

Curriculum Vitae
Dr. R. MURUGESAN

Director – Allied Health Sciences
Chettinad Academy of Research & Education
Kelambakkam, Chennai 603 103



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EDUCATION

Ph. D	Chemistry	“EPR studies on some Cu(II) and Mn (II) Complexes: Probe into the Structure and Bonding in Crystalline Environments”, Regional Sophisticated Instrumentation Center, IIT, Madras	1981
M. Sc	Chemistry	Madurai Kamaraj University	1971
B. Sc	Chemistry	Madurai Kamaraj University	1969
Certificate Course	Microprocessors & their applications	Bruce Institute of Technical and Further Education, Canberra, Australia	1984

PROFESSIONAL EXPERIENCE

Since 2008	Emeritus Professor, Networking Resource Centre in Biological Sciences, Madurai Kamaraj University
2007 - 2008	Senior Professor, Department of Physical Chemistry, Madurai Kamaraj University
1997 - 2007	Professor, Department of Physical Chemistry, Madurai Kamaraj University
1990 - 1997	Reader, Department of Physical chemistry, Madurai Kamaraj University
1973 - 1990	Assistant Professor, Department of PG Chemistry, VHNSN College, Virudhunagar
1971 to 1973	Demonstrator, Department of PG Chemistry, VHNSN College, Virudhunagar

ADMINISTRATIVE EXPERIENCE

3-Years (2002-2004)	DEAN (Academic: Teaching & Computerization) Madurai Kamaraj University
3-Years (2002-2004)	Coordinator, Choice Based Credit System (CBCS), Madurai Kamaraj University
3-Years (1998-2000)	Head, MCA Programme & Computer Center, Madurai Kamaraj University
3-Years (1998-2000)	Placement Coordinator, MCA Programme, Madurai Kamaraj University
Dec1986 to Dec 1990	Head-in-Charge, Faculty of Computer Science, VHNSN College, Virudhunagar

HONORS AND AWARDS

- B.Sc Gold Medalist, St. Xavier's College, Palayamkottai, 1969
- M.Sc University first rank, Bagthavathchalam memorial prize, Madurai Kamaraj University, 1971
- National trainee award, National Biomedical ESR Center, Milwaukee, Wisconsin, USA, 1984
- Visiting Scientist, National Cancer Institute, USA 2001
- Visiting Professor, Kyushu University, Dec 2005 -Feb 2006
- Member, Expert Committee, Commonwealth Academic Staff Fellowship selection for the year 2005, University Grants Commission, New Delhi, December 2004
- Member, Expert Committee, Evaluation and Research Funding Council – Major and Minor Research Projects, University Grants Commission, New Delhi, August 2004
- Member, Expert Committee, Evaluation and Research Funding Council – Major and minor research projects, University Grants Commission, New Delhi, July 2005

VISITS ABROAD

(Visiting Scientist/ Professor, Collaborative Research, Conference – Annexure – I for details)

USA	14
Japan	8
Australia	1
Italy	1
The Netherlands	1

PROFESSIONAL SERVICES

University/ State Services:

- Member, External Expert Inspection Team, Computer Education Project, Electronics Corporation of Tamilnadu Limited, July 2000
- Member, Subject Expert, Selection Committee, Mother Teresa Women's University, Kodaikanal, October 2000
- Member, Expert Committee, Computerization, Arulmigu Thandayuthapani Swami Thirukovil, Palani, 2005
- Member, Subject Expert, Selection Committee, Bharathiar University, Coimabatore, January 2005
- Member, Academic Advisory Committee, Academic Staff College, University of Madras, Chennai, 2003-2005
- Member, Subject Expert, Selection Committee, Kerala University, Trivandrum, Nov 2007
- University Representative: VVV College, Virudhunagar; NS College, Theni; SBK College, Aruppukottai

Novel Courses Developed and Taught:

