

**VIRUDHUNAGAR HINDU NADARS' SENTHIKUMARA NADAR COLLEGE**  
**(An Autonomous Institution affiliated to Madurai Kamaraj University and**  
**Re-Accredited with A Grade by NAAC)**  
**VIRUDHUNAGAR-626 001**

**Staff Profile**

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**Titles of Dissertation**

<b>Degree</b>	<b>Title of thesis</b>	<b>University</b>
<b>Ph.D.,</b>	Synthesis, Characterization and Biological Studies of Copper(II), Cobalt(II), Nickel(II), Zinc(II) and Oxovanadium(IV) Schiff Base Complexes	Madurai Kamaraj University, Madurai
<b>M.Phil.,</b>	Quinolinium bromochromate as a new brominating agent for the bromination of metal -diketonates	Madurai Kamaraj University, Madurai

Area of Specialization : Organic Chemistry and Bio-inorganic Chemistry

**Courses Attended**

Orientation Programme: 1

Refresher Course : 4

**Seminars, Workshops and Conferences Attended**

National level Seminars / Workshops / Conference : 32

**Papers Presented**

Paper Presented in International level Seminars / Workshops / Conference: 31

**Research Publications**

Research publications in International Journals : 10

Research publications in National Journals : 04

### ***List of Research articles Published in International level Journals***

1. Quinolinium bromochromate as a new brominating agent for the bromination of metal  $\beta$ -diketonates, N.Raman, **R.Paulpandian** and A.Shanmugasundaram, *Asian J. Chem.*, 8(1) (1996) 42-44.
2. Biological screening and DNA nuclease activity of transition metal complexes of  $N_2O_2$  type of Knoevenagel condensate Schiff base, **R.Paulpandian** and N.Raman, *Appl. Organomet. Chem.*, **30** (2016) 531-539.
3. DNA binding propensity and nuclease efficacy of biosensitive Schiff base complexes containing pyrazolone moiety: Synthesis and characterization, **R.Paulpandian** and N.Raman, *J. Mol. Struct.*, **1125** (2016) 374-382.
4. Role of Knoevenagel condensate pyrazolone derivative Schiff base ligated transition metal complexes in biological assay and cytotoxic efficacy, R.Paulpandian, A.Arunadevi and N.Raman, *Appl. Organomet. Chem.*, 31 (2017) 1-10.
5. Oxovanadium(IV) complexes with Knoevenagel Schiff base condensate as impending chemotherapeutic agents: Synthesis, characterization, biological screening and anti-proliferative assay, **R.Paulpandian** and N.Raman, *Bioorg. Chem.*, 73 (2017) 100-108.
6. DNA interaction, molecular docking and biological profile of tetradentate histidine based metallointercalators, A.Arunadevi, **R.Paulpandian** and N.Raman, *J. Mol. Liq.*, 241 (2017) 801–810.
7. Probing of effective pyrazolone based metallonucleases: Molecular docking and *in vitro* biological critique, A.Arunadevi, **R.Paulpandian**, and N.Raman, , *Appl. Organomet. Chem.*, (2018) 1-13
8. Expatriating biological excellence of aminoantipyrine derived novel metal complexes: Combined DNA interaction, Antimicrobial, Free radical scavenging studies and Molecular docking simulations, S.Syed Ali Fathima, **R.Paulpandian** and E.R.Nagarajan, *J. Mol. Struct.*, DOI: 10.1016/j.molstruc.2018.10.021
9. Biologically active Co (II), Cu (II), Zn (II) centered water soluble novel isoniazid grafted O-carboxymethyl chitosan Schiff base ligand metal complexes: Synthesis, spectral characterisation and DNA nuclease activity, M.Manimohan, **R.Paulpandian**, S.Pugalmani and M.Aboobucker Sithique, *Int. J. Biol. Macromo.*, 163 (2020) 801–816.

10. Tetraaza macrocyclic Schiff base metal complexes bearing pendant groups: Synthesis, characterization and bioactivity studies, **R. Paulpandiyam**, A. Arunadevi and Senthil A. Gurusamy Thangavelu, **Inorg. Chem. Commun.**, 134 (2021) 108989.

