Dr. Gopal Lal Khatik

M.S. Pharm.; Ph.D.

**Designation:** Associate Professor **Department:** Medicinal Chemistry

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Google Scholar: <a href="https://scholar.google.co.in/citations?user=k0VOQQgAAAAJ">https://scholar.google.co.in/citations?user=k0VOQQgAAAAJ</a>

Scopus: https://www.scopus.com/authid/detail.uri?authorld=14031691500

Research Gate: <a href="https://www.researchgate.net/profile/Gopal-Khatik">https://www.researchgate.net/profile/Gopal-Khatik</a>

Citations: 2391	Publications:	<b>Book:</b> 01	Guest Editor:	Patents:		
h-index: 26	104	Book Chapter:	02	07 (granted),		
i10-index: 58		04		05 (Published)		
Ph.D Supervision: MS/M.Pharm. Supervision:						
1 PI and 1 as Co-PI (Completed) 33 (Completed)						
05 (ongoing)						

Dr. Gopal L. Khatik is currently serving as an Associate Professor in the Department of Medicinal Chemistry, NIPER Raebareli, India. Dr. Khatik completed his M.S. (Pharm.) and Ph.D. degrees from NIPER SAS Nagar and has more than ten years of teaching and research experience in industry and academic institutions. He has published 100 research and review articles in indexed journals with a high reputation from ACS, RSC, Wiley, Springer, Bentham, Elsevier, Theme, and Taylor & Francis. Dr. Khatik edited the guest issue of Current Drug Discovery Technologies and Current Pharmaceutical Design from Bentham Science. He was awarded a project from SERB in the young Scientist Scheme, which has been completed successfully and working on the project of senolytic agents in the treatment of Alzheimer's disease which is funded by SERB/ANRF. He is working as an editorial board member of AJAS, JPR, IJPBA, and a reviewer in various international journals. Dr. Khatik has expertise in drug design (CADD) and small organic molecule synthesis. His research interests include



heterocyclic chemistry, asymmetric synthesis, and drug design in the area of cancer, diabetes, and neurodegenerative diseases.

**Current Position**: Associate Professor, NIPER Raebareli (20 Feb 2025 to Present)

#### **Positions Held**

Assistant Professor, NIPER Raebareli (20 Feb 20220 to 19<sup>th</sup> Feb 2025)

Associate Professor: Lovely Professional University, India (Aug 2016-present)

Assistant Professor: Lovely Professional University, India (July 2012- July 2016)

Trainee Research Associate: Jubilant Chemsys Ltd Noida, India (July 2006- July 2007)

#### **Academic Records**

Ph. D.: National Institute of Pharmaceutical Education and Research (NIPER) Mohali, India (July 2007-June 2012)

M. S. (Pharm): National Institute of Pharmaceutical Education and Research (NIPER) Mohali, India (July 2004-June 2006)

B. Pharm: B.N. college of Pharmacy, Udaipur, India (2000-2004)

# **Teaching**

- Organic Chemistry
- Medicinal Chemistry
- Analytical Chemistry
- Advanced Organic Chemistry
- Advanced Analytical Chemistry
- Research Methodology
- Basics of drug action
- Drug design

#### **Research Interest:**

Synthetic organic chemistry encompassing asymmetric synthesis, heterocyclic chemistry, process chemistry, medicinal chemistry with aid of CADD specifically anticancer and antidiabetic agents.

#### **Technical Skills:**

Organic synthesis: Expertise in carrying out various organic synthetic reactions including asymmetric synthesis, multistep synthesis of organic molecules, Methodology development, Process chemistry and combinatorial chemistry. Experience in handling air sensitive, Pyrophoric, and hazardous reagents

Purification: Good expertise in purification of organic compounds using

crystallization and distillation (at atmospheric and reduced pressures)

and chromatographic techniques such as column chromatography, preparative TLC, HPTLC.

Analytical techniques: Experience in handling of UV-Vis, Fluorescence spectrophotometer,

Flash chromatography, HPLC system, Polarimeter.

Structural elucidation: Well versed with structural elucidation using UV-VIS spectrometer, FTIR, 1D, 2D NMR (300 and 400 MHz) & Mass spectroscopy (LCMS/GCMS/MALDI-TOF-TOF/HRMS), CHNS- Elemental analyzer Installation and operation of instruments: Rotavapor, circulator, immersion cooler, vacuum pump, fume hood, magnetic stirrer, hot air oven, vacuum desiccator etc.

### 2. Patent Details (with URL)

- VYAS, Manish, SAH, Anil, RAJ, Shivangni, KHATIK, Gopal Lal, YADAV, Pramod, VERMA, Surajpal, Neha Sharma, Navneet Khurana, Shobit Bansal, Nishith Keserwani, Amrit Pal Singh, Sorabh Lakhanpal, Manish Gupta, Lovely Professional University Jalandhar, FORMULATION OF SPINACEA OLERACEA FOR ANTIDIABETIC AND ANTIOXIDANT ACTIVITY, APPLICATION NUMBER 201811022935, 20/06/2018, https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus
- VYAS, Manish, RAJ, Shivangni, SAH, Anil, KHATIK, Gopal Lal, PK Prajapati,, VERMA, Surajpal, Lovely Professional University Jalandhar, SELF NANO EMULSIFYING DRUG DELIVERY SYSTEM (SNEDDS) OF ENICOSTEMMA LITTORALE FOR THE MANAGEMENT OF DIABETES MELLITUS, APPLICATION NUMBER 201811022937, 20/06/2018, https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus
- 3. (Patent granted) Dr. Manish Vyas, Priyanka Joshi, Dr. Gopal Lal Khatik, Vijay Mishra, Saurabh Satija, Lovely Professional University Jalandhar, PHARMACEUTICAL COMPOSITION OF CROTON TIGLIUM FOR ANTIDIABETIC ACTIVITY, APPLICATION NUMBER 201911004441, 05/02/2019, https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus
- 4. Dr. Manish Vyas, Priti Verma, Dr. Gopal Lal Khatik, Vijay Mishra, Surajpal Verma, Lovely Professional University Jalandhar, NOVEL FORMULATION OF CALOTROPIS PROCERA FOR THE MANAGEMENT OF DIABETES MELLITUS, APPLICATION NUMBER 201911004442, 05/02/2019, <a href="https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus">https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus</a>
- (patent granted) Gopal Lal Khatik, Zakari Umar Ya'u, Bashir Usman, Navneet Khurana, Jeena Gupta, Manish Vyas, Lovely Professional University Jalandhar, AN ORAL PHARMACEUTICAL COMPOSITION FOR ALPHA-AMYLASE INHIBITION, APPLICATION NUMBER 201911028014, 12/07/2019, Granted 05/02/2021, https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus
- 6. Dr. Manish Vyas, Dr. Gopal Lal Khatik, Harpreet Kaur, Saurabh Satija, Vijay Mishra, Navneet Khurana, Lovely Professional University Jalandhar, PHYTOSOMAL FORMULATION OF PHYLLANTHUS NIRURI FOR MANAGEMENT OF DIABETES,