- Involved in the curriculum design and teaching of nanotechnology-based "Advanced Drug Delivery Systems" for M.Tech. in nanotechnology
- Designed and taught a Short-term course on "Introduction to In Silico Drug Discovery", to the Postgraduate and doctoral students of Faculty of Pharmaceutical Sciences, Kyushu University, Japan
- Involved in the design of the course "Molecular Informatics and Drug Design"
- Developed curriculum and taught the following Interdisciplinary Courses
 - Biophysical Spectroscopy
 - Computers in Chemistry
 - Proteomics and Bioinformatics
- Delivered special lectures on frontier and emerging areas of Biomedical EPR spectroscopy and Imaging, Multidimensional NMR and MRI, Cheminformatics, Molecular Modeling, In Silico Drug design, Soft Computing in Medical Image Processing in Refresher Courses and Summer Schools conducted by MG University, University of Kerala, University of Calicut, Cochin University of Science and Technology, University of Mysore, Shimoga University, Mangalore University, Pondicherry University in addition to the Universities and Colleges in Tamil Nadu

Board of Studies/Academic Committee Services:

- Member, Board of studies in M.Tech. Green energy technology, Pondicherry University
- Member Invitee, Board of studies in M.Tech. Nanotechnology, Karunya University, Coimbatore
- Chairman Board of Studies in Computer Science, Madurai Kamaraj University, Madurai
- Member, Board of Studies in Chemistry: Pondicherry University, M.S. University, Mother Teresa Women's University, Lady Doak college, The American College, Thiagarajar College, Fatima College, ANJAC College
- Member, Board of Studies in Computer Science and Information Technology: Bishop Heber College, The American College, Thiagarajar College, Lady Doak college, AJ College
- Member Academic Council: The American College, Thiagarajar College, Lady Doak college, AJ College
- Member, BRI Advisory Board, BioSciences Research Institute, India
- Member, Academic Audit Committee, SFR College, Sivakasi

RESEARCH PROFILE

Research Interests

- Medical Image Reconstruction, Artificial Intelligence in Medicine,
- EPR Imaging, Contrast agents for NMR, EPR-Instrumentation,
- Biological Applications of Magnetic Resonance,
- Biophysical Chemistry, Photodynamic Therapy, Cheminformatics and Drug design

Collaborative Research

- National Cancer Institute, NIH, USA
- Dept of Bio-Function studies, Faculty of Pharmaceutical Sciences, Kyushu University, Japan

Patents

No. of Patents **5** (World 1 + US 4)

P-1: "System and Method For Performing In-Vivo Imaging and Oxymetry and FT Microscopy By Pulsed Radiofrequency Electron Paramagnetic Resonance", **Ramachandran**

- Murugesan**, Rolf Tschudin, Sankaran Subramanian, James Mitchell, Murali Cherukuri Krishna, US Patent No. 5,678,548, Oct 21, 1997.
- P-2: "System and method for performing in vivo imaging and oxymetry and FT microscopy by pulsed radiofrequency electron paramagnetic resonance", **Ramachandran Murugesan**, Murali K. Cherukuri James B. Mitchell, Sankaran Subramanian Rolf G. Tschudin, WO 97/04331 Feb. 6, 1997.
- P-3: "Gated RF Preamplifier for use in pulsed Radiofrequency electron paramagnetic resonance and MRI", Rolf Tschudin, **Ramachandran Murugesan**, Sankaran Subramanian, James Mitchell, Murali Cherukuri Krishna, US patent No: 5,828,216, Oct 27, 1998.
- P-4: "Invivo imaging and oxymetry by pulsed radio frequency paramagnetic resonance", **Ramachandran Murugesan**, Murali K. Cherukuri James B. Mitchell, Sankaran Subramanian, Rolf G. Tschudin, US patent No. 5, 865, 746, Feb.2, 1999.
- P-5: "Resonant structure for spatial and spectral-spatial imaging of free radical spin probes using radiofrequency time domain electron paramagnetic resonance", N. Devasahayam, **Ramachandran Murugesan**, S. Subramanian J. Mitchell, M.C. Krishna, US Patent Application Serial No, 60/047, 786 filed on May 27, 1997

Sponsored Research Projects:

1.	IR & NMR study of structure reactivity correlation in polynuclear aromatics	DST (Rs.4,30,000/-) completed	Co- investigator
2.	Electron transfer in mixed valence heteropoly anions	UGC (Rs.1,20,000/-) completed	Principal Investigator
3.	Photoselection, Transient EPR and CIDNP studies of purpurins: Second generation photosensitizers for Photodynamic therapy	DST (Rs. 6,21,710/-) completed	Principal Investigator
4.	A modular radiofrequency electron	DST (Rs. 64,93,000/-)	Principal Investigator

	paramagnetic resonance spectrometer / imager – for in vivo applications	Project completed	
5.	Development of Diagnostic imaging and therapeutic technology	UGC (Under Centre for Excellence in Genomic Sciences Program) – Completed	Principal Investigator
6.	Nanoengineered encapsulated-Q Dots for in vivo imaging, diagnostics, drug delivery and therapy	UGC-UPE (Under University with Potential for Excellence program) – Ongoing	Principal Investigator

