



Resolving Double Helix For Life

# C G Bhakta Institute of Biotechnology

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**Dr. GIFTSON J SENAPATHY**

Assistant Professor

CGBIBT

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## ACADEMIC RECORD

- Ph.D., Biotechnology (2014)  
Karunya Institute of Technology, Coimbatore, India
- M.Phil., Biochemistry (2009)  
Annamalai University, Chidambaram, India
- M.Sc., Biochemistry (2007)  
Annamalai University, Chidambaram, India
- B.Sc., Biochemistry (2005)  
The American College, Madurai Kamaraj University, Madurai, India

## RESEARCH CAREER

- **Research experience** : 10 years (2007-2017)
- **Research interests:** Cancer biology (Colon cancer, cervical cancer, breast cancer) and toxicity (hepatotoxicity and nephrotoxicity) based on *In Silico* studies, cell line studies (*In vitro*) and animal studies (*In vivo*).
- **Summary of the research works:** 2 (two)
  1. Chemosensitizing effect of Ferulic Acid on Cisplatin in Cervical Cancer and Dalton's Lymphoma cell lines - (*Ph.D. Thesis- Highly commended*)
  2. Gallic Acid, A Phenolic Compound, As A Chemopreventive Agent Against Colon Carcinogenesis Induced By 1,2-Dimethylhydrazine In Albino Wistar Rats - (*M.Phil. Thesis- Highly commended*)
- **Summary of the collaborative research works:** 5 (five)
  1. The potential beneficial effect of chrysin, a flavonoid on ethanol induced Hepatotoxicity in wistar rats.
  2. Anticancer effect of hesperidin on HeLa & MCF7 on breast and cervical cancer cells.

3. Evaluation of anticarcinogenic effect of ferulic acid in experimental animals induced with Dalton's Lymphoma Ascites Tumors.
  4. Evaluation of anticarcinogenic potential of Gallic acid, a tea polyphenol in experimental animals induced with Dalton's Lymphoma Ascites tumor
  5. Therapeutic potential ferulic acid on fluoride induced hepatic and renal toxicity in male albino Wistar rats
- **Number of UG and PG students guided during research career:**  
(M.Phil.- 3, B.Tech. – 4, M.Tech – 10)
  - **Number of research papers published :** 10 (Ten)
  - **Number of research papers in progress:** 3 (Three)

## RESEARCH SKILLS

- *In vivo* - Animal handling techniques ( animal care, drug administration through intra gastric intubation, sc, idm, & IV routes, euthanasia, sample collection and analysis)
- *In vitro* - Animal cell culture techniques – maintenance, passaging, cell harvesting, cell preservation and assays
- *In Silico* - 2d structure drawing, optimization, molecular Docking using 'Shrodinger commercial software'
- Molecular biology techniques
- Comet assay – Single cell gel electrophoresis, Micronucleus assay, Nuclear condensation
- Gas chromatography (Schimadzu)
- HPLC
- Biochemical techniques – antioxidants and LPO assays, xenobiotic metabolizing enzyme assays, liver marker enzymes
- Western blotting
- Fluorescent microscope (Schimadzu)
- Fully automatic analyzer
- SPSS statistical software ( version 21)

## AWARDS RECEIVED

- **'Young Scientist Award'** at International Conference on 'Current trends in Advanced biomedical technology (CTAB-2009)', Nehru Arts and Science College, Coimbatore, 2009
- **'Best Research Paper Award'** at "MARINA '09"- National Conference on Advance Trends in Biotechnology, Dr. N.G.P. Arts and Science College, Coimbatore, 2009

## RESEARCH PUBLICATIONS

(In the order of Impact Factor)

1. **Giftson Senapathy. J.,** Jayanthi. S., Nalini. N. (2010) 'Chemopreventive efficacy of gallic acid, an antioxidant and anticarcinogenic polyphenol, against 1,2-dimethyl hydrazine induced rat colon carcinogenesis' *Investigational New Drugs* 28(3), 251-259. - **(Impact factor - 3.5)**
2. **Giftson Senapathy. J.,** Jayanthi. S., Viswanathan. P., Umadevi. P. and Nalini. N.(2011) "Effect of gallic acid on xenobiotic metabolizing enzymes in 1,2-dimethyl hydrazine induced colon carcinogenesis in Wistar rats – A Chemopreventive approach", *Food and chemical toxicology* 49, 887–892.- **(Impact factor - 3.00)**
3. **Giftson Senapathy. J** and Umadevi. P. (2011) "Potentiating effect of ferulic acid, a plant polyphenol on cisplatin in combination chemotherapy in Dalton's Ascites Lymphoma mice model", *Journal of Pharmacy Research*, 4(8), 2814-2818 – **(Impact factor - 2.89)**
4. **Giftson Senapathy. J.,** Umadevi. P. and Kannika. P.S. (2011) "The Present Scenario of Cervical Cancer Control and HPV Epidemiology in India: an Outline", *Asian Pacific Journal of Cancer Prevention* 12, 1107-1115. – **(Impact factor - 2.514)**
5. **Giftson Senapathy. J.,** Umadevi. P. and Murugan S (2013) "Chemosensitization by phytochemicals – A recent approach in cancer chemotherapy", In: *Facets of Biotechnology*, SAMS Publishers, Chennai, India (ISBN no. 978-93- 80485-35-3), 28-35.
6. Jayanthi. S., **Giftson Senapathy. J.,** Devaraj. R., and Nalini. N. (2009) 'Hepatoprotective effect of chrysin on prooxidant–antioxidant status during

ethanol induced toxicity in female albino rats' in the 'Journal of Pharmacy and Pharmacology 61(6), 809-817 - (**Impact factor - 2.033**)

