

CURRICULAM VITAE

UPENDRA SHARMA, PhD, FRSC

Principal Scientist

Chemical Technology Division

CSIR-Institute of Himalayan Bioresource Technology

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&

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PROFESSIONAL EXPERIENCE

Principal Scientist (1st September 2021 onwards) at Chemical Technology Division, CSIR-IHBT, Palampur

Senior Scientist (1st September-31st August 2021) at Chemical Technology Division, CSIR-IHBT, Palampur
(One-year **advance Promotion i.e. Merit Promotion** from Scientist to Senior Scientist)

Scientist (1st September 2014- 31st August 2017) at Chemical Technology Division, CSIR-IHBT, Palampur

Postdoctoral Fellow (14th March 2014- 22nd August) at KAIST, South Korea, worked on transition metal catalyzed remote C-H activation.

Young Scientist-DST Fast Track (24th May 2013-11th March 2014) at IIT Bombay, worked on development of catalytic processes for heterocycle synthesis through multiple C-H activation.

Research Assistant (6th Nov. 2012-22nd May 2013) at IIT Bombay, worked on stereoselective nitration and trifluoromethylation of olefins.

EDUCATION

- 2007 – 2012** **PhD (Organic Chemistry)** GNDU, Amritsar, Punjab / CSIR-IHBT, Palampur
Mentor: Dr. Bikram Singh, Chief Scientist & HOD, NPC&PDD, CSIR-IHBT (**Submitted on 21st May, 2012 and defended on 26th Oct. 2012**) entitled **“Phytochemical Investigation of *Tinospora cordifolia*, *Asparagus racemosus* and Synthesis of Phthalimide Derivatives for Immunomodulatory Active Molecules”**
- 2005-2006** **Research Scholar** in Panjab University, Chandigarh
- 2003 - 2005** **M.Sc Chemistry**, DAV collage, Jalandhar, GNDU, Amritsar, 1st Class with 63 %
- 2002 - 2003** **B.Ed.**, Jammu University, Jammu, 1st Class with 67 %
- 1999 - 2002** **BSc**, University Govt. College Chowari, HPU, Shimla 1st Class 72%

SKILLS

- **Synthetic methodology development** (C-H activation/functionalization leading to value added molecules)
- **Isolation and structure elucidation of plant secondary metabolites** from Himalayan medicinal plants using modern spectroscopic techniques including NMR (1D & 2D), LC-MS, IR and UV-vis. Development of eco-friendly processing technology at pilot scale for bioactives of industrial importance.
- **Medicinal Chemistry:** Synthesis of New Heterocycles (Quinoline, Indole, Furan) Derivatives as Potential Therapeutic Agents
- **Chemical Profiling** using NMR (1D & 2D) and hyphenated chromatographic techniques such as UPLC-MS/MS and GC-MS
- **Analytical Chemistry** using UPLC, HPLC & GC for **standardization of plant extracts** through development of quantification method for marker compounds

AWARDS/HONOURS

- **Fellow of Royal Society of Chemistry (FRSC), London, UK (2023-) (Member ID: 740422)**
- Member of Early Career Board of *Science of Synthesis* (2022-)
- Member of Early Career Advisory Board of *Asian Journal of Organic Chemistry* (2020-)
- One Year Advance Promotion *i.e.* Merit Promotion from Scientist to Senior Scientist
- Manjushree Pal Memorial Award for Best Oral Presentation from Ethnopharmacology Society of India, Kolkata (2017)
- Chaired a poster session in National Conference on Innovation in Bioprocess Technology (IBT-2019), CIAB, Mohali, Punjab, India on December 11-13, 2019.
- Chaired a poster session in 4th International Congress of the Society for Ethnopharmacology, India Healthcare in 21st century: Perspectives of Ethnopharmacology & Medicinal Plant Research, UKA Tassadia University, Bardoli, Surat, Gujrat on February 23-25, 2017.
- Thieme Chemistry Journal Award (2016)
- D S Kothari Postdoc Fellowship (2012)
- Fast Track Young Scientist project for three years (2012)
- Postdoc Fellowship KAIST, South Korea (2014)
- CSIR Senior Research Fellowship (2009)
- CSIR Junior Research Fellowship (2007)
- GATE (2007)
- CSIR-NET (2006)

MEMBERS OF PROFESSIONAL SOCIETY

Fellow of Royal Society of Chemistry (FRSC), London, UK (2023-)

Life member, Chemical Research Society of India (CRSI) (LM No. LM 3471).

Life member, Catalysis Society of India (CSI) (LM No. LM1068).

Life member, Analytical Society of Analytical Scientists (LM No. 2008/38).

EDITORSHIP

1. Early Career Advisory Board member of *Science of Synthesis* (2022-)
2. Early Career Advisory Board member of *Asian Journal of Organic Chemistry* (2020-)

RESOURCE PERSON FOR JOURNALS

Synthetic Chemistry

Nature Chemistry
ACS Catalysis
Organic Letters
Chemical Communication
Green Chemistry
Advance Synthesis & Catalysis
Organic Chemistry Frontier
The Journal of Organic Chemistry
ACS Omega
Polyhedron
Chemistry of Material
Catalysis Letter
ChemMedChem
Organic Chemistry-An Indian Journal
Synthesis

Natural Product Chemistry

Journal of Natural Products
Journal of Ethanopharmacology
Natural Product Reports
Natural Product Communications
Studies in Natural Product Chemistry
Phytochemical Analysis
Separation Science and Technology
Biomedicine & Pharmacotherapy
Toxicology and Environmental Health Sciences
Agriculture Water Management
Journal of Functional Foods
SN Applied Science
Journal of Functional Food and Analysis
Chinese Journal of Natural Medicines
Chemico-Biological Interaction

INSTITUTIONAL RESPONSIBILITIES

- Member, Technical and Purchase Committee (2018 onwards)
- Member, Students selection committee in Chemical Sciences, CSIR-IHBT
- DAC Member, Ph.D. students enrolled in Academy of Scientific and Innovative Research (AcSIR), Ghaziabad-201002, India/CSIR-IHBT, Palampur

SCIENTIFIC PROGRAMME ORGANIZED

- Co-Coordinator and acted as resource person in a Capacity Building Programme for Ph.D. students and Faculty from MDU, Rohtak on “**Advanced Scientific Laboratory and Instrumentation**” under UGC-STRIDE Programme at CSIR-IHBT, Palampur November 07-08, 2022.
- Coordinated “**One-day visit/training programme**” in CSIR-IHBT on 30.03.2022 under SERB-Scientific Social Responsibility Programme in a SERB Funded Project (File No. CRG/2021/000878).
- Co-Coordinator and acted as resource person in a Capacity Building Programme for Ph.D. students and Faculty from MDU, Rohtak on “**Bioprospecting Natural Products for Human Health and Socio-economic Development**” under UGC-STRIDE Programme at CSIR-IHBT, Palampur March 07-11, 2022.

