



**Dr. C. KIRUTHIGA**

**Teaching Assistant**

### Contact

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### Academic Qualifications

Degree	Institution	Year	Branch	Class
Ph.D.	Alagappa University	2024	Biotechnology	-
TNSET	Mother Teresa Women's University, Tamil Nadu	2016	Life Science	Qualified
MS (By Research)	Alagappa College of Technology, Anna University	2012	Biotechnology	First Class
B.Tech	Kamaraj College of Engineering and Technology	2008	Biotechnology	First Class with Distinction

### Teaching Experience

**Total Teaching Experience: 2 Years**

Position	Institution	Duration
Teaching Assistant	Department of Biomedical Science Faculty of Science, Science Campus Alagappa University, Karaikudi	July 2024- April 2025
Assistant Professor	Department of Biotechnology, Vidhyaa Giri College of Arts and Science, Puduvayal, Sivaganga, TN, India	2 Years May 2017 – March 2019

## Research Experience

Total Research Experience : 8 Years

## Areas of Research

- Cancer Therapeutics
- Molecular Oncology
- Pharmacology
- Cell Death Mechanism
- Autophagy

## Patents

S.No	Inventors	Title of the Invention	Application Number	Date of Filing	Application Status
1	<b>Kiruthiga C,</b> Devi KP	COMPOSITION EXHIBITING ANTI-CANCER ACTIVITY,AND IMPLEMENTATIONS THEREOF	202141052384	15-Nov-2021	<b>Granted</b> Patent No. <b>551982</b>
2	<b>Kiruthiga C,</b> Devi KP	“COMPOSITION EXHIBITING ANTI-CANCER ACTIVITY AND IMPLEMENTATION THEREOF”	202241011678	03-Mar-2022	Published- <b>01.09.2023</b>
3	<b>Kiruthiga C,</b> Jaya Balan, Devi KP	SYNERGISTIC COMBINATION OF NATURAL COMPOUNDS AGAINST NON-SMALL CELL LUNG CANCER	202241011109	01-Mar-2022	Published- <b>08.09.2023</b>

## Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books/Chapters
13	4	-	2	1

<b>h-index</b>	<b>: 5</b>
<b>i10 index</b>	<b>: 4</b>
<b>Total Citations</b>	<b>: 155</b>
<b>Cumulative Impact Factor</b>	<b>: 52.626</b>
<b>Average Impact Factor</b>	<b>: 4.04</b>

## ACCESSION NUMBERS

- Genbank: Translationally controlled tumor protein FJ890311, Penaeidin EU884391, Peroxiredoxin GQ161914, Lysozyme GQ414750, O-methyl transferase JN572540, Phagocytosis activating protein GQ423624, Anti-lipopoly saccharide factor.
- dbESTs: GW316490 - GW316613. cDNA library constructed in pSPORT (Invitrogen).

## Academic Merits and Awards

1. DST-PURSE Research fellow, 2019-2020.
2. RUSA 2.0, EIR fellowship, 2023.

## Events Participated

Number of Conferences/Seminars/Workshops: 10

### Conferences

- **Kiruthiga Chandramohan, Pandima Devi Kasi.** Synergistic combination of phytocompounds induce anti-proliferation, apoptosis and cellular senescence in A549 cells. NATIONAL LEVEL CONFERENCE ON BIOTECHNOLOGY AND OMICS SCIENCES 27th - 28th May, 2022.

- **Kiruthiga C**, Devi KP. Synergistic Anticancer Activity of Terpenoids Promotes Apoptosis and Mitochondrial Membrane Depolarization in A549 Non-Small Cell Lung Cancer Cells. 3<sup>rd</sup> INTERNATIONAL CONFERENCE ON GENOME BIOLOGY (ICGB-3) AND 53<sup>RD</sup> ANNUAL AQUA-TERR DAY. 28<sup>th</sup> February to 2<sup>nd</sup> March, 2022.
- **Kiruthiga C**, Devi KP. Combination of terpenoids promote apoptosis and cell cycle arrest in 549 non-small cell lung cancer cells. Online SECOND INTERNATIONAL CONGRESS ON BIOLOGICAL AND HEALTH SCIENCES, Feb 24-27, 2022.
- Presented a poster titled “Functional characterization of Peroxiredoxin and Its Gene Expression in Tissues of White Spot Syndrome Virus Infected Shrimps Fenneropenaeus indicus” at CHENNAI CHEMISTRY CONFERENCE-2011, IIT MADRAS, Chennai during February 11-13, 2011.
- Presented a poster titled “Production and Functional Characterization of Recombinant Peroxiredoxin and its gene expression in tissues of White Spot Syndrome Virus infected shrimps Fenneropenaeus indicus” at conference on “EMERGING TRENDS IN BIOLOGICAL RESEARCH” (NCEBR’11), UNIVERSITY OF MADRAS, Chennai during February 21-22, 2011.

