



Dr.K.S.JAYACHANDRAN

Assistant Professor

Contact

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Academic Qualifications: M.Sc., M.Phil., Ph.D.,

Degree	Subject	Year	University
B.Sc.	Biochemistry	1997	University of Madras
M.Sc.	Biochemistry	2000	University of Madras
M.Phil.	Biochemistry	2005	University of Madras
Ph.D.	Biochemistry	2010	University of Madras

Teaching Experience: 12 Years

Research Experience: 17 Years

AdditionalResponsibilities

1. Department coordinator for NAAC,BDU
2. Department coordinator for Placement Training Cell, BDU

AreasofResearch

Drug Discovery andMolecular Cardiology

ResearchSupervision/Guidance

ProgramofStudy		Completed	Ongoing
Research	Ph.D.	2	2
	M.Phil.	1	--
Project	PG	18	0

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs/ Manuals
15	4	--	3	1

Cumulative Impact Factor (asperJCR):	21.5
h-index	: 8
i10index	: 8
TotalCitations	: 371

FundedResearchProjects

Completed Projects

ROLE	FUNDING AGENCY	TITLE OF THE MAJOR RESEARCH PROJECT	DURATION	STATUS
PI	DBT	Dietary supplement of Crataegus Oxycantha extract as potential therapeutics against high fat induced inflammatory response and associated cardio vascular diseases	2013-2016 40.372 Lakhs	Completed
PI	DST-SERB	Elucidating the adverse effects of Presenilin-2(PS2) mediated downstream signaling and Ca ²⁺ imbalance during myocardial infarction. effective therapeutic strategy by Crataegus oxycantha (COC) extract in experimental ischemia/ reperfusion (I/R)Induced rat	2016-2018 11 Lakhs	Completed
Co-PI	ICMR	Experimental study on the effect of intermittent hypoxia on neurogenesis mediated recovery after transient focal cerebral ischemic stroke in the limbic system and cortex of experimental rodents: a non-invasive attempt for brain regeneration and	2019-2022 52 Lakhs	On-going
PI	TANSCHE	Possible link between calcium overload and presenilin 2 over expression in Ischemia-reperfusion induced injury. At attempt to expose the hidden Iceberg behind Myocardial Arrhythmia/stunning	2019 (48 Lakhs)	Submitted
PI	RUSA	Understanding the mechanism of Ca ²⁺ overload during Post Myocardial Infarction and the role of Presenilin2.	2019 (49 Lakhs)	Submitted

Patent

Dr.K. S. Jayachandran (2019)Novel Animal Model to Precisely Imitate Human Myocardial Infarction. File Number 201941007841

EventsParticipated

OtherTrainingPrograms

1. UndergoneatrainingcourseonCURRENTREGULATIONS,HANDLING,BREEDING,MAINTENANCEANDTECHNIQUESINLABORATORYANIMALEXPERIMENTSinNationalCentreforLaboratoryAnimalSciences,2014,NationalInstituteof Nutrition,Hyderabad.

Overseas Exposure/Visits

1. Visited France for AD/PD 2015: International conference on Alzheimer's and Parkinson's Diseases to present poster.
2. Visited Malaysia for checking the possibilities for collaborative research in Department of orthopaedics, University of Malaya.

Membership in

Academic Bodies

1. Member-Board of studies, Department of Bioinformatics, Bharathidasan University
2. Member-Board of studies, School of Lifesciences, Bharathidasan University
3. Member-Board of studies, Department of Bioinformatics, Bishop Heber College

4. Member–
Board of studies, Department of Biotechnology, Dhana Lakshmi Srinivasan Arts and Science College for Women
5. Member–Board of studies, Periyar University, Salem.

