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Research and Professional Experience

- **Associate Professor** [Dec 16, 2022 - Till], Department of Chemistry, Hansraj College University Enclave, University of Delhi, Delhi-110007.
- **Assistant Professor** [Dec 15, 2014 – Dec. 15, 2022], Department of Chemistry, Hansraj College University Enclave, University of Delhi, Delhi-110007.
- **Research Collaborator** [July 2021-] Mayo Clinic Florida USA (Employee ID, 309707; Person ID, 309707).
- **Assistant Professor - Affiliate** [October 1, 2018 – September 30, 2021], Department of Medicine, Stritch School of Medicine, University of Loyola, Chicago, United States of America.
- **Affiliate Professor** [September 1, 2019 – August 30, 2022], Department of Pharmaceutical Chemistry, University of Debrecen, Debrecen, Hungary.
- **Post-Doctoral Researcher** [August 1, 2016 - July 31, 2017], Department of Chemistry, Massachusetts Institute of Technology (M.I.T.), 77 Massachusetts Avenue, Cambridge, MA 02139 United States of America (Advisor: Prof. Alexander M Klibanov).
- **Assistant Professor (Ad-hoc)** [Aug 5, 2010-Dec 14, 2014], Department of Chemistry, Sri Venkateswara College, University of Delhi, New Delhi-110021.
- **Principal Investigator** [2011 - 2014], Department of Chemistry, University of Delhi, *Title of the Project:* “Novel functionalized tetrahedral activated small peptidomimetic inhibitors of malarial aspartic proteases, plasmepsin I and plasmepsin II” *Funding Agency:* Department of Science and Technology, Ministry of Science and Technology, Government of India.
- **Ph. D. in Chemistry** [2004 – 2010], Department of Chemistry, University of Delhi, Delhi- 110007 India. Title of the Thesis: “**Synthesis, Conformational Features and Reactivity Studies of Sym N,N',N''-Triarylguanidines**”. Advisor: Prof. Natesan Thirupathi.
- **M. Sc. in Organic Chemistry** [2001 - 2003]: Division: First
- **B. Sc.** [1999 - 2001]: Division: First

Patent (International) – Granted

- **Brijesh Rathi**, Snigdha Singh, Neha Sharma, Poonam, Agam P Singh, Ravi Durvasula, Prakasha Kempaiah “Hydroxyethylamine-based piperazine compounds, and methods of producing and using the same for treating disease” (US Patent App. 11485714; 1 Nov. 2022) **Granted**.
- Zoltner Martin, Zahedifard Farnaz, **Brijesh Rathi**, Neha Sharma, Meenakshi Bansal “Phthalimide-based substances with antiprotozoal activity and their use in therapy” (Czech Patent App. PV 2021-408; 15 August 2023) **Granted**.

Patent (Indian) - Filed

- **Brijesh Rathi**, Prakasha Kempaiah, Agam P Singh, Snigdha Singh, Yash Gupta, Neha Sharma, Poonam, Ravi Durvasula, “Hydroxyethylamine-based Piperazine Compounds, and Methods of Producing and Using the Same for Treating Disease” Application No. *INDIA Patent No: 202011056923* was filed on Apr 29, 2021.
- Neha Sharma, **Brijesh Rathi**, Agam P Singh “Novel Antiparasitic Agents Based on Piperazine and Uses thereof” (Patent Filed; Application No. 202011043767; 08 October 2020).

Research Publications ([Citation: 2815](#); [h-index: 27](#))

1. Zahedifard, F.; Bansal, M.; Sharma, N.; Shen, S.; Singh, P.; **Rathi, B.***; Zoltner, M*. “Phenotypic Screening Reveals a Highly Selective Phthalimide-based Compound with Antileishmanial Activity” *PLoS Negl. Trop. Dis.* **2024**, *18*, e0012050.
2. Jiang, X.; Gao, Z.; Sharma, P. P.; Kumar, S.; **Rathi, B.**; Jia, X.; Daia, J.; Xie, M.; Donga, G.; Xua, S.; Clercq, E.; Pannecouque, C.; Dicke, A.; Liua, X.; Zhan, P. “Discovery of low-molecular-weight phenylalanine derivatives as novel HIV capsid modulators with improved antiretroviral activity and metabolic stability” *J. Med. Virol.* **2024**, *96*, e29594 (IF, 12.7; Wiley Germany; ISSN, 1096-9071).
3. Bege, M.; Singh, V.; Sharma, N.; Debreczeni, N.; Bereczki, I.; Poonam; Herczegh, P.; **Rathi, B.***; Singh, S.*; Borbás, A*. “In vitro and in vivo antiplasmodial evaluation of sugar-modified nucleoside analogues” *Sci. Rep.* **2023**, *13*, 12228 (IF, 4.996; Nature Group Publications, Netherland; ISSN: 2045-2322).
4. Singh, A. P.; **Rathi, B.** “Editorial: Advances in anti-malarial drug discovery” *Front. Drug Discov.* **2023**, *3*:1335842 (ISSN: 2674-0338).
5. Kumar, S.; Bhuvaneshwari, R.; Jain, S.; Nirwan, S.; Fatima, S.; Kumar, D.; Chhikara, B.; **Rathi, B.**; Poonam “A Systematic Review on Pesticide-loaded Nanocapsules: A Sustainable Route for Pesticide Management to Enhance