- 7. Dr. Manish Vyas, Dr. Gopal Lal Khatik, Risabet Danola Lamare, Meenu Mehta, Neha Sharma, Lovely Professional University Jalandhar, A FORMULATION OF CHENOPODIUM QUNOA FOR ANTI-DIABETIC ACTIVITY, APPLICATION NUMBER 202011007654, 24/02/2020, https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus
- 8. Dr. Manish Vyas, Dr. Gopal Lal Khatik, Dr. Kamal Dua, Dr. Saurabh Satija, Dr. Meenu Mehta, Dr. Navneet Khurana, Dr. Sanjeev Sahu, Geeta Verma, Lovely Professional University Jalandhar, NOVEL LIPOSOMAL FORMULATION OF SEMECARPUS ANACARDIUM AND PROCES THERE OF, INDIAN PATENT, APPLICATION NUMBER 202011023766, 06/06/2020, https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus
- Neha Sharma, Vishu Verma, Dr. Gopal Lal Khatik, Dr. Monica Gulati, Dr. Manish Vyas, Dr. Navneet Khurana, Lovely Professional University Jalandhar, A NOVEL NANOMICELLES FORMULATION OF ROTENONE, INDIAN PATENT, APPLICATION NUMBER 202011031142, 21/07/2020, https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus
- 10. METHOD FOR CHEMICAL SYNTHESIS OF KYNURENIC ACID, ETHYL ESTER AND AMIDE DERIVATIVES THEREOF. INDIAN PATENT, APPLICATION NUMBER 202211065540. 2022/11/16
- 11. (Patent granted) Gopal Lal Khatik, Ashok Kumar Datusalia, Amol Mahajan, Shreyash Yadav, Jatin Malik, Dhairiya Agarwal, and Ramesh Ambatwar. (Benzoxazole-2-yl)-2-Phenoxyacetamide Derivatives As Alpha-Amylase Inhibitors and Anti-Diabetic Agents And Compositions Thereof INDIAN PATENT, APPLICATION NUMBER 202411019091. Filed 15/03/2024. Granted 14/11/2024.

### 3. Publication Details (with URL)

S	Authors	Title	Journal	Volu	Numb	Pages	Year
				me	er		
1	Khatik, Gopal L; Kumar, Raj;	Catalyst-free conjugated addition of thiols to α, β-	Organic Letters	8	11	2433- 2436	2006
	Chakraborti, Asit K;	unsaturated carbonyl compounds in water					
2	Khatik, Gopal L; Sharma, Gaurav; Kumar, Raj; Chakraborti, Asit K;	Scope and limitations of HCIO4–SiO2 as an extremely efficient, inexpensive, and reusable catalyst for chemoselective carbon–sulfur bond formation	Tetrahedron	63	5	1200- 1210	2007
3	Khatik, Gopal	Stereochemical studies	Tetrahedron	51	28	3654-	2010

	L; Pal, Anang; Mobin, Shaikh M; Nair, Vipin A;	of 5-methyl-3- (substituted phenyl)-5- [(substituted phenyl) hydroxy methyl]-2- thiooxazolidin-4-ones	Letters			3657	
4	Khatik, Gopal L; Kumar, Raj; Chakraborti, Asit K;	Magnesium perchlorate as a new and highly efficient catalyst for the synthesis of 2, 3-dihydro-1, 5-benzothiazepines	Synthesis	2007	4	541- 546	2007
5	Khatik, Gopal L; Pal, Anang; Apsunde, Tushar D; Nair, Vipin A;	A highly efficient methodology for 5-methyl-3-aryl-2-thiooxazolidin-4-ones using lithium perchlorate in DIPEA mediated synthesis.	Journal of Heterocyclic Chemistry	47	3		2010
6	Khatik, Gopal L; Kaur, Jasmine; Kumar, Varun; Tikoo, Kulbhushan; Venugopalan, P; Nair, Vipin A;	Aldol derivatives of Thioxoimidazolidinones as potential anti-prostate cancer agents	European journal of medicinal chemistry	46	8	3291- 3301	2011
7	Khatik, Gopal L; Kaur, Jasmine; Kumar, Varun; Tikoo, Kulbhushan; Nair, Vipin A;	1, 2, 4-Oxadiazoles: A new class of antiprostate cancer agents	Bioorganic & medicinal chemistry letters	22	5	1912- 1916	2012
8	Khatik, Gopal L; Dube, Namita; Pal, Anang; Nair, Vipin A;	Highly efficient one-pot synthesis of 2-aminobenzoxazoles using triflic acid as a cyclodesulfurizing reagent	Synthetic Communica tions	41	17	2631- 2639	2011
9	Khatik, Gopal L; Kumar, Varun; Nair, Vipin A;	Reversal of selectivity in acetate aldol reactions of N-acetyl-(S)-4-isopropyl-1-[(R)-1-phenylethyl] imidazolidin-2-one	Organic Letters	14	10	2442- 2445	2012
10	Khatik, Gopal L; Khurana, Ravi; Kumar, Varun; Nair, Vipin A;	Asymmetric induction by (S)-4-isopropyl-1-phenylimidazolidin-2-thione in titanium-mediated aldol reactions and its application in	Synthesis	2011	19	3123- 3132	2011

		enantioselective synthesis of (R)-baclofen					
11	Kumar, Varun; Pal, Anang; Khatik, Gopal L; Bhattacharya, Suman; Nair, Vipin A;	Additive controlled, stereoselective benzylation of 2- thioxotetrahydropyrimidin -4 (1H)-ones via chiral induction from a remote stereocenter	Tetrahedron: Asymmetry	23	06-Jul	434- 442	2012
12	Kumar, Varun; Khatik, Gopal L; Nair, Vipin A;	Sterically Controlled Stereoregulation in Aldol Reactions of 3-Aryl-1- alkyl Dihydrothiouracils	Synlett	2011	20	2997- 3001	2011
13	Kumar, Varun; Khatik, Gopal L; Pal, Anang; Praneeth, Mohan R; Bhattarai, Sanjay; Nair, Vipin A;	A facile synthesis and chemoselective reactions of dihydrothiouracils	Synlett	23	16	2357- 2362	2012
14	Kumar, Varun; Kumar, Kapil; Pal, Anang; Khatik, Gopal Lal; Nair, Vipin A;	Aldol reactions of 2- thioxotetrahydropyrimidin -4 (1H)-ones: stereoregulations from endo-and exocyclic chiral centres	Tetrahedron	69	6	1747- 1754	2013
15	Khatik, Gopal L; Sharma, Ratnesh; Kumar, Varun; Chouhan, Mangilal; Nair, Vipin A;	Stereoselective synthesis of (S)- dapoxetine: a chiral auxiliary mediated approach	Tetrahedron Letters	54	45	5991- 5993	2013
16	Kumar, Varun; Rachamalla, Mahesh; Nandekar, Prajwal; Khatik, Gopal L; Sangamwar, Abhay T; Tikoo, Kulbhushan; Nair, Vipin A;	Design and synthesis of optically pure 3-aryl-6-methyl-2-thioxotetrahydropyrimidin -4 (1 H)-ones as antiprostate cancer agents	RSC Advances	4	71	37868- 37877	2014
17	Kaur, Paranjeet; L. Khatik, Gopal;	Advancements in non- steroidal antiandrogens as potential therapeutic agents for the treatment of prostate cancer	Mini reviews in medicinal chemistry	16	7	531- 546	2016