PHD THESIS EXAMINER

- Ph.D. Thesis Evaluated till date: **11** Viva Exam Taken: **5**

• **PROJECTS HANDLED**

Project Title		Funding Agency	Duration	Role
In Progress: 03				
20	Chemometrics as Inventive Tool for Quality Assessment of Medicinal Plants: A Case Study with Aconitum heterophyllum (Nation Priority Plant).	Science and Engineering Research Board (SERB) File No.: CRG/2021/000878	2021-2024	Principal Investigator
19	Value Addition and Product Diversification in Tea.	Department of Biotechnology (NER-BPMC) File No. BT/PR45264/NER/95/1920/2022	2022-2025	Co-Principal Investigator
18	Process optimization and up-scale production of lignocellulosic extremozymes from Himalayan microbes for biomass valorization/depolymerization.	Department of Biotechnology (NER-BPMC) File No. BT/PR45190/NER/95/1902/2022	2022-2025	Co-Principal Investigator
Completed: 17				
17	Exploration of Himalayan Plants for Novel Antimalarial Agents: Characterization of potential molecules (Phase-II).	CSIR/Agri Nutri Biotech Mission	2020-2023	Principal Investigator
16	Next generation genomics for genetaic improvement of <i>Stevia rebaudiana</i> .	CSIR/Agri Nutri Biotech Mission	2020-2023	Co-Principal Investigator
15	Development of the natural glycoside (stevioside/rebaudioside A) based drug delivery nano-probe-carrier for cancer therapeutics.	CSIR-EMR	2020-2023	Co-Principal Investigator
14	CSIR-Aroma Mission – Phase II (HCP0007)	CSIR/Aroma Mission	2020-2023	Co-Principal Investigator
13	Development of nutraceutical formulation for kidney health.	CSIR/ Immunity Mission	2021-2023	Co-Principal Investigator
12	Development of Immunomodulatory Products based on <i>Carum carvi</i> and <i>Bunium persicum</i> .	CSIR/ Immunity Mission	2021-2023	Co-Principal Investigator
11	Bio-prospecting and product development from <i>Curcuma longa</i> (turmeric) in Uttarakhand. <i>In collaboration: Graphic Era (Deemed to be University), Utterakhand.</i>	R&D; Sponsored by Uttarakhand State Council for Science and Technology, DST, Uttarakhand	2021-2022	Co-Principal Investigator
10	Evaluating SARS-CoV-2 Main protease (Mpro) inhibitors identified from the library of FDA approved drugs and novel CSIR molecules.	CSIR-Healthcare Mission: Drugs and APIs for COVID-19	2020-2021	Principal Investigator
9	Transition Metal Catalyzed Simultaneous Distant C-H Activation and Hetero-atom Transfer: Direct	SERB-DST (EMR/2014/001023)	2015-2018	Principal Investigator

	Synthesis of Bioactive Derivatives of Heterocyclic Compounds.			
8	Exploration of Himalayan Plants for Novel Antimalarial Agents: Characterization of potential molecules.	CSIR/Agri Nutri Biotech Mission	2019-2020	Principal Investigator
7	Phytopharmaceutical development from as <i>Cissampelos pareira</i> per regulatory guidelines of AYUSH.	CSIR/Phytopharma Mission	2017-2020	Principal Investigator
	Technology packages for production of GMP grade medicinal plant extracts of <i>Ginkgo biloba</i> .	CSIR/Phytopharma Mission	2017-2020	Principal Investigator
6	High throughout genotyping to expedite the genetic characterization and dissection of important agronomic traits of tea.	DST	2018-2021	Co-Principal Investigator
5	Phytochemical investigation of selected high value rare, endangered and threatened (RET) medicinal Plants.	CSIR/Phytopharma Mission	2017-2020	Co-Principal Investigator
4	Nutraceutical formulation for boosting bone and cartilage health.	CSIR/Neutraceutical Mission	2018-2020	Co-Principal Investigator
3	A kaempferol-enriched nutraceutical formulation for ageing bone: to concurrently stop bone loss and restoring lost bone (CSIR-CDRI, CSIR-IHBT).	CSIR/Neutraceutical Mission	2018-2020	Co-Principal Investigator
2	Identification of improved clone(s) of <i>Stevia rebaudiana</i> (Bertoni).	CSIR/Agri Nutri BiotechMission	2018-2020	Co-Principal Investigator
1	Development of process for converting raw cellulosic biomass into textile fiber and nanocellulose.	CSIR/Agri Nutri BiotechMission	2018-2020	Co-Principal Investigator

DISSERTATIONS (BEING) SUPERVISED

(a) **Postdoc:** 06 [Completed: 05; Current: 01]

(b) **Ph.D.:** 26 [Awarded: 8; Current: 18]

Pursuing	Awarded
1. Mr. Devesh Chandra	1. Dr. Shruti Sharma completed thesis entitled “ Exploration of <i>Polygonatum verticillatum</i> for its chemistry and therapeutic potential ” on 21 st September 2022.
2. Ms. Diksha Parmar	2. Dr. Patil Shiv Prasad Suresh completed thesis entitled “ Phytochemical and Pharmacological Investigation of <i>Trillium goavniatum</i> Wall. Ex D.Don for Steroidal Saponins ” on 15 th February 2022.
3. Ms. Surekha Kumari	3. Dr. Ankit Kumar Dhiman completed thesis entitled “ Development of Methodologies for the Synthesis of N-Heterocyclic Derivatives through C-H Bond Functionalization ” on 23 rd December 2021.
4. Mr. Sumit	4. Dr. Inder Kumar completed thesis entitled “ Development of Photo-
5. Ms. Manisha	
6. Mr. Anmol	
7. Ms. Ankita Thakur	
8. Mr. Rohit Kumar	
9. Mr. Shiv Kumar Gupta	
10. Mr. Prithavi Pal Singh	