- Crop Productivity" *Curr. Nanosci.* **2023**, *20*, 280-297 (IF, 1.5; Bentham Science UAE; ISSN, 1573-4137).
6. Bansal, M.; Kumar, S.; Rathi, B.* "Synthesis of novel phthalimide-based piperazine conjugated analogs as anti-malarial agents" *Chem. Biol. Lett.* **2023**, *10*, 627 (Scopus Indexed; ISSN, 2347-9825).
 7. Sharma, H.; Kumar, M.; Sethi, A.; Poonam; **Rathi, B.*** "Metal-free construction of aminated isoquinoline frameworks from 2-(2-oxo-2-arylethyl) benzonitrile in an aqueous medium" *Green Chem.* **2023**, *25*, 167 (IF, 9.8; RSC London; ISSN, 1463-9270).
 8. Kumar; M.; Verma, S.; Sharma, M.; Poonam;* Rathi, B*. "Metal-Catalyzed Synthesis of Benzofused Five-Membered N/O/S Heterocycles, a Progressive Area in Synthetic Chemistry" *Eur. J. Org. Chem.* **2023** DOI: 10.1002/ejoc.202300877 (IF: 2.8; Wiley; ISSN:1099-0690).
 9. Silva, R.; Lima, S. C.; Reis, W. P.; Magalhães, J. F.; Magalhães, R.; **Rathi, B.**; Kohl, A.; Bezerra, M. C.; Pena, L. "Comparison of DNA extraction methods for COVID-19 host genetics studies" *Plos ONE* **2023**, *18*, e0287551 (IF: 3.24; Plos Publications; ISSN: eISSN-1932-6203).
 10. Wang, Z.; Sharma, P. P.; **Rathi, B.**; Xie, M.; Clercq, E. D.; Pannecouque, C.; Kang, D.; Zhan, P.; Liu, X. "Escaping from Flatland: Multiparameter Optimization Leads to the Discovery of Novel Tetrahydropyrido[4,3- d]pyrimidine Derivatives as HIV-1 NNRTIs with Superior Antiviral Activities against NNRTI-Resistant Variants and Favorable Drug-Like Profiles" *J. Med. Chem.* **2023**, *66*, 13, 8643–8665 (IF, 8.04; American Chemical Society; ISSN, 1520-4804).
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 12. Hooda, A.; Singh, D.; Nehra, K.; Dalal, A.; Kumar, S.; Malik, R.S.; **Rathi, B.**; Kumar, P. "Luminescent Tb (III) complexes with Lewis bases for displays: Synthesis and spectral investigation" *Inorg. Chem. Comm.* **2023**, *151*, 110583 (IF, 3.428; Elsevier, Netharlands; ISSN, 1879-0259).
 13. Shaikh, A. S.; Sethi, A.; Makhil, P. N.; **Rathi, B.**; Kaki, V. R. "Quest for selective MMP9 inhibitors: a computational approach" *J. Biomol. Struct. Dyn.* **2023**, DOI: [10.1080/07391102.2023.2186710](https://doi.org/10.1080/07391102.2023.2186710) (IF,5.235; Elsevier; ISSN, 1538-0254).
 14. Kumar, S.; Yadav, D.; Singh, D.; Shakya, K.; **Rathi, B.***; Poonam* "Recent developments on Junin virus, a causative agent for Argentine haemorrhagic fever" *Rev. Med. Virol.*, **2023**, *33*, e2419 (IF, 11.043; Wiley; ISSN, 1099-1654).
 15. Upadhyay, C., Bhattacharya, S., Kumar, S., Kumar, D., Bhadula, N., **Rathi, B.**, Singh, A. P., & Singh, P. "Novel fluorinated piperazine based-amino acid derivatives as antiplasmodial agents: Synthesis, bioactivity and computational studies. *Chem. Biol. Lett.* **2023**, *10*, 543 (Scopus Indexed; ISSN, 2347-9825).

