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Total citations: 3951; h-index:31; i-10 index: 64

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Qualifications : B. Pharm., M. Pharm., Ph.D.

Area of Interest/Specialization : **Area of Interest:** Design, Synthesis and biological evaluation of small heterocyclic molecules for anticancer and anticonvulsant activity. **Specialization:** Pharmaceutical Chemistry.

Experience : 19 years

Awards and Honors :

- **Prof KA Thaker Award** for Best Research Paper publication in Institution of Chemists (2011).
- **AICTE Career Award for Young Teachers (CAYT)** 2013-14 by All India Council for Technical Education (AICTE), New Delhi.

- **Best Poster Award for Paper presentation** during 1st International Conference on Novel Frontiers in Pharmaceutical & Health Sciences (INNOPHARM 1) held during Oct 10-11, 2015 at Bhopal (MP).
- **Best Scientist - IRDP Award 2018** by IRDP Group of Journals for the outstanding excellence and remarkable achievements in the field of Teaching, Research and Publications.
- **Young Scientist Award 2021** for outstanding contribution and sincere dedication towards the Pharmacy Profession by Indian Pharma Educational Society (IPES), Lucknow, India.

Research Projects :

- **AICTE** Project entitled "Design, Synthesis and anticancer evaluation of some novel histone deacetylase inhibitors" worth Rs.14.42 lakhs (Completed).
- **AICTE** Project entitled "Ethnopharmacological Studies of Traditional Medicinal Plants of Amarkantak and Pendra Regions of Chhattisgarh State" worth 9.75 lakhs (Completed).
- **UGC** Project entitled "Design synthesis and pharmacological evaluation of novel combretastatin A-4 analogues as anticancer agent" worth Rs.10.5 lakhs (Completed).
- **DST-SERB** Project entitled "Design and Synthesis of Novel Histone Deacetylase Inhibitors for Their Potential Antineoplastic Activity" worth Rs.25.5 lakhs (Completed).
- **ICMR** Extramural Project entitled "Anticancer Evaluation of Novel Hydroxamic acid as Histone Deacetylase Inhibitors" worth Rs.24.04 lakhs (Ongoing).

International Collaboration :

- **Prof. Ravichandran Veerasamy**, Faculty of Pharmacy, AIMST University, Semeling, 08100 Bedong, Kedah Darul Aman, Malaysia.
- **Dr. Amit K. Tiwari** (Associate Professor), Department of Pharmacology and Experimental Therapeutics, University of Toledo, 2801 Bancroft St, Toledo, OH 43606, United States.
- **Dr. Sai Hanuman Sagar Boddu**, (Associate Professor), College of Pharmacy and Health Sciences, Ajman University, P.O. Box 346, Ajman, UAE.

Publications

S. No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	Patel P, Wahan SK, Vishakha S, Kurmi BD, Gupta GD, Rajak H, Asati V.	Recent Progress in Histone deacetylase (HDAC) 1 Inhibitors as Anticancer Agent	Current Cancer Drug Target (Impact Factor: 2.9)	Accepted ; Ahead of Print	doi:10.2174/1568009622666220624090542	2022
2.	Shirbhate E, Patel VK, Tiwari P, Kore R, Veerasamy R, Mishra A, Rajak H.	Combination Therapy for the treatment of Alzheimers disease: Recent progress and future prospects.	Current Topics in Medicinal Chemistry (Impact Factor: 3.6)	Accepted ; Ahead of Print	doi: 10.2174/1568026622666220907114443	2022
3.	Patel VK, Shirbhate E, Tiwari P, Kore R, Veerasamy R, Mishra A, Rajak H.	Multi-targeted HDAC inhibitor as anticancer agents: Current status and future prospective.	Current Medicinal Chemistry (Impact Factor: 4.2)	Accepted ; Ahead of Print	doi: 10.2174/0929867329666220922105615	2022
4.	Shirbhate E, Pandey J, Patel VK, Veerasamy R, Rajak H.	Exploration of structure activity relationship using integrated structure and ligand based approach: Hydroxamic acid based HDAC inhibitors and cytotoxic agents.	Turkish Journal of Pharmaceutical Sciences (Impact Factor: 0.95)	Accepted ; Ahead of Print	doi: 10.4274/tjps.galenos.2022.12269	2022
5.	Hui LY, Mun CS, Sing LC, Rajak H, Karunakaran R, Ravichandran V.	Multi-Targeted molecular docking and drug-likeness evaluation of some nitrogen heterocyclic compounds targeting protein involved in development of COVID-19.	Medicinal Chemistry (Impact Factor: 2.4)	Accepted ; Ahead of Print	doi 10.2174/1573406418666220616110351	2022
6.	Sing LC, Roy A, Hui LY, Mun CS, Rajak H, Karunakaran R, Ravichandran V.	Multi-targeted molecular docking, drug-likeness and ADMET studies of derivatives of few quinoline- and acridine-based FDA-approved drugs for anti-breast cancer activity.	Structural Chemistry (Impact Factor: 1.8)	33	649-669	2022
7.	Shirbhate E, Veerasamy R, Sai H.S. Boddu, Tiwari AK, Rajak H.	Histone deacetylase inhibitor-based oncolytic virotherapy: A promising strategy for cancer treatment.	Drug Discovery Today (Impact factor: 8.3)	27(6)	1689-87	2022
8.	Mishra A, Jha V, Rajak H.	Molecular structural investigations of quinoxaline derivatives through 3D-QSAR, molecular docking,	Indian Journal of Chemical Society (Impact factor: 0.5)	99(2)	100343	2022