11. Er. Mohit Sharma	catalytic Methodologies for the C-C and C-Heteroatom Bond Formation ” on 15 th July 2021. 5. Dr. Rakesh Kumar completed thesis entitled “ Synthesis and Derivatization of N-Heterocyclic Compounds through C-H Bond Functionalization ” on 5 th February 2020. 6. Dr. Ritika Sharma completed thesis entitled “ Synthesis of Quinoline Derivatives via Catalytic Remote C-H Activation ” on 26 th July, 2019. 7. Dr. Deepali Katoch completed Thesis entitled “ Phytochemical and pharmacological investigation of <i>Zephyranthes grandiflora</i> and <i>Narcissus tazetta</i> for Amaryllidaceae alkaloids and their synthetic modification ” 19 th July 2019. 8. Dr. Vinod Bhatt completed thesis entitled “ Phytochemical and Synergy-Directed Biological Studies of <i>Zanthoxylum</i> Species ” on 15 th February 2018.
12. Ms. Shivani Puri	
13. Ms. Shivani	
14. Mr. Raman Singh	
15. Ms. Mahek Sharma	
16. Mr. Parteek Singh Bora	
17. Mr. Gaurav Aggrawal	
18. Sachin Rana	

(c) **Post graduation training/thesis: 21 [National: 20 International: 1]**

Awarded	
International Student Under CSIR-TWAS Fellowship	
1.	Mrs. Adenike Evelyn ADENIYI , University of Ibadan, Nigeria completed six-month TWAS-CSIR fellowship research on thesis entitled “ Suitability of Seed Oil of <i>Hildegardia barteri</i> (Mast. Kosterm) for Production of Selected Bio-Products ” in 24 th January-July, 2018.
National	
2.	Mr. Sayani Das , Shoolini University, Solan, Himachal Pradesh, completed three months training entitled “ Phytochemical Investigation of <i>Neptunia oleracea</i> ” in Jan-March, 2023.
3.	Ms. Shilpa Ghosh , Shoolini University, Solan, Himachal Pradesh, completed three months training entitled “ Phytochemical Investigation of <i>Callistemon citrinus</i> ” in Jan-March, 2023.
4.	Mr. Sahil Rana , Chandigarh University, Chandigarh, Punjab, completed one and half months training entitled “ Phytochemical Investigation of Plants ” in June-August, 2022.
5.	Ms. Nivedita Thakur , Guru Nanak Dev University, Amritsar, Punjab, completed five months training entitled “ Synthesis and Characterisation of Isoquinoline Derivatives ” in Feb-July, 2022.
6.	Ms. Anjali , Chandigarh University, Chandigarh, Punjab, completed two months training entitled “ Basics in natural product chemistry ” under SERB-DST funded project in Jan-March, 2022.
7.	Mr. Arpit Mahajan , Guru Nanak Dev University, Amritsar, Punjab, completed four months training entitled “ Protection of amino acids using phthalic anhydride ” in Jan-April, 2020.
8.	Mr. Ayush Kumar , DAV University, Jalandhar (Pb) completed one-month training on basic lab practices in organic synthesis in January, 2020.
9.	Dr. Naresh Kumar , IIT, Indore (MP) completed six-month training on synthesis of heterocyclic molecules in July-December, 2019.
10.	Miss. Pooja Babbar SRM University, Delhi- NCR, completed one and half month training entitled “ Study on Isolation and Characterization of Secondary Metabolites from Medicinal Plants ” in July-December, 2019.
11.	Ms. Ankita Rana , Chandigarh University, Gharuan, Pb, completed one and half month training entitled “ Study towards Oxidation of Quinoline Derivatives ” in June-August, 2019.
12.	Mr. Anurag Shukla , Amity University, Noida (UP) completed one and half month training entitled “ Extraction, qualitative and quantitative analysis of <i>Camellia sinensis</i> leaves ” May-July, 2019.
13.	Mr. Vikrant , Shoolini University, Solan, HP, completed two-month training entitled “ Synthesis of Quinoline N-oxide and maleimides ” in June-August, 2018.
14.	Ms. Vivekshu , Chandigarh University, Chandigarh, completed one-month training entitled “ Analytical ”

Techniques used in Phytochemical investigations in May-June, 2018.

15. **Ms. Alka Devi**, Ahilya Vishwavidyalaya, Indore (M.P.) completed six-month training entitled **"Phytochemical and In-silico biological studies of *Cissampelos pareira*"** in January-June, 2018.
16. **Ms. Jyoti**, Amity University Gurgaon, Haryana, completed two-month training entitled **"Extraction, Fractionation and Isolation of Secondary Metabolites from *Cissampelos pareira* Roots"** in March-April, 2018.
17. **Mr. Sachin**, Amity University Gurgaon, Haryana, completed two-month training entitled **"Functionalization of Quinoline and their characterization"** in March-April, 2018.
18. **Mr. Saurabh Kumar**, SHUATS, Allahabad, completed one-month training entitled **"Fractionation and Isolation of Secondary metabolites from *Cissampelos pareira*"** in July, 2017.
19. **Mr. Amit**, Amity University Gurgaon, Haryana, completed one-month training entitled **"Phytochemical Investigation of *Cissampelos pareira*"** in July, 2017.
20. **Ms. Reetu Bala**, SGGS College, Punjab University, Chandigarh, completed one-month training entitled **"Lewis Acid Catalyzed *N*-alkylation of 1,2,3,4-Tetrahydroisoquinolines with Acrylates"** in July, 2017.
21. **Mr. Sachin**, Amity University Gurgaon, Haryana, completed one-month training entitled **"Synthesis of Quinoline *N*-Oxides and Quinoline Ylides"** in July, 2017.