16. Jee, B.; Sharma, P. P.; Goel, V. K.; Kumar, S.; Singh, Y.; Rathi, B. "Natural Metabolite Ursolic Acid as an Inhibitor of Dormancy Regulator DosR of Mycobacterium tuberculosis: Evidence from Molecular Docking, Molecular Dynamics Simulation, and Free Energy Analysis" *Curr. Comput. Aided Drug Des.* **2023** *In Press* DOI: 10.2174/1573409919666230201100543 (IF, 1.63; Bentham Science Publishers; ISSN, 1875-6697).
17. Raj, S.; Rathi, B.; Mehra, P.; Asthana, S.; Kumar, D. "Deciphering the role of c-MET in Metabolic reprogramming of Head and Neck squamous cell Carcinoma via In Silico analysis" *Chem. Biol. Lett.* **2023**, *10*, 532 (Scopus Indexed; ISSN, 2347-9825).
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19. Sujata Maurya, Sibi Raj, Nihar Ranjan Bhoi, Neel Mani, Brijesh Rathi, Dhruv Kumar "Morphological analysis of metabolically dysregulated spermatozoa using Artificial Intelligence based approach" *J. Integrat. Sci. Technol.* **2023**, *2*, 532 (Indian Science Publications; ISSN, 2321-4635).
20. Dalal, A.; Nehra, K.; Hooda, A.; Singh, D.; Kumar, P.; Kumar, S.; Malik, R. S.; Rathi, B. "Luminous lanthanide diketonates: Review on synthesis and optoelectronic characterizations, *Inorg. Chim. Acta* **2023**, *550*, 121406 (IF, 2.8; Elsevier; ISSN, 0020-1693).
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22. Sharma, N.; Sharma, H.; Kumar, M.; Grishina, M.; Pandit, U.; Poonam and **B. Rathi*** "Solvent-free mechanochemical grinding facilitates clean synthesis of *N*-substituted amines" *Org. Biomol. Chem.*, **2022**, *20*, 6673-6679 (IF, 3.89; ISSN, 1477-0539; Royal Society of Chemistry London).
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26. Kumar, S.; Sharma, N.; Dantas, W.; Nascimento, J.C.F.; Maus, H.; Oliveira, R. N.; Pandit, U.; Singh, A.; Schirmeister, T.; Hazari, P. P.; Pena, L.; Poonam*, **Rathi, B.*** “A potent candidate against Zika virus infection: Synthesis, bioactivity, radiolabeling and biodistribution studies” *New J. Chem.* **2022**, *46*, 18764 (IF: 3.93; Royal Society of Chemistry; ISSN, 1396-9261).
27. Sharma, P. P.; Bhardwaj, S.; Sethi, A.; Poonam; Rathi, B. Chitosan based architectures as biomedical carriers *Carbohydr. Res.* **2022** Accepted (IF, 2.975; Elsevier; ISSN, 1873-426X).
28. Nehra, K.; Dalal, A.; Hooda, A.; Bhagwan, S.; Jakhar, K.; Singh, D.; Malik, R. S.; Kumar, S.; **Rathi, B.** “Synthesis, thermal and photoluminescence investigation of Tb (III) β -diketonates with 1, 10-phenanthroline derivatives” *J. Lumin.* **2022**, *251*, 1192333 (If, 4.171; Elsevier; ISSN, 1872-7883).
29. Gupta, Y.; Sharma, N.; Singh, S.; Romero, J.G.; Rajendran, V.; Mogire, R.M.; Kashif, M.; Beach, J.; Jeske, W.; Poonam, Ogutu, B.; Kanzok, S.M.; Akala, H.M.; Legac, J.; Rosenthal, P.J.; Rademacher, D.J.; Durvasula, R.; Singh, A.P.; **Rathi, B.*** and Kempaiah, P. The multistage antimalarial compound Calxinin perturbs *P. falciparum* Ca^{2+} homeostasis by targeting a unique ion channel. *Pharmaceutics* **2022**, *14*, 1371 (IF, 6.525; ISSN, 1999-4923; MDPI Switzerland).
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31. Arfin, S.; Chauhan, S.; Mani, N.; **Rathi, B.**; Kumar, D. “In Silico analysis of Ceruloplasmin alteration in Oral Squamous Cell Carcinoma” *Chem. Biol. Lett.* **2022**, *9*, 342 (Scopus Indexed; ISSN, 2347-9825).
32. Kumar, K.; Kovalenko, S.; Bhardwaj, S.; Sethi, A.; Gorobets, N.; Desenko, S. M.; Poonam, **Rathi, B.*** “Drug Repurposing against SARS-CoV-2 using Computational Approaches” *Drug Discov. Today* **2022**, *27*, 2015-2027 (IF, 8.369; Elsevier Netherland; ISSN, 1359-6446).
33. Raj, S.; Kesari, K. K.; Kumar, A.; **Rathi, B.**; Sharma, A.; Gupta, P.K.; Jha, S. K.; Jha, N. K.; Slama, P.; Roychoudhury, S.; Kumar, D. “Molecular Mechanism(s) of regulation(s) of c-MET/HGF Signalling in Head and Neck Cancer” *Mol. Cancer* **2022**, *21*, 31 (IF, 41.444; BMC Springer Nature; ISSN, 1476-4598).
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35. Sharma, P. P.; Sethi, A.; Diwedi, B.; Grishina, M.; **Rathi, B.**; Singh, G. “Novel Inhibitors of malarial aspartyl proteases, plasmepsin II and IV: In silico design

