

Dr. RANGA SWAMY J

Assistant Professor

Dept. of Chemistry

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**Working at Poornaprajna College Since: 2021****Currently held positions/offices**

- Co-ordinator, Youth Red Cross Association, Poornaprajna College

Educational Qualification

- Post Doctoral Fellow, DoS in Chemistry, University of Mysore, (2016-21)
- Ph.D. in Chemistry, University of Mysore (2015)
- CSIR-NET (2014)
- M.Sc. from University of Mysore (2010)

Work experience

- Assistant Professor at Poornaprajna College, Udupi (2021-till date)
- UGC Post-Doctoral Fellow, at Department of Studies in Chemistry, University of Mysore, (2016-21)
- Assistant Professor at Sarada Vilas College, Krishnamurthypuram, University of Mysore, Mysuru (2014-16).
- Guest Faculty in the Department of Chemistry at Sir M.V.P.G. Centre, Tubinakere, Mandya, University of Mysore (2013-14).
- Guest Faculty at Department of Studies in Chemistry, University of Mysore (2011-13)

Awards/Achievements

- UGC Post-Doctoral Research Award in Chemistry in the year 2016.

Areas of interest (Academic)

- Molecular Symmetry and Group Theory, NMR Spectroscopy.
- Identification of potential bioactive molecule via high throughput *in vitro* screenings and to study their structure-activity relationship.
- Design and synthesis of new bioactive scaffolds (heterocyclic compounds) as probes for biology and medicine (antioxidants, antimicrobials, anticancer, anti-inflammatory etc).
- Synthetic methodology.

Research Publications

Journal articles

1. Revanna, B. N., Madegowda, M., Neelufar., Rangaswamy, J., Naik, N. (2022). A Novel Schiff Base Derivative as a Fluorescent Probe for Selective Detection of Cu²⁺ ions in buffered solution at pH 7.5: Experimental and Quantum Chemical Calculations. *Journal of Molecular Structure*, 1254, 132327.
2. E Vijaya Sekhar, Rangaswamy, J., Mahesh Bhat, Naik,N. (2021). 2-(4-nitrophenyl)iminomethyl phenol Schiff base metal complexes: Synthesis, spectroscopic characterization, anticancer and antimicrobial studies. *Inorganic Nano-metal Chemistry*. (Accepted-November 26, 2021)
3. Ankali, K. N., Ramaswamy, J.,Shalavadi, M., & Naik, N. (2022). Synthesis, Molecular Docking and In Vivo Biological Evaluation of Iminostilbene Linked 1, 2, 3-Triazole Pharmacophores as Promising AntiAnxiety and Anti-Inflammatory Agents. *Medicinal Chemistry*, 18(2),260-272.
4. Sekhar, E. V., Karki, S. S., Ramaswamy, J., Bhat, M., & Kumar, S. (2021). Synthesis, characterization, and biological evaluation of some 4-((thiophen-2-yl-methylene) amino) benzenesulfonamide metal complexes. *Beni-Suef University Journal of Basic and Applied Sciences*, 10(1), 1-9.
5. Ankali, K. N., Rangaswamy, J.,Shalavadi, M., Naik, N., & naik Krishnamurthy, G. (2021). Synthesis and Molecular Docking of novel 1, 3-Thiazole Derived 1, 2, 3-Triazoles and In vivo Biological Evaluation for their Anti anxiety and Anti inflammatory Activity. *Journal of Molecular Structure*, 1236, 130357.