PUBLICATIONS

Total: **151** Citation: > **4463** h-index: **33** i-10 index: **95**

After Independent Research Lab: **105**

Book Chapter: **11**

Patent: **3** (Granted: 02; Filed: 01)

Invited/Oral Presentations: **27**

Paper presented in conferences: **36**

S. No.	NAME OF ALL THE AUTHORS	TITLE OF THE PAPER	NAME OF THE JOURNAL, YEAR, VOLUME, PAGE
151	Sarathi, Rohit Kumar, Tamanna Sharma, and Upendra Sharma*	Rh(III)-Catalyzed Alkylation of 8-Methylquinolines with 2 Oxabenzonornadienes	<i>Organic Letters</i> , 2023, 25, doi.org/10.1021/acs.orglett.3c00652
150	Prateek Singh Bora, Prakhar Agrawal, Naveen Kumar Kaushik, Shivani Puri, Dinkar Sahal,* Upendra Sharma*	Antiplasmodial activity of the bulbs of <i>Fritillaria cirrhosa</i> D. Don (Syn: <i>Fritillaria roylei</i> Hook.): UPLC-IM-Q-TOF-MS/MS-based biochemometric approach for the identification of marker compounds.	<i>Journal of Ethnopharmacology</i> , 2023, 310, 116389.
149	Patil Shivprasad Suresh, Veerbhan Kesarwani, Surekha Kumari, Ravi Shankar,* Upendra Sharma*	Bisbenzylisoquinolines from <i>Cissampelos pareira</i> L. as Antimalarial Agents: Molecular Docking, Pharmacokinetics Analysis, and Molecular Dynamic Simulation Studies.	<i>Computational Biology and Chemistry</i> , 2023, 104, 107826.
148	Ambika, Vijay Kumar, Devesh Chandra, Vikas Thakur, Upendra Sharma* and Dharam Singh*	Depolymerization of lignin using laccase from <i>Bacillus</i> sp. PCH94 for production of valuable chemicals: A sustainable approach for lignin valorization.	<i>International Journal of Biological Macromolecules</i> , 2023, 234, 123601.
147	Arivukarasu Palanisamy, Rinku	Shatavarin-IV saponin adjuvant	<i>HELIYON</i> , doi.org/10.1016/j.heliy

	Sharma, Prithvi Pal Singh, Upendra Sharma, Rajendra Damu Patil, Gorakh Mal, Birbal Singh	elicits IgG and IgG2b responses against <i>Staphylococcus aureus</i> bacterin in a murine model.	on.2023.e15339
146	Ankita Thakur, Shiv Shankar Gupta, Ankit Kumar Dhiman, Upendra Sharma*	Photoredox Minisci-type hydroxyfluoroalkylation of isoquinolines with <i>N</i> -trifluoroethoxyphthalimide.	The Journal of Organic Chemistry , 2023, 88, 2314-2321.
145	Prithvi Pal Singh, Robin Joshi, Ravi Kumar, Ashok Kumar, Upendra Sharma*	Comparative phytochemical analysis of <i>Ferula assa-foetida</i> with <i>Ferula jaeschkeana</i> and commercial oleo-gum resins using GC-MS and UHPLC-PDA-QTOF-IMS.	Food Chemistry International , 2023, 164, 112434.
144	Patil Shivprasad Suresh, Prithvi Pal Singh, Mohit Sharma*, and Upendra Sharma*	Multicomponent natural deep eutectic solvents: Super solvents for the efficient extraction of steviol glycosides (rebaudioside A) from <i>Stevia rebaudiana</i> .	Journal of Cleaner Production , 2023, 356, 135639.
143	Patil Shivprasad Suresh, Krishan Gopal Thakur,* and Upendra Sharma*	Molecular Docking and Dynamic Simulation Approach to Decipher Steroidal Sapogenins (Genus <i>Trillium</i>) Derived Agonists for Glucocorticoid Receptor.	Journal of Biomolecular Structure and Dynamics , 2023, 41, 51-66.
142	Shivani Puri, Sarthak Sharma, Avnesh Kumari, Mohit Sharma* Upendra Sharma* and Sanjay Kumar*	Extraction Of Lignocellulosic Constituents From Cow Dung: Preparation and Characterization of Nanocellulose.	Biomass Conversion and Biorefinery , 2023, 13, 311-320.
141	Sandeep Kumar, Anmol, Upendra Sharma*, S.G. Eswara Reddy*	Insecticidal potential of extracts, fractions, and molecules of <i>Aconitum heterophyllum</i> Wall ex. Royle against aphid, <i>Aphis craccivora</i> Koch (Hemiptera: Aphididae).	Pest Management Science , 2023, 79, 1538-1546.
140	Rohit Kumar, Diksha Parmar, Devesh Chandra, Sarthi, and Upendra Sharma,*	Regioselective C(sp ³)-H Amidation of 8-methyl Quinolines with <i>N</i> -hydroxyphthalimides.	Chemical Communications , 2022, 58, 13151-13154.
139	Surekha Kumari, Anmol, and Upendra Sharma*	A cularine type isoquinoline alkaloid from the root part of <i>Cissampelos pareira</i> .	Natural Product Research , 2022, doi.org/10.1080/14786419.2022.2126469.
138	Tanvi Sharma, Anmol, Upendra Sharma, and Sanjay Kumar*	Iridoid glycosides from <i>Picrorhiza</i> genus endemic to	Critical Reviews in Biotechnology , 2022,