- and validation studies” *Chem. Biol. Lett.* **2022**, *9*, 315 (Scopus Indexed; ISSN, 2347-9825).
36. Sharma, N.; Kashif, M.; Singh, V.; Fontinha, D.; Mukherjee, B.; Kumar, D.; Singh, S.; Prudêncio, M.; Singh, A.*; **Rathi, B.*** “Novel antiplasmodial compounds leveraged with multistage potency against Parasite *Plasmodium falciparum*: In vitro, in vivo evaluations and pharmacokinetic studies” *J. Med. Chem.* **2021**, *64*, 8666 (IF, 8.04; American Chemical Society; ISSN, 1520-4804).
 37. Mehta, J.; Rolta, R.; Salaria, D.; Awofisayo, O.; Fadare, O.A.; Sharma, P. P.; **Rathi, B.**; Chopra, A.; Kaushik, N.; Choi, E. H.; Kaushik, N. K. “Phytocompounds from North Western Himalayan medicinal plants as potential drug to treat multidrug resistant *Salmonella typhimurium*: an in silico approach” *Biomedicine* **2021**, *9*, 1402 (IF, 6.08; MDPI Switzerland; ISSN: 2227-9059).
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 39. Gupta, Y.; Kumar, S.; Zak, S.; Jones, K.; Upadhyay, C.; Sharma, N.; Azizi, S.-A.; Kathayat, R.; Poonam; Herbert, A.; Durvasula, R.; Dickinson, B.; Dye, J.; **Rathi, B.***; Kempaiah, P.* “Antiviral Evaluation of Hydroxyethylamine Analogs: Inhibitors of SARS-CoV-2 Main Protease (3CLpro), A Virtual Screening and Simulation Approach” *Bioorg. Med. Chem.* **2021**, *47*, 116393 (IF: 3.641; Elsevier; ISSN: 0968-0896).
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47. Chandel, V.; Tripathi, G.; Nayar, S. A.; **Rathi, B.**; Kumar, A.; Kumar, D. “In silico identification and validation of triarylchromones as potential inhibitor against main protease of severe acute respiratory syndrome coronavirus 2” *J. Biomol. Struct. Dyn.* **2021** Accepted <https://doi.org/10.1080/07391102.2021.1918255> (IF, 5.235; Elsevier; ISSN, 1538-0254).
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Books

Edited Books

Singh, A., Rathi, B., Verma, A. K., & Singh, I. K. (Eds.). (2023). *Natural Product Based Drug Discovery Against Human Parasites*, <https://doi.org/10.1007/978-981-19-9605-4> 16 Springer Singapore (ISBN: 9789811996047).

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- Saniya Arfin, Kirti Agrawal, Ashok Kumar, Arun Kumar, Brijesh Rathi, Dhruv Kumar, Chapter 1 - Metabolic dysregulation in cancer progression, Editor(s): Dhruv Kumar, Shailendra Asthana, *Autophagy and Metabolism*, Academic Press, 2022, Pages 1-39, ISBN 9780323998796, <https://doi.org/10.1016/B978-0-323-99879-6.00008-0>.
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- Sujata Maurya, Kavindra Kumar Kesari, Shubhadeep Roychoudhury, Jayaramulu Kolleboyina, Niraj Kumar Jha, Saurabh Kumar Jha, Ankur Sharma, Arun Kumar, Brijesh Rathi & Dhruv Kumar (2022). *Metabolic Dysregulation and Sperm Motility in Male Infertility*. In: Kesari, K.K., Roychoudhury, S. (eds) *Oxidative Stress and Toxicity in Reproductive Biology and Medicine*. *Advances in Experimental Medicine and Biology*, vol 1358. Springer, Cham. <https://doi.org/10.1007/978-3-030-89340-8> 12
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 - Kumar S., Kumari P., Rathee G., Rathi B. (2021) Nanomaterials for Early Cancer Diagnostics. In: Malik A., Afaq S., Tarique M. (eds) Nanomedicine for Cancer Diagnosis and Therapy. Springer, Singapore. p.p. 97-114. https://doi.org/10.1007/978-981-15-7564-8_5 (ISBN, 978-981-15-7564-8)
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Supervision

Doctoral Research

- **Neha Sharma**, Date of Award: 8th June 2023); University of Delhi; Role: Supervisor.
- **Dr. Prem P Sharma** (Reg No. 18001907001; Date of Award: 20.07.2022); DCRUST, Murthal; Role: Co-supervisor.
- **Dr. Pramila Gupta** (MUR1403063; Date of Award: 20.02.2021; Mewar University Rajasthan); Role: Co-supervisor.