6. Balakrishnaiah, G., **Rangaswamy, J.**, Naik, N. (2020) One pot synthesis of piperidone based transition metal complexes and their antioxidant and antifungal activity studies. *World Journal of Pharmaceutical Research*.6, 1041-1054.
7. Bala Krishnaiah, G., **Rangaswamy, J.**, Naik, N. (2019) Synthesis, spectral characterization and biological efficacy of metal complexes with nitrogen and oxygen (NON/NO) donor of thiazole fused Schiff base ligand. *Journal of Emerging Technologies and Innovative Research*.6, 609-623.
8. Naik, N., **Rangaswamy, J.**, (2018). Novel Phenyl and Purine Substituted Derivatives of Quinazolinones: Synthesis, Antioxidant and Antibacterial Features. *Chem Sci Trans*, 7, 37-46.
9. **Rangaswamy, J.**, Kumar, H. V., Harini, S. T., & Naik, N. (2017). Functionalized 3-(benzofuran-2-yl)-5-(4-methoxyphenyl)-4, 5-dihydro-1H-pyrazole scaffolds: A new class of antimicrobials and antioxidants. *Arabian Journal of Chemistry*, 10, S2685-S2696.
10. Harini, S. T., Kumar, H. V., **Rangaswamy, J.**, & Naik, N. (2017). Synthesis of thiazole-based substituted piperidinone oximes: Profiling of antioxidant and antimicrobial activity. *Russian Journal of Bioorganic Chemistry*, 43(2), 186-196.
11. **Rangaswamy, J.**, Naik, N. (2017) Synthesis and screening of benzofuran fused c-2,4,6-substituted pyrimidine derivatives as a new antibacterial and antifungal agent. *International Journal of Pharmacy and Pharmaceutical Sciences*.9, 27-32.
12. **Rangaswamy, J.**, Kumar, H. V., Naik, N. (2016) N-(3-(benzofuran-3-yl)-3-oxo-1-phenylpropyl) acetamide scaffolds: synthesis and molecular docking studies towards exploring of anti-inflammatory activity. *European Journal of Biomedical and Pharmaceutical Sciences*.3, 588-595.
13. **Rangaswamy, J.**, Kumar H. V., Naik, N. (2016) An efficient one-pot synthesis of N-(3-(benzofuran-3-yl)-3-oxo-1-phenylpropyl) acetamide scaffolds via multicomponent reaction: as a novel cluster of free radical, oxidation and bacterial inhibitors. *World Journal of Pharmaceutical Research*. 5, 1657-1673.
14. Kumar, H. V., Kumar, P., **Rangaswamy, J.**, Sindhu, K. U., & Naik, N. (2015). 5H-Dibenz [b, f] azepine based pyrazole sulphonamides: A privileged platform for probing the antimicrobial and antioxidative properties. *European Journal of Chemistry*, 6(4), 394-403.
15. **Rangaswamy, J.**, Vijay Kumar, H., Harini, S. T., Naik, N. (2015) An easy access to benzofurans via DBU induced condensation reaction of active 2-hydroxy

acetophenones with phenacyl chlorides: A novel class of antioxidant agents. *Journal of Heterocyclic Chemistry*, 52, 938-943.

16. **Rangaswamy J.**, Vijay Kumar, H., Harini, S. T., Naik N. (2015) Synthesis of novel benzofuran gathered C-2,4,6-substituted pyrimidine derivatives conjugated by sulfonyl chlorides: as a new series of potent antioxidants and antimicrobials drug candidate. *Journal of Heterocyclic Chemistry*, 52, 1349-1360.
17. Harini, S. T., Vijay Kumar, H., Peethambar, S.K., **Rangaswamy, J.**, Naik, N. (2014) Novel 2,6-bis(4-methoxyphenyl)-1-methylpiperidin-4-one oxime esters: synthesis and a new insight into their antioxidant and antimicrobial potential. *Medicinal Chemistry Research*. 23, 1887–1898.
18. Naik, N., Vijay Kumar, H., Sandra Maria Dias, **Rangaswamy, J.** (2013) Novel 4-methoxy-2-acetyl benzofuran based chalcones: A new perceptivity into their antioxidant potentials. *International Journal of Pharmacy and Pharmaceutical Science*. 5 (2013) 242-247.
19. **Rangaswamy, J.**, Kumar, H. V., Harini, S. T., & Naik, N. (2012). Synthesis of benzofuran based 1, 3, 5-substituted pyrazole derivatives: As a new class of potent antioxidants and antimicrobials-A novel accost to amend biocompatibility. *Bioorganic & Medicinal Chemistry Letters*, 22(14), 4773-4777.
20. Harini, S. T., Kumar, H. V., **Rangaswamy, J.**, Naik, N. (2012). Synthesis, antioxidant and antimicrobial activity of novel vanillin derived piperidin-4-one oxime esters: Preponderant role of the phenyl ester substituents on the piperidin-4-one oxime core. *Bioorganic & Medicinal Chemistry letters*, 22(24), 7588-7592.
21. Naik, N., Vijay Kumar, H., **Rangaswamy, J.**, Harini, S.T., Umeshkumar, T.C. (2012) Three component one pot synthesis of 5-Substituted 1-Aryl-2,3-diphenyl imidazoles: A novel class of promising antioxidants. *Journal of Applied Pharmaceutical Science*. 2, 067-074.
22. Naik, N., Vijay Kumar, H., **Rangaswamy, J.** (2012) Novel indole-3-butyric acid analogues: Synthesis and a new insights into their antioxidant activity. *Journal of Pharmacy Research*. 5, 4504-4509.