		Himalayan region: phytochemistry, biosynthesis, pharmacological potential and biotechnological intercessions to boost production.	doi.org/10.1080/07388551.2022.2117681.
137	Shiv Shankar Gupta, Diksha Parmar, Rohit Kumar, Devesh Chandra, and Upendra Sharma*	Construction of <i>N</i> -Heterocycles through Group 9 (Co, Rh, Ir) Metal-Catalyzed C-H Activation: Utilizing Alkynes and Olefins as Coupling Partners.	<i>Catalysis Reviews: Science and Engineering</i> , 2022, doi.org/10.1080/01614940.2022.2097640.
136	Chirag Kulkarni, Shivani Sharma, Prateek Singh Bora, Saurabh Verma, Swati Rajput, Konica Porwal, Srikanta K. Rath, Jiaur R. Gayen, Upendra Sharma, Naibedya Chattopadhyay*	A novel extraction method enhanced the osteogenic and anti-osteoporosis effect of tea extract without any hepatotoxicity in ovariectomized rats.	<i>Frontiers in Endocrinology</i> , 2022, 13, doi: 10.3389/fendo.2022.951800.
135	Devesh Chandra, Ankit Kumar Dhiman, Diksha Parmar and Upendra Sharma*	Alkylation, Alkenylation, and Alkynylation of Heterocyclic Compounds through Group 9 (Co, Rh, Ir) Metal-Catalyzed C-H Activation.	<i>Catalysis Reviews: Science and Engineering</i> , 2022, 64, 716-788.
134	Diksha Parmar, Ankit Kumar Dhiman, Rohit Kumar, Akhilesh K. Sharma* and Upendra Sharma*	Cp*Co(III)-Catalyzed Selective C8-Olefination and Oxyarylation of Quinoline <i>N</i> -Oxides with Terminal Alkynes.	<i>The Journal of Organic Chemistry</i> , 2022, 87, 9069-9087.
133	Patil Shivprasad Suresh, Prithvi Pal Singh, Anmol, Smita Kapoor Yogendra S. Padwad and Upendra Sharma*	Lactic acid-based Deep Eutectic Solvent: An Efficient Green Media for the Selective Extraction of Steroidal Saponins from <i>Trillium govanianum</i> .	<i>Separation and Purification Technology</i> , 2022, 294, 121105.
132	Ajay Kumar, Sandeep Kaur, Sukhvinder Dhiman, Prithvi Pal Singh, Gaurav Bhatia, Sharad Thakur, Hardeep Singh Tuli, Upendra Sharma, Subodh Kumar, Abdulmajeed G. Almutary*, Abdullah M. Alnuqaydan, Arif Hussain, Shafiul Haque, Kuldeep Dhama, Satwinderjeet Kaur*	Targeting Akt/NF- κ B/p53 pathway and apoptosis inducing potential of 1,2-benzenedicarboxylic acid, bis (2-methyl propyl) ester isolated from <i>Onosma bracteata</i> Wall. against human osteosarcoma (MG-63) cells.	<i>Molecules</i> , 2022, 27, 3478.
131	Madiha Haider, Vivek Anand, M. Ghalib Enayathullah, Yash Parekh, Sushma Ram, Surekha Kumari, Anmol, Gayatri Panda, Manjari Shukla, Dhvani Dholakia, Arjun	Anti-SARS-CoV-2 potential of <i>Cissampelos pareira</i> L. identified by Connectivity map-based analysis and <i>in vitro</i> studies.	<i>BMC Complementary Medicine and Therapies</i> , 2022, 22, 114.

	Ray, Sudipta Bhattacharyya, Upendra Sharma, Kiran Kumar Bokara, Bhavna Prasher* and Mitali Mukerji*		
130	Ankita Thakur, Manisha, Inder Kumar, and Upendra Sharma*	Visible Light Induced Functionalization of C-H Bonds: Opening of New Avenues in Organic Synthesis.	Asian Journal of Organic Chemistry , 2022, 11, e202100804.
129	Surekha Kumari, Shudh Kirti Dolma, Anmol, Upendra Sharma,* and S.G. Eswara Reddy*	Insecticidal activity of extracts, fractions and pure molecules of <i>Cissampelos pareira</i> Linnaeus against aphid, <i>Aphis craccivora</i> Koch.	Molecules , 2022, 27, 633.
128	Anmol, Surekha Kumari, Raman Singh, Gaurav Aggarwal, Prakhar Agrawal, Dinkar Sahal,* and Upendra Sharma*	Antiplasmodial diterpenoid alkaloid from <i>Aconitum heterophyllum</i> Wall. ex Royle: Isolation, characterization, and UHPLC-DAD based quantification.	Journal of Ethnopharmacology , 2022, 287, 114931.
127	Prithvi Pal Singh, Patil Shivprasad Suresh, Prateek Singh Bora, Vinod Bhatt, and Upendra Sharma*	Govanoside B, A New Steroidal Saponin from Rhizomes of <i>Trillium govanianum</i> .	Natural Product Research , 2022, 36, 37-45.
126	Rohit Kumar, Devesh Chandra, and Upendra Sharma*	Pd-Catalyzed Atropselective C-H Olefination Promoted by a Transient Directing Group.	Advance Synthesis & Catalysis , 2022, 364, 897-908.
125	Devesh Chandra, Manisha, and Upendra Sharma*	Recent Advances in the High-Valent Cobalt-Catalyzed C-H Functionalization of N-Heterocycles.	The Chemical Records , 2022, e202100271.
124	Madhu Thapliyal, Sachin Panwar, Deepak Rana, Manu Pant, Prabhakar Semwal, Upendra Sharma, Suktilang Majaw, Vinay Nautiyal, Sanjay Kumar, Rajendra Dobhal and Ashish Thapliyal*	Biochemical Analysis of Curcumin Content of Turmeric (<i>Curcuma Longa</i>) from Himalayan Region of Uttarakhand and Its Economic Potential.	Biochem. Cell. Arch. 2022, 22, 1509-1514.
123	Devesh Chandra, Nikunj Kumar, Sumit, Diksha Parmar, Puneet Gupta,* and Upendra Sharma* Highlighted on Front Cover Page , 2021, 57, 11567-11568.	Co(III)-catalysed regioselective linear C(8)-H olefination of isoquinolone with terminal aromatic and aliphatic alkynes.	Chemical Communications , 2021, 57, 11613-11616.
122	Shiv Shankar Gupta, Manisha, Rakesh Kumar, Ankit Kumar Dhiman, and Upendra Sharma*	Predictable Site-Selective Functionalization: Promoter Group Assisted para-Halogenation of N-Substituted (Hetero)Aromatics under	Organic & Biomolecular Chemistry , 2021, 19, 9675-9687.

