

Dr. Mamta Tripathi

Contact no. +919039808285

Bhilai, Chhattisgarh, India

Email address: mamta320@gmail.com

Passport No. L8240879



CAREER OBJECTIVE:

- *INSPIRE Research scholar focussed, and dedicated to learn latest scientific temperament. I am very much enthusiastic in grasping new things and believe in exploring new findings of existing work. I am very much passionate of research work based on chemical biology.*

PROFESSIONAL STRENGTHS:

- Good verbal & written communications skills
- High sense of urgency and Time management
- Able to tackle multi-tasking
- Possess good management and organizational skills
- Ability to work on team and under pressure
- Good motivator, enthusiastic and open to learn new ideas
- Hindi as a native language
- Fluent Command in English

TECHNICAL PROFICIENCY:

- Professional Techniques (UV-Visible Spectroscopy, Fluorescence Spectroscopy, Rp-HPLC, NMR, Fluorescence Microscope, Gel Electrophoresis, FT-IR, and Viscosity)
- Computational Based Theoretical Analysis Molecular Docking Analysis
- High presentation skills
- Computer Efficient (systems, Office and Research based software)

WORK EXPERIENCE:

Pt. Ravishankar Shukla University, Raipur (C.G.), India.

Active INSPIRE Research Scholar worked for doctoral degree 2013- 2018

Responsibilities:

Focus on personal development, after completing Bachelor of Science.

Awards and Honors:

❖ **INSPIRE Fellow (Financially Assisted by Department of Science & Technology New Delhi, India)**

➤ 1st Position in Merit List of M.Sc. 2012.

➤ 4 Gold Medals in the Year 2013.

✓ **Got Young Scientist Award in Indian Council of Chemists held at Pune 2016, India.**

✓ **Got Young Scientist Award In Chhattisgarh Young Scientist Award at Bhilai, Chhattisgarh, 2017, India**

❖ **RESEARCH FIELD**

Thesis Title: "Studies on Hydroxamic Acid Metal Complexes as Nucleic Acid Binder and Enzymatic Inhibitors". Mentor: Prof. Rama Pande.

The thesis work focused on investigating biological property of Hydroxamic acid-Metal complexes. For the first time such study were done, I have determined the mode of Nucleic acid (DNA/RNA) binding parameters of five metal chelating hydroxamic acid employing UV-Visible Spectroscopy, Fluorescence Spectroscopy, Viscosity techniques. Molecular Docking using Hex and AutoDock Software was also done. Both the results experimental and theoretical complemented the analysis. Out of five Hydroxamic acid-Metal complexes four complexes deduced as Minor groove binder and one comes out as Major groove binder. Further studies were extended and efficiency of complexes with enzyme was too checked using AutoDock 4.0 software. Results were excellent all five complexes were successfully dock into socket of enzyme HDAC 8 and proved that complexes are efficiently binds with the core of enzyme HDAC 8. Cytotoxicity of complexes against MCF-7 Breast Cancer Cell were also done, outcome encourages the finding for further in-vivo analysis. Among five Hydroxamic acid-Metal complexes incorporating metal Copper, Molybdenum, Vanadium and Tungsten, Copper-hydroxamic acid complex emerged as best molecule so far. Work done in the thesis proved as a important piece of information in determining binding mode of complexes with nucleic acid and will provide a great help in solving the mechanism of interaction.

