

JAYANTA DOWARAH, Ph.D.

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EDUCATIONAL QUALIFICATION:

- B.Sc. Chemistry (2013), from department of Chemistry, Sibsagar College, Dibrugarh University, Assam. (First class with distinction).
- M.Sc. (2015), from department of Chemistry, Mizoram University, Aizawl, Mizoram, India. First class first, (**Gold Medalist**).
- Ph.D., (2021). Title: “Molecular Recognition: Synthesis and study of Non-covalent interactions in Organic Fleximers”, from department of Chemistry, Mizoram University, Aizawl, Mizoram, India under Supervision of Dr. Ved Prakash Singh.
- CSIR NET, 2022.

TEACHING AND EXPERIENCES:

- **Guest Faculty in the Department of Industrial Chemistry**, Mizoram University, Aizawl, Mizoram, India, Pin-796004, from **01-02-2022 to 01-07-2022**.
- **Assistant Professor (contractual) in the Department of Chemistry**, Dibrugarh University, Dibrugarh, Assam, India, Pin-786004, from **01-02-2023 to 31-01-2024**.
- **Assistant Professor in the Department of Chemistry**, BBK College, Nagaon, Barpeta, Assam, Pin-781311, from **17-02-2024 to Present**.

FELLOWSHIP AND AWARDS:

- University Fellowship from Mizoram University, Aizawl, Mizoram, India.

- **DST INSPIRE Fellowship as JRF**
- **DST INSPIRE Fellowship as SRF**

RESEARCH AREAS:

Organic synthesis, Drug design, developing crystal, Crystal analysis, Hirshfeld surface analysis, topology study of crystal, *In-silico* analysis, Molecular docking simulations, supramolecular chemistry.

RESEARCH PUBLICATIONS:

1. Design, synthesis, structural investigation and binding study of 2-pyridone-based pharmaceutical precursor with DNA, **Jayanta Dowarah**, Biki Hazarika, Balkaran Singh Sran, Dingtea Khiangte, Ved Prakash Singh, *Journal of Molecular Structure*, 2023, (DOI: org/10.1016/j.molstruc.2023.135182), (I.F: **3.841**).
2. Synthesis of a Pyridone-Based Phthalimide Fleximer and Its Characterization and Supramolecular Property Evaluation, **Jayanta Dowarah**, Brilliant N. Marak, Balkaran Singh Sran, Pramod Kumar Shah, Pradeep Kumar Shukla, Ved Prakash Singh, *ACS Omega*, 2022, (DOI: 10.1021/acsomega.2c02095), (I.F: **4.132**)
3. Green synthesis, structural analysis and anticancer activity of dihydropyrimidinone derivatives, **Jayanta Dowarah**, Devanshi Patel, Brilliant N. Marak, Umesh Chand Singh Yadav, Pramod Kumar Shah, Pradeep Kumar Shukla, Ved Prakash Singh, *RSC Advances*, 2021, 11, 35737-35753, (DOI: 10.1039/D1RA03969E), (I.F: **4.036**)
4. Supramolecular architectures in dihydropyridones: Synthesis, crystal structure, Hirshfeld analysis, cytotoxicity and in silico studies, Lalhruaizela, Devanshi Patel, Brilliant N. Marak, **Jayanta Dowarah**, Balkaran Singh Sran, Umesh Chand Singh Yadav, Ved Prakash Singh, *Journal of Molecular Structure*, 2021, 1250, 131671, (doi.org/10.1016/j.molstruc.2021.131671), (I.F: **3.841**).
5. Potential drug development and therapeutic approaches for clinical intervention in COVID-19, **Jayanta Dowarah**, Brilliant N. Marak, Umesh Chand Singh Yadav, Ved Prakash Singh*, 2021, *Bioorganic Chemistry*, (I.F: **5.307**).
6. Study of the structure-bioactivity of fleximers: synthesis, crystal structure, Hirshfeld surface analysis, and anti-inflammatory assays, Ved P. Singh*, **Jayanta Dowarah**, Brilliant N. Marak,