Sponsored Workshop/Seminar/Meetings:

1.	All India Summer School on Digital Electronics and Microcomputers in Chemistry	DST (Rs. 93,620/-)	Director
2.	PAC Meeting on Physical Chemistry	DST (Rs. 7,40,000/-)	Organizer

Research Guidance:

Ph. D (Annexure – II for details)	
Degree Awarded	19 (Chemistry 11 + Computer Science 8)
Thesis Submitted	2 (Computer Science 1 + Biology 1)
Scholars Working	5 (Computer Science 1 + Chemistry 2 + Biology 2)
M.Phil	20 (Chemistry 10 + Computer Science 10)
Master Thesis (M.Sc/MCA)	38 (Chemistry 6 + Genomics 19 + Biochemical technology 10 + MCA 3)

Publications: (Annexure – III for details)

Journal Papers	121	(Biophysical 86 + Medical Imaging/Computer Science 33 + Bio-Nanotechnology 2)
Invited Articles Published in Books	1	
Papers Published in Reviewed Conference Proceedings	15	(Computer Science)
Papers Presented in International Conferences	34	
Papers Presented in National Conferences	40	
Popular Lectures	3	

Manuscript Reviewer for International Journals:

- IEEE Transactions on Biomedical Engineering
- Artificial Intelligence in Medicine
- Free Radical Research
- Journal of Molecular Structure
- Process Biochemistry

Conference Committee/ Program Committee Service:

- Member, Conference Planning Committee, Software Engineering Education & Training Conference '00, Inaugural Annual Conference "Bridging the Gap" Between Industry Needs and Academic Offerings, Taj Connemara Hotel Ballroom, Chennai, 24th February 2000
- Session chair, The 10th International Workshop on BioMedical ESR Spectroscopy and Imaging, KYUSHU 2003, Fukuoka, Japan, April 1-3, 2003
- Chair Person, Neural Networks and Pattern Recognition, UGC sponsored National Conference on Distributed Database & Computing, March 2004
- Session Chair, First IEEE International conference on Signal and Image processing, December 2006
- Member, Advisory Committee, International Conference on Computational Intelligence and Multimedia Applications, December 2007
- Chair Person, International Conference on Computational Intelligence and Multimedia Applications, December 2007
- Member, Advisory Committee, National Conference on Intelligent Computing Model-2008 (NCICM-08), February 2008
- Chair Person, National Conference on Intelligent Computing Model-2008 (NCICM-08), February 2008

- Session Chair, International Conference on Cognition and Recognition (ICCR-08), April 10-12, 2008
- Session Chair, and Invited talk International Conference on “Managing Next Generation Software Applications” – 2008 during 5th & 6th December 2008, Karunya University, Coimbatore
- Member of International Advisory Committee of EPR2008, Fukuoka, Japan
- Member, Indian EPR Society
- Invited Talk, Educator’s Day 2008, Nurturing Innovation and Creativity in Engineering (NICE) Education, Bangalore, sponsored by National Instruments, 21st Nov 2008
- Resource Person, National symposium on nanobiotechnology, Department of Biotechnology and Bioinformatics, Dhanalakshmi Srinivasan College of Arts and Science for Women, 12-13 March 2010
- Member, National Advisory Committee, Third National Conference on Communication Technologies (NCCT '10), Mepco Schlenk Engineering College, Sivakasi, 19-20 March, 2010