***List of Research Paper Presented in International and National level***

***Conferences/Seminars:***

1. “***Synthesis, characterization, antimicrobial screening and DNA binding properties of  $N_2O_2$  type transition metal complexes of Knoevenagel condensate Schiff base,***” in the two day International Conference on ‘Recent Advances in Materials and Chemical Sciences’ organized by the Department of Chemistry, The Gandhigram Rural Institute – Deemed University, Gandhigram, 14th and 15th December 2015.
2. “***DNA studies and antimicrobial screening of mixed ligand complexes derived from 4-aminoantipyrine based Schiff base,***” in the Sixth International Conference (ICMG-2016) on ‘Metals in Genetics, Chemical Biology and Therapeutics’ held at Indian Institute of Science, Bangalore, during February 17-20, 2016.
3. “***DNA interaction and antimicrobial screening studies of Knoevenagel condensate of pyrazolone based Schiff base complexes,***” in the One day National level Seminar on ‘Modern Trends in Chemistry (NTC-2016)’ organized by the Department of Chemistry, Ayya Nadar Janaki Ammal College, Sivakasi on 11<sup>th</sup> March 2016.
4. “***DNA binding compassion of mixed ligand Schiff base complexes: Synthesis and physico-chemical investigation***”, in the National Symposium on Recent Developments in Chemistry (RDC-2016), organized by the Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai, Tamilnadu, 4<sup>th</sup> June-2016.
5. “***Probing the DNA interaction of transition metal chelates of pyrazolone derivatives: Synthesis and characterization***”, in the ICMR, DBT & INSA sponsored International Conference on Cancer Biology: Drug Discovery and Novel Therapeutics, organized by the Department of Zoology & Chemistry, SBK. College, Aruppukottai, Tamilnadu, September 29 and 30, 2016.
6. “***The binding mode of pyrazolone derived copper(II), cobalt(II), nickel(II) and zinc(II) Schiff base coordination compounds with Calf-Thymus DNA***”, in the UGC sponsored National level Seminar on Recent Advances in Chemical Research (RACR-2017),

organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, January 24 and 25, 2017.

7. ***“Antimicrobial susceptibility testing of Knoevenagel condensate Schiff base ligated transition metal complexes: Synthesis and characterization”***, in the ACT and RSC sponsored one day National Seminar on Recent Advances in Bioinorganic and Medicinal Chemistry (RABAMCHEM-2017), organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, 15<sup>th</sup> February, 2017.
8. ***“DNA binding aptitude of histidine based transition metal complexes as novel intercalators: Synthesis and characterization”***, in the ACT and RSC sponsored one day National Seminar on Recent Advances in Bioinorganic and Medicinal Chemistry (RABAMCHEM-2017), organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, 15<sup>th</sup> February, 2017.
9. ***“In vitro DNA binding deeds of transition metal complexes of 13-membered tetraaza macrocyclic Schiff base”***, in the ACT and RSC sponsored one day National Seminar on Recent Advances in Bioinorganic and Medicinal Chemistry (RABAMCHEM-2017), organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, 15<sup>th</sup> February, 2017.
10. ***“Deciphering the DNA binding mode and in vitro anti-proliferative assay of oxovanadium(IV) complex with Knoevenagel condensed Schiff base”***, in the SERB sponsored National level Seminar on Frontier areas in chemical sciences (FACS-2017), organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, June 22 and 23, 2017.
11. ***“DNA damage induction, anti-oxidant properties of amino acid based complexes: Synthesis and characterization”***, in the SERB sponsored National level Seminar on Frontier areas in chemical sciences (FACS-2017), organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, June 22 and 23, 2017.
12. ***“Template synthesis of tetraaza macrocyclic transition metal complexes with its antimicrobial potency”***, in the SERB sponsored National level Seminar on Frontier areas in chemical sciences (FACS-2017), organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, June 22 and 23, 2017.

13. ***“In vitro Cytotoxic activity of oxovanadium(IV) complex on human tumor cell lines by the MTT assay”***, in the ICMR sponsored National level Seminar on RATMCBMC-2017, organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, July 14 and 15, 2017.
14. ***“Molecular docking and biological findings of novel histidine based transition metal complexes”***, in the ICMR sponsored National level Seminar on RATMCBMC-2017, organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, July 14 and 15, 2017.
15. ***“Studies on DNA binding mode and cleavage activity of tetraaza macrocyclic Schiff base transition metal complexes”***, in the ICMR sponsored National level Seminar on RATMCBMC-2017, organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, July 14 and 15, 2017.
16. ***“Exploration on DNA binding ability of heteroleptic ligand metal complexes: Synthesis and characterization”***, International Conference on Recent Advances In Materials For Energy And Environmental Remediation (RAMEER – 2018), organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, June 28 and 29, 2018.
17. ***“DNA binding ability of Knoevenagel condensate mixed ligand metal complexes: Synthesis and characterization”***, in the National level Seminar on Recent Trends in Chemistry, organized by the Department of Chemistry, VPMM Arts and Science College for women, Krishnankoil, Tamilnadu, February 11 and 12, 2019.
18. ***“Deciphering the binding mode of -diketonate metal(II) complexes with calf-thymus DNA”***, in the International Conference on ETMPC-2019, organized by the Faculty of Science and Humanities Noorul Islam Deemed University, Thuckalay, Tamilnadu, February 22, 2019.
19. ***“Screening the antimicrobial profiles of heteroleptic ligand metal complexes: Synthesis and characterization”***, in the SERB sponsored National level Seminar on Emerging Trends in Bioinorganic and Pharmaceutical Chemistry, organized by the Department of Chemistry, VHNSN College, Virudhunagar, Tamilnadu, February 27 and 28, 2019.

