




Aditi Mahavidyalaya

Faculty Details



Title	Dr.	First Name	Bhupender	Last Name	Singh	Photograph
Designation	Assistant Professor					
Department	Chemistry					
Address	Department of Chemistry Aditi Mahavidyalaya, University of Delhi Bawana, Delhi – 110039. & (Res.) VPO Jaunti, Delhi-110081					
Phone number	9818811510					
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Web-Page	https://sites.google.com/view/bschhikara					
Educational Qualifications						
Degree	Institution				Year	
Ph.D.	INMAS/ACBR, University of Delhi				2006	
M.Sc. (Organic Chemistry)	M.D. University				1997	
B.Sc.	M.D. University				1995	
Career Profile						
Aug 2014 – onwards: Assistant Professor, Aditi Mahavidyalaya, University of Delhi 2012-13: Teaching Associate, DCR University of Science and Technology, Murthal (Sonapat), Haryana 2009-2012: Postdoctoral Fellow, University of Rhode Island, Kingston, RI, US 2006-2009: DST-PDF, Indian Institute of Science, Bangalore Mar 2006-Sept 2006: Lecturer, Bundelkhand University, Jhansi, UP.						
Administrative Assignments						
Member of college committees						
Areas of Interest / Specialization						
Organic Chemistry, Medicinal Chemistry, Nanomedicine, Materials Chemistry, Environmental Science						
Subjects Taught						
VAC- Science and Society SEC – Plant Aromatics and Perfumery VAC- Digital Empowerment Chemistry – I (O 2.5) Chemistry – II (O 3.5) Environmental Science (2014-22)						
Research Guidance						
NA						

Publications Profile

Recent:

2025

Polycystic Ovary Syndrome (PCOS)-Specific Risk Appraisal of the Sunscreen Ultraviolet (UV) Filters (Oxybenzone/Octinoxate). Sulagna Dutta, Pallav Sengupta, Bhupender S. Chhikara, Grzegorz Formicki, Israel Maldonado Rosas, Shubhadeep Roychoudhury. *Toxics* **2025**, 13, 927

Novel small molecule drugs approved by FDA in 2024 for cancer therapy
Bhupender S. Chhikara, Appan Srinivas Kandadai, *Journal of Molecular Chemistry*, **2025**, 5(2), 1206.

2024

Heart disease prediction using Machine learning and cardiovascular therapeutics development using molecular intelligence simulations: A perspective review. Bhupender S. Chhikara, Rajiv Kumar, Jyoti Singh, Santosh Kumar. *Biomedical and Therapeutics Letters* **2024**, 11(2), 920

A Systematic Review on Pesticide-loaded Nanocapsules: A Sustainable Route for Pesticide Management to Enhance Crop Productivity. Sumit Kumar, R Bhuvaneshwari, Sejal Jain, Shweta Nirwan, Zainab Fatima, Dharmender Kumar, Bhupendra S Chhikara, Brijesh Rathi. *Current Nanoscience* **2024**, 20(3), 280-297.

Signaling and molecular pathways implicated in oral cancer: A concise review. Monika Kumari, Bhupender S Chhikara, Priyamvada Singh, Brijesh Rathi, Geeta Singh. *Chemical Biology Letters* **2024**, 11(1), 652

2023

Nanotoxicity of multifunctional stoichiometric cobalt oxide nanoparticles (SCoONPs) with repercussions toward apoptosis, necrosis, and cancer necrosis factor (TNF- α) at nano-biointerfaces. Rajiv Kumar, Bhupender S Chhikara, Simge Er Zeybekler, Dhruv Sanjay Gupta, Ginpreet Kaur, Mitrabasu Chhillar, Anil K Aggarwal, Abbas Rahdar. *Toxicology Research* **2023**, tfad086.

Reproductive toxicity of combined effects of endocrine disruptors on human reproduction. Pallav Sengupta, Sulagna Dutta, Sovan Bagchi, Bhupender S. Chhikara, Aleš Pavlík, Petr Sláma, Shubhadeep Roychoudhury. *Frontiers in Cell and Developmental Biology* **2023**, 11, 1162015

Genomes of extinct hominins and human reproductive evolution. Pallav Sengupta, Sulagna Dutta, Bhupender S. Chhikara. *EXCLI Journal* 2023, 22, 392-394.

Bioorthogonal chemistry in the reproductive medicine. Pallav Sengupta, Sulagna Dutta, Bhupender S. Chhikara. *Chemical Biology Letters* 2023, 10 (3), 545.

Global Cancer Statistics 2022: the trends projection analysis. Bhupender S. Chhikara, Keykavous Parang. *Chemical Biology Letters*, **2023**, 10(1), 451.

