ramaswami College, Trichy on 14.12.2022 &15.12.2022.

14. Presented a paper titled **“Isolation and biological activity of  $\beta$  sitosterol from the ethanolic extract of *Cyperus rotundus* and *Tinospora cordifolia*”** and got the 3<sup>rd</sup> prize in oral presentation in the International conference on phytotherapeutics (ICPT-2023) organized by PG and Research Department of Biochemistry in association with IQAC, Sengamala Thayaar Educational Trust Women’s College (Autonomous) on 10.2.2023.
15. Presented a paper and got 3<sup>rd</sup> Prize for the oral presentation in **“DBT-CTEP sponsored International Conference on Structural Biology and Drug Discovery”** conducted by PG & Research Department of Biochemistry in association with IQAC and Bioinformatics and Drug Discovery Society on 16.02.2024 & 17.02.2024.
16. Participated in **International conference on “phytopharmaceuticals - An Emerging Plat from to Sustainable Health Care (ICPEPSH)”** organized by the PG and research Department of Biochemistry, Sengamala Thayaar Educational Trust Women’s College - Mannargudi on 25.09.2024 and 26.09.2024
17. Participated in **International conference on “Interdisciplinary Approaches in Biological Sciences for Innovative Research (ICIBIR 2024)** organized by the PG and research Department of Microbiology and Biotechnology, Shrimati Indira Gandhi College, Trichy on 27.09.2024.

#### **National:**

1. Participated and Presented a paper Outlining of Phytochemicals and GC-MS Profile of *Centella asiatica* on **“National Conference on Phytochemicals in Medicinal Plants and Food (MEDFOOD’18)”** organized by the department of Biochemistry, Bharathidasan University Constituent College for Women, Orathanadu On 1.2.2018.
2. Participated and presented a paper **“Outline Studies on phytochemical screening, *in vitro* antioxidant activity of ethanolic extract of *Tinospora cordifolia* in the National Conference on “post covid-19 complications - A biotechnological Approach(PCBA’22)** organized by PG and Research Department of biotechnology, Jamal Mohamed College, Trichy on 07.09.2022 and 08.09.2022.

#### **Participation in Seminars**

1. Attended and presented a paper on **“Development and applications of Nano Materials”** in the State Level Seminar at Seethalakshmi Ramaswamy College, Trichy on 29.8.2012 & 30.8.2012.
2. Participated in **webinar on “Look beyond what you can with IR imaging”**, organized by on Perkin Elmer 08.05.2020.

3. Participated in webinar on **“Menstrual Hygiene-Mystery Unravelling”** organized by Indra Gansan Institutions, Manikandam Trichy-12 held on.15.5. 2020.
4. Attended on Webinar on **“Career Opportunities in Science Menstrual Hygiene-Mystery Unravelling”** organized by SASTRA University held on 20-05-2020.
5. Attended on Webinar on **“Two days National Level Webinar on Recent Trends in Biological Science”** organized by Sree Narayana Guru College, Coimbatore held on 21.05.2020-22.05.2020.
6. Attended on Webinar on **“Guidelines for writing the Research paper”** organized by Arasu Engineering College Kumbakonam, Thanjavur held on 22.05.2020
7. Attended on Webinar on **“Chemical Science Frontiers: The Virtual International Conference”** organized by Uka Tarsadia University Surat, Gujarat -394350 held on 29.05.2020 &30.05.2020
8. Attended on Webinar on **“Covid 19 – A Threat to Hypertensive and Diabetic Patients”** organized by Justice Basheer Ahmed Sayeed College for Women-Chennai held on 11.6.2020.
9. Attended Webinar on **“Introduction to pre-clinical trials”** organized by Rajah Serfoji Govt. College, Thanjavur held on 15.6.2020.
10. Attended webinar on **“Ftir & Hplc Instrumentation”** organized by Rajah Serfoji Govt. College, Thanjavur on 27.6.2020.
11. Webinar on **“Our job role in food processing company”** organized by post graduate and research department of Biochemistry, Department of Biochemistry, JJ College of arts and science, Pudukkottai on 9.7.2021.
12. Attended **International seminar on “Recent advances in Translational Medicine”** (ISRATM-2021) conducted by School of life sciences, Marudupandiyar College, Thanjavur on 26. 11.2021.
13. Attended webinar on **“Climate change impact and mitigations on National scienceday celebrations”** organized by center for climate change research, department of environmental biotechnology, school of environmental sciences, Bharathidasan university, Tiruchirappalli on 28.2.2022.

### **Participation in Workshop**

1. Attended workshop on **“Challenges in Environmental Restoration”** at Bharathidasan University, Trichy on 5.3.2012 & 6.3.2012.

2. Participated in a National level technical workshop on “**Next generation sequencing**” in collaboration with Thermo fisher scientific (USA) on “Frontiers in life science” at St. Joseph’s college, Trichy on 10.9.2015.
3. Attended a **state level workshop on "Experimental Animals's Model: Care, Maintenance and Handling"** organized by JJ College of arts and Science, pudukkottai held on 26.2.2021.
4. Participated in a workshop titled “Vikaspedia-A platform for Augmentation of Multilingual Digital Resources for Development” organized by Department of English of SIGC, Trichy on 20.2.2025.