7. Lakshmikanthan. P., Kavitha. S. , Angelin Arumugam. J and **Giftson Senapathy. J.** (2013) "Ferulic Acid Modulates Fluoride-Induced Oxidative Hepatotoxicity in Male wistar Rats", Biological Trace Elements Research, 152, 85-91.- (**Impact factor - 1.93**)
8. Selvi. S., Umadevi. P., Murugan. S. and **Giftson Senapathy. J.** (2011) "Anticancer potential evoked by *Pleurotus florida* and *Calocybe indica* using T 24 urinary bladder cancer cell Line", African Journal of Biotechnology 10(37), 7279-7285.- (**Impact factor - 0.573**)
9. Umadevi. P., Murugan. S., **Giftson Senapathy. J.** (2010) "Sleep Strengthens Memories", Journal of Clinical and Diagnostic Research 3, 2105-2110. - (**Impact factor - 0.23**)
10. **Giftson Senapathy. J.** (2013) "Sports- A boon to mental health", 21<sup>st</sup> KEMT Souvenir, 32
11. **Giftson Senapathy. J.,** Umadevi. P. and Murugan. S. "Sensitizing human cervical cancer cells for cisplatin treatment by ferulic acid, a plant polyphenols by augmenting cytotoxicity, reactive oxygen species and DNA damage in HeLa and SiHa cell lines" (Submitted to in Biochemical and Biophysical Research Communications).
12. **Giftson J Senapathy. J.,** Umadevi P and Murugan S. "Chemosensitizing effect of ferulic acid through the augmentation of *in vitro* cytotoxicity in cisplatin chemotherapy on Dalton's lymphoma cell lines" (Submitted to Asian Pacific Journal of Cancer Prevention).
13. **Giftson J Senapathy. J.,** Umadevi P and Murugan S. "Chemoprotective and immunomodulating effects of ferulic acid on cisplatin chemotherapy in Dalton's lymphoma xenografted mice" (Under Communication in International Immunopharmacology).

#### **POSITIONS AND RESPONSIBILITIES - (since 2013)**

- Research Consultant - Karunya University, KMCH College of Pharmacy, Hindustan College of Arts and Science
- Subject expert - Animal experiments, Karunya University and Sree Narayana Guru College of Arts and Science

- Consultant for undergraduate and Postgraduate student projects in Health Sciences - Karunya University and KMCH College of Pharmacy
- Member board of studies (BoS) for UG and PG engineering courses – Karunya University, 2015-2017
- Member Curriculum Development cell, Karunya University
- Trainer – Department of Value Empowerment and Skill Development, Karunya University
- ‘Senior Residential Advisor (SRA)’, Karunya University
- Student Counselor, Karunya University
- Event Manager -for mega events

### **TEACHING EXPERIENCE**

- 4+ years – as teaching faculty, research consultant and trainer – in Karunya University
- Handled classes for B.Tech., Biotechnology, M.Tech., Biotechnology, M.Sc. Biochemistry and M.Sc., Medical Biochemistry students under the areas of Biochemical techniques, Cancer biology, Biochemistry, Molecular biology, Genetics and Animal handling techniques during the research career.
- Given guest lecture in Sree Narayana Guru College, Coimbatore for M.Sc. Biotechnology & Biochemistry students.
- Given talks for B.Tech. and Business Management students on general topics regarding motivation, time management, entrepreneurship, interpersonal relationships, Value education and personality development.

### **REVIEWER OF JOURNALS**

- ‘Food and Chemical Toxicology’ (Elsevier)
- ‘Toxicology In vitro’ (Elsevier)
- ‘Phytotherapy Research’ (Wiley Science)
- ‘Anti-Cancer Agents in Medicinal Chemistry’ (Bentham Science)
- ‘RSC Advances’ (Royal Society of Chemistry)
- ‘Letters in Drug Design and Discovery’ (Bentham Science)
- ‘Biomaterials and Tissue Engineering Bulletin’

## CONFERENCES

### Chair & organizer

- Chair of student's symposium, '*Radiation and Life*', Annamalai University, Chidambaram, India, 2006
- Organized '*Parthenium Awareness Camp*', Karunya University, Coimbatore, 2010
- Organized, '*HPLC*' training in Karunya University, Coimbatore, 2011