		ADME prediction and pharmacophore modeling studies for the search of novel antimalarial agent.				
9.	Veerasamy R, Rajak H.	QSAR studies on neuraminidase inhibitors as anti-influenza agents.	Turkish Journal of Pharmaceutical Sciences (Impact factor: 0.44)	18(2)	151-156	2021
10.	Singh A, Patel VK, Rajak H.	Appraisal of pyrrole as connecting unit in hydroxamic acid based histone deacetylase inhibitors: Synthesis, anticancer evaluation and molecular docking studies.	Journal of Molecular Structure (ISSN 0022-2860) (Impact Factor: 2.1)	1240	130590	2021
11.	Shirbhate E, Patel P, Patel VK, Veerasamy R, Sharma PC, Sinha BN, Rajak H.	Synthetic and Semi-synthetic Drugs as a Promising Therapeutic Option for the Treatment of COVID-19.	Mini-Reviews in Medicinal Chemistry (Impact factor: 3.9)	21	1004-1016	2021
12.	Veerasamy R, Roy A, Karunakaran R, Rajak H.	Structure-Activity Relationship Analysis of Benzimidazoles as Emerging Anti-Inflammatory Agents: An Overview.	Pharmaceuticals (Basel). (Impact Factor: 5.9)	14(7)	663	2021
13.	Shirbhate E, Pandey J, Patel VK, Kamal M, Jawaid T, Gorain B, Kesharwani P, Rajak H.	Understanding the role of ACE-2 receptor in pathogenesis of COVID-19 disease: a potential approach for therapeutic intervention.	Pharmacological Reports (Impact factor: 3.9)	73(6)	1539-1550	2021
14.	Patel VK, Shirbhate E, Patel P, Veerasamy R, Sharma PC, Rajak H.	Corticosteroids for treatment of COVID-19: effect, evidence, expectation and extent.	Beni-Suef University Journal of Basic and Applied Sciences	10	78	2021
15.	Patel V and Rajak H.	Structural Investigations of Aroylindole Derivatives through 3D-QSAR and Multiple Pharmacophore Modeling for the Search of Novel Colchicines Inhibitor.	Letters in Drug Design and Discovery (Impact Factor: 1.1)	18	131-142	2021
16.	Shirbhate E, Divya, Patel P, Patel VK, Veerasamy R, Rajak H.	Exploration of anticancer potential of hydroxamate derivatives as selective HDAC8 inhibitors using integrated structure and ligand based molecular	Indian Journal of Chemistry (Impact Factor: 0.5)	60B	136-147	2021

