

# CURRICULUM VITAE

**Dr. Sampa Gupta, Ph.D.**

## CONTACT INFORMATION

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## Professional Experience

**Assistant Scientist** at University of Florida, School of Pharmacy, Dept of Medicinal Chemistry,  
1345 Center Dr, Gainesville, FL, USA May 2022 –Present

**Postdoctoral Research Associate** at University of Florida, School of Pharmacy, Dept of  
Medicinal Chemistry, 1345 Center Dr, Gainesville, FL, USA Feb 2020 –May 2022

## Academic Qualification

**Ph.D.** Medicinal Chemistry CSIR-CDRI, Lucknow, India in March 2019.

Title of Thesis: “**Design, synthesis and bio evaluation of pyrazole and pyran derivatives as possible biodynamic agents**”

**M.Sc. (Master of Science in Organic Chemistry)** degree from “University of Kalyani, Kalyani, West Bengal, India” in 2011.

**B.Sc. (Bachelor of Science in Chemistry)** degree from “Krishnath College, Berhampore, West Bengal, India” in 2009.

### **Research Skills**

- Total synthesis of natural product analogues, designing and synthesis of various biologically active scaffolds (heterocyclic compounds and carbohydrate molecules) with the help of various organic reactions including multicomponent, multistep, and metal catalysed coupling reactions resulting SAR analysis and lead optimisation.
- Developing novel route for organic transformation and synthesis of fused heterocyclic compounds.
- DFT calculations for computational designing of nanomaterials for energy related studies, especially in the field of batteries, and nanocatalysis.

### **Analytical Instrument and Techniques Known/ Skills**

- Synthetic organic chemistry: successful handling of milligram to multigram scale reactions
- Experienced in handling air, light, hazardous, and moisture sensitive compounds, and performing reactions under an inert atmosphere and their proper purification.
- Spectroscopic data characterization and interpretation skills [IR, 1-D and 2-D NMR (COSY, HMQC, HMBC etc.), MS]
- Modern analytical techniques such as NMR (Bruker), Mass-spectroscopy, FT-IR.
- Microwave synthesizer (Anton Paar, Monowave-400)
- Analytical and preparative High-Performance Liquid Chromatography (HPLC)
- Experience in lab safety and management
- Basic understanding of theoretical and computational chemistry

### **Research Publications**

1. P. Maurya, R. S. Rawat, **S. Gupta**, S. Krishna, M. I. Siddiqi, K. V. Sashidhara, D. Banerjee, **J. Biomol. Struct. Dyn.**, (2023) [doi.org/10.1080/07391102.2023.2297817](https://doi.org/10.1080/07391102.2023.2297817)
2. S. Mukhopadhyay, **S. Gupta**, J. Wilkerson, A. Sharma, L. R. McMahon, C. R. McCurdy, Receptor Selectivity and Therapeutic Potential of Kratom in Substance Use Disorders, **Curr. Addict. Rep.**, 10 (2023) 304-316.
3. A. Sardar, A. Ansari, **S. Gupta**, S. Sinha, S. Pandey, D. Rai, M. Kumar, R. S. Bhatta, R. Trivedi, K. V. Sashidhara, Design, Synthesis and Biological Evaluation of New