Annexure – I

VISITS ABROAD

V-1:	The Netherlands	Dec'81 – Jun'82	Post Doctoral Research – Study of Magnetic ordering and spin diffusion in low dimensional magnetic materials by ESR with Prof. E. de Boer - University of Nijmegen, The Netherlands
V-2:	USA	July'82- Apr'85	Research Associate – Time Resolved EPR Spectroscopy with Prof.S.I. Weissman, Washington University, St.Louis MO, USA
V-3:	Australia	May'85 – Dec'86	Research Fellow – Development of New Instrumentation for Zero Field ESR with Dr.R. Bramley Research School of Chemistry, Australian National University Canberra, Australia
V-4:	USA	Oct'93	Collaborative Research – RF-FT-EPR Imaging- Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-5:	USA	May'94 – Jun'96	Visiting Scientist – RF-FT-EPR Imaging at the Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-6:	Italy	Sept 10-14, 1995	To present a paper in an International workshop and symposium at L'aquila, Italy
V-7:	USA	Mar'97- Apr'97	Collaborative Research project discussions – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD

V-8:	Japan	Oct'12-16, 1997	To present a paper in an International Conference at Yamagata, Kyoto, Japan and to visit Institute of Advanced Energy, Kyoto University
V-9:	USA	May'98- June'98	Collaborative Research – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-10:	USA	May'99- June'99	Collaborative Research – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-11:	USA	Dec'00- Dec'01	Visiting Scientist- Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-12:	USA	May'02_June '02	Collaborative Research – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-13:	Japan	29-3-03 to 10-4-03	To present a paper in an International Conference and deliver special lectures at Kyushu University, Japan
V-14:	USA	June'03_July' 03	Collaborative Research Medical Imaging – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-15:	USA	Dec 03	Collaborative Research Medical Imaging – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-16:	USA	Sept 04	Collaborative Research Medical Imaging – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-17:	USA	Feb 05	Collaborative Research Medical Imaging – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-18:	USA	May-June 05	Collaborative Research Medical Imaging – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-19:	Japan	Dec05- Feb06	Visiting Professor, Kyushu University, Japan
V-20:	USA	June 06	Collaborative Research – Radiation Biology Branch, National Cancer Institute, NIH, Bethesda, MD
V-21:	Japan	September 06	Collaborative Research, Faculty of Pharmaceutical sciences, Kyushu University, Japan
V-22:	Japan	Feb07- March07	Collaborative Research, Faculty of Pharmaceutical sciences, Kyushu University, Japan
V-23:	Japan	7 th May -30 th June 07	Collaborative Research, Faculty of Pharmaceutical sciences, Kyushu University, Japan
V-24:	Japan	18 th -27 th Aug 07	Collaborative Research, Faculty of Pharmaceutical sciences, Kyushu University, Japan
V-25:	Japan	6 th -10 th Mar	To participate Prof. Utsumi's retirement memorial

2010 Symposium on "The relation between University
and
the promotion of Science and Technology" at
Faculty of Pharmaceutical sciences, Kyushu
University, Japan

Annexure – II

RESEARCH GUIDANCE

i) Ph.D:

Ph.D. Awarded

- Ph-1: T. Lekshmana Thanulingam, "Studies on structure-reactivity correlation (By kinetic and instrumental methods)", Aug 1991
- Ph-2: A. Thamarachelvan, "Spectroscopic studies on some transition metal complexes and radicals", March 1997
- Ph-3: V. S. Xavier Anthonisamy, "Structure, bonding and dynamic processes in condensed phases: an EPR study", June 1997
- Ph-4: T. Jeyabalan, "Studies on transition metal compounds: Investigations on polyoxometalates", Dec 1998
- Ph-5: J. Johnson Inbaraj, "EPR and optical spectroscopic studies of free radicals and photoexcited systems", March 1999
- Ph-6: C. Karunakaran, "Studies on coordination compounds of styrylpyridine", Nov 2000
- Ph-7: A. Milton Franklin Benial, (Physics), "Spectral investigations of structure and bonding in crystalline environment", May 2002
- Ph-8: K. K. Mothilal, "Studies on model compounds of transition metal ions and reactive oxygen species of biological interest", May 2003
- Ph-9: M. Rajendran, "Studies on free radicals and reactive oxygen species", March 2004
- Ph-10: D. Christopher Durairaj, (Computer Science), "An object oriented approach for electron magnetic resonance image reconstruction and analysis", Nov 2005
- Ph-11: Y. Yesuthangam, "Studies on synthetic and natural products of biological interest", April 2006
- Ph-12: P. Alli, (Computer Science), "Adaptive filters for optimal region of interest identification in electron magnetic resonance images", May 2006
- Ph-13: A. Suganthi, "Studies on coordination complexes of biological interest", Aug 2006
- Ph-14: S. Chandrasekaran, (Computer Science) "Genetic algorithms for electron magnetic resonance image reconstruction and processing", Feb 2008
- Ph-15: T. Aravalluvan, (Computer Science) "Reconstruction algorithms for EMR imaging from limited and sparse angle data," Dec 2009
- Ph-16: V. Thavavel, (Computer Science) "Adaptive wavelet based techniques for medical image reconstruction and analysis" (August 2010)