		modeling approach.				
17.	Sharma PC, Sharma D, Sharma A, Bansal KK, Rajak H , Sharma S, Thakur VK.	New horizons in benzothiazole scaffold for cancer therapy: Advances in bioactivity, functionality and chemistry.	Applied Materials Today (Impact Factor: 8.7)	20	100783	2020
18.	Veerasamy R, Karunakaran R, Rajak H .	Biological, Phytochemical and Pharmacological Aspects of <i>Murdannia Bracteata</i> – A Review.	International Journal of Pharma Research	11	16-20	2020
19.	Shirbhate E, Patel P, Patel VK, Veerasamy R, Sharma PC, Rajak H .	The combination of histone deacetylase inhibitors and radiotherapy: a promising novel approach for cancer treatment.	Future Oncology (Impact factor: 2.6)	16 (30)	1-13	2020
20.	Sharma PC, Goyal R, Sharma A, Sharma D, Saini N, Rajak H , Sharma S, Thakur VK.	Insights on fluoroquinolones in cancer therapy: chemistry and recent developments.	Materials Today Chemistry (Cite score: 3.72)	17	100296	2020
21.	Divya, Shirbhate E, Patel VK, Patel P, Veerasamy R, Jawaid T, Kamal M, Rajak H .	Lead identification of hydroxamate derivative as selective HDAC2 inhibitor using computational approaches.	Indian Drugs (Impact factor: 0.8)	57	24-37	2020
22.	Veerasamy R, Karunakaran R, Rajak H .	QSAR studies on polymerase acid endonuclease inhibitor as anti-influenza agents.	International Journal of Pharma Research	11	43-53	2020
23.	Shirbhate E, Divya, Patel P, Patel VK, Veerasamy R, Sharma PC, Rajak H .	Searching for potential HDAC2 inhibitors: Structure activity relationship studies on Indole-based hydroxamic acids as anticancer agent.	Letters in Drug Design and Discovery (Impact Factor: 1.1)	17	905-917	2020
24.	Ravichandran V, Rohini K, Rajak H , Parasuraman S, Suresh KK.	Insights into the key structural features of triazolothienopyrimidines as anti-HIV agents using QSAR, molecular docking, and pharmacophore modeling.	Structural Chemistry (Impact Factor: 2.0)	30	1471-1484	2019
25.	Veerasamy R, Krishnan SK, Sivadasan S, Rajak H .	Design, synthesis and evaluation of thiourea derivatives as antimicrobial and antiviral agents.	Letters in Drug Design and Discovery (Impact Factor: 1.1)	16	618-624	2019

26.	Dewangan D, Nakhate K, Mishra A, Thakur AS, Rajak H , Dwivedi J, Sharma S, Paliwal S.	Design, synthesis and characterization of quinoxaline derivatives as a potent antimicrobial agent.	Journal of Heterocyclic Chemistry (Impact Factor: 1.1)	56	566-578	2019
27.	Patel P, Patel VK, Singh A, Jawaid T, Kamal M, Rajak H .	Identification of hydroxamic acid based selective HDAC1 inhibitors: Computer aided drug design studies.	Current Computer-aided Drug Design (impact factor: 0.7)	15	145-166	2019
28.	Veerasamy R, Rajak H. 2019, 30, 5-13.	QSAR studies of imidazoles and sulphonamides as antidiabetic agents.	Obidius University Annals of Chemistry	30	5-13	2019
29.	Singh A, Patel P, Jageshwar, Patel VK, Jain DK, Kamal M, Rajak H .	The safety, efficacy and therapeutic potential of histone deacetylase inhibitors with special reference to panobinostat in gastrointestinal tumors: A review of preclinical and clinical studies.	Current Cancer Drug Targets (Impact Factor: 3.4)	18	720-736	2018
30.	Patel VK, Rajak H .	Development of structure activity correlation model on aroylindole derivative as anticancer agents.	Letters in Drug Design and Discovery (Impact Factor: 1.1)	15	143-153	2018
31.	Singh A, Rajak H .	Structural exploration and pharmacophoric investigation of pyrrole based analogs as novel histone deacetylase 1 inhibitor using combinatorial studies.	International Journal of Pharmacy and Pharmaceutical Sciences	10	90-96	2018
32.	Sharma PC, Piplani M, Rajak H .	Synthesis, characterization and antimicrobial evaluation of lipid based norfloxacin prodrug.	Current Drug Delivery ISSN: 1567-2018. (Impact factor: 3.5)	15	219-226	2018
33.	Patel VK, Rajak H .	Synthesis N-substituted 2-amino-3,4,5-trimethoxyaroylindole derivatives for the search of novel anticancer agents.	Letters in Organic Chemistry (Impact Factor: 1.1)	15	931-939	2018
34.	Bansal KK, Sharma D, Sharma A, Rajak H , Sharma PC.	Novel thiazole clubbed triazole derivatives as antimicrobial, antimalarial, and cytotoxic agents.	Indian Journal of Heterocyclic Chemistry (Impact Factor: 0.5)	28	305-312	2018