Resource persons in various capacities

Number of Invited/Special Lectures delivered: 11

Others

Sequences submitted in GenBank: 08

Recent Publications

1. Roshan SA, Gunaseelan D, Benazsir S, Pandian N, **Jayachandran S**, Kandasamy M, Muthusamy A. Acute Intermittent Hypoxia Therapy alters Cognitive Behavioral Parameters in Wistar Albino Rats. *Int. J. Pharm. Sci. Drug Res.* 2023;15(5):632-637. DOI: 10.25004/IJPSDR.2023.15051
2. Roshan, S. A., Elangovan, G., Gunaseelan, D., **Jayachandran, S. K.**, Kandasamy, M., & Anusuyadevi, M. (2023). Pathogenomic Signature and Aberrant Neurogenic Events in Experimental Cerebral Ischemic Stroke: A Neurotranscriptomic-Based Implication for Dementia. *Journal of Alzheimer's Disease*, 1-20.(2023): (IF.4.106)
3. Surya Kumar, Manickam N, **Jayachandran KS**, Kandasamy M, Anusuyadevi M. Resveratrol Mediated Regulation of Hippocampal Neuroregenerative Plasticity via SIRT1 Pathway in Synergy with Wnt Signaling: Neurotherapeutic Implications to Mitigate Memory Loss in Alzheimer's Disease . *Journal of Alzheimer's Disease* (2022) (IF.4.106): 2021
4. Divya Dasagrandhi, Anusuyadevi Muthuswamy, **Jayachandran Kesavan Swaminathan**. Atherosclerosis: nexus of vascular dynamics and cellular cross talks. *Molecular and Cellular Biochemistry* (2021). (IF – 3.396)
5. **Swaminathan K. Jayachandran**, Muthuswamy Anusuyadevi, Musthafa Mohamed Essa, Walid Qoronfleh. Decoding information on COVID-19: An Ontological approach towards design of possible therapeutics. *Journal of Informatics in Medicine Unlocked* (2020). (IF: 2.10)
6. Arul salomee kamalabai Ravindran, Sivaramakrishnan Venkatabalasubramanian, Ranjani Manickam, Muthuswamy Anusuyadevi, Swaminathan **K Jayachandran**. Plausible computational insights and new atomic-level perspective of Epicatechin Gallate from *Cratagus oxycantha* extract in preventing Caspase 3 activation in conditions like post- Myocardial Infarction. *Journal of Biomolecular Structure & Dynamics* (2020). (IF: 3.22)
7. Arul salomee kamalabai Ravindran, Muthuswamy Anusuyadevi and **Swaminathan K. Jayachandran**. 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 (2020)