- Ph-17: M. Sumathi, (Computer Science) "Algorithms for ringing artifacts reduction in EMR images" (August 2010)
- Ph-18: S. Sivakumar, (Computer Science) "Evaluation of iterative algorithms for reconstruction of EMR images from projections" (September 2010)
- Ph-19: M. M. Ramya, (Computer Science) "Application of soft computing and wavelets in medical image watermarking" (October 2010)
- Ph-20: D. Balasubramanian, (Computer Science) "Evaluation of spline interpolation techniques for reconstruction of electron magnetic resonance images" (Aug 2011)
- Ph-21: Bibbin Tom Paul (Biology), UGC-JRF, "Novel therapeutic agents for photodynamic therapy" (September 2011)

Ph.D. Thesis Submitted

- Ph-22: K. Venkatesan, DST-JRF, "Studies on electron magnetic resonance imaging And imaging agents"
- Ph-23: S. Pandian, UGC-JRF, "Studies on potential photodynamic and chemotherapeutic agents"

Ph 24 Saritha Chakrasali "Medical Image Security – Search for Generic Solution"

Ph.D. Scholars currently working

a) Full time

- Ph-1: B. Anish (Biology), UGC-UPE-JRF, "Studies on Nanopharmaceuticals"
- Ph-2: S. Swathika (Biology), UGC-Meritorious Fellow, "Studies on molecular targets for renal fibrosis"

b) Part-time (Computer Science)

- Ph-3: Saritha Chakrasali "Medical Image Security – Search for Generic Solution"

ii) M.Phil:

M.Phil. Chemistry

MPC-1:	R. Poornika, "Echinomycin derivatives as potential drugs for multidrug resistance therapy of cancer: In silico approach", July 2007
MPC-2:	C. Chrysolite Joy, "Synthesis of sterically hindered secondary amines with potential application as singlet oxygen sensors", July 2008

M.Phil. Computer Science

MPCS-1:	S. Kannan, "A study and analysis of filter/convolution back projection algorithm – An object oriented approach", MS University, Aug 2003
MPCS-2:	M. Ramaswami, "Design of stack filter using genetic algorithms, MS University", Aug 2003
MPCS-3:	G. Karthigai Lakshmi, "A system for evaluation of enhancement filters for denoising magnetic resonant images: An object oriented design", MS University, Sep 2003
MPCS-4:	A. Ann Ramola Jeyanthi, "An object library for ECG signal processing, Mother Teresa Women's University", June 2004
MPCS-5:	A. Anitha Sharon, "Comparison and evaluation of image compression techniques for medical imaging", June 2004
MPCS-6:	K. Rose Mary Euphrasia, "Implementation and evaluation of an algorithm for reconstruction of images from limited number of projections", Mother Teresa Women's University, June 2004
MPCS-7:	V. Thavavel, "Object library for image processing", 2004
MPCS-8:	C. Meenakshi, "A high speed neural network for medical image classification: An object oriented approach", Sep 2005
MPCS-9:	M.M. Ramya, "An object library for medical image segmentation", MS University, Sep 2005

iii) Master Thesis:

M.Sc. Genomics

MSG-1	Shruti Agarwal, "Structure based molecular modeling of MIF inhibitors", May 2004
MSG-2	Namita Satija, "Molecular modeling of cyclooxygenase 2 – drug interactions in tumor angiogenesis", May 2004
MSG-3	M.K. Bharathi Priya Dharshini, "Molecular modeling of MIF inhibitors in glioblastoma multiforme angiogenesis", May 2005

