

PROFILE



Dr.R.GOMATHI

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Educational Qualifications

Biochemistry

Ph.D:Avinashilingam University For Women, Coimbatore-43, Tamil Nadu, India.

(2012-2016, Awarded February,2017)

M.Phil:Avinashilingam University ForWomen, Coimbatore-43, Tamil Nadu,India.

(2010-2011)

B.Ed: Sri Saradha College of Education, Salem, TamilNadu(2009-2010)

M.Sc:Shrimati Indira Gandhi College, Trichy

(Affiliated to Bharathidasan University, Trichy, Tamil Nadu, India) (2007-2009)

PGDBI: Shrimati Indira Gandhi College, Trichy.

(Affiliated to Bharathidasan University, Trichy, Tamil Nadu,India)(2008-2009)

B.Sc: SeethalakshmiRamaswamiCollege,Trichy.

(Affiliated to Bharathidasan University, Trichy, Tamil Nadu,India)(2004-2007)

Area of interest

- ClinicalBiochemistry
- Bioinstrumentation Techniques
- HumanPhysiology
- Cell biology
- Endocrinology

Work experience:

- Worked as TA (**Technical Assistant**) under the **DBT funded project entitled “National Certification System for Tissue Culture Raised Plants (NCS-TCP)”** in the Department of Biotechnology, **National Research Centre for Banana, Trichy** for 9 months.
- Worked as an **Assistant Professor** at **Holy Cross College, Trichy** from **September 2017-June 2019**.
- Currently working as an **Assistant Professor** in the Department of Biochemistry, **Holy Cross College, Trichy** from **August 2020 to till date**.

Publications

- ✓ **Gomathi, R**, Priyadharshini, T, Kirithika, TandK.Usha, Phytochemical screening and free radical scavenging activity of *Medicago sativa* leaves, International Journal of Pharmaceutical Research and Bio-Science, 2013, 2(4): 29-38. ISSN No. : 2277-8713, Impact factor: 0.525, Index Copernicus Value: 4.99
- ✓ **Gomathi, R**, Vijipriya, M and K.Usha, Cardioprotective effect of ethanolic extract of *Medicago sativa* stem on isoproterenol induced myocardial infarction in Wistar Albino rats, International Journal of Pharmacy and Pharmaceutical Sciences, 2014, 6(2): 839-842. ISSN No.: 0975-1491, Impact factor:1.5.
- ✓ Kirithika, T, ThoudamBhaigyabati, **Gomathi, R** and Usha, K, Preliminary phytochemical screening and antioxidant property of various extracts of *Albiziasaman* leaves, International Journal of Pharmaceutical Research and Bio-Science, 2013, 2(1): 315-323. ISSN: 2277-8713. Impact factor: 0.525, Index Copernicus Value: 4.99
- ✓ Kirithika, T, **Gomathi, R** and Usha, K, Cardio protective effect of *Nelumbonucifera* flower extract against isoproterenol induced oxidative stress in male swiss albino rats, International Journal of Recent Scientific Research, 2013, 4(7), 1056–1059. ISSN No: 0976-3031, Impact factor 1.136, Index Copernicus International Value 5.72.
- ✓ Kirithika, T, ThoudamBhaigyabati, **Gomathi, R** and Usha, K, Preliminary phytochemical screening and free radical scavenging activity on aerial plant of *Nelumbonucifera* flowers, American Journal of PharmTech Research, 2013, 3(2), 660- 665. ISSN: 2249-3387. Impact Factor: 0.9832, Index Copernicus Value: 6.55.
- ✓ **Gomathi, R**, Banu, S and Usha, K Phytochemical analysis and *in vitro* free radical scavenging activities of *Medicago sativa* seeds, Kongunad Research Journal, 2015, 2(1), 128-132. ISSN No:2349-2694 (In-House Journal)
- ✓ **Gomathi, R**, Banu, S and Usha, K, Phytochemical analysis and free radical scavenging potential of *Medicago sativa* Linn seeds, International Research Journal of Pharmacy, 2016, 7(6), 71-76. ISSN: 2230-8407. Impact Factor: 0.751, Index Copernicus Value:

7.62.