		Metal-Free Condition.	
121	Sumit, Devesh Chandra, Ankita Thakur, Ankit Kumar Dhiman, and Upendra Sharma*	Cp*Rh(III)-Catalyzed Regioselective C(sp ³)-H Electrophilic Trifluoromethylthiolation of 8-Methylquinolines.	The Journal of Organic Chemistry , 2021, 86, 13754-13761.
120	Manisha, Shiv Shankar Gupta, Ankit Kumar Dhiman, and Upendra Sharma*	Rh(III)-Catalyzed Selective C7 Halogenation of Indolines.	European Journal of Organic Chemistry , 2021, 2021, 5443-5448.
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34	Manju Bala, Praveen Kumar Verma, Upendra Sharma, Neeraj Kumar, Bikram Singh	Iron Phthalocyanine as an Efficient and Versatile Catalyst for N-alkylation of Heterocyclic Amines with Alcohols: One-pot Synthesis of 2-Substituted Benzimidazoles, Benzothiazoles and Benzoxazoles.	<i>Green Chemistry</i> 2013, 15, 1687.
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32	Praveen K. Verma, Upendra Sharma, Manju Bala, Neeraj Kumar, Bikram Singh	Transition Metal-free 1,3-Dimethylimidazolium Hydrogen Carbonate Catalyzed Hydration of Organonitriles to Amides.	<i>RSC Advance</i> , 2013, 3, 895.
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12	Upendra Sharma, Praveen Kumar Verma, Neeraj Kumar, Vishal Kumar, Manju Bala, Bikram Singh	Phosphane-Free Green Protocol for Selective Nitro Reduction with Iron Based Catalyst.	Chemistry: A European Journal , 2011, 17, 5903.
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2	Ritu Bala, Raj Pal Sharma, Upendra Sharma, Andrew D. Burrows, Kevin Cassar	Hexaamminecobalt(III) Complexes as Multiple Hydrogen Bond Donors: Synthesis, Characterization and X-ray Structural Study of Mixed Anion Complexes [Co(NH ₃) ₆]Br ₂ (BF ₄) and [Co(NH ₃) ₆]Cl ₂ (HC ₂ O ₄).H ₂ O.	Journal of Molecular Structure , 2007, 832, 156.
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7. P. S. Suresh, S. S. Gupta, Anmol, and U. Sharma.* Insight into Coronaviruses and Natural Products-based Approach for COVID-19 Treatment. *Studies in Natural Product Chemistry (Elsevier)*, 2022, Vo. 74, Chapter 12; pp 443-469; doi: 10.1016/B978-0-323-91099-6.00005-0.
8. P. S. Bora, P. S. Suresh, S. Kumari, Anmol, S. Puri, and U. Sharma.* Integrated Approach for the Quality Assurance of Commercially Important Himalayan Medicinal Plants. In: Ekiert H.M., Ramawat K.G., Arora J. (eds) *Medicinal Plants. Sustainable Development and Biodiversity*, vol 28. pp 721-768, *Springer*, Cham, https://link.springer.com/chapter/10.1007/978-3-030-74779-4_22.
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11. M. Chandel, U. Sharma, N. Kumar, B. Singh and S. Kaur. In Vitro Studies on the Antioxidant/Antigenotoxic Potential of Aqueous Fraction from *Anthocephalus cadamba* Bark. P.R. Sudhakaran et al. (eds.), *Perspectives in Cancer Prevention-Translational Cancer Research (Springer)*, 2013, pp 61-72.

PATENT

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1. M. Sharma, S. Thakur, U. Sharma and S. Kumar.
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1. B. Singh, S. Chattergi, N. Kumar and U. Sharma.
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PAPER PRESENTED IN CONFERENCE/TRAININGS

Invited/Oral Presentations (National/International)

2023

1. **"Analytical techniques for understanding chemical complexity of enzymes and product thereof"** in "Advanced E-SDP on Entrepreneurship Skill Development on Enzyme Bioprocessing" Organised by CSIR-IHBT and Sponsored by DC (MSME), Govt. of India, New Delhi March 13-17, 2023 (15th March, 2023).

2022

2. **"Drug Discovery and Preclinical Trials"** in "CME Training Programme for Ayurvedic Medical Officers" Organised by Research institute in Indian system of Medicine Joginder Nagar, Distt. Mandi, Himachal 12-17 December 2022 (14th December, 2022).
3. **"Plant's Special Metabolites: Why they are Important?"** in in "CME Training Programme for Ayurvedic Medical Officers" Organised by Research institute in Indian system of Medicine Joginder Nagar, Distt. Mandi, Himachal 12-17 December 2022 (14th December, 2022)..
4. **"Chemistry of Plants: A Tale from Plants to Phytomolecules"** in Regional Level Science Congress at Palampur Science Center, Palampur, Himachal on 05-09 December (6th December, 2022).
5. **"Traditional Knowledge-Medicinal Plants-Bioactive Molecules"** in DST-Under Accelerate Vigyan Scheme "Hands on Training Program on Development of Nutraceutical Based Formulations and Their Characterization" Organised by CSIR-IHBT, Palampur, 22-28 November 2022 (23rd November, 2022).
6. **"Traditional Knowledge-Medicinal Plants-Bioactive Molecules"** in DST-STUTI "Recent Approached and Techniques in Drug Design and Drug Discoverysy" Organised by ICT, Mumbai at Shoolini University, 22-28 August 2022.
7. **"Transition Metal Catalyzed Functionalization of N-Containing Heterocycles via C-H Activation"** in Webcheminar on Innovation in Organic Synthesis in India – presented by SynOpen and SoS, 14 July 2022.
8. **"Herbal Material: Source of Bioactive Molecules and Issue of Contamination"** in two Week Intensive Course on "Recent Trends and Challenges in Regulation and Standardization of Herbal Drugs and Formulations" organised by NIPER-SAS Nagar, 08-17 June 2022.

9. **"Structure Elucidation of Natural Products Isolated from Industrially Relevant Medicinal Plants"** in Chemical Science Symposium at IIT, Mandi, Himachal Pradesh, India on 23-24 May, 2022.
10. **"Traditional Knowledge-Driven Discovery of Bioactive Molecules from Medicinal Plants"** in BioX Annual Conference by IIT, Mandi, Himachal Pradesh, India on 13-14 May, 2022.
11. **"Systematic Study for Discovering Bioactive Natural Products from Medicinal Plants"** in Webinar on Role of Natural Products in Drug Discovery and Development by NIPER, Ahmedabad, Gujarat, India on 29th April, 2022.

