

## CURRICULUM VITAE

Name : **D. JAYA BALAN**  
DOB (dd/mm/yy) : 15/05/1993  
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## EDUCATION

**July 2024 to till now** Scientific Co-Ordinator, Central Research Laboratory, Rajas Medical Institution, TN

**DEC 2022 to May 2023** Post-doctoral fellow, Cold Spring Harbor Laboratory, NY, USA

**2021 to 2022** Assistant Professor, Department of Microbiology, VHNSN College, India

**2016 to 2021** Research Scholar in Biotechnology, Alagappa University, India.

**2013 to 2015** Master of Science in Biotechnology, First Class with distinction, Alagappa University, India.

**2009 to 2013** Bachelor of Science in Biotechnology, First Class with distinction, ANJA College, Affiliated to Madurai Kamaraj University, India.

## COMPETITIVE EXAMS QUALIFIED

SI NO	COMPETITIVE EXAMS QUALIFIED	QUALIFIED YEAR	RANK
1.	CSIR NET (Lectureship)	2017 (Reg No: 347959)	76 <sup>th</sup>
2.	TAMILNADU STATE ELIGIBILITY TEST(TNSET)	2016 (Reg No: 2500406)	Not specified
3.	Alagappa University Pre-Ph. D entrance examination	2016	FIRST

## AWARDS & ACHIEVEMENTS

- Secured **Second rank** in under graduation
- Selected for **UGC - Post-Graduate Merit Scholarship** for University Rank Holder (2013-15) @ Rs.2000/- per month for two years
- Secured **First rank in Alagappa university Pre-PhD entrance** examination and awarded AURF Fellowship @ Rs.5000/- per month for two years (23.07.2016 – 22.07.2018)
- Selected as a **RUSA 2.0 project fellow** under the title of “Theme Based Research- Translational Health Research for Human, Animal & Plant Systems” and received 12000/- per month for two years (11.03.2019 to 10.03.2020)
- Won **Second prize for poster presentation** in the International Conference on New Vistas in Life Science, Holy Cross College, Tiruchirappalli, 11th September, 2018.
- Won **First prize for oral presentation** in the National Seminar on Miracle Microbes. V.H.N. Senthilkumara Nadar College, Virudunagar, 25th September, 2018.

## TECHNIQUES KNOWN

- **Cell Culture techniques:**  
Expertise in cell culture maintenance, Cell cytotoxicity assays, Anti-cancer drug screening, Animal cell staining and imaging, Flow cytometry, Antioxidant Assays
- **Molecular techniques:**  
DNA, RNA and Protein extraction & quantification, PCR analysis, Real Time-PCR, Agarose gel electrophoresis, SDS-PAGE, Western blot
- **In vivo Techniques:**  
Mice handling, Acute & Sub Acute Toxicity Testing, oral administration, Mice dissection, Blood collection via Cardiac Puncture.
- **Microscopic techniques:**  
Light microscopy, Confocal laser scanning microscopy (CLSM), Fluorescent microscopy and Scanning electron microscopy (SEM)
- **Nanotechnology:**  
Nanoparticle preparation, lyophilisation and characterization
- **Microbiological techniques:**  
Microbiological culture methods and Toxicity analysis using human PBMC, human Buccal cells, RBC cells
- **Statistics:**  
One way ANNOVA, Two way ANNOVA, Student's t-test
- **Data presentation techniques:**  
Origin, Adobe Photoshop and Microsoft office.

## AREAS OF INTEREST

- Cancer Biology
- Cell Biology
- Genomics & Proteomics
- Molecular Biology

## RESEARCH EXPERIENCE

Position	Organization	Date
<b>RUSA 2.0 project fellow</b>	Department of Biotechnology, Alagappa University, Tamil Nadu, India	March 2019 - March 2020
<b>Alagappa University Research Fellow (AURF Fellow)</b>	Department of Biotechnology, Alagappa University, Tamil Nadu, India	July 2016- July 2018

## RESEARCH MILESTONES

No. of Research Publications	: <b>05</b>
No. of Review Publications	: <b>03</b>
Cumulative & Average Impact factor	: <b>41.1 &amp; 5.8</b>
h-index	: <b>04</b>
i10-index	: <b>03</b>
Total Citations	: <b>70</b>
No. of Conferences Attended	: <b>10</b>
No. of Seminars and Workshop Attended	: <b>05</b>
Indian Patent Filed	: <b>01</b>