18	Kumar, Kapil; More, Shital S; Goyal, Sandeep; Gangar, Mukesh; Khatik, Gopal L; Rawal, Ravindra K; Nair, Vipin A;	A convenient synthesis of 4-alkyl-3-benzoylpyrroles from α, β-unsaturated ketones and tosylmethyl isocyanide	Tetrahedron Letters	57	21	2315- 2319	2016
19	Kumar, Kapil; More, Shital S; Khatik, Gopal L; Rawal, Ravindra K; Nair, Vipin A;	A Highly Stereoselective Chiral Auxiliary-assisted Reductive Cyclization to Furoindoline	Journal of Heterocyclic Chemistry	54	5	2696- 2702	2017
20	Nayak, Surendra K; Khatik, Gopal L; Narang, Rakesh; Monga, Vikramdeep; Chopra, Harish Kumar;	p53-Mdm2 interaction inhibitors as novel nongenotoxic anticancer agents	Current cancer drug targets	18	8	749- 772	2018
21	Kaur, Paranjeet; Khatik, Gopal L; Nayak, Surendra K;	A review on advances in organoborane-chemistry: versatile tool in asymmetric synthesis	Current Organic Synthesis	14	5	665- 682	2017
22	Khatik, Gopal L; Datusalia, Ashok K; Ahsan, Waquar; Kaur, Paranjeet; Vyas, Manish; Mittal, Amit; Nayak, Surendra Kumar;	A retrospect study on thiazole derivatives as the potential antidiabetic agents in drug discovery and developments	Current drug discovery technologie s	15	3	163- 177	2018
23	Mansoori, Mohammad Hashim; Khatik, Gopal L; Mishra, Vijay;	Synthesis and pharmacological evaluation of pyridinyl-1, 3, 4-oxadiazolylethanone derivatives as antimicrobial, antifungal and antitubercular agents	Medicinal Chemistry Research	27	3	744- 755	2018
24	Datusalia,	Thiazole heterocycle: A	Current	15	3	162-	2018

	Ashok K; Khatik, Gopal L;	privileged scaffold for drug design and discovery	Drug Discovery Technologie s			162	
25	Kaur, Paranjeet; Khatik, Gopal L;	Lithium perchlorate catalyzed electrophilic activation: a convenient one-pot synthesis of trans-cinnamic acids	Letters in Organic Chemistry	15	8	688- 692	2018
26	Kaur, Paranjeet; Mittal, Amit; Nayak, Surendra K; Vyas, Manish; Mishra, Vijay; Khatik, Gopal L;	Current strategies and drug targets in the management of type 2 diabetes mellitus	Current drug targets	19	15	1738- 1766	2018
27	Bashary, Roqia; Khatik, Gopal L;	Design, and facile synthesis of 1, 3 diaryl-3-(arylamino) propan-1-one derivatives as the potential alpha-amylase inhibitors and antioxidants	Bioorganic chemistry	82		156- 162	2019
28	Kumar, Shubham; Khatik, Gopal L; Mittal, Amit;	In silico molecular docking study to search new SGLT2 inhibitor based on dioxabicyclo [3.2. 1] octane scaffold	Current Computer- Aided Drug Design	16	2	145- 154	2020
29	Puri, Diksha; Khatik, Gopal Lal; Shunmugaper umal, Tamilvanan;	Studies on olive-and silicone-oils-based Janus macroemulsions containing ginger to manage primary dysmenorrheal pain	Materials Science and Engineering : C	100		276- 285	2019
30	Bashary, Roqia; Vyas, Manish; Nayak, Surendra K; Suttee, Ashish; Verma, Surajpal; Narang, Rakesh; Khatik, Gopal L;	An insight of alpha- amylase inhibitors as a valuable tool in the management of type 2 diabetes mellitus	Current diabetes reviews	16	2	117- 136	2020
31	Som, Sananda;	Quality by design-based crystallization of	ASSAY and Drug	18	1	Nov-33	2020

	Singh, Sachin Kumar; Khatik, Gopal L; Kapoor, Bhupinder; Gulati, Monica; Kuppusamy, Gowthamaraja n; Anandhakrishn an, Nandha Kumar; Kumar, Bimlesh; Yadav, Ankit Kumar; Kumar, Rajesh;	curcumin using liquid antisolvent precipitation: micromeritic, biopharmaceutical, and stability aspects	Developme nt Technologie s				
32	Usman, Bashir; Sharma, Neha; Satija, Saurabh; Mehta, Meenu; Vyas, Manish; Khatik, Gopal L; Khurana, Navneet; Hansbro, Philip M; Williams, Kylie; Dua, Kamal;	Recent developments in alpha-glucosidase inhibitors for management of type-2 diabetes: An update	Current pharmaceut ical design	25	23	2510- 2525	2019
33	Narang, Rakesh; Kumar, Raj; Kalra, Sourav; Nayak, Surendra Kumar; Khatik, Gopal L; Kumar, Gadekula Naresh; Sudhakar, Kalvatala; Singh, Sachin Kumar;	Recent advancements in mechanistic studies and structure activity relationship of FoF1 ATP synthase inhibitor as antimicrobial agent	European Journal of Medicinal Chemistry	182		111644	2019
34	Shafi, Sana; Gupta, Pawan; Khatik, Gopal L; Gupta, Jeena;	PPARγ: potential therapeutic target for ailments beyond diabetes and its natural agonism	Current Drug Targets	20	12	1281- 1294	2019

35	Khatik, Gopal L; Datusalia, Ashok K; Vyas, Manish;	Current Pharmaceutical Interventions and Drug Design in the Management of Diabetes and Diabetic Complications	Current Pharmaceut ical Design	25	23	2509- 2509	2019
36	Kaur, Kawalpreet; Khatik, Gopal L;	Cancer immunotherapy: an effective tool in cancer control and treatment	Current Cancer Therapy Reviews	16	1	62-69	2020
37	Famta, Paras; Famta, Mani; Kaur, Jaskiran; Khursheed, Rubiya; Kaur, Amanjot; Khatik, Gopal L; Pawde, Datta Maroti; Rahman, Syed Nazrin Ruhina; Shunmugaper umal, Tamilvanan;	Protecting the normal physiological functions of articular and periarticular structures by aurum nanoparticle-based formulations: an up-to-date insight	AAPS PharmSciT ech	21	3	95	2020
38	Kumar, Shubham; Khatik, Gopal L; Mittal, Amit;	Recent developments in sodium-glucose cotransporter 2 (SGLT2) inhibitors as a valuable tool in the treatment of type 2 diabetes mellitus	Mini Reviews in Medicinal Chemistry	20	3	170- 182	2020
39	Patle, Deepshikha; Vyas, Manish; Khatik, Gopal L;	A review on natural products and herbs used in the management of diabetes	Current diabetes reviews	17	2	186- 197	2021
40	Kapoor, Bhupinder; Gupta, Reena; Gulati, Monica; Singh, Sachin Kumar; Khatik, Gopal Lal; Chawla, Manish; Nagappan, Krishna Veni; Khursheed, Rubiya;	High-performance liquid chromatography and liquid chromatography/mass spectrometry studies on stress degradation behavior of sulfapyridine and development of a validated, specific, stability-indicating HPLC assay method	Assay and Drug Developme nt Technologie s	18	3	119- 133	2020
41	Kumar, Rajan; Kaur,	Synthesis and evaluation	Bioorganic	100		103867	2020