### Participation in Orientation Programme / Short Term Courses

- Participated in the **Science Academies Refresher Course** in “**Bioprospection of Bio resources: land to Lab approach**” organized by PG and Research Department of Botany, at St. Joseph’s College, Trichy, on 04.01.2018 and 18.01.2018.

### Participation in Faculty Development Programme

1. Attended **Hands on Training in “ELISA”** conducted by Athma Institute of Mental Health & Social Science Trichy, on 22.08.2010.
2. Attended a Faculty Development Programme on “**Skill Based Training Programme on e-literacy**” organized by ICT Academy of Tamil Nadu and Bharathidasan University, Trichy at our College Campus from 11.8.2011 to 13.8.2011.
3. Participated in **Hands on training programme on gas chromatography & mass spectrometry**”- basic instrument operation and maintenance at Sathyabama Institute of Science and Technology, Chennai on 24.07.2019 & 25.07.2019.
4. Attended FDP on “**Methodology & data interpretation of analytical Instrumentation techniques**” organized by Sathyabama Institute of Science and Technology, Chennai held on 15.6.2020 to 19.6.2020.
5. Attended **National Level Five Days Faculty Development Programme** on Digital transformation and innovation in biological sciences- redefining the role of 2K teachers organized by PG department of Biochemistry, Holy Cross College, Trichy on 26<sup>th</sup> - 30<sup>th</sup> July 2021.
6. Attended **online FDP on research proposal to patenting**-A road map jointly organized by IQAC and PG and research department of Biochemistry, Srimad Andavan arts and science college, Trichy on 25. 8.2021 - 27.8.2021.



7. Participated in the **Six Day National Level Virtual Faculty Enrichment Program** on **ALIGNING WITH THE NEW EDUCATIONAL ERA**", organized by Primax foundation and St. Claret College Bengaluru, Shrimati Indira Gandhi college, Tiruchirappalli, and St. Francis de Sales College Bengaluru on 21 02 2022 to 26 02.2022.
8. Attended **faculty enrichment programme on "Introduction to cloud computing** organized by department of computer science, IT, and computer applications, Shrimati Indira Gandhi College, Trichy on 26.2.2022.
9. Participated in **Faculty enrichment program on "Shape yourself with siddha"** organized by Department of Biochemistry, Shrimati Indira Gandhi College, Trichy on 14.7.22.
10. Participated in **IP Awareness/Training programme** under National Intellectual property Awareness Mission organized by Shrimati Indira Gandhi College, and Trichy on 26.04.2023.
11. Ms.S.Gomathi attended the Naan Mudhalvan - A Massive up skilling programme conducted by Tamil Nadu Government (TSDC) at Bharathidasan University from 17.07.2023 to 22.07.2023.
12. Ms.S.Gomathi participated in the **Five Day International Virtual Faculty Development Programme on "Recent Trends In Biological Sciences" - (RTBS 2023)** organized by the Department of Botany, Seethalakshmi Ramaswami College, Trichy from 16.10.2023 to 20.10.2023.
13. Ms.S.Gomathi has completed the **NEP 2020 orientation & sensitization programme under Malaviya Mission Teacher Training Programme of UGC, organised by UGC-Malaviya Mission Teacher Training Centre, Bharathidasan University, and Trichy** from 05.02.2024 to 14.02.2024.
14. S. Gomathi attended a 6-day Faculty Development Programme on Health care Management-3470 Health care- A Massive Upskilling Programme Phase II conducted by Tamil Nadu Skill Development Corporation at Bharathidasan University. 6.01.25-11.01.25.
15. S.Gomathi attended a 6-day Faculty development programme on Advanced tools and Techniques for Research Methodology organized by the Department of Research and Development in association institution's Innovation Council, Indra Ganesan College of Pharmacy from 3.02.2025 to 8.02.2025.

## **Invited Speaker / Session Chair- Conference / Seminar / Workshop**

### **The following program features me as a Resource Person**

- **Unave Marunthu**” conducted by NSS of Shrimati Indira Gandhi College on 28.03.2014.
- **One Day Workshop on “Mushroom Cultivation”** conducted by Department of Biochemistry on 08.07.2014.
- **“A visit to herbal garden and Preparation of herbal Mehendi”** conducted by the Department of Biochemistry on 11.02.2017.
- **“Workshop on Production of organic fertilizer”** conducted by the Department of Biochemistry on 15.07.2017 at K Block Garden, for the II and III year B.Sc Students.
- **“Production of Vermiwash”** conducted by the Department of Biochemistry on 31.03.2018, 15.07.2018 at Garden near canteen for I & II M.Sc. Biochemistry.
- **Biomedical waste management”** conducted by the Department of Biochemistry on 12.10.2019 at Microbiology Laboratory for I & II M.Sc. Biochemistry.
- Acted as a chair person, for the poster presentation in **“DBT-CTEP sponsored International Conference on Structural Biology and Drug Discovery”** conducted by PG & Research Department of Biochemistry in association with IQAC and Bioinformatics and Drug Discovery Society on 16.02.2024 & 17.02.2024.
- Delivered a talk on **“Prominence of Bioscience ”** for Government Girls Higher Secondary School students, Townhall, Tiruchirappalli on 05.07.2024.