Post-Doctoral Research

- **Dr. Manoj Kumar (2021-)**
- **Dr. Sumit Kumar (2022-)**
- **Dr. Prem P. Sharma (2022-)**

Master Thesis

- **Shivani Jaiswal** (Enrolments No.: A14587820006; Amity University) 'In-silico Screening of Phytochemicals Against ERK2 Using Structure-Based Drug Designing Approach'.

Professional Editing/editor services

- **Guest Editor:** Frontiers in Drug Discovery (DOI: 10.3389/fddsv.2023.1223140).
- **Associate Editor (Guest):** Frontiers in Cellular and Infection Microbiology ([doi: 10.3389/fcimb.2023.1175996](https://doi.org/10.3389/fcimb.2023.1175996)).

Administrative Committees

Coordinator DST PAC, 17-18 August, 2023.

Coordinator DST PAC, 16-17 December, 2022.

Coordinator DST PAC, 15 December, 2022.

Coordinator DST PAC, 29-30 December, 2022.

Convener (Founder), Research Committee of Hansraj College, 2018-2021.

Convener, Research Committee, Hansraj College, University of Delhi, 2018-2021.

Co-convener, Research Committee, Hansraj College, University of Delhi, 2021 onwards.

Convener (Founder), Institutional Innovation Cell (IIC), A Unit of MHRD-Innovation Cell, Hansraj College, University of Delhi, 2018 onwards.

Coordinator, Centre for Global Health Study Site, a unit of Global Health Center Loyola University Chicago, USA (2018-2019).

Coordinator, Laboratory For Translational Chemistry and Drug Discovery, Hansraj College, University of Delhi (2017 onwards).

Member of Hostel Committee, 2015-16.

Editorial Member, Brochure Committee of University of Delhi 2022.

Research Interest

Medicinal Chemistry and Drug Discovery

Research Projects (Total funding secured >3.5 Cr. Rupees)

1. Title of the project: "Small Molecule Drug Discovery for Rare Genetic Disorder Therapy [DST/TDT/RARE/2022/21(G)/2]"
Funding Agency: DST, Government of India
Duration: Three Years (2023-2026)
Project Cost: Rs. 1,02,12,522/-
Role: PI
2. Title of the project: "To Synthesize Noble Metabolic Pathways Inhibitors for the Development of Broad-spectrum Antiviral Therapy"
Funding Agency: INMAS-DRDO, Government of India
Duration: Three Years (2023-2025)
Project Cost: Rs. 23,90,774/-
Role: PI

3. Title of the project: "Target Based Screening and Development of Hydroxyethylamine Derivatives as Novel Antimalarials" (CRD/2022/000580)
Funding Agency: SERB, Government of India (ASEAN-India R&D Project).
Duration: Two Years (2023-2025)
Project Cost: Rs. 34,00,000/-
Role: PI
4. Title of the project: "Molecular theranostic probes based on optically active amines for targeting SARS-CoV-2"
Funding Agency: DRDO, Government of India
Duration: Three Years (2021-2024)
Project Cost: 49.04 Lakh
Role: PI
5. Title of the project: "Repurposing of Drugs and Validation of Lead Compounds Against Main Protease and RNA Dependent RNA Polymerase of SARS-CoV-2"
Funding Agency: BRICS - DST, Government of India
Duration: Three Years (2021-2023)
Project Cost: 42.87 Lakh
Role: Co-PI
6. Title of the project: "Design and Synthesis of Novel Bioactive DOTA Conjugates"
Funding Agency: INMAS-DRDO, Government of India
Duration: Three Years (2021-2022)
Project Cost: 8.90 Lakh
Role: PI
7. Title of the Project: "Lead Optimization of Potent Multistage Antimalarials"
Funding Agency: SERB, Government of India
Duration: Three Years (2020-2023)
Project Cost: 46.41 Lakh
Role: PI
8. Title of the Project: "Development of Nanoantenna Sensor for Infrared Detection"
Funding Agency: DST, Government of India
Duration: 2019-2021
Cost: 63.08 Lakh
Role: PI
9. Title of the Project: "Design and Catalytic Large-Scale Synthesis of New Functionalized Perfluorinated Ketones/Ethers as Potential Fire Extinguishants"
Funding Agency: DRDO, Government of India
Project Cost: 48.2 Lakh
Duration: 2017-2020

