



Dr. J. JEYAKANTHAN
Professor and Head

Contact

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Academic Qualifications:

Year of Passing	Degree	University / Institute
2000	Ph.D. Crystallography and Biophysics	University of Madras
1995	M. Phil. Physics	M. K. University
1993	M.Sc. Physics	M. K. University
1991	B.Ed.	University of Madras
1999	P.G.D.C.A	MIT, Anna University

Teaching Experience: 8 Years

Position	Institute/University	Period
Professor and Head	Department of Bioinformatics	March 2010 – till date

Research Experience: 21 Years

Position	Institute/University	Period
Professor and Head	Department of Bioinformatics	March 2010 – till date
Research Scientist	SPring-8, Japan	May 2007 – March 2010

Researcher	RIKEN Harima Institute, SPring-8, Japan	June 2003 – May 2007
PDF	Indian Institute of Science, Bangalore	January 2000 – May 2003
CSIR SRF-JRF	University of Madras, Chennai	June 1995 – December 1999

Additional Responsibilities

1. 2018 - * : Member, Finance Committee
2. 2018 - * : Member, Sports Advisory Board
3. 2018 - * : Coordinator, Tamil Nadu State University Rating Framework (TANSURF).
4. 2017 - * : Nodal Officer, National Institutional Ranking Framework (NIRF).
5. 2017 - * : Coordinator, DST-PURSE (Phase-II).
6. 2017 - * : Coordinator, DST-FIST (Level-I).
7. 2016 - * : Member of Syndicate (Governor-Chancellor Nominee).
8. 2016 - * : Member, Research Advisory Committee (RAC).
9. 2015 - * : Chairperson, School of Biological Sciences.
10. 2010 - * : Member of Senate.
11. 2010 - * : Member, Website Maintenance Committee.
12. 2010 - * : Chairman, Board of Studies of Bioinformatics.

Completed:

1. 2015 - 17: Director, Directorate of Collaborative Programmes.
2. 2012 - 16: Director, Centre for International Relations.
3. 2012 - 15: Member, Research Advisory Committee.
4. 2012 - 13: Coordinator, Career Guidance and Counselling Cell.
5. 2010 - 15: Member, Internal Quality Assurance Cell (IQAC).

Areas of Research

Broad subject : Structural Biology and Bio-Computing

Area of Specialization : Small and Macro Molecule X-ray Crystallography

Current Research focus

- **Structural and Functional studies on vital drug targets**
 - ❖ Proteins from *Thermus thermophilus* HB8, *Pyrococcus horikoshii* OT3, *Aquifex aelicous* VF5, *Mycobacterium tuberculosis* and *Brugia malayi*.
 - ❖ Proteins responsible for *Dengue*, *Chikungunya*, Cancer, Diabetes, etc.,
- **Development of Tools and databases**
 - ❖ Web based search engines for analyzing macromolecular interactions

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	03	10
	M.Phil.	06	-
Project	PG	16	-
	UG / Others	02	02

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
114	84	01	103	01

Cumulative Impact Factor (as per JCR) :	298.9
h-index :	15
i10 index :	28
Total Citations :	1016

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	DBT	2012	2015	Structural and Functional Analysisfrom <i>Thermus thermophilus</i> HB8	50.25
2	UGC	2012	2015	Structural and Functional Protein from <i>Pyrococcus horikoshii</i> OT3	12.90
3	DBT	2012	2015	Structure Determination of and Identification of Potential Inhibitors	32.16
4	DBT	2013	2016	Structural and Functional <i>Pyrococcus horikoshii</i> OT3	77.00
5	DST	2013	2016	Structural and Functional Studies from <i>Pyrococcus horikoshii</i> OT3	48.98
6	UGC	2016	2018	Structural and Functional Stat2 Protein From <i>Homo Sapiens</i>	37.80
7	DBT	2015	2018	Development of Web Based Fatty acids and Buffers	13.81

