

CURRICULUM VITAE

PREETI PRAJAPATI

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CAREER OBJECTIVE

To build career in a growing organization where I can get opportunities to prove my abilities by accepting challenges, fulfilling the organizational goal.

PRESENT POSITION

- Research Associate (Part-Time) working as a Project Fellow under the supervision of Prof. Mahendra Singh Sodha funded by The NorthCap University, Gurugram, Haryana, India.

TOPIC of Ph.D. THESIS

- Experimental and Theoretical studies of Structure and Activity of active Pharmaceutical Ingredients and Cocrystals.

AREA OF INTEREST

- Quantum Chemical computation, Pharmaceutical Cocrystals and Vibrational Spectroscopy, Molecular Modeling and Molecular Docking.

ACADEMIC PROFILE

| Examination | Board/University | Year | Div. | % |
|--------------------|--|-------------|-------------|----------|
| Ph.D. | University of Lucknow | 2022 | - | - |
| M.Sc. | University of Lucknow | 2013 | I | 72.4 |
| B.Sc. | University of Lucknow | 2011 | I | 60.94 |
| Intermediate | CBSE/Kendriya Vidyalaya Bakshi ka Talab, Lucknow | 2008 | I | 69.2 |
| High School | CBSE/Kendriya Vidyalaya Bakshi ka Talab, Lucknow | 2006 | I | 80.00 |

ACHIEVEMENT & AWARDS

- Worked as Project Fellow in Centre of Excellence Scheme funded by Government of Uttar Pradesh at Department of Physics, University of Lucknow, India (2021-22).
- Selected as an apprentice in Sanshadow Consultants (Pvt.) Ltd. Company in 2020.
- Received best Research Paper Award from University of Lucknow in the session: 2016-17, 2018-19, 2020-21 and 2022-23.

PERSONAL PROFILE

Father's Name: Rajaram Prajapati
Mother's Name: Devrati Prajapati
Date of Birth: 01 May 1991
Nationality: Indian
Gender: Female
Marital Status: Single
Language Known: English, Hindi

PAPER PUBLISHED

- Combined spectroscopic and quantum chemical studies of ezetimibe, **Preeti Prajapati**, Jaya Pandey, Manishkumar R. Shimpi, Anubha Srivastava, Poonam Tandon, Sitaram P. Velaga, Kirti Sinha, *Journal of Molecular Structure*, 2016, **1125**, 193-203.
- Studies of molecular structure, hydrogen bonding and chemical activity of a nitrofurantoin-L-proline cocrystal: a combined spectroscopic and quantum chemical approach, Jaya Pandey, **Preeti Prajapati**, Manishkumar R. Shimpi, Poonam Tandon, Sitaram P. Velaga, Anubha Srivastava and Kirti Sinha, *RSC Adv.*, 2016, **6**, 74135–74154.
- Spectroscopic and molecular structure (monomeric and dimeric model) investigation of Febuxostat: A combined experimental and theoretical study, Jaya Pandey, **Preeti Prajapati**, Anubha Srivastava, Poonam Tandon, Kirti Sinha, Alejandro P. Ayala, A. K. Bansal, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2018, **203**, 1-12.
- Combined spectroscopic and quantum chemical approach to study the effect of hydrogen bonding interactions in ezetimibe, **Preeti Prajapati**, Jaya Pandey, Poonam Tandon and Kirti Sinha, *Spectrochimica Acta Part A: molecular and Biomolecular spectroscopy*, 2019, **206**, 246-253.
- Structural reactivity analyses of a neoflavonoid 4-methoxydalbergione using vibrational spectroscopy and quantum chemical calculations, Shweta, Eram Khan, **Preeti Prajapati**, Poonam Tandon, Purnima Bharti, Padam Kumar, Rakesh Maurya, *Journal of Molecular Structure*, 2019, **1175**, 28-38.
- Quantum chemical calculations and DFT study of Sitagliptin: Insight from computational evaluation and docking approach, Manoj Kumar Chaudhary, **Preeti Prajapati**, Bhawani Datt Joshi., *Journal of Nepal Physical Society*, 2020, **6(1)**, 73-83.