	Paranjeet; Bhat, Zahid Rafiq; Bhat, Sana; Kumar, Rakesh; Kumar, Rajan; Tikoo, Kulbhushan; Gupta, Jeena; Khurana, Navneet; Kaur, Jaskiran; Khatik, Gopal L;	of new 1, 2, 4-oxadiazole based trans-acrylic acid derivatives as potential PPAR-alpha/gamma dual agonist	Chemistry				
42	Choudhary, Neeraj; Khatik, Gopal L; Suttee, Ashish;	The possible role of saponin in type-II diabetes-a review	Current diabetes reviews	17	2	107- 121	2021
43	Kapoor, Bhupinder; Gulati, Monica; Singh, Sachin K; Khatik, Gopal L; Gupta, Reena; Kumar, Rakesh; Kumar, Rajan; Gowthamaraja n, K; Mahajan, Sanjeev; Gupta, Som;	Fail-safe nano- formulation of prodrug of sulfapyridine: preparation and evaluation for treatment of rheumatoid arthritis	Materials Science and Engineering : C	118		111332	2021
44	Yadav, Bijay Kumar; Kaur, Jaskiran; Kumar, Nitin; Vyas, Manish; Bashary, Roqia; Mittal, Amit; Haneef, Jamshed; Khatik, Gopal L;	Quercetin as an important nutraceutical and medicinal agent	Plant Archives	20	2	2537- 47	2020
45	Bhatt, Nitin K; Haneef, Jamshed; Vyas, Manish; Khatik, Gopal L;	Development of L-lysine amino acid-based co-crystal of telmisartan using crystal engineering approach to improve solubility, dissolution, and micrometric	Current drug delivery	18	5	596- 606	2021

		properties					
46	Kaur, Jaskiran; Famta, Paras; Khurana, Navneet; Vyas, Manish; Khatik, Gopal L;	Biomedical applications of 4-hydroxycoumarin as a fungal metabolite and its derivatives	New and Futu Development Biotechnology Bioengineerin	s in Mic y and	crobial	209- 218	2020
47	Chopra, Vijay; Shriwastva, Aishwarya; Khatik, Gopal L; Vyas, Manish; Yadav, Pramod; Prajapati, PK; Tomar, Bhupendra;	A comprehensive review on pharmacological properties of Abrus precatorius L.	The Natural Products Journal	10	5	543- 549	2020
48	Kaur, Jaskiran; Famta, Paras; Famta, Mani; Mehta, Meenu; Satija, Saurabh; Sharma, Neha; Vyas, Manish; Khatik, Gopal Lal; Chellappan, Dinesh Kumar; Dua, Kamal;	Potential anti-epileptic phytoconstituents: An updated review	Journal of ethnopharm acology	268		113565	2021
49	Kaur, Paranjeet; Khatik, Gopal;	An overview of computer-aided drug design tools and recent applications in designing of anti-diabetic agents	Current Drug Targets	22	10	1158- 1182	2021
50	Vyas, Manish; Simbo, Daniel A; Mursalin, Mohd; Mishra, Vijay; Bashary, Roqia; Khatik, Gopal L;	Drug delivery approaches for doxorubicin in the management of cancers	Current Cancer Therapy Reviews	16	4	320- 331	2020
51	Kaur, Jaskiran; Famta, Paras; Khurana, Navneet; Vyas, Manish; Khatik, Gopal	Pharmacotherapy of type 2 diabetes	Obesity and Diabetes: Sci Advances and Practice			679- 694	2020

	L;						
52	Choudhary, Neeraj; Khatik, Gopal L; Choudhary, Sunanda; Singh, Gurpal; Suttee, Ashish;	In vitro anthelmintic activity of Chenopodium album and in-silico prediction of mechanistic role on Eisenia foetida	Heliyon	7	1		2021
53	Kaur, Jaskiran; Mishra, Vijay; Singh, Sachin Kumar; Gulati, Monica; Kapoor, Bhupinder; Chellappan, Dinesh Kumar; Gupta, Gaurav; Dureja, Harish; Anand, Krishnan; Dua, Kamal;	Harnessing amphiphilic polymeric micelles for diagnostic and therapeutic applications: Breakthroughs and bottlenecks	Journal of Controlled Release	334		64-95	2021
54	Pawge, Girija; Khatik, Gopal L;	p53 regulated senescence mechanism and role of its modulators in age-related disorders	Biochemical pharmacolo gy	190		114651	2021
55	Divita, KM; Khatik, Gopal L;	Current perspective of ATP synthase inhibitors in the management of the tuberculosis	Current Topics in Medicinal Chemistry	21	18	1623- 1643	2021
56	Shriwastava, Aishwarya; Chopra, Vijay; Vyas, Manish; Khatik, Gopal L; Yadav, Pramod; Gupta, Jeena; Singh, Amrit P;	A retrospective study on Gloriosa superba and its main active constituents	The Natural Products Journal	11	4	463- 471	2021
57	Patel, Smith; Bansoad, Ankush V; Singh, Rakesh; Khatik, Gopal L;	BACE1: a key regulator in Alzheimer's disease progression and current development of its inhibitors	Current Neurophar macology	20	6	1174- 1193	2022
58	Tripathi, Nancy; Verma, Surajpal; Vyas,	Nanoformulations of quercetin: a potential phytochemical for the	Brazilian Journal of Pharmaceut	58		e18744	2022

	Manish; Yadav, Narendra Singh; Gain, Subhajit; Khatik, Gopal Lal;	treatment of uv radiation induced skin damages	ical Sciences				
59	Kaur, Jaskiran; Gulati, Monica; Famta, Paras; Corrie, Leander; Awasthi, Ankit; Saini, Sumant; Khatik, Gopal L; Bettada, Vidya G; Madhunapantu la, SubbaRao V; Paudel, Keshav Raj;	Polymeric micelles loaded with glyburide and vanillic acid: I. Formulation development, in-vitro characterization and bioavailability studies	Internationa I Journal of Pharmaceut ics	624		121987	2022
60	Nair, Vipin A; Mallikarjunasw amy, Aiyagala MM; Khatik, Gopal L; Vishwa, Prashanth; Kandaiah, Sakthivel;	A convenient synthesis of 3-arylideneindolin-2-ones and evaluation of their photoelectrochemical properties	Organic Communica tions	15	3	272	2022
61	Khatik, Gopal L;	Catalyst-free, One-pot Synthesis of 2-Aryl Benzimidazoles from Orthophenylenediamine and Aryl Aldehyde in Acetonitrile	Letters in Organic Chemistry	19	12	1070- 1076	2022
62	Kashid, Snehal; Suttee, Ashish; Kadam, Prasad; Khatik, Gopal Lal; Kasarla, Ramesh;	AN IN-Silico Studies for Immunomodulatory Potential of Phytoconstituents from A Naturally Occurring Herb Nigella Sativa	Pharmacop hore	13	May- 22	14-26	2022
63	Kumar, Sumit; Ambatwar, Ramesh; Gupta, Vaibhav; Khatik, Gopal	Convenient "on-water" one-pot, synthesis of flavonols catalyzed by LiOH. H2O-and H2O2-mediated oxidation: S. Kumar et al.	Research on Chemical Intermediat es	49	3	901- 915	2023