8. Mini ML, Sathya M, Essa MM, Al-Saadi AM, **Jayachandran KS**, Anusuyadevi M. Identification of salt-tolerant cowpea genotypes using ISSR markers and proteome analysis *Frontiers in bioscience (Elite edition)* 2019. 11, 130-149. (IF: 2.34)
9. Karthick C, Nithiyanandan S, Essa MM, Guillemain GJ, **Jayachandran SK**, Anusuyadevi M, Time-dependent effect of oligomeric amyloid- β (1-42)-induced hippocampal neurodegeneration in rat model of Alzheimer's disease. *Neurol Res.* 2018 Nov 19:1-12. doi: 10.1080/01616412.2018.1544745. (IF: 1.96)
10. Divya Dasagrandhi, Arul Salomee Kamalabai R, Anusuyadevi Muthuswamy, AngelaMarieLennox, Tamilselvan Jayavelu, Vasudharani Devanathan, **Jayachandran K esavan Swaminathan**. Ischemia/reperfusion injury in male guinea pigs: Anefficient model to investigate myocardial damage in cardiovascular complications. *Biomedicine & Pharmacotherapy* 20, February 2018
11. Sathya, M., Gobinath, T., Salomy, A., Nisha, M., Kandasamy, M., Essa, M. M., **Jayachandran, K. S.**, Anusuyadevi, M. Biophysical interaction of resveratrol with sirtuin pathway: Significance in Alzheimer's disease. *Frontiers In Bioscience, Landmark*, 23, 1380-1390, March 1, 2018
12. Divya, D., Arul Salomee, K. R., Anusuyadevi, M., **Jayachandran, K. S.** "HMGB1: A Therapeutic Target for Myocardial Infarction." *Cardiovasc Ther* 7, no. 5 (2017): 555-724.
13. Periyasamy, S., Sathya, M., Karthick, C., Kandasamy, M., Shanmugaapriya, S., Tamilselvan, J., **Jayachandran, K. S.**, Anusuyadevi, M. Association studies of specific Cholesterol related genes (APOE, LPL, and CETP) with Lipid profile and memory function: A correlative study among Rural and Tribal Population of Dharmapuri District, India. *J Alzheimers Dis.* 2017 (doi: 10.3233/JAD-170272).
14. Sathya, M., Moorthi, P., Premkumar, P., Kandasamy, M., **Jayachandran, K. S.**, Anusuyadevi, M. Resveratrol intervenes cholesterol and isoprenoids mediated amyloidogenic processing of A β PP in Familial Alzheimer's disease. *Journal of Alzheimer's Disease* reprint (2016): 1-22.
15. Karthick, C., Periyasamy, S., **Jayachandran, K. S.**, Anusuyadevi, M. Intrahippocampal Administration of Ibotenic Acid Induced Cholinergic Dysfunction via NR2A/NR2B Expression: Implications of Resveratrol against Alzheimer Disease Pathophysiology. *Front Mol Neurosci* 2016, 9:28.
16. Moorthi, P., Premkumar, P., Priyanka, R., **Jayachandran, K. S.**, Anusuyadevi, M. Pathological changes in hippocampal neuronal circuits underlie age-associated neurodegeneration and memory loss: Positive clue toward SAD. *Neuroscience.* 2015 Jun 1; 301:90-105.
17. DNA Barcoding of *Crataegus oxycantha* collected from Western Himalayas. Divya

D,SureshU,AnusuyadeviM,**JayachandranKS**.(SubmittedtoNCBIforsequencesubmission)

18. BACE1 in Alzheimer's disease. Sathya M, Premkumar P, Karthick C, Moorthi P, **Jayachandran KS**, Anusuyadevi M. Clin Chim Acta. 2012; 24; 414: 171-8
19. Homology modeling, molecular docking and electrostatic potential analysis of MurFligase from Klebsiella pneumonia. Sivaramakrishnan V, Thiyagarajan C, Kalaivanan S, Selvakumar R, Anusuyadevi M, Jayachandran KS. Bioinformation. 2012; 8(10): 466-73
20. Tiruchenduran M, Naveen AV, **Jayachandran KS**, Niranjali S. Devaraj. Protective effect of grape seed proanthocyanidin (GSD) against cholesterol-cholic acid diet induced hypercholesterolemia in rats. Cardiovascular pathology. 2011, 20(6): 361-8
21. **Jayachandran K Swaminathan**, Mahmood Khan, Karuppaiyah Selvendiran, Niranjali Devaraj, Periannan Kuppusamy. Crataegus oxycantha extract reduces apoptotic incidence in an experimental myocardial ischemia/reperfusion model by regulation of Akt and HIF-1 signaling pathways. Journal of Pharmacology and Experimental Therapeutics. J Cardiovasc Pharmacol. 2010 Nov; 56(5): 526-31
22. **Jayachandran K Swaminathan**, Mahmood Khan, Iyappu K Mohan, Karuppaiyah Selvendiran, Niranjali Devaraj, Brian K Rivera, Periannan Kuppusamy. Cardioprotective properties of Crataegus oxycantha extract against ischemia-reperfusion injury. Phytomedicine 2010; 17(10): 744-52.
23. Elango C, **Jayachandran KS**, Niranjali Devaraj S. Hawthorn extract reduces infarct volume and improves neurological score by reducing oxidative stress in rat brain following middle cerebral artery occlusion. Int J Dev Neurosci. 2009 Dec; 27(8): 799-803. Epub 2009 Aug 25