MSG-4	S. Vani, "Molecular modeling of CAP43 DNA-HIF-1 protein interaction with potential application to cancer therapy", April 2006
MSG-5	K.C. Anisha, "Structure modeling the YB1 protein: A potential new target for cancer therapeutics", April 2006
MSG-6	S. Devi Sundhari, "Modeling drugs for myeloproliferative disorders: Structure prediction and drug docking with mutated janus kinase-2", April 2006
MSG-7	P. Swarna Deepa, "Molecular modeling of catalase peroxidase from mycobacterium tuberculosis – Proposing novel isoniazid derivatives with potential application in MDRTB", April 2007
MSG-8	Arpitha Venugopalan, "Molecular modeling of mutant pfcr1 and its interaction with viable chloroquine resistance reversal agents", April 2007
MSG-9	S. Kavitha, "Molecular modeling and in silico screening of ligands for FLT3 mutants", April 2008
MSG-10	G. Ramani, "Homology modeling of Akt3-Pleckstrin homology domain with potential application of Akt3 as a cancer target", April 2008
MSG-11	A. Saranya Devi, "In silico modeling and structure based design of STAT3 inhibitors", April 2008
MSG-12	Aditi Sharma, "In silico screening of galectin-3 inhibitors with potential applications of galectin-3 as an anti-cancer agent", April 2009
MSG-13	Vinoth Madhavan. "In silico and in vivo antitumor activity of piperines", April 2009
MSG-14	G. Amsaveni, "Chitosan based nanoparticles for drug delivery in photodynamic therapy", April 2010
MSG-15	P. Devi Prasada Naik, "In silico optimization of HSP70 inhibitors", April 2010
MSG-16	Shruti Jain, "Investigation of the structure and role of peripheral benzodiazepine receptor in hypocrellin B mediated photodynamic therapy", April 2010
MSG-17	R. Sweta, "Molecular modeling and mutation analysis of optineurin", April 2010
MSG-18	Ria Thomas, April 2011
MSG-19	Ashwini Kumar Sharma, April 2011

M.Sc. Biochemical Technology

MSBCT-1	M. Mohana, "Drug designing: Modeling mutated beta myosin heavy chain protein and docking it with cardiac specific drugs", May 2003
MSBCT-2	Romi Gupta, "Structure based molecular modeling and specific drug interaction with mutated human regulatory myosin light chain during hypertrophic cardiomyopathy", May 2004
MSBCT-3	Sadhvi K.Chetty, "Molecular modeling of the N-terminal and the receptor binding region of the cardiac isoform of alpha-2-macroglobulin", May 2004
MSBCT-4	M.K. Sangeetha, "Impact of AGTR A1166C and AGT M235T polymorphisms

	in south Indian hypertrophy and dilated cardiomyopathy patients and Molecular modeling of C 10 th domain of myosin binding protein and truncated C 10 domain", May 2005
MSBCT-5	S. Shree Devi, "In silico and in vivo screening of bioflavonoids as inhibitors of renal fibrosis targeting ALK5 receptor kinase", April 2008
MSBCT-6	S. Ranjani, "Molecular modeling of arcadia – A potential target in renal fibrosis", April 2008
MSBCT-7	M. Shylajanachiyar, "Multiple-template homology of AT1 receptor: In silico screening of potential antihypertensive drugs", April 2009
MSBCT-8	T. Priya Tharisini, "In silico optimization of angiotensin converting enzyme inhibitors", April 2009
MSBCT-9	A. Arul Amal Dass, "In silico studies on Myc inhibitors and NdrG1: Potential application in tumour suppression", April 2010
MSBCT-10	K. Sowmiya, "Molecular modeling studies of CB1 inhibitors – Potential application to reduction of adriamycin induced cardiotoxicity", April 2010

M.Sc. Chemistry

MSC-1	R. Prakash, "Molecular modeling of potential drugs for age related macular degeneration", April 2004
MSC-2	R. Prabhu, "Modeling of porphyrins as photosensitizers in photodynamic therapy", April 2005
MSC-3	S. Pandian, "Hypocrellins as photodynamic therapeutic agents: A theoretical investigation", April 2005
MSC-4	P. Elumalai, "Improvisation of anthraquinones as photodynamic therapeutic agents: A molecular modeling approach", April 2007
MSC-5	P. Manochitra, "Molecular modeling of coumarins: Insight into photodynamic effect", May 2007
MSC-6	S. Radha, "EPR signal processing", May 2008