	L;						
64	Patle, Deepshikha; Khurana, Navneet; Gupta, Jeena; Kaur, Paranjeet; Khatik, Gopal L;	Design, synthesis, and biological evaluation of coixol-based derivatives as potential antidiabetic agents	Journal of Molecular Structure	1277		134861	2023
65	Kaur, Jaskiran; Famta, Paras; Khurana, Navneet; Vyas, Manish; Khatik, Gopal L;	Pharmacotherapy of Type 2 Diabetes 50	Obesity and Diabetes			679	2020
66	Khan, Sabiya S; Khatik, Gopal L; Datusalia, Ashok K;	Strategies for treatment of disease-associated dementia beyond Alzheimer's disease: an update	Current Neurophar macology	21	2	309- 339	2023
67	Jain, Madhur; Gollapudi, Sirisha; Khatik, Gopal L;	An Insight into MptpB Inhibitors as a Key Strategy to Treat MDR and XDRTuberculosis	Current Pharmaceut ical Design	29	8	562- 575	2023
68	Gupta, Vaibhav; Ambatwar, Ramesh; Bhanwala, Neeru; Khatik, Gopal L;	Coumarin as a Privileged and Medicinally important Scaffold in the Treatment of Tuberculosis	Current Topics in Medicinal Chemistry	23	16	1489- 1502	2023
69	Singh, Pooja; Kanhed, Ashish; Khatik, Gopal Lal; Datusalia, Ashok Kumar;	Identifying potential neuroprotective polyphenols targeting endoplasmic reticulum stress through an in silico approach	Journal of Biomolecula r Structure and Dynamics	42	2	834- 847	2024
70	Thakur, Manisha; Babu, Akhil; Khatik, Gopal Lal; Datusalia, Ashok Kumar; Khatri, Ramchander; Kumar, Anoop;	Role of baricitinib in COVID-19 patients: A systematic review and meta-analysis	World Journal of Meta- Analysis	11	4	125- 133	2023
71	Kumar, Sumit; Ambatwar,	Easy and efficient direct conversion of aryl nitrile	Research on	49	9	3951- 3962	2023

	Ramesh; Khatik, Gopal L;	into aryl amide	Chemical Intermediat es				
72	Verma, Swati; Ambatwar, Ramesh; Datusalia, Ashok Kumar; Khatik, Gopal L;	Convenient One-Pot Synthesis of Kynurenic Acid Ethyl Ester and Exploration to Direct Synthesis of Neuroprotective Kynurenic Acid and Amide Derivatives	The Journal of Organic Chemistry	88	15	10494- 10500	2023
73	Radhakrishna, Vamshikrishna Y; Khatik, Gopal L; Vijaya, Bhuvaneshwar i S; Nair, Vipin A;	A Mild and Eco-friendly, One-pot Synthesis of 2- hydroxy- Narylacetamides from 2- chloro-N-arylacetamides	Letters in Organic Chemistry	21	5	391- 399	2024
74	Kumar, Sumit; Mahajan, Amol; Ambatwar, Ramesh; Khatik, Gopal L;	Recent advancements in the treatment of Alzheimer's disease: a multitarget-directed ligand approach	Current Medicinal Chemistry	31	37	6032- 6062	2024
75	Chandrakar, Lokesh; Ambatwar, Ramesh; Khatik, Gopal L;	Exploration of simple and economic D-π-A-chalcone in selective Fe3+ metal sensing via PET quenching effect in water as a medium and mechanistic study using DFT calculations	Journal of Molecular Structure	1296		136817	2024
76	Agarwal, Dhairiya; Malik, Jatin; Bhanwala, Neeru; Ambatwar, Ramesh; Kumar, Sumit; Chandrakar, Lokesh; Datusalia, Ashok Kumar; Khatik, Gopal L;	Networkodynamic approach to perceive the key phytoconstituents of E. officinalis (Amla) as natural BACE1 inhibitors: an in-silico study	Journal of Biomolecula r Structure and Dynamics	42	22	12304- 12316	2024
77	Ambatwar, Ramesh;	Cobalt perchlorate hexahydrate catalyzed	Journal of Heterocyclic	61	1	163- 177	2024

	Kumar, Sumit; Agarwal, Dhairiya; Chandrakar, Lokesh; Khatik, Gopal L;	one-pot synthesis of dihydropyrimidin-ones/- thiones through sonochemistry and its mechanistic study using density functional theory calculations	Chemistry				
78	Dhabale, Sonali A; Kumar, Sumit; Bhanwala, Neeru; Khatik, Gopal L;	Advancements in Synthesis and Application of 1, 5- benzodiazepines a Privileged Scaffold with a Wide Scope of Bioactivities	Current Organic Chemistry	27	17	1471- 1483	2023
79	Chandrakar, Lokesh; Ambatwar, Ramesh; Khatik, Gopal L;	Cellular senescence and senolytic agents: Recent updates on their role and applications	Current Topics in Medicinal Chemistry	24	2	157- 178	2024
80	Bhanwala, Neeru; Gupta, Vaibhav; Chandrakar, Lokesh; Khatik, Gopal L;	Thiazole heterocycle: an incredible and potential scaffold in drug discovery and development of antitubercular agents	ChemistryS elect	8	46	e20230 2803	2023
81	Agarwal, Dhairiya; Kumar, Sumit; Ambatwar, Ramesh; Bhanwala, Neeru; Chandrakar, Lokesh; Khatik, Gopal L;	Lead Identification Through In Silico Studies: Targeting Acetylcholinesterase Enzyme Against Alzheimer's Disease	Central Nervous System Agents in Medicinal ChemistryC hemistry- Central Nervous System Agents)	24	2	219- 242	2024
82	Kumar, Hitesh; Datusalia, Ashok Kumar; Khatik, Gopal L;	Virtual screening of acetylcholinesterase inhibitors through pharmacophore-based 3D-QSAR modeling, ADMET, molecular docking, and MD simulation studies	In Silico Pharmacolo gy	12	1	13	2024
83	Ambatwar, Ramesh; Gupta, Vaibhav;	Biginelli reaction: a multi- component type of reaction and synthetic advancement in the	Mini- Reviews in Organic Chemistry	21	8	811- 832	2024