Role: PI

10. Title of the Project: "A New Class of Anti-malarials: Constituting New Avenues for Anti-malarial Therapy"
Funding Agency: SERB, Government of India
Duration: 2016-2019
Cost: 32.89 Lakh
Role: PI
11. Title of the Project: "Novel functionalized tetrahedral activated small peptidomimetic inhibitors of malarial aspartic proteases, plasmepsin I and II"
Funding Agency: DST, Government of India
Project Cost: 10 Lakh
Duration: 2011-2014
Role: PI
12. Title of the project: "Contributions to bioinformatics and nanomedicine: computational, biochemical and biophysical evaluation of new small peptide and fatty acid derivatives as well as their self-assembled nanostructures as molecular weapons against infectious diseases" (INT/BLR/P-4/2014).
Funding Agency: DST, Government of India
Project cost: 5 Lakh
Duration: 2014-2016
Role: Co-PI
13. Title of the project: "Functionalized Nano-antimalarials: Design, Synthesis and Structural Aspects of Novel Metal Complexes as Inhibitors of Plasmepsin I and Plasmepsin II" (INT/PORTUGAL/P-17/2013)
Funding Agency: DST, Government of India
Project cost: 5 Lakh
Duration: 2014-2017
Role: Co-PI
14. Title of the Project: "Thio-click approach for the synthesis of stable glycomimetics and chiral oxathiacrown ethers"
Funding Agency: Department of Science and Technology, Ministry of Science and Technology, Government of India
Project Cost: 38 Lakh
Duration: 2017-2020
Role: Co-PI In collaboration with IIT Delhi
15. Title of the Project: "Conjugates and Analogues of Antiviral Compound AUY11 (INT/RUS/RFBR/P-194/2015)"
Funding Agency: Department of Science and Technology, Ministry of Science and Technology, Government of India
Project Cost: 24.28 Lakh
Duration: 2015-2017
Role: Co-PI In collaboration with IIT Delhi

16. Title of the Project: "Survey of Tree Species in Delhi Region and Screening of Selected Medicinal Plants for Anti-Cancer Activity" (SVC-101)
Funding: University of Delhi
Project Cost: 10 Lakh
Duration: One Year (2012-2013).
17. Title of the Project: "Engineered Biocompatible Organic Nanoarchitectures: A New Paradigm for Disinfections" (HRC-308)
Funding Agency: University of Delhi
Project Cost: 6 Lakh
Duration: One Year (2015-2016).

Research Collaboration

- **Dr. Agam P Singh**, Scientist, National Institute of Immunology (NII), New Delhi.
- **Prof. Conor R Caffrey**, University of California, San Diego, USA.
- **Dr. Prakasha Kempaiah**, Infectious Disease Division, Mayo Clinic, Florida, USA.
- **Dr. Martin Zoltner**, BioCev, Charles University of Prague, Czech Republic.
- **Dr. Lindomar Pena**, Department of Virology, Aggeu Magalhaes, Institute (IAM), Oswaldo Cruz Foundation (Fiocruz), Recife 50670-420, Pernambuco, Brazil.

Conferences/Seminar/workshop Organized.

- 1st Indo-Brazilian Seminar & Scientific Interaction on Chemistry Biology Interface (18th March 2024) organized by the Department of Chemistry, Hansraj College, University of Delhi. **Role: Convener.**
- "3rd International Conference on Integrative Chemistry, Biology and Translational Medicine (ICBTM-2024)" March 8-10, 2024, Jointly organized by Hansraj College University of Delhi, Delhi, India & Pacific University Udaipur and HeteroChem InnoTech Private Limited. **Role: Convener**
- "National Seminar on Climate Change Tunnel Vision?" organized by Hansraj College & British Council, UK, Prof. Alison Greig (Anglia Ruskin University), Friday 25th August 2023. **Role: Convener.**
- "2nd Indo-US Symposium on Chemical Biology and Drug Discovery" Jointly organized by Hansraj College, University of Delhi and Mayo Clinic Florida USA on 27th June 2023. **Role: Convener.**
- "2nd International conference on Integrative Chemistry, Biology and Translational Medicine (ICBTM-2022)" December 6-8, 2022, Jointly organised by Hansraj College University of Delhi, Delhi, India & Mayo Clinic Florida USA, INMAS-DRDO Delhi and Miranda House Delhi. **Role: Convener**