MCA

MCA-1	G. Jegathesan, "Image reconstruction from limited number of projections: An object oriented approach", May 2003
MCA-2	B. Gokulnath, "An artificial neural network approach for automatic recognition of abnormalities in ECG", April 2005
MCA-3	S. Mangaiyarkarasi, "Classification of ultra sound cardiac images using artificial neural network", April 2006

Research Summary

No. of Publications	Citations	h-index	i10-index
125	2002	25	52

Annexure – III

PUBLICATIONS

A. Journal Papers

- J-1: P.A. Nadar, A. Shunmugasundaram and **R. Murugesan**, Oxidation of Acetonaphthones by Hexacyanoferrate (III), Ind. J. Chem. 14A, 146 (1976).
- J-2: P. A. Nadar and **R. Murugesan**, Kinetics of Reaction of Substituted Phenyl Chloromethyl Sulphides with Aniline in Dimethylformamide, Ind. J. Chem. 15B, 1037-1039 (1977).
- J-3: **R. Murugesan**, and S. Subramanian, Electron Spin Resonance of Copper (II) in Hoffman-type Benzene and Aniline Clathrates. J. Magn. Reson, 36, 389-399 (1979).
- J-4: **R. Murugesan** and S. Subramanian, EPR of Radicals in γ -irradiated Substituted Phosphines, Molec. Phys. 38, 1941-53 (1979).
- J-5: **R. Murugesan** and E. de Boer, ESR Line-shapes in the Quasi-Two-Dimensional Magnetic System, Bis [1,2 Bis (2- Methoxy Ethoxy) Ethane] Sodium Biphenylide, Evidence for Spin Diffusion, Chem. Phys. Lett. 95, 301-304 (1983).
- J-6: M.C.M. Gribnau, **R. Murugesan**, H. V. Kempen and E. de Boer, Spin diffusion in the Quasi-Two-Dimensional Magnetic System Bis [1,2 Bis (2-Methoxy Ethane) Sodium Biphenylide, A temperature dependent ESR study, Molec. Phys. 52, 195-206 (1984).
- J-7: E. de Boer, **R. Murugesan** and M.C.M. Gribnau, Spin diffusion and Long Range Ordering in a Quasi-Two-Dimensional Magnetic System, Bull. Magn. Reson. 5, 195 (1984).
- J-8: **R. Murugesan** and S. Subramanian, Phase Transition and Host Spin Lattice Relaxation Narrowing in the EPR of Mn (II)- doped Single Crystals of $\text{CoNbOF}_5 \cdot 6\text{H}_2\text{O}$, J. Magn. Reson. 57, 385-393 (1984).
- J-9: **R. Murugesan** and S. Subramanian, Optical Spectra of Crystalline $\text{CoNbOF}_5 \cdot 6\text{H}_2\text{O}$, J. Molec. Struct. 116, 411-413 (1984).
- J-10: **R. Murugesan** and S. Subramanian, Dynamic to Static Jahn-Teller distortion in the EPR of Cu(II) in hexaimidazolecadmium(II) nitrate, Molec. Phys. 52, 129-136 (1984).
- J-11: **R. Murugesan** and S. Subramanian, EPR study of Mn (II) in a Cubic ligand field, Mn

- (II) in hexaimidazole-cadmium (II) nitrate, *Molec. Phys.* 52, 281-288 (1984).
- J-12: W.P. Chisholm, H.L. Yu, **R. Murugesan**, S.I. Weissman, E.F. Hilinski and J.A. Berson, Transient EPR and Magnetophotoselection in the photolytic formation of a Trimethylene methane Biradical, *J. Am. Chem. Soc.* 106, 4419-4423 (1984).
- J-13: A. Hauser, M. Mader, W.T. Robinson, **R. Murugesan** and J. Ferguson, Electronic and Molecular Structure of $[\text{Cr}(\text{bpy})_3]^{3+}$, *Inorg. Chem.* 26, 1331-1338 (1987).
- J-14: R. Bramley, S.R. Downing and **R. Murugesan**, Simple Improvements to the Varian 35 GHz EPR liquid nitrogen insertion dewar, *J. Magn. Reson.* 80, 520-522 (1988).
- J-15: **R. Murugesan** and D. P. Padiyan, EPR Studies of Ni(II), Mn(II) and Cu(II) in Single crystals of $\text{M}(\text{Pz})_6(\text{BF}_4)_2$ [M = Zn and Cd, Pz = Pyrazole], *Proc. Solid State Phys. Symp.* 31C, 296 (1988).
- J-16: A. Shunmugasundaram, T. L. Thanulingam and **R. Murugesan**, Structure-reactivity correlation in the reaction of N- Methyl-2-Styryl- pyridinium Iodides with Alkaline Hydrogen Peroxide, *Ind. J. Chem.* 28A, 666-669 (1989).
- J-17: A. Shunmugasundaram, T. L. Thanulingam and **R. Murugesan**, Kinetics of reaction of 2,4-dinitrophenyl acetate with 3- and 4-substituted pyridines and 4'-substituted 4-styryl pyridines, *Ind. J. Chem.* 29A, 852-855 (1990).
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- IC-34 B. Anish, R. Murugesan. International conference on nanoscience and technology (ICONSAT-2012), Hypocrellin B-loaded biodegradable nanocarriers: A comparative evaluation of physicochemical properties and in vitro photodynamic efficacies. Hyderabad, January 20-23, 2012.