Paper presented in conferences/seminars

1. Presented a paper entitled “Design, synthesis of novel biphenyl appended isoxazoline derivatives and *in vitro* antioxidant evaluation” in National conference on innovations in chemical sciences (NCICS-2020) held on 30th & 31st January 2020, Department of

Studies in Chemistry, University of Mysore in Collaboration with Karnataka Science and Technology, Department of Science & Technology, Government of Karnataka.

2. Presented a paper entitled "Synthesis, docking and biological studies of more potent indole appended benzoxazole derivatives" in Two-day National Conference on Recent Innovations in Medicinal and Material Chemistry held on 8-9th March 2019, Department of Studies in Chemistry, University of Mysore.
3. Presented a paper entitled "Searching for new leads for antibacterial and antifungals: synthesis and biological evaluation of benzofuran incorporating substituted pyrimidines". KSTA National Conference on Impact of Science and Technology on Society and Economy held at Vijayanagara Sri Krishnadevaraya University, Ballari on March 8-9, 2017.
4. Presented a paper entitled "An efficient one-step synthesis of N-(3-(benzofuran-3-yl)-3-oxo-1-phenylpropyl)acetamidescrafts via multicomponent reaction: As a novel cluster of free radical, oxidation and bacterial inhibitors". In International conference on science and technology "Future challenges and solutions" (STFCS-2016) held at University of Mysore, Mysuru, on Aug 8-9, 2016.
5. Presented a paper entitled "Synthesis of novel quinoline derivatives and evaluation of their antioxidant property". 10th MID-year Symposium in Chemistry, Chemical Research Society of India, National Institute of Technology and Bharathidasan University, Trichy, July 23-25, 2015.
6. Presented a paper entitled "Synthesis of pharmaceutically important condensed heterocyclic benzofuran gathering C-2,4,6-substituted pyrimidine derivatives as DNA cleavage and analgesic mediators". In **National Conference on Pure and Applied Chemistry (NACOPAC-2014)**. Department of Chemistry, Manasagnagotri, University of Mysore. 29-31, December, 2015.
7. Presented a paper entitled "Synthesis of benzofuran gathered C-2,4,6-substituted derivatives conjugated by sulfonyl chlorides". **Recent Trends in Bioragnic Chemistry and its application to society**, Sarada Vilas College, Mysuru, 27-28th September, 2014.
8. Presented a paper entitled "Synthesis of benzofuran based 1,3,5-substituted pyrazole derivatives: as a new class of potent antioxidants and antimicrobials-A novel accost to amend biocompatibility" **International Indian Science Congress Conference**, Kolkata, , 2-10th January, 2013.

9. Presented a paper entitled "Synthesis, antioxidant and antimicrobial activity of novel vanillin derived piperidin-4-one oxime esters: Preponderant role of the phenyl ester substituents on the piperidin-4-one oxime core" **International Indian Science Congress Conference**, Kolkata, 2-10th January, 2013.
10. Presented a paper entitled "Novel 3-(benzofuran-2-yl)-5-(4-methoxyphenyl)-4,5-dihydro-1H-pyrazole analogues conjugated with different substituted benzoyl chlorides: Synthesis and a new perceptivity into their antioxidant potential" **International Conference on Synthetic and Structural Chemistry**, International conference, Mangalore university, Mangalore 5-7th December, 2011.
11. Presented a paper entitled "Novel 2,6-bis(4-methoxyphenyl)-1-methylpiperidin-4-one oxime esters: synthesis and a new insight into their antioxidant and antimicrobial potential" **International Conference on Synthetic and Structural Chemistry**, International conference, Mangalore University, Mangalore 5-7th December, 2011.
12. Presented a paper entitled "Novel indole-3-butyric acid analogues: Synthesis and a new insight into their antioxidant activity" **Recent trends in chemistry**, National conference, PES college Mandya, 16-17th September, 2011.

Short-term courses attended

- Completed FDP on Digital Teaching Techniques organized by ICT Acedamy from 21 Sep 2021 to 25 Sep 2021.