Ongoing Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	DAE-BRNS	2018	2021	Design, Synthesis and <i>in vitro</i>activated kinase	30.33
2	ICMR	2017	2020	Structural insights of SIRT... from <i>Homo sapiens</i> ...diabetes	33.34
3	DST	2016	2019	Identification of potential antifilarial drug <i>Brugia malayi</i>	69.38

Consultancy Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	University/Institution	2012	2018	Computer Aided Drug Design	0.80

Others

S. No	Agency	Period		Scheme/Research Support	Budget (Rs. In lakhs)
		From	To		
1	DST	2017	2021	FIST (Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions) Level - I	62.00
2	UGC	2013	2018	Innovative Programme - PG Diploma in Structural Pharmacogenomics (Post M.Sc. - One year Course)	54.00 + 2AP*

* Two Assistant Professors

Distinctive Achievements / Awards

1. UGC Research Award (2016)
2. Fellow of Academy of Sciences, Chennai (2015)
3. Post Doctoral Fellowship – DST, DBT and IRPHA (2000-2003)
4. IUCr Young Scientist (1999)
5. Young Scientist Travel Award by DST and UNESCO (1999)
6. Research Fellow award by CSIR (1997)

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 14

1. 10th National Symposium cum Workshop on Recent Trends in Structural Bioinformatics

- and Computer Aided Drug Design (SBCADD'2018), Feb. 20th-23rd, 2018, Alagappa University, Karaikudi, Tamil Nadu, India.
2. 9th National Symposium cum Workshop on Recent Trends in Structural Bioinformatics and Computer Aided Drug Design (SBCADD'2017), Feb. 14th-17th, 2017, Alagappa University, Karaikudi, Tamil Nadu, India.
 3. World Habitat Day, Oct. 03rd, 2016, Alagappa University, Karaikudi, Tamil Nadu, India.
 4. Three day Workshop on Advanced Computer Aided Drug Design, Aug. 29th – 31st, 2016, Alagappa University, Karaikudi, Tamil Nadu, India.
 5. International Conference on Recent Trends in Biosciences-2016 (ICRTB-2016), Apr. 07th - 09th, 2016, Alagappa University, Karaikudi, Tamil Nadu, India.
 6. 8th National Symposium cum Workshop on Recent Trends in Structural Bioinformatics and Computer Aided Drug Design (SBCADD'2016), Feb. 16th-19th, 2016, Alagappa University, Karaikudi, Tamil Nadu, India.
 7. World Habitat Day, Oct. 15th, 2015, Alagappa University, Karaikudi, Tamil Nadu, India.
 8. 7th National Symposium cum Workshop on Recent Trends in Structural Bioinformatics and Computer Aided Drug Design (SBCADD'2015), Feb. 24th-27th, 2015, Alagappa University, Karaikudi, Tamil Nadu, India.
 9. World Creativity Day, Apr. 21st, 2014, Alagappa University, Karaikudi, Tamil Nadu, India.
 10. 6th National Symposium cum Workshop on Recent Trends in Structural Bioinformatics and Computer Aided Drug Design (SBCADD'2014), Feb. 18th-21st, 2014, Alagappa University, Karaikudi, Tamil Nadu, India.
 11. 5th National Symposium cum Workshop on Recent Trends in Structural Bioinformatics and Computer Aided Drug Design (SBCADD'2013), Feb. 19th-22nd, 2013, Alagappa University, Karaikudi, Tamil Nadu, India.
 12. 4th National Symposium cum Workshop on Recent Trends in Structural Bioinformatics and Computer Aided Drug Design (SBCADD'2012), Feb. 20th-23rd, 2012, Alagappa University, Karaikudi, Tamil Nadu, India.

13. National Youth day, Jan. 12th, 2012, Alagappa University, Karaikudi, Tamil Nadu, India.

14. 3rd National Symposium cum Workshop on Recent Trends in Structural Bioinformatics and Computer Aided Drug Design (SBCADD'2010), Dec. 20th-22nd, 2010, Alagappa University, Karaikudi, Tamil Nadu, India.