35.	Gopiraja G, Go PP, Lim YY, Rajindran D, Sivadasan S, Rajak H , Krishnan S, Veerasamy R.	QSAR and pharmacophore mapping studies on benzothiazinimines to relate their structural features with anti-HIV activity.	Medicinal Chemistry (Impact factor: 2.63)	14	733-740	2018
36.	Samuggam S, Sethu V, Sivadasan S, Suresh VC, Subash CBG, Periasamy A, Mohammed BB, Rajak H , Sathasivam K, Veerasamy R.	Phyto-Mediated Photo Catalysed Green Synthesis of Silver Nanoparticles Using <i>Durio Zibethinus</i> Seed Extract: Antimicrobial and Cytotoxic Activity and Photocatalytic Applications.	Molecules (ISSN: 1420-3049) (Impact factor: 3.0)	23	1-15	2018
37.	Patel P, Rajak H .	Synthesis N-substituted 2-amino-3,4,5-trimethoxyaroylindole derivatives for the search of novel anticancer agents.	Letters in Organic Chemistry (Impact Factor: 0.5)	11	931-939	2018
38.	Patel P, Rajak H .	Development of Hydroxamic Acid Derivatives as Anticancer Agent with the Application of 3D-QSAR, Docking and Molecular Dynamics Simulations Studies.	Medicinal Chemistry Research (Impact Factor: 1.9)	27	2100-2115	2018
39.	Jain DK, Singh A, Patel VK, Veerasamy R, Agrawal N, Rajak H .	Design strategies for the discovery of novel anticonvulsants concerned with four site binding pharmacophoric model studies.	Central Nervous System Agents in Medicinal Chemistry (Cite Score: 3.3)	17	30-50	2017
40.	Singh A, Patel P, Patel VK, Jain DK, Veerasamy R, Sharma PC, Rajak H .	Histone Deacetylase Inhibitors for the Treatment of Colorectal Cancer: Recent Progress and Future Prospects.	Current Cancer Drug Target (Impact Factor: 3.4)	17	456-466	2017
41.	Jain R, Jain N, Jain DK, Patel VK, Rajak H , Jain SK.	Novel uv spectrophotometer methods for quantitative estimation of metronidazole and furazolidone using mixed hydrotrophy solubalization.	Arabian Journal of Chemistry (Impact Factor: 3.5)	10	151-156	2017
42.	Sharma PC, Piplani M, Rajak H . 2017, 8,	Synthesis and characterization of N-	Journal of Advanced Research	8	463-470	2017

	463-470.	Mannich based prodrugs of ciprofloxacin and norfloxacin: <i>In vitro</i> anthelmintic and cytotoxic evaluation.	(Impact Factor: 4.3)			
43.	Rajak H , Jain DK, Singh S, Singh A, Patel VK, Veerasamy R, Pawar RS. 2017, 17(1), 64-71.	Novel pyrimidine based semicarbazones: Confirmation of four binding site pharmacophoric model hypothesis for antiepileptic activity.	Central Nervous System Agents in Medicinal Chemistry	17	64-71	2017
44.	Singh A, Raghuvanshi K, Patel VK, Jain DK, Veerasamy R, Dixit A, Rajak H .	Assessment of 5-substituted isatin as surface recognition group: Design, synthesis, and antiproliferative evaluation of hydroxamates as novel histone deacetylase inhibitors.	Pharmaceutical Chemistry Journal (Impact Factor: 0.5)	51	366-374	2017
45.	Patel VK, Singh A, Jain DK, Patel P, Veerasamy R, Sharma PC, Rajak H . 2017, 3, 71-78.	Combretastatin A-4 based thiophene derivatives as antitumor agent: Development of structure activity correlation model using 3D-QSAR, pharmacophore and docking studies.	Future Journal of Pharmaceutical Sciences	3	71-78	2017
46.	Singh A, Patel VK, Jain DK, Patel P, Rajak H .	Panobinostat as Pan-deacetylase inhibitor for the treatment of pancreatic cancer: Recent progress and future prospects.	Oncology and Therapy	4	73-89	2016
47.	Sharma P, Toppo FA, Sudheesh MS, Rajak H , Pawar RS. 2016, 1(3), 217-223.	Curcuma amada roxb. (Rhizomes) Promotes Wound Healing Process.	Current Traditional Medicine	1	217-223	2016
48.	Patel VK, Rajak H . 2016, 26, 2115-2118.	Synthesis, biological evaluation and molecular docking studies of 2-amino-3,4,5-trimethoxyaroylindole derivatives as novel anticancer agents.	Bioorganic and Medicinal Chemistry Letters (Impact factor: 2.8)	26	2115-2118	2016
49.	Veerasamy R, Venkateskumar K, Shalini S, Rajak H .	Exploring the structure–activity relationship of oxazolidinones as HIV-1 protease inhibitors–QSAR and pharmacophore	Chemometrics and Intelligent Laboratory Systems (Impact Factor: 2.7)	154	52-61	2016

