

ARUL SALOMEE KAMALABAI. R
Ph.D. IN BIOINFORMATICS

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Professional Profile

Enthusiastic, intuitive, and hardworking candidate with five years of wet lab and bioinformatics experience while pursuing my Ph.D. work. As an organized and dependable individual, I have proven abilities in successfully managing multiple responsibilities with a positive attitude to prioritize and achieve team goals. Key areas of my expertise are,

- Molecular Drug Designing and Data Analysis
- Small Animal (Rat & Guinea pig) Handling
- Molecular Cardiology Investigations
- Endotracheal intubation and LAD Ligation surgery
- ECG Analysis in Rat & Guinea pig
- Structural Bioinformatics

Skills

Bioinformatics

- Schrodinger
- GROMACS
- Argus Lab
- Modeller
- MEGA
- Basic Bioinformatics Tools

Wet Lab

- Electrophoresis
- Western Blotting
- Histology
- Immunohistochemistry
- Chromatography techniques
- Basic Biochemistry Experiments

Teaching Experience

Feb 2022 – Till date Assistant Professor, Department of Microbiology, The American College, Madurai, Tamil Nadu, India.

Academic Credential

JAN 2015–DECEMBER 2021

Ph.D. In Bioinformatics, Bharathidasan University, Trichy, Tamil Nadu, India.

JUNE 2008- JULY 2014

M.Tech., Bioinformatics (Integrated), Bharathidasan University, Trichy, Tamil Nadu, India.

Doctoral Research Project

Title: “UNDERSTANDING THE POSSIBLE MECHANISM BEHIND CALCIUM OVERLOAD IN EXPERIMENTAL POST-MYOCARDIAL INFARCTION IN THE RAT MODEL: A COMBINED *in-vivo*, *in-silico*, AND LC-MS BASED VALIDATION OF THE WHOLESOME EFFECT OF *Crataegus oxycantha*”

Aim: To disclose the exact mechanism of altered calcium imbalance that arises during myocardial reperfusion injury, life-threatening conditions called Myocardial stunning/arrhythmias.

Findings: Presenilins were recognized as perpetuating factors behind the variations in calcium signaling during myocardial ischemia/reperfusion injury. *Crataegus oxycantha* and in particular, its phytochemical Epicatechin gallate used in this study was identified as effective cardioprotective agent by inhibiting multiple targets of post-MI complications.

Guide: Dr. K. S. Jayachandran, Assistant Professor, Department of Bioinformatics, Bharathidasan University, Trichy- 620024.

Patents

- Novel animal model to precisely imitate human myocardial infarction. Dr. K. S. Jayachandran, Dr. Divya Dasagrathi, Dr. **R. Arul Salomee Kamalabai**, Dr. M. Anusuyadevi Jayachandran. Patent No: 484055 - 2023

Publications

- **Ravindran, A. S. K.**, Venkatabalasubramanian, S., Manickam, R., Anusuyadevi, M., & K. Swaminathan, J. (2020). Plausible computational insights and new atomic-level perspective of epicatechin gallate from *Crataegus oxycantha* extract in preventing caspase3 activation in conditions like post-myocardial infarction. *Journal of Biomolecular Structure and Dynamics*, 1-16. doi: 10.1080/07391102.2020.1847196.
- **Ravindran, A.**, Anusuyadevi, M., & Jayachandran, S. (2020). Protective Effects of Flavonols From *Crataegus Oxycantha* Against Inflammatory Markers of Atherosclerosis: A Structure Based, Molecular Docking And Dynamics Studies. *International Journal of Nutrition, Pharmacology, Neurological Diseases*, 10(4), 194-202. doi: 10.4103/ijnpnd.ijnpnd_73_20.
- Dasagrathi, D., **Kr, A.**, Muthuswamy, A., & Ks, J. (2017).HMGB1: A Therapeutic Target for Myocardial Infarction. *Journal of Cardiology & Cardiovascular Therapy*, 7. doi: 10.19080/jocct.2017.07.555724.
- Dasagrathi, D., **R, A. S. K.**, Muthuswamy, A., Lennox, A. M., Jayavelu, T., Devanathan, V. (2018).Ischemia/reperfusion injury in male guinea pigs: An efficient model to investigate myocardial damage in cardiovascular complications. *Biomedicine & Pharmacotherapy*, 99,469-479. doi: <https://doi.org/10.1016/j.biopha.2018.01.087>.