	Kumar, Sumit; Khatik, Gopal L;	synthesis of bioactive dihydropyrimidinone derivatives					
84	Kumar, Mohit; Sharma, Anita A; Datusalia, Ashok Kumar; Khatik, Gopal L;	PPARs (Peroxisome Proliferator-activated Receptors) and Their Agonists in Alzheimer's Disease	Medicinal Chemistry	20	8	781- 798	2024
85	Kumar, Hitesh; Datusalia, Ashok Kumar; Kumar, Anoop; Khatik, Gopal L;	Roemerine, a Phytoconstituent of Annona senegalensis, Targets MAO-A in Alzheimer's Disease: Network Pharmacology Integrated with Molecular Docking and Dynamics Studies	Journal of Computatio nal Biophysics and Chemistry	23	8	1025- 1037	2024
86	Kumar, Sumit; Bhanwala, Neeru; Malik, Jatin; Jagrati, Km; Khatik, Gopal L;	Copper-catalyzed time- dependent easy transformation of aryl/heteroaryl aldehyde into cyano and amide derivatives using ammonium acetate/iodine	Research on Chemical Intermediat es	50	9	4387- 4405	2024
87	Gupta, Vaibhav; Sundaramoort hy, Niranjana Sri; Bhanwala, Neeru; Ambatwar, Ramesh; Kumar, Sumit; Singh, Ramandeep; Khatik, Gopal L;	Design, Synthesis, Evaluation, and Molecular Docking Study of Novel Quinoline Hydrazone Analogues as Anti-Tubercular Agents	Journal of Computatio nal Biophysics and Chemistry	23	9	1197- 1208	2024
88	Radhakrishna, Vamshikrishna Y; Khatik, Gopal L; Nair, Vipin A;	1, 3-Dipolar Cycloaddition Reaction of Nitrile Oxide to Thiocyanates: An Efficient and Eco- Friendly Synthesis of N- Aryl-2-((3-aryl-1, 2, 4- oxadiazol-5-yl) thio) acetamides	Synthesis	56	20	3173- 3180	2024
89	Bhanwala, Neeru;	Design, synthesis, anti- tubercular activity, and	Medicinal Chemistry	33	10	1926- 1937	2024

	Sundaramoort hy, Niranjana Sri; Gollapudi, Sirisha; Sharma, Anita; Singh, Ramandeep; Khatik, Gopal L;	computational studies of novel 3-(quinolin-3-yl)-1- phenylprop-2-en-1-one derivatives	Research				
90	Khola, Sonia; Kumar, Sachin; Bhanwala, Neeru; Khatik, Gopal L;	Polyketide Synthase 13 (Pks13) Inhibition: A Potential Target for New Class of Anti-tubercular Agents	Current Topics in Medicinal Chemistry	24	27	2362- 2376	2024
91	Mahajan, Amol; Yadav, Shreyash Santosh; Malik, Jatin; Agarwal, Dhairiya; Ambatwar, Ramesh; Datusalia, Ashok Kumar; Khatik, Gopal L;	Design, Synthesis, Computational Study, and Antidiabetic Evaluation of Benzoxazole Derivatives	ChemistryS elect	ο	40	e20240 3921	2024
92	Kumar, Hitesh; Datusalia, Ashok Kumar; Kumar, Anoop; Khatik, Gopal L;	Identification of Phytoconstituents from Natural Product Database as SIRT2 Inhibitors for Potential Role in Alzheimer's Disease: An In-Silico Screening	Central Nervo System Agen Medicinal Chemistry				2024
93	Bhanwala, Neeru; Katiyar, Raunak; Kumar, Sumit; Datusalia, Ashok K; Khatik, Gopal L;	Network pharmacology and in silico investigation into the therapeutic potential of phytoconstituents of Peucedanum ostruthium as anti-tubercular agents	Health Sciences Review			100219	2025
94	Kumar, Hitesh; Datusalia, Ashok Kumar; Kumar, Anoop; Khatik, Gopal L;	Network pharmacology exploring the mechanistic role of indirubin phytoconstituent from Indigo naturalis targeting	Journal of Biomolecular Structure and Dynamics			Jan-14	2025

		GSK-3 β in Alzheimer's disease				
95	Radhakrishna, Vamshikrishna Y; Khatik, Gopal L; Kandaiah, Sakthivel; Nair, Vipin A;	An Eco-Friendly, Multicomponent Reaction for 2-(5-Amino- 4-cyano-1H-1, 2, 3- triazol-1-yl)-N-aryl Acetamides: A Fine Tunable Push-Pull Chromophore With Photoelectrochemical Properties	ChemistryS elect	10 10	e20240 5781	2025
96	Sau, Shashikanta; Sharma, Sarika; Khatik, Gopal L; Sharma, Sandeep; Kalia, Nitin Pal;	6-gingerol Enhances Ciprofloxacin Efficacy by Inhibiting NorA Efflux Pump in Staphylococcus aureus	The Microbe		100362	2025
97	Mahajan, Amol Tarachand; Khatik, Gopal L; Chaudhary, Sandeep;	Antibiofilm properties of biosurfactants: A tool against the food pathogens	Applications of Next Generation Biosurfactants in the Food Sector		91-110	2023
98	Sharma, Vashundhra; Mahajan, Amol T; Khatik, Gopal L; Chaudhary, Sandeep;	Natural product–inspired bioactive alkaloids via C– C/C–N coupling reactions: Synthetic developments, current scenario, and future perspectives	Studies in Natural Products Chemistry	85	Jan-39	2025
99	Haider, Abu Sahban; Ambatwar, Ramesh; Khatik, Gopal L;	Insights into PTP1B inhibitors as antidiabetic agents: Current research and future perspectives	European Journal of Medicinal Chemistry		117791	2025
10 0	Ambatwar, Ramesh; Singh, Pooja; Chandrakar, Lokesh; Ghosh, Suman; Datusalia, Ashok K; Khatik, Gopal L;	Synthesis and evaluation of novel dihydropyrimidine— oxadiazole hybrid scaffolds as anticholinesterase agents: SAR and in-silico studies	Bioorganic & Medicinal Chemistry Letters		130327	2025