Events Participated

Conferences / Seminars / Workshops: 88

Overseas Exposure / Visits

- National Synchrotron Radiation Research Centre, Taiwan 05th -09th December, 2017
- Osaka University and RIKEN SPring-8, Japan 22nd -30th June, 2014
- Osaka University and RIKEN SPring-8, Japan 02nd -08th December, 2012
- Osaka University and RIKEN SPring-8, Japan 09th -16th December, 2011
- Osaka University and RIKEN SPring-8, Japan 22nd March- 30th May, 2010

Membership in

Professional Bodies

1. Vice-President, Bioinformatics and Drug Discovery Society (BIDDS)
2. Fellow of the Academy of Sciences, Chennai (FASCh.)
3. Member in American Crystallographic Association
4. Member in British Crystallographic Association
5. Life member in Indian Crystallographic Association
6. Member in the World Directory of Crystallographers
7. Life Member, Indian Science Congress Association

Advisory Board

National Committee

2015 - * : UGC Nominee, SAP DSA-I program promotion in Biophysics Department, Punjab University.

Academic Bodies in Other Institutes/ Universities

1.	2018 - *	:	Member, Board of Studies in Environmental Biotechnology, Bharathidasan University, Trichy
2.	2018 - *	:	Member, Research Committee, Bharathidasan University, Trichy
3.	2018 - *	:	Member, Board of Studies in Bioinformatics, Bharathiar University, Coimbatore
4.	2017 - *	:	Member, Academic Council, Thassim Beevi Abdul Kader College for Women, Ramanathapuram
5.	2015 - *	:	Member, Board of Studies in Bioinformatics and Information Technology, Thiruvalluvar University, Vellore.
6.	2014 - *	:	Member, Board of Studies in Faculty of Bio and Chemical Engineering, Sathyabama University, Chennai.

Academic Bodies Completed

1.	2015 - *	:	Member, Standing Committee on Academic Affairs, Bharathidasan University, Trichy.
2.	2015 - *	:	Chairman, Board of Studies in Bioinformatics (UG, PG & PG Diploma), Bharathidasan University, Trichy.
3.	2015 - 17	:	Member, Board of Studies in Bioinformatics, Bharathiar University, Coimbatore.
4.	2013 - 16	:	Bharathidasan University Representative, Board of Studies of Bioinformatics, Holy Cross College, Trichy.
5.	2012 - 15	:	Member, Board of Studies of Bioinformatics, Periyar University, Salem
6.	2012 - 15	:	Member, Board of Studies of Physics, V.H.N.S.N. College, Virudhunagar.

Resource persons in various capacities

Number of Invited / Special Lectures delivered: 43

Others

1. No. of PhD Thesis evaluated : 31
2. No. of PhD Public Viva Voce Examination conducted : 13

Recent Publications

1. Santosh Kumar Chaudhary, Yuvaraj Iyyappan, Mohanapriya Elayappan, **Jeyakanthan Jeyaraman** and K. Sekar., Insights into product release dynamics through structural analyses of Thymidylate kinase, *International Journal of Biological Macromolecules*, 2018. (IF: 3.9)