- Mohan, S., Thilagar, G., **Salomy, A.**, Nisha, M., Kandasamy, M., M, M. (2018). Biophysical interaction of resveratrol with sirtuin pathway: Significance in Alzheimer's disease. *Frontiers in Bioscience*, 23(7), 1380-1390.
- Divya, D., **Arul Salomee Kamalabai, R.**, Anusuyadevi, M., & Jayachandran, K. S. (2019). Construction and Analysis of Protein-Protein Interaction Network: Role in Identification of Key Signaling Molecules Involved in a Disease Pathway. *Computer Applications in Drug Discovery and Development* (pp. 204-220). Hershey, PA, USA: IGI Global.
- Preetha, S. P., **Arul Salomee Kamalabai, R.**, Jayachandran, K. S (2021). Qualitative and quantitative phytochemical screening of vitex negundo L.extract using chromatographic and spectroscopic studies. *Natural Volatiles & Essential Oils*, 8(4), 11949-11961.
- Preetha, S. P., **Arul Salomee Kamalabai, R.**, Jayachandran, K. S (2021). Effect of vitex negundo compounds on urinary tract infection causing klebsiella pneumoniae: An insilico based approach. *Turkish journal of physiotherapy and rehabilitation*, 32(3), 33061-33081.

Conferences/ Workshops/ Seminars/ FDP

Presented:

- In silico investigation on novel inhibitors for treating multidrug resistant *Pseudomonas aeruginosa*. Mohammed Noushad A, Lokesh M, Jainab Nisha I, Arul Salomee Kamalabai R. 5th International Conference on “Recent Trends In Microbiology, RTM-2024, Alagappa University, Karaikudi. ISBN: 978-93-6163-797-1.
- Computational screening of natural compounds as putative inhibitors for antibiotic resistant *Proteus mirabilis*. Arockia Alexander S. X., Bala Kumar M, Vishalini Kaleswaran, Arul Salomee Kamalabai R. 5th International Conference on “Recent Trends In Microbiology, RTM-2024, Alagappa University, Karaikudi. ISBN: 978-93-6163-797-1.
- Possible mechanism behind Ca²⁺ overload in the Post Myocardial Infarction and the beneficial effect of *Crataegus oxyantha* extract. Arul Salomee Kamalabai R, Anusuyadevi M and Jayachandran K S. Oral presentation. “Past, Present and Future of Atherosclerosis Where do we stand?. 31st annual conference and international symposium, ISARCON 2018, JIPMER-Pondicherry.
- Myocardial Infarction in rat induces brain ischemia upregulating PS2 and PS1 promoting neuronal degeneration during aging. J. Kesavanswaminathan, K. Arul salomee. AD/PD 2015: International conference on Alzheimer’s and Parkinson’s Diseases. Nice, France.

Participated:

- ICIALS23, Department of Food Science & Nutrition, The American College, Madurai – 2023
- Faculty Orientation Programme, The American College, Madurai – 2023
- Art and Science of Methodical Scientific Writing & Publishing in a High Impact Journal, The American College, Madurai - 2023
- Achieving Excellence in Higher Education & Research, ACT Academy, Tamil Nadu - 2022
- Science Expo, The American College, Madurai - 2022
- Organizing committee member in One day event on “Awareness for Alzheimer’s Disease-

“ALZINFO-2019” in Bharathidasan university, Trichy – 2019

- Two day Hands-on workshop on “*Computer-Aided Drug and Biologics Discovery*”, in Bharathidasan University, Trichy – 2015
- “*National Seminar on Bioinformatics (NSB’15)*” in Bharathidasan University, Trichy – 2015
- 4th national symposium cum workshop on “*Recent Trends in Structural Bioinformatics and Computer Aided Drug Design*” SBCADD-2012 in Alagappa University, Karaikudi - 2012.
- CSIR sponsored National Workshop on “*Computational Intelligence Applications in Bioinformatics*” in Dr. M.G.R. Educational and Research Institute University, Chennai – 2011.
- Workshop on “*Cheminformatics & Drug Designing*” using VLife MDS 3.5 conducted by Helix Info Systems, Training & Research Institute in Bioinformatics, Chennai – 2011.
- Workshop on “*Support Vector Machines – Applications on Identification of Protein and Gene functions*” in Bharathidasan University, Trichy – 2011.
- Workshop on “*Patent information*” in Bharathidasan University, Trichy – 2008.

References

DR. K. S. JAYACHANDRAN

Assistant Professor
Department of Bioinformatics
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Dr. A. JOSEPH THATHEYUS

Head PG
Department of Microbiology
Former Head & Associate Professor
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