- Molecular interactions and vibrational properties of ricobendazole: Insights from quantum chemical calculation and spectroscopic methods, Manoj Kumar Chaudhary, **Preeti Prajapati**, Karnica Srivastava, Keilla Façanha Silva, Bhawani Datt Joshi, Poonam Tandon, Alejandro Pedro Ayala, *Journal of Molecular Structure*, 2021, **1230**, 129889.
- Molecular structure and quantum descriptors of cefradine by using vibrational spectroscopy (IR and Raman), NBO, AIM, chemical reactivity and molecular docking, Manoj Kumar Chaudhary, T Karthick, Bhawani Datt Joshi, **Preeti Prajapati**, Maria Silmara Alves de Santana, Alejandro Pedro Ayala, VS Jeba Reeda, Poonam Tandon, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2021, **246**, 118976.
- Vibrational and conformational analysis of structural phase transition in Estradiol 17 β valerate with temperature, Jaya Pandey, **Preeti Prajapati**, Poonam Tandon, Kirti Sinha, Alejandro Pedro Ayala, Javier Ellena *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2021, **263**, 120219.
- Molecular Structural, hydrogen bonding interactions and chemical reactivity studies of ezetimibe-L-proline cocrystal using a spectroscopic and quantum chemical approach, **Preeti Prajapati**, Jaya Pandey, Poonam Tandon, Kirti Sinha and Manishkumar Ramesh Shimpi, *Frontiers in Chemistry*.
- Spectroscopic and quantum chemical investigations to explore the effect of intermolecular interactions in a diuretic drug: Hydrochlorothiazide, Arti Yadav, Rajni Chaudhary, Ashok Singh Bahota, **Preeti Prajapati**, Jaya Pandey, Aditya Narayan, Poonam Tandon, Venu R.Vangala, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 2023, **285**, 121931.
- Molecular Structure, Hydrogen Bonding Interactions and Docking Simulations of Nicotinamide (Monomeric and Trimeric Models) by Using Spectroscopy and Theoretical Approach, omeric and Trimeric Models) by Using Spectroscopy and Theoretical Approach, Priya Verma, Anubha Srivastava, **Preeti Prajapati**, Poonam Tandon & Manishkumar R. Shimpi, *Polycyclic Aromatic Compounds*, 2023, <https://doi.org/10.1080/10406638.2023.2200954>.

- Combined Spectroscopic and Quantum Chemical Study to explore the effect of hydrogen bonding in Hydrochlorothiazide-Nicotinamide Cocrystal, Arti Yadav, Rajni Chaudhary, Ashok Singh Bahota, **Preeti Prajapati**, Jaya Pandey, Aditya Narayan, M. Asim Sajid Al-Hanafi, Poonam Tandon, Venu R.Vangala, *Journal of Molecular Structure*, 2023 in communication.

ORGANIZATIONAL SKILLS

- Member of Registration committee in ISABMS (International symposium on Advances in biological sciences) held on 15th July 2014.
- Member of local organizing committee (Registration) in ICOPVS (International conference on perspective in vibrational spectroscopy) held on 5th-8th November 2016.
- Member of Organizing Committee in Indo-Brazilian e-symposium on "Solid state properties of Pharmaceuticals, April 29-30, 2020.
- Member of Organizing Committee in International Conference on Diverse Emerging Materials and their Applications", March 14-15, 2021.

TEACHING EXPERIENCE

- One year teaching experience in B.Sc II (Physics) in the session 2015-16.
- One year experience of taking lab of B.Sc II (Physics) in the session 2015-16.

TECHNICAL SKILLS

- Good command on: Windows, Internet, MS-PowerPoint and MS-Excel. Skills in computational molecular modeling: GAUSSIAN-09.
- Working on FTIR spectrometer, UV Spectrophotometer.

ADDITIONAL COURSES

- One year Proficiency course in German (2015)
- One year Proficiency course in French (2016)

CONFERENCES & WORKSHOPS ATTENDED

CONFERENCES

- Presented a Poster in "International Conference on Frontiers of Spectroscopy (ICFS-2015)", Department of Physics, Banaras Hindu University, Jan 10-12, 2015.
- Presented a Poster in "International Pharmaceutical Conference on Nanoformulations and Translational research: Small getting Bigger", Department of Pharmaceutical Sciences, BBAU, Lucknow, Feb 2-3, 2015.
- Presented a Poster in "International Symposium on Advances in Biological & Material Sciences (ISABMS-2014)" organized by Humboldt Academy Lucknow & University of Lucknow, July 15, 2014.