Seminars/Workshops attended (if any)

- Participated in *International conference on Advanced Functional Materials for Energy, Environment and Health Care* held on 18-20th March 2019. Center for Material Science and Technology, Vijnana Bhavan, University of Mysore.
- Attended a *Teachers/Students* conducted at JSS College for Women, Mysore during 08-09th March 2018 under Extension Lecture Programme of the centre.
- Attended a *State Level Workshop on Intellectual Property Rights-Significance in Research and Business* held on 5th February 2018 at Teresian College, Mysuru.
- Participated in National Conference on "*Biodiversity and Bio-prospecting for Sustainable Development-2018*" organized by Institution of Excellence (IOE) in association with University with potential for excellence (UPE) at Vijnana Bhavana, university of Mysore, Mysuru on 23rd and 24th February 2018.

- Participated in ***International conference on Nanomaterials and their Applications*** held at university of Mysore, Mysuru, India during March 1-2, 2018.
- Attended a ***Two-Days Extension Lecture Programme in Chemistry for Science Teachers/Students*** conducted at JSS College for Women, Mysore during 08-09th March 2018 under Extension Lecture Programme of the centre
- Participated in ***One day National Level Conference on Emerging Trends in Nano-Chemistry*** held at MMK & SDM Mahila Maha Vidyalaya, Mysuru on February 2, 2017.
- Attended a ***Two day Seminar and Exhibition on Energy Mix: Need for the Nation***. Held at Department of Chemistry, The National Institute of Engineering, Mysuru, on January 11-12, 2017.
- Attended a ***Two day Work Shop on Recent Trends in Research Methodology and Safety Measures for Handling Chemicals in the Laboratory***. Held at Sarada Vilas College, Mysuru, on December 9-10, 2016.
- Attended a ***Two day seminar on “National Seminar on Emerging Trends in Analytical Techniques”*** held at Government Science College, on March 28 – 29th, 2016, Hassan.
- Attended a ***Two day seminar on “Two Day National Conference on Emerging Trends in Chemistry”*** held at St. Philomena’s College, Mysuru, on March 11 – 12th, 2016, Mysuru.
- Attended a ***Two day national conference on “Application of Modern Analytical Techniques to Fundamental Research in Chemistry”*** held at JSS College of Arts Commerce and Science, Mysuru, on March 9 – 10th, 2016, Mysuru.
- Attended a ***International Indian Science Congress Conference***, University of Mysore, 3-7th January, 2016.
- Attended a ***KSTA Sponsored one day seminar on “Material Science and Nanotechnology”*** Department of Chemistry, Vidya Vikas Institute of Engineering and Technology, Mysore, 29th September 2015.
- Participated in ***one day national seminar on Chemistry and Chemical Biology***, Prof. K.S. Rangappa’s 60th Birthday celebration, Shri Nalwadi Krishnaraja Wodeyar Auditorium, University of Mysore, 26th May 2015.

- Participated in ***One day seminar on recent innovations in Bio-organic and Medicinal Chemistry***, Department of Chemistry, The National Institute of Engineering, Mysuru, 28th January. 2015.
- Participated in ***International Conference on Polymer and allied Materials (ICPAM-2014)***. *International Conference, Hotel Maurya, Patna, India.30-31 May, 2014.*
- Participated in Vijay Kuamr H, Nagaraja Naik. ***Two day National Conference on Emerging trends in Ayurveda and Herbal Drug Technology***, Department of Biotechnology, Teresian College, Mysore, 22-23, November, 2012.
- Participated in ***Suvarna Manasa-2011***, Department of Studies in Chemistry, University of Mysore, Mysuru, February, 15th to 24th, 2011.
- Participated in ***One day seminar on Chemistry of Materials***, Sri Jayachamarajendra College of Engineering, Department of Chemistry and Polymer science & Technology, Mysuru, 25th November, 2011.

Seminars/Workshops organized (if any)

- Organized a ***Tow-day National Conference on Recent Innovations in Medicinal and Material Chemistry (RIMMC-2019)*** held on 8-9th March 2019, Department of Studies in Chemistry, University of Mysore in Collaboration, UGC-SAP-DRS-III, DOS in Chemistry, University of Mysore, Mysuru (Organizing Committee Member).
- Organized a ***National Conference on Innovations in Chemical Sciences (NCICS-2020)*** held on 30th & 31st January 2020, Department of Studies in Chemistry, University of Mysore in Collaboration with Karnataka Science and Technology, Department of Science & Technology, Government of Karnataka (Organizing Committee Member).

Membership in national/international academic and professional bodies (if any)

- Member of Indian Science Congress (2012)
- Member of Indian Science Congress (2015)