### Overseas Exposure / Visits

- Sultanate of Oman
- United Arab Emirates

### List of Research Articles / Recent Publications

- Balan JD, **Kiruthiga C**, Devi K.P. (2024). Synergistic action of thymol-citral is associated with cell cycle arrest and intracellular ROS generation in a549 cells. **Clinical Cancer Drugs (Accepted)**
- **Kiruthiga C.**, S Jafni, S Preethi, Rajesh Kannan N, Devi K.P. (2024). Oral Toxicity Assessment and Mitigation of Lung Carcinogenesis by Phytol and  $\alpha$ -Bisabolol Combination Treatment in Swiss Albino Mice: Insights into Redox Enzyme Modulation and Caspase-Dependent Cell Death Mechanisms. **Naunyn-Schmiedeberg's Archives of Pharmacology**. [Accepted, IF 3.6].
- **Kiruthiga. C.**, Kambati Niharika, Devi K.P (2024). Phytol and  $\alpha$ -Bisabolol Synergy Induces Autophagy and Apoptosis in A549 Cells and Additional Molecular Insights through Comprehensive Proteome Analysis via Nano LC-MS/MS. **Anti-Cancer Agents in Medicinal Chemistry**. (online (IF-2.8)
- **C Kiruthiga**, DJ Balan, NH Prasath, M Manikandakrishnan, S Jafni, NM Prabhu, SK

Pandian, **KP Devi** (2024). Synergistic induction of apoptosis in lung cancer cells through co-delivery of PLGA phytol/ $\alpha$ -bisabolol nanoparticles. **Naunyn-Schmiedeberg's Archives of Pharmacology**, 1-14. [IF-3.6]

- **C Kiruthiga**, DJ Balan, S Jafni, DP Anandan, **KP Devi** (2024). Phytol and (-)- $\alpha$ -bisabolol Synergistically trigger intrinsic apoptosis through redox and  $\text{Ca}^{2+}$  imbalance in non-small cell lung cancer. **Biocatalysis and Agricultural Biotechnology**, 103005. [IF-4.0]
- **Kiruthiga C**, DJ Balan, KP Devi, SF Nabavi, S Reshadat, Short interfering RNA in colorectal cancer: is it wise to shoot the messenger? (2023), **European Journal of Pharmacology**, 175699. [IF-5.1]
- **C Kiruthiga**, KP Devi, SM Nabavi, A Bishayee, Autophagy: a potential therapeutic target of polyphenols in hepatocellular carcinoma, (2020), **Cancers** 12 (3), 562. [IF- 6.639]
- M Jeyakumar, D Jaya Balan, **C Kiruthiga**, S Jafni, K Pandima Devi (2023).  $\alpha$ -bisabolol  $\beta$ -d-fucopyranoside (ABFP) ameliorates scopolamine-induced memory deficits through cholinesterase inhibition and attenuation of oxidative stress in zebrafish model. **Journal of Biochemical and Molecular Toxicology** 38 (1), e23580. (IF 3.6)
- S Jafni, S Sathya, M Arunkumar, **C Kiruthiga**, M Jeyakumar, E Muruges, KP Devi (2023). Hesperidin Methyl Chalcone reduces extracellular  $\text{A}\beta$  (25-35) peptide aggregation and fibrillation and also protects Neuro 2a cells from  $\text{A}\beta$  (25-35) induced neuronal dysfunction. **Bioorganic & Medicinal Chemistry**. 96, 117536. (IF 3.5)
- DJ Balan, M Das, S Sathya, **C Kiruthiga**, M Jeyakumar, MG Antoniraj, Chitosan based encapsulation increased the apoptotic efficacy of thymol on A549 cells and exhibited non toxic response in swiss albino mice, (2021) **International Journal of Biological Macromolecules** 202, 620-631. [IF-8.025]
- M Jeyakumar, S Sathya, S Gandhi, P Tharra, M Aarthi, DJ Balan, **C Kiruthiga** ,  $\alpha$ -bisabolol  $\beta$ -D-fucopyranoside inhibits  $\beta$ -amyloid ( $\text{A}\beta$ ) 25–35 induced oxidative stress in Neuro-2a cells via antioxidant approaches, (2022), **Process Biochemistry** 121, 493-503. [IF-4.88]
- S.Rajesh, **C.Kiruthiga**, V. Rashika, R. Priya and R.B. Narayanan "Molecular cloning, sequence analysis and tissue expression of translationally controlled tumour protein from the WSSV-infected Indian shrimp *Penaeus indicus*" **Aquaculture Research**, pp. 1-7. 2010. [IF-2.184]
- **C. Kiruthiga**, S. Rajesh, V. Rashika, R. Priya, R.B. Narayanan "Molecular cloning, expression analysis and characterization of peroxiredoxin during WSSV infection in shrimp *Fenneropenaeus indicus*" **Journal of invertebrate pathology**, 109 (2012) 52–58. [IF-2.795]

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