2. Boobalan T, Mohan Rasu K, Arumugam N, Saravanan S, Jothi Basu M, **Jeyakanthan J**, Arun A. Studies on the diversity of macrofungus in Kodaikanal region of Western Ghats, Tamil Nadu, India. *Biodiversitas*, 19 (6), 2283-2293, 2018.
3. Langeswaran K, **Jeyakanthan J**, Biswas A, Gowtham KS and Santhoshkumar S. Identification of potential inhibitors for Penicillin binding protein (PBP) from *Staphylococcus aureus*. *Bioinformation* 14(9): 471-476, 2018.
4. Mutharasappan Nachiappan, Vitul Jain, Amit Sharma, Manickam Yogavel, **Jeyaraman Jeyakanthan**. Structural and functional analysis of Glutaminyl-tRNA synthetase (TtGlnRS) from *Thermus thermophilus* HB8 and its complexes, *International Journal of Biological Macromolecules*, 120;1379-1386, 2018. (IF: 3.9)
5. Sindhu T, Venkatesan T, Prabhu D, **Jeyaraman Jeyakanthan**, Gandhi R. Gracy, Sushil Kumar Jalali, Anil Rai. Insecticide-resistance mechanism of *Plutella xylostella* (L.) associated with amino acid substitutions in acetylcholinesterase-1: a molecular docking and molecular dynamics investigation, *Computational Biology and Chemistry*, 77:240-250, 2018. (IF: 1.4)
6. Raghu R, Ravi M, Vinod D, Leena K, Battula Suneel Kumar, Baby Rani, **Jeyaraman Jeyakanthan**. Receptor based Pharmacophore modeling and Virtual Screening Aurora Kinase Inhibitors, *J Mol Graph Model.*, 2018. (IF: 1.8)
7. Sanjay K Choubey, **Jeyaraman Jeyakanthan**. Molecular dynamics and Quantum chemistry based approaches to identify isoform selective HDAC2 inhibitor – A novel target to prevent Alzheimer's disease, *J. Recept. Signal Transduct. Res.* 2018 (IF: 2.2)
8. Kulanthaivel Langeswaran, **Jeyakanthan Jeyaraman**, Richard Mariadasse, Saravanan Soorangkattan. Insights from the Molecular modeling, docking analysis of illicit drugs and Bomb Compounds with Honey Bee Odorant Binding Proteins (OBPs), *Bioinformation* 14(5): 219-231, 2018.
9. Janu Sahana J, Sriraghav Srinivasan, Vijeth T A, Nagarushyanth Tummala, Santhosh Rajendran, Daliah Michael, Sameer Ahmed Z, Nisha K P R, **Jeyakanthan Jeyaraman** and K. Sekar. PlaneFinder: A methodology to find the best plane for a set of atoms involved in the metal coordination in the protein structures. *Journal of Applied Crystallography*, 2018. (IF: 3.4)
10. Santosh Kumar Chaudhary, **Jeyaraman Jeyakanthan** and Kanagaraj Sekar. Structural and functional roles of dynamically correlated residues in thymidylate kinase. *Acta Cryst. D*, 2018. (IF: 2.11)

11. Amala. M, Rajamanikandan. S, Prabhu. D, Surekha, K, **Jeyakanthan. J**. Identification of Antifilarial leads against Aspartate semialdehyde Dehydrogenase of Wolbachia endosymbiont of *Brugia malayi*: Combined Molecular Docking and Molecular Dynamics Approaches. *J Biomol Struct Dyn*. Feb 6:1-18, 2018. **(IF: 3.12)**
12. P. Boomi, J. Anandha Raj, S.P. Palaniappan, G. Poorani, S. Selvam, H. Gurumallesh Prabu, P. Manisankar, **J. Jeyakanthan**, V.K. Langeswaran. Improved conductivity and antibacterial activity of poly(2-aminothiophenol)-silver nanocomposite against human pathogens. *J Photochem Photobiol B*. 178, 323-329, 2018. **(IF: 2.67)**
13. M. Maniyazagan, R. Mariadasse, **J. Jeyakanthan**, N.K. Lokanath, S. Naveen, K. Premkumar, P. Muthuraja, P. Manisankar, T. Stalin. Rhodamine based “turn-on” molecular switch FRET-sensor for cadmium and sulfide ions and live cell imaging study. *Sens Actuators B Chem.*, 238, 565-577, 2017 **(IF: 4.75)**.
14. Ansuman Biswas, Arpit Shukla, R. S. K. Vijayan, Jeyaraman Jeyakanthan and K. Sekar. Crystal structures of an archaeal Thymidylate kinase from *Sulfolobus tokodaii* provide insights into the role of a conserved active site Arginine residue. *J Struct Biol.*, 2017 **(IF: 3.12)**
15. M. Maniyazagana, C. Rameshwaran, R. Mariadasse, J. Jeyaraman, K. Premkumar, T. Stalin. Fluorescence Sensor for Hg^{2+} and Fe^{3+} ions using 3,3'-Dihydroxybenzidine: α -Cyclodextrin Supramolecular Complex: Characterization, in-silico and Cell Imaging Study. *Sens Actuators B Chem.*, 2017, **(IF: 4.75)**.
16. Choubey SK, Prabhu D, Nachiappan M, Biswal J, **Jeyakanthan J**. Molecular modeling, dynamics studies and density functional theory approaches to identify potential inhibitors of SIRT4 protein from *Homo sapiens*: a novel target for the treatment of type 2 diabetes. *J Biomol Struct Dyn*. Nov 18:1-14, 2016, **(IF: 2.91)**.
17. Ansuman Biswas, Subbarao Jasti, **J. Jeyakanthan** and K. Sekar. Role of sequence evolution and conformational dynamics in the substrate specificity and oligomerization mode of thymidylate kinases. *J Biomol Struct Dyn*. Jul 27:1-19 2016, **(IF: 2.91)**.
18. Guru Raj Rao R, Biswal J, Prabhu D, Sureka K, **Jeyakanthan J**. Identification of Potential Inhibitors for AIRS from de novo purine biosynthesis pathway through Molecular modeling Studies - A Computational approach. *J Biomol Struct Dyn*. 34 (10), 2199-213, 2016, **(IF: 2.91)**.