- ✓ Prudence Elizabeth Savielle, A.K.UmeraBegam and **R.Gomathi**, HPTLC fingerprint profile and Evaluation of Invitro-antioxidant and Anti-microbial activity from the rhizome of *Zingiberofficinale*, Academia and Society, 2019-20, 6(1&2), ISSN:2393-9419
- ✓ **R.Gomathi**, K.Nithyasri, J. Roshika, K. Subhpathi and P. Priyadharshini,*In vitro*antidiabetic and antioxidant activities of aqueous and ethanolic extract of *Vitisvinifera* seeds, International Journal of Pharmaceutical Sciences and Research, 2022,13(4), 1765-1770, ISSN No:2320-5148.
- ✓ SugunadeviGovindasamy, Suresh Kathiresan and **Gomathi Rengaraj**, *In vitro* inhibition of growth and induction of apoptosis by Mosinone-A in HEp-2 oral cancer cells, 2023, 13(2) L133-L139, doi 10.22376/ijlpr.
- ✓ **Gomathi R**, Phytochemical Analysis and Free Radical Scavenging Activities of Aqueous and Ethanolic Extracts of *Cissus quadrangularis*, 2024, 13(4): 1994-2006. ISSN: 2277-4998.

Monograph

- ❖ Protective chemicals on salt stressed banana plants: Biochemical studies on abiotic stress protective chemicals on salt stressed banana plants, **July 7, 2011, LAP LAMBERT Academic Publishing, Germany,ISBN:978-3-8454-0856-9.**

Chapters in books

- ✓ **Turning Plant into Medicine- Novel Approaches**– “Phytochemical Screening and Free Radical Activity of Selected Medicinal Plants”, **R.Gomathi**and K.Usha, New India Publishing Agency, New Delhi, India,2013, 193-202**ISBN 978-93-81450-46-8.**
- ✓ **Global Opportunities for Recent Developments in Science and Technology-** “Phytochemical analysis and free radical scavenging activities of *Medicagosativaroot*”, **R.Gomathi**and K.Usha published by Department of Biochemistry, Rev.Jacob Memorial Christian College, Ambiliikkai-12, 2014, B 141- B 144, **ISBN:978-93-82323-26-6.**
- ✓ **Botanicals and phytochemicals: The Challenges and Promise for Health Care and Drug Development-** “Phytochemical analysis and free radical scavenging activities of *Medicago sativa* germinated seeds”, **R.Gomathi**and K.Usha published by Department of Biochemistry, Rev.Jacob Memorial Christian College, Ambiliikkai-12, 2016, C 148- C 151, **ISBN:978-93-82323-60-0.**
- ✓ **ICMR sponsored National Conference on Challenging Issues and Technological approaches in Medicine-** “*In silico*study on the interaction of bioactive compounds from *Medicago sativa* leaves with myocardial targets”, R. Gomathi, Bharathi K and Usha K published by Department of Science and Humanity, Faculty of Engineering, Avinashilingam University, 2016, 105-108, **ISBN81-8446-755-9.**
- ✓ **Recent Advances In Pharmaceutical & Medical Sciences** – “*In vitro*Antidiabetic and Antioxidant Activities of Aqueous and Ethanolic Extract of *Vitisvinifera* Seeds”, Dr.R.Gomathi, K.Nithyasri, J.Roshika, K.Subhpathi and P.Priyadharshini, Published by

Prime Publication, New Delhi, India, 2023, 161-172, **ISBN 978-71-868796-1-3.**

Faculty Development Program:

- ✓ One week online **Faculty Development** Program on “Artificial Intelligence and IoT-Heuristic Transdisciplinary Perspectives” organized by CICRSD, **Holy Cross College**, Trichy, 4th-10th July 2020.
- ✓ National Level **Faculty Development Program** organized by Centre for Human Resource Development in association with Department of Biotechnology (FASH) **Karpagam University**, Coimbatore, 3rd -9th August 2020.
- ✓ **National Level 5- Day Online interactive FDP** on “Web Apps and E-content development for Digital Learning” organized by **Institute of Advanced Studies in Education, Agartala** in association with **Department of Education Technology, Bharathidasan University, Trichy**, 25th – 29th May 2021.
- ✓ **One Week** online **National faculty level program on MOOCS and e-content development** jointly organized by **Holy Cross College**, Tiruchiappalli and **Guru Angad Dev Teaching Learning Centre** under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) of Ministry of Education, SGTB Khalsa College, University of Delhi 29th April – 5th May 2023.
- ✓ **NPTEL-AICTE Faculty Development Programme on Enhancing Soft Skills and Personality** - February-April 2024.

Refresher Course:

- ✓ One month **STC Program on Innovative Teaching and skills for online classroom** organized by **Tamil Nadu Open University** from March to April 2021.

NPTEL Online Course:

- ✓ Introduction to Cell Biology from August–October 2022.
- ✓ Enhancing Soft Skills and Personality February-April 2024.

Resource Person:

- ✓ Acted as a **Judge for Mono act and mimicry** in District level Cultural festival 2022-23 organized by the **Department of School Education, Tamil Nadu Government.**

Organizing Member:

- ✓ International Conference on “**New Vistas in Life sciences**”, 11th **September, 2018**, Holy Cross College Trichy.
- ✓ International Conference on “**Future Prospects in Cancer Nanotechnology**” 21st **February, 2023** organized by the **Department of Biochemistry, Holy Cross College, Trichy**

Membership:

- ✓ Life Time Member in National Academy of Biological Sciences (NABS)

Leadership Development:

- ✓ Institutional Core Committee Member of NAAC Criterion 7
- ✓ Coordinator of Youth Red Cross

Projects undertaken:

- ✓ Seed grant Project from Holy Cross College, Trichy during 2021-2022
Title: Phytochemical analysis and antioxidant activity of *Cissusquadrangularis L.*,

International conferences:

- ✓ International Conference on “**Global competitiveness in Biology, Chemistry and Environment: for a Better Tomorrow**” Proteofest 2011, 3rd Feb, 2011, organized by the Dept of Biochemistry, Rev. Jacob Memorial Christian College, Ambilikkai-12
- ✓ **The 99th Indian Science Congress Association, 3-7th Jan, 2012**, KIIT University, Bhubaneswar, Orissa - “Cardioprotective effect of methanolic extract of *Nelumbonucifera* flowers (MNnF) and *Allium cepa* bulbs (MAcB)”
- ✓ **The 100th Indian Science Congress Association, 3 –7th Jan, 2013**, Kolkata University, Kalkata – “Phytochemical analysis and free radical scavenging activities of *Medicagosativa* leaves”.