		modelling studies.				
50.	Veerasamy R, Vasanti S, Shalini S, Sah AA, Rajak H.	Green synthesis of silver nanoparticles using <i>Atrocarpus altilis</i> leaf extract and the study of their antimicrobial and antioxidant activity.	Materials Letters (Impact Factor: 2.4)	180	264-267	2016
51.	Veerasamy R, Shivadasan S, Krishnamoorthi V, Rajak H, Krishnan S.	QSAR Study on quinolinecarbaldehyde derivatives as potential anti-tubercular agent.	Thai Journal of Pharmaceutical Sciences	40	72-81	2016
52.	Patel P, Singh A, Patel VK, Jain DK, Veerasamy R, Rajak H.	Pharmacophore based 3D-QSAR, Virtual Screening and Docking Studies on Novel Series of HDAC Inhibitors with Thiophen Linker as Anticancer Agents.	Combinatorial Chemistry & High Throughput Screening (Impact Factor: 1.3)	19	735-751	2016
53.	Patel VK, Rajak H.	Significance of amino group substitution at Combretastatin A-4 and phenstatin analogs.	Letter in Drug Design and Discovery. (Impact Factor: 1.1)	13	943-951	2016
54.	Rajak H, Jain DK, Singh A, Sharma AK, Dixit A.	Ebola virus disease: Past, present and future.	Asian Pacific Journal of Tropical Biomedicine (Impact Factor: 1.5)	5	337-343	2015
55.	Veerasamy R, Chigurupati S, Sivadasan S, Arumugam DS, Rajak H, Krishnan SA.	Exploring the relationship between the physico-chemical parameters and anti-tubercular activity of quinoline-3-carboxylic acids: A QSAR approach"	Medicinal Chemistry Research (Impact Factor: 1.9)	24	744-752	2015
56.	Patel VK, Chouhan KS, Veerasamy R, Singour PK, Pawar RS, Rajak H.	Development of Structure Activity Correlation Model on Azetidin-2-ones as Tubulin Polymerization Inhibitors.	Letters in Drug Design and Discovery (Impact Factor: 1.1)	12	351-365	2015
57.	Rajak H, Singh A, Raghuwanshi K, Dewangan PK, Veerasamy R, Sharma PC, Dixit A and Mishra P.	A Structural insight into Hydroxamic Acid Based Histone Deacetylase Inhibitors for the Presence of Anticancer Activity.	Current Medicinal Chemistry (Impact Factor: 4.9)	21	2642-2664	2014
58.	Jain DK, Singh Avineesh, Patel VK, Sharma PC, Gupta AK, Sharma AK, Rajak H.	Hydroxamic acid based histone deacetylase inhibitors: Present and future prospective as anticancer agent.	International Journal of Pharmacy and Pharmaceutical Sciences	6	648-650	2014