2021

12. **"Medicinal Plant-Traditional Knowledge-Bioactive Molecules"** in Webinar on Socioeconomic Improvement through cultivation of medicinal and aromatic plants under covid-19 Pandemic organized by Department of Chemistry, Soban Singh Jeena University, Almora, Uttarakhand, India on 8th July, 2021.
13. **"C-H Activation: A Sustainable Approach for the Direct Functionalization of Quinolines"** in Virtual International Conference on Physical Sciences (ICPS – 2021) Jointly organized by Department of Physics, Chemistry and Applied Mathematics & Humanities, SVNIT, Gujarat, India on 5-6 February, 2021.

2020

14. **"Utilizing Plant Traditional Knowledge for the Discovery of Bioactives"** in Young Scientist Conference, IISF-2020 on 22-25th Decemebr, 2020.
15. **"Traditional Knowledge and Modern Spectroscopic Techniques: Unique Combination for the Discovery of Bioactive Molecules from Medicinal Plants"** in E-Conference on Phytopharmaceuticals: Development, Regulatory, IPR & Marketing Challenges, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi on 6th August, 2020.
16. **"Regioselective C(sp³)-Methylation, Alkylation and Arylation *via* C(sp³)-H Activation"** in International conference on organometallics and Catalysis-II (ICOC-II, 2020) at Holiday Inn Resort, Goa, India during March 07-10, 2020.

2019

17. **"Don't forget the Past: Traditional Knowledge Derived Discovery of Novel Bioactive Molecules"** in National Conference on Innovation in Bioprocess Technology (IBT-2019), CIAB, Mohali, Punjab, India, December 11-13, 2019.
18. **"Remote C-H Activation: Direct Access to C8-Functionalized Quinolines International Conference"** in Catalysis and Organic Synthesis (ICCOS-2019), Moscow, Russia, September 15-20, 2019.
19. **"Innovative Approaches for the Synthesis of Antimalarial Quinolines"** in Natural Product Based Therapeutics in Drug Development, NIPER-Raebareli, Lucknow, 14-15 Feb. 2019.

2018

20. **"Quinoline Functionalization *via* C-H Bond Activation: Synthesis of Anti-malarial Quinolines"** in International conference on organometallics and Catalysis (ICOC 2018) at Holiday Inn Resort, Goa, India during December 13-16, 2018.
21. **"Herbal Material: Basic Research and Issue of Contamination"** in two Week Intensive Course on Recent Trends and Challenges in Regulation and Standardization of Herbal Drugs and Formulations" organised by NIPER-SAS Nagar, 06-16 August 2018.

2017

22. **"Quinoline Functionalization through Remote C-H Activation Using Traceless Directing Group"** in Contemporary Facets in Organic Chemistry Synthesis (CFOS) 2017, IIT Roorkee, Uttarakhand, 22-24 December, 2017.
23. **"Medicinal Plant Processing: Novel Bioactive Molecules"** in Scenario of Medicinal Plants in Himalayan Region-Cultivation, Processing and Marketing, CSIR-IHBT, Palampur, India. Organised by State Medicinal Plants Board, Himachal Pradesh, Ayurveda Bhawan, SDA Complex, Kasumpti, Shimla on 10-11 October, 2017.
24. **"Traditional Knowledge: A Perfect Guide for the Discovery of Novel Bioactive Molecules"** in Seventh Euro-India International Conference on Holistic Medicine (ICHM-2017), Kottayam, Kerala, India on 15-17 September 2017.
25. **"Future Affordable Medicines: Efforts Towards Novel Bioactive Molecules"** in Multidisciplinary National Conference on Innovative Trends in Science, Technology and Management-IV on 24th August, 2017 Organised by Sri Sai University, Palampur, Himachal Pradesh.
26. **"Efforts Towards Characterization of Bioactive Molecules from Medicinal Plants"** 4th International Congress of the Society for Ethnopharmacology, India Healthcare in 21st century: Perspectives of Ethnopharmacology & Medicinal Plant Research, UKA Tassadia University, Bardoli, Surat, Gujrat on February 23-25, 2017.
(Manjushree Pal Memorial Award for Best Presentation from Ethanopharmacology Society of India, Kolkata)

2016

27. **"Phytochemical Investigation of *Tinospora cordifolia* and *Asparagus racemosus* for Potential Immunomodulatory Agents"** in Scientific Validation of Traditional knowledge, IIT Rorkee, Uttarakhand on March 12-13, 2016 Organized by MHRD-IPR Chair IIT Roorkee, Uttarakhand

Poster Presentation/Oral Presentation from Group

2022

1. Surekha Kumari, and U. Sharma*. Phytochemical investigation of *Cissampelos pareira* for validation of traditionally claimed antiplasmodial potential. National Conference on Fornteir in Chemical Sciences (NCFCS), November 04-05, 2022, Central University of Himachal Pradesh, Dharamsala.
2. Anmol, and U. Sharma*. Exploration of antiplasmodial potential of *Aconitum heterophyllum* Wall. ex Royle and development of UHPLC-DAD based quality assessment method. National Conference on Fornteir in Chemical Sciences (NCFCS), November 04-05, 2022, Central University of Himachal Pradesh, Dharamsala.
3. Anmol, and U. Sharma*. Phytochemical investigation of *Aconitum heterophyllum* Wall. ex Royle to validate its traditionally claimed antiplasmodial potential. International Conference on Conservation, Cultivation and Sustainable Use of High Altitude Medicinal and Aromatic Plants for the Socio-economic Development, May 07-08, 2022, Uttarakhand Ayurveda University, Dehradun.