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- NC-2: **R. Murugesan**, A. Shunmugasundaram, T. Jeyabalan and P. Sami, Synthesis and study of electron transfer in manganese (IV) 12-heteropolymolybdothioate (IV), UGC-DRS National Seminar on New Trends in Dynamic and Structural Studies in Inorganic and Physical Chemistry, March 1-3, 1995, Madurai Kamaraj University, Madurai.
- NC-3: A. Milton Franklin Benial, V. Ramakrishnan and **R. Murugesan**, IR spectroscopic investigations of Mn(II) in $\text{Co}(\text{C}_5\text{H}_5\text{NO}_6)_2 \cdot \text{X}_2$ ($\text{X} = \text{ClO}_4^-$, BF_4^- and NO_3^-), National Conference on Fundamentals of Crystal Growth, January 29-30, 1996, Anna University, Madras.

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- NC-29: **R. Murugesan**, K. Venkatesan, B. T. Paul, S. Pandian, and B. Anish, Free Radical Imaging: Methodologies and Materials, National Seminar on Advances in Material Science (NSAMS-2008), February 4-5, 2008, Manonmaniam Sundaranar University, Tirunelveli.
- NC-30: **R. Murugesan**, Cheminformatics for Drug design, National Seminar on "Theoretical and Chemical Sciences" (TACS-2008), February 22-23, 2008, Annamalai University, Annamalai Nagar.
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- NC-33: **R. Murugesan**, Cheminformatics, State Level seminar on "Current Trends in Chemistry" March 4, 2008, V.V.V. College, Virudhunagar.
- NC-34: **R. Murugesan**, Bio-Medical Imaging, Regional Seminar on Recent Trends in Physics, March 6th 2008, S.V.N. College, Madurai.
- NC-35: **R. Murugesan**, Cheminformatics, State Level Students Seminar, February 14th 2008, Thiagarajar College, Madurai.
- NC-36: **R. Murugesan**, Nano-Drug, October 17th 2008, Aditanar College, Thiruchendur.
- NC-37: **R. Murugesan**, NCFRCR-08, December 5th 2008, Holy Cross College, Tiruchi.

- NC-38: B. Anish and **R. Murugesan**. Investigations on quinone loaded gelatin nanoparticles for photodynamic therapy, National Seminar on Recent Trends in Chemistry (RTC-3), February 26-27, 2009, Jayaraj Annapackiam College for Women, Periyakulam.
- NC-39: K. Karthikeyan, B. Anish, J. Jeyasubramanian and **R. Murugesan**. Molecular modeling of Polyamidoamine (PAMAM) dendrimers- potential application in drug delivery systems. National Conference ACDAME`09' on "A Confluence of Design and Manufacturing Engineers", 11 April 2009, GKM College of Engineering and Technology, organised by Department of Mechanical Engineering, Chennai.
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F. Popular Lectures

- PL-1 **R. Murugesan**, "Raman's Discovery and Ramifications in Physical and Biological Systems", National Science Day Celebrations, February 28, 2008, Bharathidasan University, Trichy.
- PL-2 **R. Murugesan**, "Raman Effect", National Science Day Celebrations, February 29, 2008, Bharathiar University, Coimbatore.
- PL-3 **R. Murugesan**, "Let food be thy medicine for longevity" Lions Club, December 2007, Madurai.