### **Books/Book Chapters:**

- 1 Dr. Gurusamy Mariappan and Dr. Gopal Lal Khatik. Medicinal Chemistry-III . Publisher : eReadON (1 January 2020, ISBN-13 : 978-8194066828). <a href="https://e-readon.com/B-pharma-books/medicinal-chemistry-III">https://e-readon.com/B-pharma-books/medicinal-chemistry-III</a>
- 2 Jaskiran Kaur, Paras Famta, Navneet Khurana, Manish Vyas, Gopal L. Khatik, Pharmacotherapy of Type 2 Diabetes. Obesity and Diabetes pp 679-694. <a href="https://link.springer.com/chapter/10.1007/978-3-030-53370-0">https://link.springer.com/chapter/10.1007/978-3-030-53370-0</a> 50
- 3. Jaskiran Kaur, Paras Famta, Navneet Khurana, Manish Vyas, Gopal L. Khatik, Chapter 16 Biomedical applications of 4-hydroxycoumarin as a fungal metabolite and its derivatives. New and Future Developments in Microbial Biotechnology and Bioengineering, 2020, Pages 209-218. https://www.sciencedirect.com/science/article/pii/B9780128210062000169
- 4. Khatik GL, Srivastava A, Divita KM. Five-membered ring fused pyrimidine-based derivatives and their biological properties. InFused Pyrimidine-Based Drug Discovery 2023 Jan 1 (pp. 51-116). Elsevier. <a href="https://www.sciencedirect.com/science/article/pii/B9780443186165000077">https://www.sciencedirect.com/science/article/pii/B9780443186165000077</a>
- 5. Mahajan AT, Khatik GL, Chaudhary S. Antibiofilm properties of biosurfactants: A tool against the food pathogens. InApplications of Next Generation Biosurfactants in the Food Sector 2023 Jan 1 (pp. 91-110). Elsevier. https://www.elsevier.com/books/applications-of-next-generation-biosurfactants-in-the-food-sector/inamuddin/978-0-12-824283-4

### **Key Achivements:**

- 1. Qualified the GATE from IIT, Delhi, INDIA, 2003 and 2004.
- 2. Research Fellowship from NIPER SAS Nagar, INDIA, 2007-2008.
- 3. JRF/SRF in Engineering & Technology UGC, INDIA, 2008-2012. (Project: Development of second generation of antiandrogens)
- 4. Research findings were presented as a poster entitled "Dual Activation Role of Water in Metal-free C-S Bond Formation" at the National Conference on "National Symposium on New Challenges in Chemistry" organized by Deptt of Chemistry, Guru Nanak Dev University, Amritsar, India during 20<sup>th</sup>-21<sup>st</sup> March 2006 which was awarded as one of the best poster.
- Awarded as Young Scientist under the scheme of young scientist SERB, DST Govt. of India
- Design, Synthesis, and Evaluation of Novel Heterocyclic Scaffolds as Potential Antidiabetic Agents Targeted to PPARα/γ Dual Agonist, SERB-DST, Govt of India (2577600 INR).
- 7. Received "Vice Chancellor Research Excellence Award -2016" at Lovely Professional University.
- 8. Received "Research Appreciation Award -2017" at Lovely Professional University.
- 9. Research Appreciation Award, Lovely Professional University, 2018
- 10. Listed among the top 2% of scientists in the world by Stanford University 2024.
- 11. Received "Appreciation Letter" from the Director NIPER- Raebareli.

### **Conference & Seminars:**

- 1. Participated in the workshop on "Green Chemistry" September 3-4, 2007 held at NIPER S.A.S. Nagar
- 2. Participated in "Carbo-XXII" conference "December 13-15, 2007 held at NIPER S.A.S. Nagar
- 4. Participated in international conference on "Emerging Trends in Chemistry" February11- 12, 2011 held at Panjab University, Chandigarh.
- 5. Workshop on "Molecular Modelling and Pharmainformatics" Nov. 1-5, 2004 at NIPER.
- 6. WHO Sponsored workshop on "Impact of TRIPS on Pharmaceutical Prices" Feb. 14<sup>th</sup>, 2005 at NIPER.
- 7. Participation and Oral presentation of "Research towards the Development of Novel Anti-prostate Cancer Agents" at "Bhartiya Vigyan Sammelan and Expo 2012" held at Lovely Professional University Chaheru from 11-14 Oct, 2012.
- 8. Participation and LOC member in SPER 3<sup>rd</sup> annual conference "Recent Trends in Pharma Industry: Bridging the Gaps in Pharmaceutical Education" held at Lovely Professional University, Jalandhar (Punjab), 8<sup>th</sup> March 2014.
- 9. Participated in workshop sponsored by IPGA "National Seminar Cum Workshop on Pharmacovigilance" held at Lovely Professional University, Jalandhar (Punjab), 26th March 2016.
- 10. Participated and LOC member in National Conference LPUNASYACON-2016 "Amalgamation of Recent Pharmaceutical Developments in Ayurveda" held at Lovely Professional University, Jalandhar (Punjab), 22-23rd April 2016.
- 11. Participated and LOC member in International Conference ICP-2017 "Pharmacists: Catalysts for Change" held at Lovely Professional University, Jalandhar (Punjab), 78th April 2017.
- 12. ICP-2017; Pharmacists: catalysts for change, Lovely Professional University, 7-8 April.
- 13. Participated in Systematic strategies for Successful positioning of Pharmaceutical products held on 02-03 June 2017, organized by HRDC, Lovely Professional University.
- 15. Participated in three days international symposium on pharmaceutical, biotechnology and chemical patent law, held on 27-29<sup>th</sup> Sept 2017 at Stellar Gymkhana, Greater Noida, Organized by IIPRD.
- 16. Participated and LOC member in Integrated Conference on Ayurveda, Agriculture and Pharmacy Science 2018 held at Lovely Professional University, Jalandhar (Punjab), 13-14h Oct 2018.
- 17. Attendance one Day International Symposium in Delhi on Streamlining Drug Design organized by Zastra Innovations Pvt. Ltd., 30, Jan 2019.
- 18. Participated in 5 days workshop on research informed and research-oriented teaching in pharmaceutical sciences at Central University of Rajasthan, 20-24 Aug 2019.
- 19. LOC member and participated in ICP-2019; Pharmacy: Realigning the Focus on Health, Lovely Professional University, 13-14 Sept 2019.

- 20. Webinar (20th August, 2020) organized by the Department of Chemistry, Mizoram University, Aizawl (India) on the Topic entitled, 'MIADMSA, A new Arsenic antidote: Journey from lab to clinic.
- 21. Attended IIC Regional Meet 2022 at AKTU on 29th August, 2022.
- 22. Attended a Training Programme on Public Procurement Principles, a Short Term Program by Administrative Staff College of India (ASCI), Hyderabad on May 27, 2024 to May 31, 2024.

#### **Presentations:**

- Research findings were presented as a poster entitled "Synthesis, stereochemical investigations and in vitro evaluation of anti (±)5-methyl-(3-substituted phenyl)-5[(substituted phenyl)-hydroxyl methyl]-2-thixooxazolidin-4-ones on prostate cancer cell lines" The Ramanbhai Foundation 5<sup>th</sup> International Symposium "Advances in Translational Research & Medicines" Held on: Feb 1-4, 2011, Venue: Zydus Research Centre, Ahmedabad (India)
- Research findings were presented as a poster entitled "Dual Activation Role of Water in Metal-free C-S Bond Formation" at the National Conference on "National Symposium on New Challenges in Chemistry" organized by Deptt of Chemistry, Guru Nanak Dev University, Amritsar, India during 20<sup>th</sup>-21<sup>st</sup> March 2006 which was awarded as one of the best poster.
- Oral presentation on "A comparative study of stereo-chemical effect anti-prostate cancer agents by molecular docking study. RTBS-2018, Department of Medical Laboratory Sciences, Lovely Professional University Punjab. 16<sup>th</sup> March 2018.
- 4. Participated and presented oral presentation "In-silico evaluation and identification of potent antidiabetic agents in the management of diabetes using computer assisted drug designing software". International Conference (SPER-Bangkok-2019). Fostering Pharmaceutical Innovations to Bridge the Gap in Pharmaceutical Research and Industry. October 3 4, 2019, Narai Hotel, Bangkok, Thailand.