- Balkaran S. Sran, Ashish K. Tewari, April 2021, *Journal of Molecular Structure*, 130513, (doi.org/10.1016/j.molstruc.2021.130513), (IF: 3.841).
7. Study of supramolecular self-assembly of pyridone and dihydropyridone co-crystal: Synthesis, crystal structure, Hirshfeld surface, DFT and molecular docking studies, Lalhruaizela, Brilliant N. Marak, Dipanta Gogoi, **Jayanta Dowarah**, Balkaran S.Sran, Zodinpuia Pachuau, Ved P. Singh*, March 2021, *Journal of Molecular Structure*, 1235, 130214, (doi.org/10.1016/j.molstruc.2021.130214), (IF: 3.841).
 8. A step towards repurposing drug discovery for Covid-19 therapeutics through In Silico approach, Brilliant N. Marak, **Jayanta Dowarah**, Laldingluaia Khiangte, Ved Prakash Singh*, November 2020, *Drug Development Research*, (DOI: 10.1002/ddr.21757), (IF: 5.004).
 9. Design, synthesis, in silico analysis with PPAR- γ receptor and study of non-covalent interactions in unsymmetrical heterocyclic/phenyl fleximer, Ved P. Singh*, **Jayanta Dowarah**, Brilliant N. Marak, Lalhruaizela, Balkaran S. Sran, Ashish K. Tewari, October 2020, *Journal of the Chinese chemical society*, (DOI:10.1002/jccs.202000215), (IF: 1.753).
 10. Design, synthesis, In silico analysis and structural study of 4,6-dimethyl-2-(3-(p-tolyloxy)propoxy)nicotinonitrile fleximer, **Jayanta Dowarah**, Brilliant N. Marak, Lalhruaizela, Balkaran S. Sran, Ved P. Singh*, September 2020, *Crystal Research and Technology*, (DOI: 10.1002/crat.202000100), (IF: 1.599).
 11. A Comprehensive Insight on the Recent Development of Cyclic Dependent Kinase Inhibitors as Anticancer Agents, Brilliant N. Marak, **Jayanta Dowarah**, Dingtea Khiangte, Ved Prakash Singh*, July 2020, *European Journal of Medicinal Chemistry*, (DOI: 10.1016/j.ejmech.2020.112571), (IF: 7.088).
 12. Structural chemistry and anti-inflammatory activity of flexible/restricted phenyl dimers, Ved P. Singh*, **Jayanta Dowarah**, Ashish K. Tewari and David K. Geiger, January 2020, *Journal of the Iranian Chemical Society*, (DOI: 10.1007/s13738-020-01853-x), (IF: 2.271).
 13. Anti-diabetic drugs recent approaches and advancements, **Jayanta Dowarah**, Ved P. Singh*, January 2020, *Bioorganic & Medicinal Chemistry*, 28 (5): 115263, (DOI: 10.1016/j.bmc.2019.115263), (IF: 3.461).
 14. Structural and non-covalent interactions study of 2-pyridone based flexible unsymmetrical dimer, Ved P. Singh*, **Jayanta Dowarah**, Lalhruaizela, David K. Geiger, December 2019, *Crystal Research and Technology*, (DOI: 10.1002/crat.201900136), (IF: 1.599).

BOOK CHAPTERS

1. Clinical Management and Recent Development of Type 2 Diabetes Mellitus, **Dr. Jayanta Dowarah**, CREDENCE, Volume-III: PART-I, March 2022. (ISSN: 978-81-956183-0-9).
2. Methods used for evaluation of antioxidant properties of natural and synthetic compounds, Jitupon Gogoi, **Dr. Jayanta Dowarah**, Advances in Chemical, Geological and Physical Sciences (ISBN 978-81-963781-8-9). (Accepted).

PAPER AND POSTER PRESENTATION IN CONFERENCES AND SYMPOSIA

1. Poster presented in international conference on chemistry and environmental sustainability (ICCES), entitled: “**Drug design & synthesis of anti-inflammatory compounds and study their biological activity**”, organised by department of chemistry, Mizoram University, 19th-22nd, February, 2019.
2. Paper presented in international conference on Emerging trends in chemical sciences (ETCS), entitled: “**Synthesis, Structural Studies And Anti-Inflammatory Activities Of Pyridone-Based Fleximers**”, organized by department of chemistry, Gauhati University, 13th-15th February, 2020.
3. Paper presented on national conferences on functional materials and applications (NCFMA), entitled: “**Molecular Recognition: Synthesis and Study of Non-Covalent Interactions in Organic Fleximers**”, organized by department of BS and HSS (Physics), N.I.T Mizoram, 22nd-23rd, November, 2019.
4. Paper presented on international seminar on recent advances in science and technology (ISRAST), entitled: “**Design, synthesis and in silico analysis of rosiglitazone based compounds against PPAR- γ receptor as anti-diabetics drugs**”, organized by NEAST, Mizoram University, 16th-18th, November, 2020.

COMPUTATIONAL SOFTWARE AWARENESS

WinGX, ORTEP, Mercury, CrystalExplorer, ToposPro, Olex2, AutoDock, AutoDock Vina, BIOVIA Discovery Studio Visualizer, PyMOL.

REFERENCE DETAILS

1. Dr. Ved Prakash Singh, Professor, Department of Industrial Chemistry, Mizoram University, Mizoram, 796004, India. Email: vpsingh@mzu.edu.in. Phone: +918732857898.