

R. DURGA PRIYADHARSHINI

My contact

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Skills

- Teaching
- Research
- Scholarly writing
- Supervision
- Mentoring

Instrumental skills

- UV/Visible Spectroscopy
- Fluorescence Spectroscopy
- Circular Dichroism
- IR Spectroscopy
- NMR Spectroscopy (Data analysis)
- Electrochemical studies (CV, DPV)
- Molecular docking
- Metadynamics simulation

About my current position

Currently, I have submitted my Ph.D. thesis at Gandhigram Rural University under the guidance of Prof. K. P. Elango and I've published eight research articles in reputed journals. I am currently employed with St. Antony's College for Women as an assistant professor.

Education

- Gandhigram Rural University
Ph.D., Chemistry
2021-2024
- GTN Arts College
M.Sc., Chemistry
2018-2020
- Govt. Arts College for Women
B.Sc., Chemistry
2014-2017

Research experience

- I have experience in investigating the interaction between biologically relevant molecules with calf thymus DNA through various spectral techniques.
- Theoretically investigating the binding behaviours of ligands with DNA via molecular docking and

Research Publications

1. Spectroscopic and theoretical evidences for the surface binding of voglibose drug with DNA. **R. Durga Priyadharshini**, S.Ponkarpagam, K. N. Vennila and K. P. Elango, *Spectrochim. Acta Part A*, 271, 120888, 2022. (Impact Factor: 4.4)
2. Multi-spectroscopic and free energy landscape analysis on the binding of anti-viral drug remdesivir with calf thymus DNA. **R. Durga Priyadharshini**, S. Ponkarpagam, K. N. Vennila and K. P. Elango, *Spectrochim. Acta Part A*, 278, 121363, 2022. (Impact Factor: 4.4)
3. Intercalation of anticancer drug Palbociclib with calf-thymus DNA: New insights from molecular spectroscopic, molecular dynamic simulations and cleavage studies. **R. Durga Priyadharshini**, R. Jayashree, R. Preethi, K. N. Vennila and K. P. Elango, *J. Biomol. Struct. Dy.*, Accepted - In Press. (Impact Factor: 4.4)
4. N,N',N''-Trisubstituted guanidine derivatives as DNA-intercalators: synthesis, crystal structures and biophysical investigations. **R. Durga Priyadharshini**, P.N.Sathishkumar, M. Bensingh, N. Bhuvanesh, K. N. Vennila, R. Karvembu and K. P. Elango, *New J. Chem.*, 47, 14185-14194, 2023. (Impact Factor: 3.3)
5. Multi-spectroscopic, thermodynamic and molecular simulation studies on the binding of pyrroloquinoline quinone with DNA: coexistence of intercalation and groove binding modes. **R. Durga Priyadharshini**, R. Jayashree, R. Preethi, K. N. Vennila and K. P. Elango, *J. Biomol. Struct. Dy.*, Accepted - In Press. (Impact Factor: 4.4)
6. Multi-spectroscopic and molecular simulation methods of analysis to explore the mode of binding of Mebendazole drug with calf-thymus DNA. K. Pavithra, **R. Durga**

Priyadharshini, K. N. Vennila, and K. P. Elango, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 300, 122938, 2023. (Impact Factor: 4.4)

7. Multi-spectroscopic, calorimetric and molecular dynamics evaluation on non-classical intercalation of antiviral drug Molnupiravir with DNA. K. Pavithra, **R. Durga Priyadharshini**, K. N. Vennila, K. P. Elango, *Journal of Biomolecular Structure and Dynamics*, Accepted - In Press. (Impact Factor: 4.4)
8. Exploring the binding mechanism of Pomalidomide drug with CT-DNA: Insights from multi-spectroscopic, molecular docking and simulation studies. K. Pavithra, **R. Durga Priyadharshini**, K. N. Vennila, and K. P. Elango, *Journal of Molecular Structure*, 1302, 137547, 2024. (Impact Factor: 3.8)

Conference Presentations

- ❖ Presented the paper “In vitro calf thymus DNA binding studies of antidiabetic drug voglibose using multi-spectroscopic and molecular dynamic simulation studies” R. Durga Priyadharshini and K. P. Elango in the “International Webinar on Recent Advances in Chemical Sciences (RACS 2K22)” organized by The Gandhigram Rural Institute – Deemed to be University, Gandhigram on 21 and 22 July 2022
- ❖ Presented the paper “In vitro calf thymus DNA binding studies of antiviral drug remdesivir using multi-spectroscopic and molecular dynamic simulation studies” R. Durga Priyadharshini and K. P. Elango in the National Conference on Newer Material for Energy and Environmental Application (NCNM-2022) organized by Annamalai University, Chidambaram, on 24 and 25 September 2022
- ❖ Presented the paper “Biophysical insights on the interaction of pyrroloquinoline quinone with calf thymus DNA” R. Durga Priyadharshini and K. P. Elango in the National level

conference on “Transcending Frontiers in Chemical Science (TFCS-2023)” organized by National Institute of Technology, Trichy on 11 August 2023

Workshop participation

- Participated in the “National Level Workshop on Nuclear Magnetic Resonance Spectroscopy” organized by The Gandhigram Rural Institute – Deemed to be university, March 2023