- “1st International conference on Integrative Chemistry, Biology and Translational Medicine (ICBTM-2019)” Feb 25-26, 2019, Jointly organised by Centre for Global Health, Hansraj College University of Delhi, Delhi, India & Loyola University Stritch School of Medicine Maywood, Chicago USA. **Role: Convener**
- Indo-US Colloquium on Recent Developments in Interdisciplinary Research, July 2, 2018, Jointly organised by IQAC, Department of Chemistry, Hansraj College University of Delhi, Delhi, India & Loyola University Stritch School of Medicine Maywood, IL USA. **Role: Convener**
- “Indo-Portuguese workshop on Nanotechnology in Chemistry and Biology (INCB- 2016)” jointly organized by the Department of Chemistry, Hansraj College and CQM, University of Madeira, Portugal (February 12-13, 2016). **Role: National Coordinator.**
- India International Science Festival (IISF-2015) organized by the Ministry of Science & Technology, Govt. of India from December 4-8, 2015 (**Role: Coordinator**).
- MHRD funded the “National Workshop on Role of Technical Terminology in Higher Education” (23-24 July 2015) at Hansraj College, University of Delhi (**Role: Coordinator**).
- “1st International conference on emerging trends of nanotechnology in drug discovery” was organized (May 26-27, **2014**) by Sri Venkateswara College & Department of Biochemistry, University of Delhi South Campus, in association with Centro de Química da Madeira, Universidade da Madeira, Portugal (**Role: National coordinator and organizing secretary**).
- “A National Symposium on Recent Trends in Innovative Research at Under-graduation: Science and Society” was organized (28th Feb-2nd March **2013**) by Sri Venkateswara College, University of Delhi (**Role: Organizing secretary**).
- A national seminar on “Recent Trends in Chemistry” was organized (March 20-22, **2012**) by the Department of Chemistry, Sri Venkateswara College, University of Delhi (**Role: Treasurer**).
- A national conference on “Convergence of Science and Spirituality” was organized (5- 6th Nov **2011**) by Sri Venkateswara College in association with the Institute for Science and Spirituality, A Study Wing of ISKCON Delhi (**Role: Coordinator**).

Invited Lectures

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- Invited Lecture on “Medicinal Chemistry: Scope & Future Aspects” J. C. Bose University of Science and Technology, YMCA Faridabad; 29th March 2023.
 - “Identification and optimization of novel *N*-substituted amines as therapeutic agents for the management of various diseases” during International Conference on Interdisciplinary Research in Cancer Biology (IC-IRCB-2022), 22-23 September 2022 organized by School of Health Sciences & Technology, UPES University, Dehradun, Uttarakhand, India.
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- “Hydroxyethylamine Pharmacophore Based Novel Multistage Antimalarials” during Interdisciplinary Research in Biomedical Sciences" CONIAPS XXVII organized by Amity University Uttar Pradesh, Noida in association with International Academy of physical Sciences (AIPS), Prayagraj; from 26 to 28 October 2021.
- “Computer Aided Drug Design”, National Workshop on Bioinformatics: Resources, Tools, and its applications (19-27 July 2021), Zakir Husain Delhi College, University of Delhi, New Delhi.
- “Discovery of next-generation antimalarials” Amity University Noida, Friday, 11 June 2021.
- “Understanding the therapeutic developments for novel coronavirus COVID-19 management” DiSTAP (Singapore-MIT Alliance for Research and Technology (SMART) Centre) Biweekly seminar, Thursday, 23rd April 2020.
- “Design of multistage inhibitors of malaria parasite; malarial aspartic proteases as crucial drug targets to achieve multistage activity” VI Forum PPGDITM (UFRPE-UFPB-UFRN-UFC), Recife, capital of Pernambuco State, in the campus of the Federal Rural University of Pernambuco, Brazil, 28th November's 2019.
- “Multistage Antimalarials Targeting Malarial Proteases” during International Workshop on Chemistry and Chemical Biology of Carbohydrates, Nucleic Acids and Antibiotics (22-24, May **2019**) organized by University of Debrecen, Hungary.
- “New Antimalarials: Multistage Inhibitors of Malaria Parasite as Emerging Hope for the Malaria Eradication” Department of Pharmaceutical Chemistry, University of Debrecen, Hungary (June 12, **2018**).
- Invited Speaker for the workshop “How to get published research paper in the right journals” organized by Grace India Educational Charitable Trust, Delhi at Hansraj College, University of Delhi (October 27, **2018**).
- "Discovery of Multistage Antimalarials: Synergistic Fusion of Privileged Bioactive Scaffolds Triggers Growth Inhibition of Malaria Parasite Plasmodium Falciparum" Drug Discovery & Therapy World Congress (DDTWC-2017) July 10-13, **2017**, Boston, MA United States of America.
- "Functionalized Small Molecules As Potential Antimalarial Agents" National conference on Frontiers in Research & Development on Agriculture, Bio-medicinal, Chemical and Pharmaceutical sciences (4th March, **2016**), Mewar University, Rajasthan.