❖ **Book Chapter Published**

Ashish Asatkar, **Mamta Tripathi** and Deepali Asatkar “Salen and related ligands” IntechOpen, ISBN 978-1-7885-2202.(Accepted)

❖ **Paper Publication**

1. Yamini Thakur, Rainy Agrawal, **Mamta Tripathi**, Mohammad Khursheed Siddiqi, Eli Mohapatra, Rizwan Hasan Khan, Rama Pande, Exploring the DNA binding efficacy of Cobalt(II) and Copper(II) complexes of hydroxamic acids and explicating their anti-cancer propensity, **Journal of Molecular Structure** 1197 2019, 691-706.
2. Rainy Agrawal, Mohammad Khursheed Siddiqi, Yamini Thakur, **Mamta Tripathi**, Ashish K. Asatkar, Rizwan Hasan Khan and Rama Pande, Explication of Bovine Serum Albumin Binding with Naphthyl Hydroxamic Acids by Multi-Spectroscopic and Molecular Docking Approach Along with its Antioxidant Activity, **Luminescence**, 2019, 1-16.
3. Rainy Agrawal, Yamini Thakur, **Mamta Tripathi**, Mohammad K Siddiqi, Rizwan H Khan, Rama Pande, Elucidating the Binding Propensity of Naphthyl Hydroxamic Acid to Human Serum Albumin (HSA): Multi-Spectroscopic and Molecular Modeling Approach, **Journal of Molecular Structure**, 1184 (2019) 1-11.
4. Yamini Thakur, **Mamta Tripathi**, Bharati Verma, Rainy Agrawal, Likheshwari, Rama Pande Interaction of Cobalt(II) And Copper(II) Hydroxamates With Single Stranded Polyriboadenylic Acid: an Insight Into RNA Based Drug Designing, **Nucleosides, Nucleotides and Nucleic Acids**, 2018, 481-508.
5. Yamini Thakur, **Mamta Tripathi**, Bharati Verma, Rainy Agrawal, Likheshwari, Rama Pande, New Insight into the DNA Binding Studies, In Vitro Anti-Cancer Activity and Molecular Modelling of Dioxo Complexes of Molybdenum(VI) and Tungsten(VI) Hydroxamic Acids, **Journal of Macromolecular Science, Part A Pure and Applied Chemistry**, 2018, 357-374.
6. **Mamta Tripathi**, Gopal Chandra Giri, Devashish Das, Rama Pande, Sougata Sarkar, Santanab Giri, Gourisankar Roymahapatra, Avijit Sarkar, Synthesis, Characterization and Nucleic Acid Binding Studies of Mononuclear Copper(II) Complexes derived from azo containing *O, O* donor ligands, **Nucleosides, Nucleotides and Nucleic Acids**, 37(10), (2018) 563-584.
7. Bharati Verma, Yamini Thakur, **Mamta Tripathi**, Manish Pardhi, Rubi Khilari and Rama Pande, N-Aryl hydroxamic Acids as drug like molecule: a motif of binding mode with calf thymus DNA. **Indian Journal of Biochemistry & Biophysics**, 55(3), (2018) 215-221.
8. **Mamta Tripathi**, Rubi Khilari, Yamini Thakur, Bharati Verma, Manish Pardhi and Rama Pande Oxovanadium Complex as Potential Nucleic Acid Binder, **Journal of Macromolecular Science, Part A Pure and Applied Chemistry** 54(2), (2017) 85-90.
9. Manish Pardhi, Bharati Verma, Yamini Thakur, Rubi Khilari, **Mamta Tripathi** and Rama Pande, In vitro Screening of N-Naphthyl hydroxamic Acids as DNA Binding Agents, **Asian Journal of Chemistry**, 28(12), (2016) 2605-2612.
10. Ashish K. Asatkar, **Mamta Tripathi**, Snigdha Panda, Rama Pande, Sanjio S. Zade, Cu(I) complexes of bis(methyl)(thia/selena) salen ligands: Synthesis, Characterization, Redox Behavior and DNA Binding Studies, **Spectrochimica Acta Part-A (Molecular and Bimolecular Spectroscopy)**, 171 (2017) 18-24.
11. **Mamta Tripathi**, Yamini Thakur, Ashish K. Asatkar, Debashish Das, Rubi Khilari, Rabbani Syed, Majed Ahmed Al-Shaeri, Bharati Verma, Rainy Agrawal, Likheshwari and Rama Pande In-vitro and In-silico DNA binding Studies of Hydroxamic Acid Based Cu(II) Complex with Potential Antitumor Activity (Communicated).
12. Rubi Khilari, **Mamta Tripathi** and Rama Pande Nucleic Acid Binding and Antioxidant Activity of n-m-Tolyl-Chlorophenoxy Aceto Hydroxamic Acid. (Communicated).
13. Rainy Agrawal, Likheshwari, Bharati Verma, Yamini Thakur, **Mamta Tripathi** and Rama Pande Determination of Lipophilicity of N-Aryl Hydroxamic Acids by applying RP-HPLC and Octanol-water method. (Communicated).