- Presented a Poster in 3rd Lucknow Science Congress and National Conference on “Science for Society: An Interdisciplinary Approach”, BBAU, 31st Oct-2nd Nov, 2015.
- Presented a Poster in “International Conference on Advances in Light Technologies and Spectroscopy of Materials (ICALTSM-2016)”, Department of Physics, University of Lucknow, Jan 16-18, 2016.
- Presented Oral in “International Conference on New Scintillations on Materials Horizon (ICNSMH-2016)”, Department of Applied Physics, Faculty of Engineering and Technology, Mahatma Jyotiba Phule Rohilkhand University, Bareilly, Oct 21-23, 2016.
- Presented a Poster in “6th International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS 2016)”, University of Lucknow, Nov 5-8, 2016.
- International Seminar on New Horizons of Astronomy (ISNHA-2016), Council of Science & Technology, U.P, Department of Mathematics & Astronomy, University of Lucknow, Lucknow, Nov 9, 2016.
- Presented a Poster in “International Conference on Drug Design”, Convention Centre, JNU, April 7-9, 2017.
- National Seminar on Terrestrial & Extraterrestrial Life, University of Lucknow, Council of Science & Technology, Lucknow, Sep 22, 2017.
- Presented a Poster in “National Symposium on Multidimensional Aspects of Spectroscopy, Department of Physics, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, Nov 17- 18, 2017.
- Presented a poster in “7th International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS-2018), BARC-MUMBAI, November 25 -29, 2018.
- Presented a poster in “International Symposium on Advances in Functional and Biological Materials ISAFBM-2019”, 28th Feb 2019, at University of Lucknow, Lucknow.
- Presented Oral in International Conference on Ultrasonics and Materials for Advanced Technology (ICUSAT-2019), Nov 16-18, 2019 at VBS Purvanchal University.
- Presented Oral in International Conference on Ultrasonics and Materials for Advanced Technology (ICUSAT-2019), Nov 16-18, 2019 at VBS Purvanchal University.
- Presented Oral in Indo-Brazilian e-symposium on "Solid state properties of Pharmaceuticals, April 29-30, 2020 at Lucknow University.
- Presented Oral in International Conference on Diverse Emerging Materials and their Applications”, March 14-15, 2021 at Lucknow University.

WORKSHOPS

- Awareness Seminar on MATLAB for Data Processing & Application Development, centre Facility for Computational Research, Feb 9, 2015.
- Workshop on Popularization of Astronomy, Department of Mathematics & Astronomy, University of Lucknow, Lucknow, May, 2015.
- Summer School on Laboratory Training and Management, Department of Physics, University of Lucknow, May 15, 2015.
- Workshop on Bioinformatics and Cheminformatics Approaches in Computational aided drug Designing, Department of Biotechnology, Govt. of India, Oct 15-17, 2015.
- Workshop on Diffraction, Microscopic and Spectroscopic Techniques for Materials Studies, Department of Physics, University of Lucknow, Nov 7-8, 2015.

- Author Workshop jointly organized by Springer Nature & Tagore Library, Lucknow University, July 26, 2017.
- Workshop on Applications of Gaussian & GaussView Software, organized by Physics Department, University of Lucknow, 18-19 July, 2019.
- Workshop on High Performance Computing (HPC), organized by Physics Department, University of Lucknow, 05-09 August, 2019.

CHAPTERS IN BOOK

- Cocrystal of Pharmaceutical Drugs: A case study of Paracetamol cocrystals with oxalic acid and 4, 4, Bipyridine, Keshav Kumar Singh, **Preeti Prajapati** and Poonam Tandon, Pharmaceutical: boon or Bane, ISBN: 979-88687-487-4, 2023, NOVA Science Publishers, Inc.

CHAPTERS IN E-BOOK PROCEEDING

- Study of Pharmaceutical Cocrystal using Experimental and Computational Techniques: An overview, Eram Khan, Karnica Srivastava, Anuradha Shukla, Jaya Pandey, **Preeti Prajapati**, Poonam Tandon, Proceedings of International Conference on Perspectives in Vibrational Spectroscopy, 2016, ISBN:978-93-5267-364-3, 8-14.
- Effect of hydrogen bonding on vibrational properties and chemical reactivity of molecular systems, **Preeti Prajapati**, Jaya Pandey and Poonam Tandon, Proceedings of International Symposium on Advances in Functional and Biological Materials (ISAFBM-2019), ISBN: 978-93-5351-824-0.
- Application of Spectroscopy and Density Functional Theory (DFT) to Molecular Modeling (Drug Designing): An Overview, Jaya Pandey, **Preeti Prajapati**, Poonam Tandon, Proceedings of International Symposium on Advances in Functional and Biological Materials (ISAFBM-2019), ISBN: 978-93-5351-824-0.

DECLARATION:

I hereby declare that all the above information is current to the best of my knowledge and belief.