19. D Sasikala, **J Jeyakanthan**, P Srinivasan. Structural insights on identification of potential lead compounds targeting WbpP in *Vibrio vulnificus* through structure-based approaches. *J Recept Signal Transduct Res.* Oct 36 (5), 515-30, 2016, **(IF: 2.27)**.
20. S. Jagadeeshan, A. Subramanian, S. Tentu, S. Beesetti, M. Singhal, S. Raghavan, R. P. Surabhi, J. Mavuluri, H. Bhoopalan, J. Biswal, R. S. Pitani, S. Chidambaram, S. Sundaram, R. Malathi, **J. Jayaraman**, A. S. Nair, G. Venkatraman, and S. K. Rayala. p21 activated kinase 1 (Pak1) signaling influences therapeutic outcome in pancreatic cancer. *Ann Oncol.* 27(8):1546-56, 2016, **(IF: 9.26)**.
21. R. Santhosh, S.N. Satheesh, M. Gurusaran, Daliah Michael, K. Sekar and **J. Jeyakanthan**. NIMS: A database on Nucleobase compounds and their Interactions in Macromolecular Structures. *J Appl Crystallogr.*, 49, PP:1093-1098, 2016, **(IF: 3.98)**.
22. Surekha K, Prabhu D, Richard M, Nachiappan M, Biswal J, **Jeyakanthan J**. Investigation of vital pathogenic target orotate phosphoribosyltransferases (OPRTase) from *Thermus thermophilus* HB8: Phylogenetic and molecular modeling approach. *Gene.* 583(2):102-11, 2016 **(IF: 2.31)**.
23. Gowri M, Beaula WS, Biswal J, Prabhu D, Saiharish R, Rohanprasad S, Pitani R, Kandaswamy D, Raghunathan R, **Jeyakanthan J**, Rayala SK, Ganesh V. β -lactam substituted polycyclic fused pyrrolidine/pyrrolizidine derivatives eradicate *C. albicans* in an ex vivo human dentinal tubule model by inhibiting sterol 14- α demethylase and cAMP pathway. *Biochim Biophys Acta.* 1860(4). pp:636-647. 2016, **(IF: 5.08)**.
24. Ravi M, Tentu S, Baskar G, Rohan Prasad S, Raghavan S, Jayaprakash P, **Jeyakanthan J**, Rayala SK, Venkatraman G. Molecular mechanism of anti-cancer activity of phycocyanin in triple-negative breast cancer cells. *BMC Cancer.* 15(1) PP: 768. 2015, **(IF: 3.26)**.