### Papers Presented

- '*Ferulic acid augments the chemotherapeutic potential of cisplatin by altering the antioxidant and lipid peroxidation status of cervical carcinoma In Vitro*' at 'International Symposium on Innovations in Free Radical Research and Experimental Therapeutics' in Karunya University, Coimbatore.
- '*Chemopreventive & therapeutic modulation of gallic acid on xenobiotic metabolizing enzymes in 1,2-dimethylhydrazine induced colon carcinogenesis in Wistar rats*' at 'International Conference on Current trends in Advanced Biomedical Technology (CTAB-2009)' in NHASS, Coimbatore.
- '*Effect of plant polyphenols gallic acid on intestinal microflora and aberrant crypt foci development in Colon cancer*' at 'MARINA '09' a National Conference on 'Advance Trends in Biotechnology'
- '*Chemopreventive potential of gallic acid on prooxidant – antioxidant status against colon carcinogenesis induced by 1,2-dimethyl hydrazine in rats*' at 'International Conference on Natural products in Health & 21<sup>st</sup> Annual Conference of the Indian Society for Atherosclerosis Research' in Annamalai University, Chidambaram.
- '*Antioxidants and Free Radicals in Human Health*' at Annamalai University, Chidambaram
- '*Nutritional value of Traditional Indian Foods*' to European Research group at The American College, Madurai.

### Research Posters Presented

- '*Chemopreventive efficacy of gallic acid, an antioxidant and anticarcinogenic polyphenol, against 1,2-dimethyl hydrazine induced rat colon carcinogenesis*' in the 77<sup>th</sup> Annual Meeting of Society of Biological Chemists (India) at IIT madras, Chennai.

- *'Hepatoprotective effect of chrysin on prooxidant – antioxidant status during ethanol induced toxicity in female albino rats'* in the 77<sup>th</sup> Annual Meeting of Society of Biological Chemists (India) at IIT madras, Chennai.
- *'Ferulic acid - a herbal antioxidant, sensitizes cancer cells and protects normal cells by altering antioxidant and lipid peroxidation status in cisplatin chemotherapy'* in International Symposium on Free Radical Damage and Herbal Antioxidants in Health and Disease and Satellite Conference of the Society for Free Radical Research (SFRR SATCON) at Avinashilingam University, Coimbatore.

### **Conferences attended**

- National Conference on 'Frontiers in Biology and the 18th Annual meeting of the Society of Biological Chemists (India)' in Annamalai University, Chidambaram.
- National Conference on 'Natural Products in Health and Disease' in Annamalai University, Chidambaram.

### **TRAININGS & WORKSHOPS**

- One day awareness workshop on 'Intellectual Property Rights and Patents filing' organized by Karunya University –INCITE and IPR cell
- International Training Partners Inc., USA, certified training on 'Sharpening Your Interpersonal Skills – SYIS'
- 'Workshop on Project Proposal and Scientific writings' – Karunya University
- Short term training programme on 'SPSS, Version - 21', Karunya University, Coimbatore
- Short term training course in 'Advanced Techniques in Animal Cell Culture (ATACC-2011)', Karunya University, Coimbatore.
- Short term training programme on 'Immunological Techniques in Cancer Biology', Karunya University, Coimbatore.
- National workshop on 'Critical Perspectives on Research Methodology in Biomedical Sciences', Karunya University, Coimbatore.
- 'Gas Chromatography' training in Advanced Training Institute, Govt. of India, Chennai.
- 'Pharma marketing executive course' in The American College.
- 'Leadership training Workshop' in The American College.

### **Special trainings on teaching & technology**

- Faculty Development program (FDP) on 'Outcome Based Education' organized by Karunya Competency Development Center (KCDC) on 13th & 14th December, 2016.
- FDP on 'Creating A Learning Community Through Mentoring' organized by KCDC on 18th Nov, 2016
- 'Bloom's Taxonomy' organized by KCDC on 7th Nov, 2016
- 'Neuro - Linguistic Programming' organized by KCDC on 24th Oct, 2016
- 'Flipped Classroom And Blended Learning' organized by KCDC on 7th Sep, '16
- 'Mastering Educational Technology Tools' organized by KCDC on 7th Sep, '16
- 'Mastering YouTube For Education' organized by KCDC on 8th Sep, 2016
- 'SMAC and IOT In Higher Education' organized by KCDC on 8th Sep, 2016
- 'Lecture Capturing' organized by KCDC on 24th Aug, 2016
- 'LMS Basic – MOODLE' organized by KCDC on 5th Aug, 2016

### **OTHER INTERESTS**

- Reading books, Freelance writer, Motivational speaker
- Sports and swimming
- Music – Singing and Keyboard play.
- Drawing, Stamp and coin collections, Multimedia

### **LANGUAGE SKILLS**

- Fluent in speaking and the usage of the English and Tamil language.
- Can understand and speak Hindi and French

### **COMMUNICATION ADDRESS**

Dr. GIFTSON J SENAPATHY  
Assistant Professor  
CG Bhakta Institute of Biotechnology (CGBIBT)  
Uka Tarsadia University  
Bardoli Surat,  
Gujarat.  
India



## **DECLARATION**

I hereby declare that the information and all the details furnished in the résumé are true.

  
**Dr. GIFTSON J SENAPATHY**

**PLACE:** Surat, Gujarat - India.

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