## PUBLICATIONS

- Balan DJ**, Rajavel T, Das M, Sathya S, Jeyakumar M, Devi KP. Thymol induces mitochondrial pathway-mediated apoptosis via ROS generation, macromolecular damage and SOD diminution in A549 cells. **Pharmacological reports**. 2021 Feb;73(1):240-54. (**Impact Factor: 3.9**)
- Balan DJ**, Das M, Sathya S, Kiruthiga C, Jeyakumar M, Antoniraj MG, Devi KP. Chitosan based encapsulation increased the apoptotic efficacy of thymol on A549 cells and exhibited non toxic response in swiss albino mice. **International Journal of Biological Macromolecules**. 2022 Mar 31;202:620-31. (**Impact Factor: 8.0**)
- Das M, **Balan DJ**, Kasi PD. Mitigation of oxidative stress with dihydroactinidiolide, a natural product against scopolamine-induced amnesia in Swiss albino mice. **NeuroToxicology**. 2021 Sep 1;86:149-61. (**Impact Factor: 4.3**)
- Jeyakumar M, Sathya S, Gandhi S, Tharra P, Aarthi M, **Balan DJ**, Kiruthiga C, Baire B, Singh SK, Devi KP.  $\alpha$ -bisabolol  $\beta$ -D-fucopyranoside inhibits  $\beta$ -amyloid (A $\beta$ ) 25-35 induced oxidative stress in Neuro-2a cells via antioxidant approaches. **Process Biochemistry**. 2022 Jul 25. (**Impact Factor: 4.8**)
- Antoniraj MG, Dhayanandamoorthy Y, Kumar P, Kandasamy R, **Balan DJ**, Devi KP. Design and evaluation of redox responsive disulfide containing resveratrol loaded nanocarrier anti-cancer activity in the MDA-MB-231 cell line. **Materials Today Communications**. 2022 Aug 1;32:103873. (**Impact Factor: 3.6**)

6. Nabavi SM, Ahmed T, Nawaz M, Devi KP, **Balan DJ**, Pittalà V, Argüelles-Castilla S, Testai L, Khan H, Sureda A, de Oliveira MR. Targeting STATs in neuroinflammation: the Road Less Traveled!. **Pharmacological research**. 2018 Dec 11. (Impact Factor: 10.3)
7. Sohn SI, Rathinapriya P, Balaji S, **Balan DJ**, Swetha TK, Durgadevi R, Alagulakshmi S, Singaraj P, Pandian S. Phytosterols in seaweeds: An overview on biosynthesis to biomedical applications. **International Journal of Molecular Sciences**. 2021 Nov 24;22(23):12691. (Impact Factor: 6.2)
8. Chandramohan K, **Balan DJ**, Devi KP, Nabavi SF, Reshadat S, Khayatkashani M, Mahmoodifar S, Filosa R, Amirkhalili N, Pishvaei S, Aval OS. Short interfering RNA in colorectal cancer: is it wise to shoot the messenger?. **European Journal of Pharmacology**. 2023 Apr 1:175699. (Impact Factor: 5.19)
9. Jeyakumar M, **Balan DJ**, Kiruthiga C, Jafni S & Devi KP.  $\alpha$ -bisabolol  $\beta$ -D-fucopyranoside (ABFP) ameliorates scopolamine-induced memory deficits through cholinesterase inhibition and attenuation of oxidative stress in zebrafish (*Danio rerio*). **Behavioural Pharmacology** (Impact Factor: 2.2).

#### INDIAN PATENT FILED

S. No.	Title	Inventors	Assignee	Patent Application Number	Filing Date
1.	SYNERGISTIC COMBINATION OF NATURAL COMPOUNDS AGAINST NON-SMALL CELL LUNG CANCER	Kiruthiga Chandramohan, <b>Jaya Balan Devasagayam</b> , Pandima Devi Kasi	Alagappa University	202241011109	01.03.2022

#### BOOK CHAPTERS PUBLISHED

1. Devi KP, & **Balan DJ**. (2018). Flavonoids and their anti-cancer effect targeting the major signalling pathways involved. Recent advances in the molecular mechanism of flavonoids. Houston, Texas: **Studium Press** (India Pvt. Ltd.), 1-22.
2. **Balan DJ**. & Devi KP. (2020). Emulsifiers. In: Food Additives and Human Health. **Bentham Science Publishers**. 212-227.

#### DECLARATION

I hereby declare that the above-mentioned information is true to the best of my knowledge.

Yours sincerely



(D. JAYA BALAN)