### **Invited lectures:**

- 1. One day seminar on "Zonal Awareness Program (North zone) Development and understanding about the Pharmacopoeial monograph for Herbal drugs and Phytopharmaceuticals" at Abhilashi College of Pharmacy, Mandi (HP) in technical support with Indian Pharmacopoeia Commission, Ghaziabad. 28 sept 2019.
- 2. Fragment-based drug design: A tool for design and discovery of lead compounds. Drug Discovery Hackathon, AICTE. 12 Aug 2020.
- 3. Guest lecture delivered online on 8th June, 2021 (B R Nahata College of Pharmacy, Mandsaur) on "Stereochemical aspects in drug action: Navigating an exploration of chiral auxiliary in stereoselective synthesis".
- 4. Guest lecture delivered online on 31st May, 2022 (Nirmala College of Health Science, Chalakudy, Thrissur) on "Stem Cell Biology: A Drug Discovery Tool in Alzheimer's Disease".

- 5. Author workshop on how to write manuscript and grant proposal, 12<sup>th</sup> Oct 2018. HRDC, Lovely Professional University Punjab.
- 6. Empowering research: An approach to avail funding grants to empower the research and development in academia" 20<sup>th</sup> Oct 2022. College of Pharmacy, Teerthankar Mahaveer University, Moradabad (UP).
- 7. Invited speaker at Centre for Interdisciplinary Biomedical Research (CIBR), Adesh University, Bhatinda. Artificial Intelligence in New Molecular Discoveries" Three Days Workshop-cum-Hand-on practice program 27-29 April 2023 (online).
- 8. Invited Lecture on NMR Spectroscopy in Characterisation at BBAU, Central University, Lucknow on 12<sup>th</sup> Sept 2023.
- 9. Invited Guest Speaker for Career Counselling Session for Pharmacy Students at Aryakul College of Pharmacy Lucknow. (16 March 2024).
- 10. invited as Speaker and Panellist for National Conference on Strengthening Industry-Academia Collaboration in Pharmaceutical Sciences. At Dr. Vishwanath Karad MIT World Peace Universit, School of Health Science and Technology, Kothrud, Pune, Maharashtra (25-26 April 2025)
- 11. Invited as resource person for two days Faculty Development Program at Invertis Institute of Pharmacy, Invertis University, Bareilly (15-16 July 2025)

# Organised conference/webinar:

- 1. Joint Organising Secretary in 12th NIPER-R International E-Symposium, held on 15-16 Feb, 2021.
- 2. Vocal for Local to boost innovative ideas to small scale entrepreneurship" by Dr. Rahul Taneja who is an IPR Scientist at the Patent Information Centre, Department of Science & Technology, Govt. of Haryana (23 Sept 2020).
- 3. "Discovery of Small Heterocyclic Molecules as a Kinase Inhibitor" by Dr. Brahmam Pujala Associate Director Integral BioSciences Pvt. Ltd (14 Jan 2021).
- 4. "Smart protein engineering for synthesis of drugs/drug intermediates" by Dr. Pankaj Soni, Senior Research Advisor, Pfizer, USA on 8th Feb 2021.
- 5. One Day International Webinar on "Chromatographic methods for Purification and Analysis of Pharmaceutical Products" 22 Aug 2021
- 6. Expert Guest Lecture by Prof. Asit. K Chakraborti "On Medicinal Chemistry Education" and "Sustainable Practices In Medicinal Chemistry Research: A few Concepts and Applications". Oct 18, 2021
- 7. Accelerating Innovation, Creativity and Translational Science from Phenomena in Nature, Resource person: Prof. Saranjit Singh. Apr 26, 2023.
- 8. One-day Workshop on Computer-aided Drug Design. Jul 10, 2023.
- 9. Webinar on Multicompartmental biodegradable polymeric particles for programmable active release by Prof. Sampa Saha, IIT, Delhi. Feb 28, 2024.
- 10. One-day hands on training on HPLC. Jul 4, 2023.
- 11. Intellectual Property Rights (IPR) Patents & Design Filing. Apr 3, 2023.
- 12. Workshop on "Intellectual Property Rights (IPR)". Feb 3, 2025.
- 13. One-Day International Webinar on "Chromatographic methods for Purification and Analysis of Pharmaceutical Products" with Spinco-Biotech. Jul 22, 2021.

14. "Smart protein engineering for synthesis of drugs/drug intermediates" by Dr. Pankaj Soni Senior Research Advisor, Pfizer, USA. Feb 8, 2021.

# **Research Project:**

- M.S. Pharm. Project "Design and Synthesis of 1,3-Diaryl heterocyclic compounds as antileishmanial agents." By: Gopal L. Khatik; Research Supervisor: Dr. Asit K. Chakraborti
- 2. Ph.D. Project. "Synthesis and Applications of 5-Membered Heterocycles: Thioxooxazolidinones, Thioxoimidazolidinones, 1,2,4-Oxadiazoles" By: Gopal L. Khatik; Research Supervisor: Dr. Vipin A. Nair
- 3. Young Scientist SERB, DST funded project "Design, synthesis, and evaluation of novel heterocyclic scaffolds as potential antidiabetic agents targeted to PPARα/γ dual agonist".

# **Current Funding Description:**

## **Completed Projects:**

1. Project Title: "Design, synthesis, and evaluation of novel heterocyclic scaffolds as potential antidiabetic agents targeted to PPARα/γ dual agonist"

Duration: 3 Years (From Oct 2015 to Oct 2018)

Total Budget: 25.77 Lakhs

Project Number: SB/FT/CS-204/2014 Funding Agency: SERB-DST, New Delhi

As PI

2. Project Title: Development of SOPs and Standardization of Different Preparation Techniques of Netra Putapaka Formulation for Ophthalmic Use

Duration: 2 years

Total budget: 13.6 lakh

Funding agency: CCRAS- New Delhi

As Co-I

### **Ongoing Projects**

Project Title: "Designing of senolytic agents for the treatment of Alzheimer's disease"

Duration: 3 Years (From March 2022 to Feb 2025)

Total Budget: 39.43 Lakhs

Project Number: EEO/2021/000114

Funding Agency: SERB-DST, New Delhi

As PI

4. Project title: Development of modified kynurenic acid-based scaffolds for treatment of post-traumatic stress disorder

Duration: 3 years
Total budget: 6 lakh

Funding Agency: UPCST

As Co-I

5. Project title: Exploration of oxadiazole scaffolds into potential pan peroxisome proliferator-activated receptors (PPARs) agonists as antidiabetic agents

Duration: 3 years

Total budget: 46 lakh

Funding Agency: SERB CRG

As PI

Dr. Gopal Lal Khatik (Ph.D.)