❖ **INTERNATIONAL/ NATIONAL WORKSHOPS/SEMINARS PARTICIPATED**

- An Insight into the Interaction of Oxo-Vanadium Complex as Nucleic Acid Binders. **Mip Tec Life Science Week and Mip Tech Exhibition, Sept. 22-26, 2015, Basel, Switzerland, (Poster presentation).**
- Binding Studies Of Hydroxamic Acid-Vanadium(V) Complexes With ct-DNA. Indian Council Of Chemist, December 22-24 2016, Pune, Maharashtra, India, (Oral Presentation).
- Short Term Course on Hands on Training on in-silico drug design and discovery. National Institute Technology, April 4-8, 2016, Raipur, Chhattisgarh, India.

- In-silico Analysis From In-Vitro Target Prediction of Hydroxamic Acid Metal Complexes a DNA Binders, Enzyme Inhibitors and Anti-Breast Cancer Agents 22ndCRSI National Symposium in Chemistry, February 2–4, 2018, Pt. RavishankarShukla University (India),(Poster Presentation).
- In-vitro Interactional Evaluation of Hydroxamic Acid-Metal Complexes as DNA Binders and Anti-Breast Cancer Agents International Conference on Advances in Chemical Science and Allied fields of Science, Health, Education and Environment,8-10 March 2018 Career College Bhopal, Madhya Pradesh, India, (Oral Presentation).

EDUCATIONALSUMMARY:

Advanced

1. **Doctor of Philosophy** (Ph.D): School of Studies in Chemistry, Pt. RavishankarShukla University, Raipur, (C.G.), India. (July2018) Mentor: Prof. Rama Pande.
2. **Master of Science** (M.Sc): School of Studies in Chemistry, (**74.88%**) Pt. RavishankarShukla University, Raipur, (C.G.), India. (**Gold Medalist**) (2012).

Tertiary

1. **Bachelor of Education** (B.Ed): M. J College Bhilai, All Compulsory with physical and biological Science, (**79.88%**) Pt. RavishankarShukla University, Raipur, (C.G.) India. (2013).
2. **Bachelor of Science** (B.Sc): G. D. Rungta College of Science & Technology, Bhilai, Chemistry, Botany, Biotechnology, Foundation Course, (**70.88%**) Pt. RavishankarShukla University, Raipur, (C.G.), India (2010).

PERSONALDETAILS:

- ❖ Date of birth : 28 July, 1990
- ❖ Gender : Female
- ❖ Marital Status : Single
- ❖ Nationality : Indian
- ❖ Language Known : English, Hindi

REFERENCES:

- **Prof. Rama Pande**
Professor (Retd)
School of Studies in Chemistry,
Pt. RavishankarShukla University, Raipur, Chhattisgarh, India
Email id- rama.pande@gmail.com
Contact No.-+919827198370
- **Prof. Shamsh Pervez**
Professor
School of Studies in Chemistry,
Pt. RavishankarShukla University, Raipur, Chhattisgarh, India
Email id- shamshpervez@gmail.com
Contact No.-+919425242455
- **Prof. Alaeddin Hussain**
Professor
MMU UK/ Brunei Darussalam University
Email id-alaeddinhussain1@gmail.com
Contact No. 00441614343704 U

DECLARATION

I do hereby confirm that the information given in this form is true to the best of my knowledge and belief.

MamtaTripathi