- ✓ International Symposium on “**Free Radical Damage and Herbal Antioxidants in Health and Disease**” (Satellite Conference of the Society for Free Radical Research (SFRR SATCON)), **4-5th Feb, 2013**, Avinashilingam University for Women, Coimbatore-43– “Phytochemical analysis and free radical scavenging activity of *Ficus religiosa*”.
- ✓ International Conference & Workshop on “**Advances in Biomolecular Sciences & Analytical NMR**”, **25- 27th August 2014**, SrimadAndavan Arts and Science College, Trichy-5.
- ✓ International Conference on “**Translational Cancer Research**”, **14–16th, Dec, 2015**, Avinashilingam University for Women, Coimbatore-43.
- ✓ International Conference on “**Herbal and Natural Components as the Future of Pharmacology**” and 7th Annual Meet of the National Society of Ethnopharmacology, 2017, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.
- ✓ International Conference on “**New Vistas in Life sciences**”, **11th September,2018**, Holy Cross College Trichy.
- ✓ International Colloquia on “**Bionanomaterials and Bionanotechnology (ICBB’18)**”, 2018, St.Joseph’s College, Trichy.
- ✓ International Virtual Conference –“**TRIES 2021**”, **28th – 30th September 2021** organized by UGC Stride Component 1 & Holy Cross Incubation & Innovative Council (HCIIC) Holy Cross College, Trichy. (Presented a Paper entitled “**A Review on Poly-Herbal Formulation**”)
- ✓ International Conference on “**Recent Advancements in Therapeutics ICRAT-2022**”, 17th August 2022, Shrimati Indira Gandhi College, Trichy.
- ✓ International Conference on “**Articulating Multidisciplinary Research and Grant Proposal**” (ICAMRGP-2022), 19th and 20th October 2022, Srinivasan College of Arts and Science, Perambalur-12.
- ✓ International Conference on “**Future Prospects in Cancer Nanotechnology**”, 21st February, 2023 organized by Department of Biochemistry, Holy Cross College, Trichy.

National conferences

- National conference on **Biorevolution “A Promising Strategy”**, **11th Feb, 2011**, organized by Department of Biosciences, Sri Krishna Arts and Science College, Coimbatore-8- “*In vitro* free radical scavenging activity and the effect of *Medicagosativaleaves* on lipid profile changes in Swiss Albinorats”.
- National conference on “**Phytomedicine**”, **4-5th October, 2012**, organized by Department of Botany, School of Life Sciences, Bharathiyar University, Coimbatore- “Phytochemical screening and free radical scavenging activity of medicinal plants”.

- National seminar on **“The Applications of Chromatography for Bioscience Explorations Related to Defence Research”**, 5-7th December, 2012, organized by School of Biosciences, Dr.G.R. Damodaran College of Science, Coimbatore- “GC-MS analysis of methanolic extract of *Nelumbonucifera* flowers”.
- National conference on **Biorevolution “A Promising Strategy”**, 13th Feb, 2013, organized by Department of Biosciences, Sri Krishna Arts and Science College, Coimbatore-8.
- National level paper presentation competition on **“Biovision2013”**, 24th October, 2013, organized by Department of Zoology, Mercy College, Palakkad, Kerala.
- CSIR sponsored National Conference on **“Global Opportunities for Recent Developments in Science and Technology”**, 8th Feb, 2014, organized by Department of Biochemistry, Rev.Jacob Memorial Christian College, Ambiliikkai-12- “Free radical scavenging potential of *Medicagosativaseeds*”.
- DST-sponsored two days national level conference on **“Advanced Developments of Medicinal Chemistry in Target Drug Design”**, 11 and 12th September, 2014, organized by Department of Chemistry, Kongunadu Arts and Science College, Coimbatore-29.
- 3rd National Conference on **“Botanicals and phytochemicals: The Challenges and Promise for Health Care and Drug Development”**, 4th February, 2016, organized by Department of Biochemistry, Rev.Jacob Memorial Christian College, Ambiliikkai-12.
- ICMR Sponsored National Conference on **“Challenging Issues and Technological Approaches in Medicine- CITAM 2016”** 19 and 20th February, 2016, organised by Department of Science and Humanities, Faculty of Engineering, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.
- One day Conference on **“Challenges and Opportunities in Life Sciences”** organized by the School of Life Sciences, Holy Cross College, Trichy, 15th January, 2023.