Awards/Fellowships/Recognitions Availed

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- 2024 March – “CAPES-Print Fellowship” from Coordenação de Aperfeiçoamento de Pessoal de Nível Superior, Ministry of Education, Brazil.
 - 2023 (July) – “Mahatma Hansraj Research Excellence Award” Hansraj College, University of Delhi.
 - 2023 (June) – Appointed “Scientific Advisor”, Delhi High Court, New Delhi.
 - 2022 (June) – “Institute of Eminence Fellow Award” by University of Delhi.
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- 2021 (October) – Best Paper Presentation Award by International Conference of International Academy of Physical Sciences and Amity University, Noida.
- 2021 (July) - [Scientists join hands targeting to synthesize compounds to inhibit maturation & propagation of COVID 19 virus](#) – a story about our research published on DST, Govt. of India website.
- 2019 – “CAPES-Print Fellowship” from Coordenação de Aperfeiçoamento de Pessoal de Nível Superior, Ministry of Education, Brazil.
- 2018 - The prestigious “Excellence Awards for In Service Teachers” by University of Delhi. This award is given to highly deserving individuals for their contribution to academic activities.
- 2018 - “Best Young Teacher award” by Grace India Award-2018 Function on the occasion of 87th Birth Anniversary of Bharat Ratna Dr. APJ Abdul Kalam celebrated at Hansraj College University of Delhi.
- 2016-2017 “UGC-Raman International Fellowship” by UGC, Ministry of Human Recourses and Development, Govt. of India.
- 2016 – “Early Career Research Award” by Science & Engineering Research Board (SERB), Ministry of Science of Technology, Govt. of India.
- 2011-2014 – “Young Scientist Fellowship” by DST, Ministry of Science of Technology, Govt. of India.
- 2017 – “International Reviewer for Russian Science Foundation (RSF)” – on recommendations of Russian International Affairs Council (RIAC), Russia.
- 2018 - Ambassador for Bentham Science Publishers.

Short Course(s)/ Resource person.

- ❖ Four Credit Course on “Antimalarial Drug Discovery Towards Malaria Eradication” Federal Rural University of Pernambuco, Recife, Brazil, 27 November, 2019.
- ❖ Antimalarial drugs: Preclinical and Clinical Aspects (14 credit PhD elective course and undergraduate elective course) 7-16 October 2019, University of Debrecen, Hungary.

International Visits

- ❖ Visiting Fellow [June 11-18, 2018], Department of Pharmaceutical Chemistry, University of Debrecen, Hungary.
 - ❖ Visiting Fellow [June 6-16, 2016], Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia.
 - ❖ Visiting Fellow [June 30 –July 7, 2016], Belarussian State University, Minsk, Belarus.
 - ❖ Visiting Fellow [Oct. 2014], Centro de Química da Madeira, Universidade da Madeira, Campus da Penteada, 9020-105 Funchal, Portugal.
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Honorary Positions (Editing/Review/Membership of Scientific Bodies)

- **Life Member**, Chemical Research Society of India (CRSI) - LM 3495.
- **Advisory Board Member**, Avishkaran, The BIONEST of NIPER Hyderabad.
- **Section Editor**, Current Topics in Medicinal Chemistry (IF: 3.37).
- **Associate Editor**, Chemical Biology Letters, Indian Science Publishers.
- **Life Member** (L32926), The Indian Science Congress Association, Kolkata.
- **Editorial Review Board Member**, ARKIVOC, Arkat USA.
- **Jury Member**, DST Inspire 2015.
- **Reviewer**, Journal of Medicinal Chemistry (ACS); Chemical Science (RSC); Annals of Medicine; RSC Interface; Biochemistry; Plos ONE, RSC Advances; Computational and Structural Biotechnology Journal; Toxicology Research; Physical Chemistry Chemical Physics; Microbial Pathogenesis; Journal of Chemical Physics; Journal of Heterocyclic Chemistry; Bioorganic Medicinal Chemistry; ARKIVOC; Journal of Molecular Liquids; Frontiers Molecular Biosciences.

Certificate Courses Pursued at Massachusetts Institute of Technology (M. I. T.)

- EHS Representative Orientation, MIT Training course from Massachusetts Institute of Technology (M.I.T.), Cambridge, United States of America.
- Chemist Chem Hygiene & Safety, MIT Training course from Massachusetts Institute of Technology (M.I.T.), Cambridge, United States of America.
- Chemist Lab Spec Chem Hygiene, MIT Training course from Massachusetts Institute of Technology (M.I.T.), Cambridge, United States of America.
- Managing Hazardous Waste, MIT Training course from Massachusetts Institute of Technology (M.I.T.), Cambridge, United States of America.
- Managing Your Time , from Massachusetts Institute of Technology (M. I. T.), Cambridge, United States of America.

Memorandum of Understanding (MU)

1. On January 4th 2024, MoU was signed between Hansraj College & Kumaun University Nainital Uttrakhand.
2. On March 8th 2024, MoU was signed between Hansraj College & University of Debrecen, Hungary.
3. On March 8th 2024, MoU was signed between Hansraj College & Federal Rural University of Pernambuco (UFRPE), Recife, Brazil.

Personal Details

Father's Name: Sh. Mangey Ram

Date of Birth: June 5, 1981

Sex: M

Languages Known: English, Hindi

Nationality: Indian