20. “***Antimicrobial studies on Knoevenagel condensate -diketone complexes: Synthesis and characterization***”, in the International Conference on Advanced Material (ICAM-2019), organized by the Department of Physics, Aditanar College of Arts and Science, Tiruchendur, Tamilnadu, August 26, 2019.
21. “***DNA Nuclease activity of Knoevenagel condensate -diketone framed mixed ligand metal(II) complexes***”, International Conference on Sustainable Development organized by the Kalasalingam Deemed University, Krishnankovil, Tamilnadu, December 18 and 20, 2019.
22. “***DNA cleavage studies of Schiff base metal complexes derived from vanillin: Synthesis and characterization***”, in the National Conference on Functional Materials (NCFM – 2020), organized by the Department of Physics, Noorul Islam Centre for Higher Education, Kumaracoil, Thuckalay-629 180, February 24, 2020.
23. “***Knoevenagel condensate -diketone based mixed ligand metal(II) complexes: Synthesis, characterization and nucleolytic cleavage activity***” in the International Virtual Conference on “Innovative Strategies in Chemical Science and Technologies (ISCST 2020)”, organized by the Department of Chemistry, Bhaktavatsalam Memorial College For Women, Chennai – 80, on 27<sup>th</sup> & 28<sup>th</sup> June 2020.
24. “***DNA binding activity of transition metal complexes of novel tetradentate N<sub>2</sub>O<sub>2</sub> type of Knoevenagel condensate Schiff base: Synthesis and characterization***”, in the Web Conference on Synthesis and Characterization of NOVEL MATERIALS, organized by the PG & Research Department of Physics, Muthurangam Govt.Arts College, Vellore, Tamilnadu, on July 6 and 7, 2020.
25. “***DNA binding studies of macrocyclic Schiff base transition metal complexes***”, in the International Conference on Recent Advances in Organic Medicinal and Biological chemistry (RAOMBC-2020), organized by the Division of Chemistry, VIT Chennai, Tamilnadu, July 8 and 9, 2020.
26. “***Knoevenagel condensed pyrazolone derived Schiff base metal complexes as impending DNA interacting agents: Synthesis and characterization***” National Conference on “Advancements in Science and Humanities” organized by the Department of Science and Humanities, Kings College of Engineering, Puthukottai, Tamilnadu, on 13<sup>th</sup> July 2020.

27. ***“Antimicrobial Potency of Transition Metal Complexes of Novel Tetradentate Schiff Base: Synthesis and characterization”*** in the International Virtual Conference on Advanced Materials for Sustainable Development, organized by the Department of Chemistry, Bannari Amman Institute of Technology, Sathyamangalam, Tamilnadu, on 7<sup>th</sup> and 8<sup>th</sup> August 2020.
28. ***“DNA interaction studies of transition metal complexes of pyrazolone derivatives: Synthesis and characterization”*** in the two days International Virtual Conference on “Current Trends in Advanced Chemistry (CTAC-2020)” organized by the Department of Chemistry, Saranathan College of Engineering, Trichy-12, on 17<sup>th</sup> and 18<sup>th</sup> August 2020.
29. ***“Synthesis, characterization and In vitro biological screening of heteroleptic Schiff base metal complexes”***, in the Virtual International Transdisciplinary Conference (VITC-2020) organized by the Department of Physics, School of Advanced Sciences, VIT Vellore, Tamilnadu, August 26-28,2020.
30. ***“Chemical nucleolytic cleavage activity of mixed ligand Schiff base metal(II) complexes”*** in the International Web Conference on Advance Materials Science and Engineering, organized by Department of Physics, Bannari Amman Institute of Technology, Sathyamangalam, on 11<sup>th</sup> -12<sup>th</sup> September 2020.
31. ***“DNA interaction studies of mixed ligand Schiff base metal complexes: Synthesis and physico-chemical investigation”*** in the International Virtual Conference on Recent Trends on Engrey Material (INCRTEM – 2020), Alagappa University-Science Block, Karaikudi – 630003, Tamilnadu, India, from 09.09.2020 to 11.09.2020.