Seminars

- ✓ Regional level seminar on **“Emerging trends in Biochemistry and Hospital Management”**, 26th Sep 2008, organized by Indian Medical Association, Trichy Branch, Departments of Biochemistry & Hospital Management of Shrimati Indira Gandhi College, Trichy-2.
- ✓ UGC seminar, 19th Apr, 2010, organized by Sri Saradha College of Education, Salem-16
- ✓ National seminar on **“Computational Biology”**, 16th March, 2011, Avinashilingam Deemed University for women, Coimbatore, sponsored by University grants commission & Society of Biological chemists (India), Coimbatore chapter.
- ✓ National Seminar on **“The Applications of Chromatography for Bioscience Explorations Related To Defence Research”**, 5th -7th Dec, 2012, Dr.G.R.Damodaran College of Science, Avinashi Road, Coimbatore-14. (Indian Academy of sciences, Bangalore), (Indian National Science Academy, New delhi) & (The National Academy Of Sciences, Allahabad).

- ✓ One day seminar on **“Breakthroughs and Boulevards in Biosciences”**, 2016, Avinashilingam Deemed University for Women, Coimbatore-43.

Symposia:

- **International Symposium on “Free Radical Damage and Herbal Antioxidants in Health and Disease”**, 2013, Avinashilingam Deemed University for Women, Coimbatore-43.
- **One day students symposium on “Cutting Edges in Biotechnology”**, 2014, Avinashilingam Deemed University for Women, Coimbatore-43.
- **International Scientist Meet on “Genetics and Health Care”**, 2021, Holy Cross College, Trichy

Workshop

- Two Day Workshop on **“Electrophoretic Techniques”** organized By Department of Biochemistry, 9th -10th Aug, 2005, Seethalakshmi Ramaswami College, Trichy-2.
- DST-CURIE sponsored National workshop on **“Basics in Animal Tissue Culture and Phytochemical analysis”** 22-27th Nov, 2010, Avinashilingam Deemed University for Women, Coimbatore-43.
- National workshop on **“Path Finder-Explore, Experiment, and Elucidate research: A Colloquium-2010”**, 22-23 Dec, 2010, Avinashilingam Deemed University for Women, Coimbatore-43.
- Two Day **“Science Academies”** Lecture Workshop on **“Prospects And Future Challenges in Plant Biotechnology”** 18-19th March, 2011, Dr.G.R.Damodaran College of Science, Avinashi Road, Coimbatore-14. (Indian Academy of sciences, Bangalore), (Indian National Science Academy, New Delhi); (The National Academy of Sciences, Allahabad).
- Two Day workshop on **“Research ethics and Post-Research Perspectives”**, 10th and 11th Aug, 2011, Avinashilingam Deemed University for Women, Coimbatore-43.
- Three days workshop on **“Path Finder-Explore, Experiment, and Elucidate research”**, 7th -9th Feb, 2013, Avinashilingam Deemed University for Women, Coimbatore-43.
- Workshop on **“Handling Data Using SPSS”**, 2014, Avinashilingam University for Women Coimbatore- 43.
- Hands-on Training on **“Chromatography System”**, 2014, Avinashilingam University for Women, Coimbatore- 43.
- UGC sponsored –Student’s Workshop on **“Quality Education for All”** 2014, Avinashilingam University for Women Coimbatore- 43.

- Workshop on “Bioethics in Research” 2014, Avinashilingam University for Women, Coimbatore-43.
- Three-Day workshop on “Molecular Modeling and Computer-Aided Drug Discovery” 2015, Avinashilingam University for Women, Coimbatore-43.

Webinars:

- One week online Faculty Development Program on “Artificial Intelligence and IoT-Heuristic Transdisciplinary Perspectives” organized by CICRSD, Holy Cross College, Trichy, 4th-10th July 2020.
- National Level Faculty Development Program organized by Centre for Human Resource Development in association with Department of Biotechnology (FASH) Karpagam University, Coimbatore, 3rd -9th August 2020.
- National Level 5- Day Online interactive FDP on “Web Apps and E-content development for Digital Learning” organized by Institute of Advanced Studies in Education, Agartala in association with Department of Education Technology, Bharathidasan University, Trichy, 25th – 29th May 2021.
- National Webinar on “Academic Writing And Research Publication In Indexed Journals”, organized by Centre for Applied Research, The Gandhigram Rural Institute (Deemed to be University), Gandhigram - 624 302, Dindigul District, Tamil Nadu 28&29 July, 2022

Model Presentation:

- Presented Model in “Bio-Expo”, 2007, Shrimati Indira Gandhi College, Trichy 2

Hands-on Workshop:

- ✓ **Principles, Application and Troubleshooting on HPLC&HPTLC at CM Block,** University College of Engineering, BIT Campus, Anna University, Trichy, 24th February, 2023.