4. A. Thakur, and U. Sharma*. Regioselective C(sp²)-H Alkylation of Quinoline *N*-Oxides. Chemical Research Society of India 28th National Symposium in Chemistry (CRSI NSC-28), March 25-27, 2022, IIT Guwahati.
5. D. Parmar, and U. Sharma*. C(sp³)-H Monoarylation of 8-Methylquinolines through Ru(II)-Catalysed C-H Activation. Chemical Research Society of India 28th National Symposium in Chemistry (CRSI NSC-28), March 25-27, 2022, IIT Guwahati.
6. Manisha, and U. Sharma*. Selective C(7)-H Halogenation of *N*-Pyrimidylindolines. Chemical Research Society of India 28th National Symposium in Chemistry (CRSI NSC-28), March 25-27, 2022, IIT Guwahati.
7. R. Kumar, and U. Sharma*. Transient Directing Group Assisted Atropeselective Olefination of Biaryls. Chemical Research Society of India 28th National Symposium in Chemistry (CRSI NSC-28), March 25-27, 2022, IIT Guwahati.
8. Sumit, and U. Sharma*. Regioselective C(sp³)-H Trifluoromethylthiolation of 8-Methylquinoline. Chemical Research Society of India 28th National Symposium in Chemistry (CRSI NSC-28), March 25-27, 2022, IIT Guwahati.

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9. S. Patil, P. Singh, and U. Sharma*. Steroidal Saponins from *Trillium govanianum*: Isolation and Characterization. Gyantarang 2020, CSIR-NEIST, Jorhat Assam, 23-25 January 2020.

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10. R. Kumar and U. Sharma.* New Bioactive Molecules through C-H Bond Functionalization and [3+2] Cyclization of N-Heterocyclic Compounds in New Frontiers in Chemistry - From Fundamentals to Applications (NFCFA2019), Department of Chemistry, BITS Pilani, KK Birla, Goa Campus, 20-22 December, 2019. **(Third Prize for this Poster)**
11. R. Kumar and U. Sharma.* Employing C-H activation for the synthesis of quinoline containing antimalarials in New Frontiers in Chemistry From Fundamentals to Applications (NFCFA2019), Department of Chemistry, BITS Pilani, KK Birla Goa Campus, 20-22 December, 2019.
12. S.S. Gupta and U. Sharma.* Derivatization of N-Heterocyclic Scaffolds to Bioactive Molecules Through C-H Activation Strategy in New Frontiers in Chemistry - From Fundamentals to Applications (NFCFA2019), Department of Chemistry, BITS Pilani, KK Birla Goa Campus, 20-22 December, 2019.
13. A.K. Dhiman and U. Sharma.* Design and Synthesis of Quinoline based Bioactive Heterocyclic Molecules through C-H Functionalization in New Frontiers in Chemistry - From Fundamentals to Applications (NFCFA2019), Department of Chemistry, BITS Pilani, KK Birla Goa Campus, 20-22 December, 2019.
14. I. Kumar and U. Sharma.* Photocatalyzed Metal/Oxidant-free ipso-Hydroxylation of Boronic Acids: Direct Synthesis of Phenols in New Frontiers in Chemistry - From Fundamentals to Applications (NFCFA2019), Department of Chemistry, BITS Pilani, KK Birla Goa Campus, 20-22 December, 2019.
15. A. K. Dhiman and U. Sharma.* Microwave-Assisted Metal-Free Three Component Reaction for Direct Synthesis of 2-Anilinoquinolines and 3-Hydroxyquinolines. In 25th CRSI National Symposium in Chemistry and CRSI-ACS 18-21 July, 2019, IIT Kanpur.
16. R. Kumar and U. Sharma.* Cobalt(III)-Catalyzed Alkylation of C(sp³)-H Bonds of 8-Alkylquinolines with Maleimides. In 25th CRSI National Symposium in Chemistry and CRSI-ACS 18-21 July, 2019, IIT Kanpur.

17. D. Chandra and U. Sharma.* Rapid Synthesis of Quinoline by Organic Acid Mediated Povarov Type Multicomponent Reaction. In 25th CRSI National Symposium in Chemistry and CRSI-ACS 18-21 July, 2019, IIT Kanpur.

2017

18. A. K. Dhiman, S. Chaudhary, R. Kumare, R. Kumar and U. Sharma.* Synthesis of 2-substituted-3-(2-hydroxyaryl)quinolines and 4-(2-hydroxyaryl)acridines. in Contemporary Facets in Organic Chemistry Synthesis (CFOS) 2017, IIT Roorkee, Uttarakhand, 22-24 December, 2017.
19. R. Sharma, R. Kumar, I. Kumar and U. Sharma.* [Cp*RhCl₂]₂ Catalyzed Remote Functionalization of Quinolines and their Mechanistic Understanding. **Indo-US Bilateral Workshop** Organised by IISc Bangalore, IISER Kolkata and IIT Mumbai at Rhythm Lonavala, Lonavala, Maharashtra, India during December 7-10, 2017.
20. R. Kumar, A. K. Dhiman and U. Sharma.* Metal-free C-2 Arylation of Quinoline N-Oxides with Aryldiazonium Salts/Anilines. **21st CRSI National Symposium in Chemistry** n organised by CSIR-IICT, Tarnaka Hyderabad-500007 on 2017.
21. R. Sharma, I. Kumar, R. Kumar and U. Sharma* Rhodium (III)-Catalyzed Remote C-H Activation/functionalization of Quinolines. **21st CRSI National Symposium in Chemistry** organised by CSIR-IICT, Tarnaka Hyderabad-500007 on 2017.
22. Onkar S Nayal, M S Thakur, N. Kumar, U. Sharma* and B. Singh.* Novel Approches for the Synthesis of Tertiary Amines via Carbocationic Pathway. **VI National Symposium on Advances in Chemical Science** at GNDU, Amritsar, Punjab, India on 5-6 March, 2017. (**Best Poster Award**)

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23. R. Sharma, I. Kumar and U. Sharma.* Rhodium-catalyzed remote C-H activation using traceless directing group. **21st International Conference on Organic Chemistry**, IIT Bombay, Bombay, India on 11-16 December, 2016.
24. Rakesh Kumar, Ankit Kumar Dhiman and Upendra Sharma. Catalyst and Solvent Free Access to Bioactive Quinoline Derivatives. **21st International Conference on Organic Chemistry**, IIT Bombay, Bombay, India on 11-16 December, 2016.
25. M. Kumar, N. Kumar, B. Singh and U. Sharma.* Harnessing bio-based reagents for C-N bond formation reactions. **21st International Conference on Organic Chemistry**, IIT Bombay, Bombay, India on 11-16 December, 2016.
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