- Quinazolinone-Benzopyran-Indole Hybrid Compounds Promoting Osteogenesis through BMP2 Upregulation, **Eur. J. Med. Chem.**, 244 (2022) 114813.
4. **S. Gupta**, A. K. Rai, S. Pandey, L. R. Singh, Dr. A. Tamrakar, K. V. Sashidhara, Design, Synthesis and Evaluation of novel Pyrazole-fibrate Derivatives as stimulators of glucose uptake by GLUT4 translocation. **Bioorg. Med. Chem. Lett.**, 34, (2021) 127760.
  5. **S. Gupta**, A. Ansari, K. V Sashidhara, Base promoted peroxide systems for the direct Oxidation of Primary Amines. **Tetrahedron Lett.**, 60 (2019), 151076.
  6. A. Upadhyay, P. Chandrakar, **S. Gupta**, N. Parmar, S. K. Singh, M. Rashid, P. Kushwaha, M. Wahajuddin, K. V. Sashidhara, S. Kar, Synthesis, Biological Evaluation, Structure–Activity Relationship and Mechanism of Action Studies of Quinoline-metronidazole Derivatives against Experimental Visceral Leishmaniasis. **J. Med. Chem.**, 62 (2019) 5655-5671.
  7. P. Kushwaha, S. Fatima, A. Upadhyay, **S. Gupta**, S. Bhagwati, T. Baghel, M. I. Siddiqi, A. Nazir, K. V. Sashidhara, Synthesis, biological evaluation and molecular dynamic simulations of novel Benzofuran-tetrazole derivatives as potential agents against Alzheimer’s disease. **Bioorg. Med. Chem. Lett.**, 29 (2019) 66-72.
  8. **S. Gupta**, P. Maurya, A. Upadhyay, P. Kushwaha, S. Krishna, M.I. Siddiqi, K.V. Sashidhara, D. Banerjee, Synthesis and bio-evaluation of indole-chalcone based benzopyrans as promising antilipase and antiproliferative agents, **Eur. J. Med. Chem.**, 143 (2018) 1981-1996.
  9. **S. Gupta**, S. Adhikary, R. K. Modukuri, D. Choudhary, R. Trivedi, K. V. Sashidhara, Benzofuran-pyran hybrids: A new class of potential bone anabolic agents, **Bioorg. Med. Chem. Lett.**, 28 (2018) 1719-1724.
  10. A. Upadhyay, P. Kushwaha, **S. Gupta**, R. P. Dodda, K. Ramalingam, R. Kant, N. Goyal, K. V. Sashidhara, Synthesis and evaluation of novel triazolyl quinoline derivatives as potential antileishmanial agents, **Eur. J. Med. Chem.**, 154 (2018) 172-181.
  11. P. Kushwaha, A. K. Tripathi, **S. Gupta**, P. Kothari, A. Upadhyay, N. Ahmad, T. Sharma, M. Siddiqi, R. Trivedi, K. V. Sashidhara, Synthesis and study of benzofuran-

- pyran analogs as BMP-2 targeted osteogenic agents, **Eur. J. Med. Chem.**, 156 (2018) 103-117.
12. L. R. Singh, A. Kumar, A. Upadhyay, **S. Gupta**, G.R. Palanati, K. Sikka, M. I. Siddiqi, P. N. Yadav, K. V. Sashidhara, Discovery of coumarin-dihydroquinazolinone analogs as niacin receptor 1 agonist with in-vivo anti-obesity efficacy, **Eur. J. Med. Chem.**, 152 (2018) 208-222.
  13. R. K. Modukuri, D. Choudhary, **S. Gupta**, K. B. Rao, S. Adhikary, T. Sharma, M. I. Siddiqi, R. Trivedi, K. V. Sashidhara, Benzofuran-dihydropyridine hybrids: A new class of potential bone anabolic agents, **Bioorg. Med. Chem.**, 25 (2017) 6450-6466.
  14. K. V. Sashidhara, L. R. Singh, D. Choudhary, A. Arun, **S. Gupta**, S. Adhikary, G. R. Palnati, R. Konwar, R. Trivedi, Design, synthesis and in vitro evaluation of coumarin-imidazo [1, 2-a] pyridine derivatives against cancer induced osteoporosis, **RSC Adv.**, 6 (2016) 80037-80048.
  15. K. V. Sashidhara, R. K. Modukuri, S. Singh, K. B. Rao, G. A. Teja, **S. Gupta**, S. Shukla, Design and synthesis of new series of coumarin-aminopyran derivatives possessing potential anti-depressant-like activity, **Bioorg. Med. Chem. Lett.**, 25 (2015) 337-341.
  16. L. R. Singh, V. C. Tripathi, S. Raj, A. Kumar, **S. Gupta**, S. Horam, A. Upadhyay, P. Kushwaha, J. Arockiaraj, K. V. Sashidhara, M. Pasupuleti, In-house chemical library repurposing: a case example for *Pseudomonas aeruginosa* antibiofilm activity and Quorum Sensing inhibition, **Drug Dev. Res.**, 79 (2018) 383-390.
  17. R. K. Rai, A. Mahata, S. Mukhopadhyay, **S. Gupta**, P. -Z. Li, K. T. Nguyen, Y. Zhao, B. Pathak, S. K. Singh, Room-temperature chemo-selective reduction of nitro groups using non-noble metal nanocatalysts in water, **Inorg. Chem.**, 53 (2014) 2904-2909.