2022

1. [Nanotherapeutics and HIV: Four decades of infection canvass the quest for drug development using nanomedical technologies](#). Bhupender S. Chhikara, Nirpendra Singh, Poonam, Parveen Bazard, Rajender S. Varma, Keykavous Parang. *Applied Nanomedicine* **2022**, 22 (1), 354.
2. [Synthesis and Biological Evaluation of 5'-O-Fatty Acyl Ester Derivatives of 3'-Fluoro-2',3'-dideoxythymidine as Potential Anti-HIV Microbicides](#). Hitesh K. Agarwal, Bhupender S. Chhikara, Guofeng Ye, Sitaram Bhavaraju, Ajay Dixit, Anil Kumar, Gustavo F. Doncel, Keykavous Parang. *Molecules* **2022**, 27 (10), 3352.
3. [Synthesis of new analogs of morpholine and their antiplasmodial evaluation against human malaria parasite Plasmodium falciparum](#). Charu Upadhyay, Neha Sharma, Sumit Kumar, Prem Prakash Sharma, Diana Fontinha, Bhupender S. Chhikara, Budhaditya Mukherjee, Dhruv Kumar, Miguel Prudencio, Agam P Singh, Poonam. *New Journal of Chemistry*, **2022**, 46, 250-262.

2021

4. [Viral infection mitigations using advanced nanomaterials and tools: lessons from SARS-CoV-2 for future prospective interventions](#). B.S. Chhikara, Rajiv Kumar, Poonam, Parveen Bazard, Rajender S. Varma. *Journal of Materials NanoScience*, **2021**, 8(2), 64-82.
5. [Chemerin and male reproduction: 'a tangled rope' connecting metabolism and inflammation](#). Fong Fong Liew, Sulagna Dutta, Pallav Sengupta, Bhupender S. Chhikara. *Chemical Biology Letters*, **2021**, 8(4), 224-237.
6. [Orexins: the 'multitasking' neuropeptides in the energy metabolism and immune regulation of male reproduction](#). Pallav Sengupta, Muhjah Falah Hasan, Sulagna Dutta, Ravindran Jegasothy, Bhupender S. Chhikara. *Chemical Biology Letters*, **2021**, 8(4), 202-212.
7. [Adropin in immune and energy balance: 'a molecule of interest' in male reproduction](#). Roland Akhigbe, Sulagna Dutta, Pallav Sengupta, Bhupender S. Chhikara. *Chemical Biology Letters*, **2021**, 8(4), 213-223.
8. [Immunoendocrine regulation of energy homeostasis and male reproduction](#). Sulagna Dutta, Pallav Sengupta, B. S. Chhikara. *Chemical Biology Letters*, **2021**, 8(4), 141-143.
9. [Cleaning the molecular machinery of cells via proteostasis, proteolysis and endocytosis selectively, effectively, and precisely: intracellular self-defense and cellular perturbations](#). Rajiv Kumar, Bhupender S. Chhikara, Kiran Gulia, Mitrabasu Chhillar. *Molecular Omics*, **2021**, 17(1), 11-28.
10. [Review insights of nanotheranostics for molecular mechanisms underlying psychiatric disorders and commensurate nanotherapeutics for neuropsychiatry: the mind-knockout](#). Rajiv Kumar, **Bhupender S Chhikara**, Kiran Gulia, Mitrabasu Chhillar. *Nanotheranostics*, **2021**, 5(3), 288-308. doi:10.7150/ntno.49619.

2020

11. [Developmental and histochemical studies on carposporophyte of Solieria robusta \(Greville\) Kylin \(Solieriaceae, Gigartinales\) from Port Okha, India](#). I.N. Gahlawat, P. Lakra, J. Singh, Bhupender S. Chhikara, *J. Integr. Sci. Technol.*, **2020**, 8(2), 12-20.
12. [Experimental and Computational Studies of Microwave-Assisted, Facile Ring Opening of Epoxide with Less Reactive Aromatic Amines in Nitromethane](#). Sumit Kumar, Charu Upadhyay, Meenakshi Bansal, Maria Grishina, **Bhupender S. Chhikara**, Vladimir Potemkin, Brijesh Rathi, and Poonam. *ACS Omega*, **2020**, 5(30), 18746-57. doi:10.1021/acsomega.0c01760
13. [Knowledge drain versus Brain drain: the one more dangerously significant](#). **Bhupender S. Chhikara**, *Current Science*, **2020**, 119(3), 421.

14. [Phenylpyrazalopyrimidines as Tyrosine Kinase Inhibitors: Synthesis, Antiproliferative Activity, and Molecular Simulations](#). **Bhupender S. Chhikara**, Sajda Ashraf, Saghar Mozaari, Nicole St. Jeans, Dindyal Mandal, Rakesh K. Tiwari, Zaheer Ul-Haq, Keykavous Parang. *Molecules*, **2020**, 25, 2135; doi:10.3390/molecules250921355
15. [Corona virus SARS-CoV-2 disease COVID-19: Infection, prevention and clinical advances of the prospective chemical drug therapeutics](#). **B.S. Chhikara**, Brijesh Rathi, J. Singh, Poonam. *Chem. Biol. Lett.* **2020**, 7 (1), 63–72.

Pls see previous Publications details at Lab site: <https://sites.google.com/view/bschhikara/publications>
 Google Scholar: <https://scholar.google.com/citations?user=S8GMgt8AAAAJ&hl=en>

Conference Organization/ Presentations (in the last three years)
NA
Research Projects (Major Grants/Research Collaboration)
NA
Awards and Distinctions
Young Achiever Award (2021 APP) Young Scientist Award (2014 APP)
Association With Professional Bodies
Chemical Research Society of India Society of Biological Chemists India Association of Pharmacy Professionals, India American Chemical Society (2010-11)
Other Activities
Check Outreach activities at https://sites.google.com/view/bschhikara Editor, Chemical Biology Letters