E-Content Developed:

- **5 modules**

Achievements

- ✓ National Level Paper Presentation Competition, “**Biovision 2013**”, 24th October, 2013, organized by Department of Zoology, Mercy College, Palakad, Kerala-6. **SECOND PRIZE** for oral presentation entitled “Phytochemical analysis and free radical scavenging activities of *Medicago sativastem*”.
- ✓ CSIR sponsored National Conference on “**Global Opportunities for Recent Developments in Science and Technology**”, 8th Feb, 2014, organized by Department of Biochemistry, Rev. Jacob Memorial Christian College, Ambiliikkai-12. **BEST PAPER AWARD** for oral presentation on “Phytochemical analysis and free radical scavenging activities of *Medicago sativaroot*”.

- ✓ Ministry of AYUSH, UGC and CSIR sponsored International Conference on “**Herbal and Natural Components as the Future of Pharmacology and 7thAnnual Meet of the National Society of Ethnopharmacology**” organized by Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam University, Coimbatore. **BEST PRESENTATION AWARD** for oral presentation on “*In vitro* antioxidant activity of *Medicagosativa*”

Research Experience

Ph.D Project

- Cardioprotective effect of the ethanolic extract of *Medicago sativa* leaves

M.Phil., Project

- Cardioprotective effect of methanolic extract of *Nelumbonucifera* flowers (MNnF) and *Allium cepa* bulbs (MAcB), Avinashilingam University, Coimbatore.

M.Sc., Project

- Biochemical studies on abiotic stress protective chemicals on salt stressed banana plants, National Research Centre for Banana, Trichy.

Seed Grant Project (Institute Project)

- Phytochemical analysis and antioxidant activity of *Cissusquadrangularis L.*, (2021-22)

Projects Guided:

Mini Project

1. Modified *In vitro* Hepatoprotective Activity of Ethanolic Seed Extract of *Artocarpus heterophyllus* on Hydrogen peroxide Exposed Liver Tissue (**April 2018**)
2. A Comparative Study of Antioxidant and Antimicrobial Activity of Bark Extract of *Saracaasoca* and *Terminalia Arjuna* (**April 2019**)
3. Antidiabetic and Antioxidant Activities of Aqueous and Ethanolic Extract of *Vitisvinifera* Seeds (**March 2021**)
4. Phytochemical Analysis and Antioxidant Activity of *Marsilea crenata* Leaves (**April 2022**)
5. An Investigation on Microplastic Contamination from the Freshwater and Groundwater Environment of Tiruchirappalli District (**April 2023**)
6. Anti-oxidant, Anti-inflammatory, Anti-arthritis and Anti-microbial activity of *Solanum trilobatum* Leaves Under In Vitro Study (**April 2024**)

M.Sc., Project

1. Phytochemical Analysis and *In vitro* Antioxidant Activity of *Marsilea crenata* Leaves (**April 2022**)
2. An Investigation on Microplastic Contamination from the Freshwater and Groundwater Environment of Tiruchirappalli District (**April 2023**)
3. Development of an effective Bio-foe compound from Azospirillin, *Glucano azatobacter* and

Methylobacter in the disease resistance of *Gossypium herbaceum* and *Nicotiana tabacum*
(April 2024).

Patent:

Published -Registered in the year 2024 (Design no: 426003-001) Apparatus for Phytochemical
Detection of Crude Drugs (6.8.2024).

Technical sets

- High Performance Thin Layer Chromatography
- PCR
- Electrophoresis