### **Mentoring/Project co-supervision**

Undergraduate students, Trainees and Volunteers in University of Florida: (6 students)

- Zachary Isler, Lauren R. Rozic, Dawson Jackson, Michael Casanueva, Selina Muffler, Amelia Bunnell.

### **Conference/Seminars attended**

1. Three-Day Lecture Workshop On “**Concept in Chemistry-II**” at Department of Chemistry, K.N College, Berhampore, West Bengal. By: IAS -Bangalore, INSA -Delhi, NASI –Allahabad, India, February-2008
2. National Level Workshop on “**The Origin of Modern Chemistry**” at Scottish Church College, Kolkata, West Bengal, Sponsored by DST, August-2010.
3. “**National Seminar on Current Trends in Chemistry – V (NSCTC – V)**” sponsored by University Grand Commission. at Department of Chemistry, University of Kalyani, Kalyani, West Bengal, India. February-2011.
4. “**National Seminar on Chemistry for Better World on The International Year of Chemistry**” sponsored by University Grand Commission at Department of Chemistry, University of Kalyani, Kalyani, West Bengal, India. March 29, 2011.
5. Attended 6<sup>th</sup> International Conference on “**Current trends in Drug discovery and Research**” (CTDDR), CSIR-CDRI, Lucknow, India, 25-28<sup>th</sup> February 2016.
6. Poster presented in “**Frontiers in Chemical Sciences- 2016**” on the topic “Design, synthesis and *in vitro* evaluation of coumarin–imidazo[1,2-*a*] pyridine derivatives against cancer induced osteoporosis” at Department of chemistry, IIT Guwahati, India 8-10<sup>th</sup> December 2016.
7. Poster presented in “**ACS Fall 2023, ACS Meetings & Expositions**”, San Francisco, California, 13-17<sup>th</sup> August 2023.
8. Attended “**UF-Scripps Chemical Biology and 5th UF Drug Discovery Symposium**”, Scripps Florida, Jupiter, Florida, 20-21<sup>st</sup> April 2023.

### **Awards and Honors**

- **2019** (February): Dr. M. M. Dhar memorial Distinguished career achievement award- 2019 for thesis in Chemical Sciences
- **2016-2018**(January): Awarded Senior Research Fellowship by Council of Scientific and Industrial Research (CSIR), Government of India.
- **2014-2015**: Awarded Junior Research Fellowship by Council of Scientific and Industrial Research (CSIR), Government of India.

- **2013:** Qualified National Eligibility Test (CSIR NET Examination) in India

#### **Worked as Judge**

- Judge at Pharmacy and Population Health (PPH) poster session, presented by PharmD students College of Pharmacy, University of Florida **09/2022**
- Judge at Research Showcase poster session, presented by graduate student and postdocs at College of Pharmacy, University of Florida. **02/2023**
- Judge at Graduate Student Research Day, presented by graduate student at Reitz Union, University of Florida **04/2023**

#### **Peer Reviewer for Journal**

- Applied Biochemistry and Biotechnology; Frontier in Oncology; Molecule; Pharmaceutical; BMC Notes; International Journal of Molecular Sciences; Medicinal Chemistry Research; Separations.

#### **Editorial Board Member**

- Review editor for the journal "Frontiers in Pharmacology"
- Topical Advisory Panel member for "Current Issue in Molecular Biology"