			(Impact factor 1.59)			
59.	Rajak H , Dewangan PK, Patel V, Jain DK, Singh A, Veerasamy R, Sharma PC, Dixit A.	Design of Combretastatin A-4 Analogs as Tubulin Targeted Vascular Disrupting Agent with Special Emphasis on Their Cis-Restricted Isomers.	Current Pharmaceutical Design (Impact Factor: 3.9)	19	1923-1955	2013
60.	H. Rajak, A. Singh, P.K. Dewangan, V. Patel, D.K. Jain, S.K. Tiwari, R. Veerasamy and P.C. Sharma.	Peptide Based Macrocycles: Selective Histone Deacetylase Inhibitors with Antiproliferative Activity.	Current Medicinal Chemistry (Impact Factor: 4.9)	20	1887-1903	2013
61.	Sharma PC, Sinhmar A, Sharma A, Rajak H , Pathak DP.	Medicinal significance of benzothiazole scaffold: an insight view.	Journal of Enzyme Inhibition and Medicinal Chemistry (Impact Factor: 1.5)	28	240-266	2013
62.	Sharma PC, Chaudhary M, Sharma A, Piplani M, Rajak H , Prakash O.	Insight view on possible role of fluoroquinolones in cancer therapy.	Current Topics in Medicinal Chemistry (Impact Factor: 3.7)	13	2076-2096	2013
63.	Singh A, Patel VK, Jain DK, Sharma PC, Gupta AK, Sharma AK, Rajak H .	Histone Deacetylase Inhibitors: Current Status in Treatment of Leukemia.	Current Research in Pharmaceutical Sciences	03	102-107	2013
64.	Rajak H , Thakur BS, Singh A, Raghuvanshi K, Sah AK, Veerasamy R, Sharma PC, Pawar RS, Kharya MD.	Novel limonene and citral based 2,5-disubstituted-1,3,4-oxadiazoles: A natural product coupled approach to semicarbazones for antiepileptic activity.	Bioorganic and Medicinal Chemistry Letters (Impact factor: 2.8)	23	864-868	2013
65.	Veerasamy R, Chean OC, Subramaniam DK, Ying NM, Sivadasan S, Rajak H , Rasheed A.	Designing hypothesis of diaryl pyrimidine analogs as anti-HIV agent: QSAR approach.	Medicinal Chemistry Research (Impact Factor: 1.9)	22	35-44	2013
66.	Pawar RS, Chaurasiya PK, Rajak H , Singour PK, Toppo FA, Jain A.	Wound healing activity of Sida cordifolia Linn. in rats.	Indian Journal of Pharmacology	45	474-478	2013
67.	Sharma AK, Sharma JN, Garg A, Rajak H , Joshi RK, Dixit	Anti-atherosclerotic Potential of <i>Achyranthes aspera</i>	Journal of Biologically Active Products from	3	216-223	2013

	VK.	Husk and its Crude Saponins in Experimental Rats.	Nature.			
68.	Veerasamy R, Rajak H , Sadashivan S, Dhanaraj SA, Kumar SK.	Designing hypothesis of substituted N-arylsulfonyl-3-acetylindoles as anti-HIV agents: 3D QSAR study.	International Journal of Drug Design and Discovery	4	1117-1123	2013
69.	Sharma PC, Kumar R, Chaudhary M, Sharma A, Rajak H .	Synthesis and biological evaluation of novel benzothiazole clubbed fluoroquinolone derivatives.	Journal of Enzyme Inhibition and Medicinal Chemistry (Impact Factor: 1.5)	28	1-10	2013
70.	Rajak H, Thakur BS, Kumar P, Parmar P, Sharma PC, Veerasamy R, Kharya MD.	Synthesis and antiepileptic activity of some novel semicarbazones containing 1,3,4-thiadiazole and quinazoline ring	Acta Poloniae Pharmaceutica-Drug Research (Impact Factor: 0.4)	69	253-261	2012
71.	Khare A, Trivedi S, Rajak H , Pawar RS, Patil UK, Singour PK.	Hansch analysis of novel pyrimidine derivatives as highly potent and specific COX-2 inhibitors.	Medicinal Chemistry Research (Impact Factor: 1.9)	21	672-680	2012
72.	Rajak H, Kumar P, Parmar P, Thakur BS, Veerasamy R, Sharma PC, Sharma AK, Gupta AK, Dangi JS.	Appraisal of GABA and PABA as linker: Design and synthesis of novel benzamide based histone deacetylase inhibitors.	European Journal of Medicinal Chemistry (Impact Factor: 3.3)	53	390-397	2012
73.	Rajak H , Patel V, Jain DK, Dewangan PK, Veerasamy R, Sharma PC, Gupta AK, Dangi JS.	Structure-Activity Relationships Among Novel 1,3,4-oxadiazole Analogues for Their Anti-inflammatory Activity.	Current Research in Pharmaceutical Sciences	03	142-148	2012
74.	Sharma PC, Kaur G, Pahwa R, Sharma A, Rajak H .	Quinazolinone analogs as potential therapeutic agents.	Current Medicinal Chemistry (Impact Factor: 4.9)	18	4786-4812	2011
75.	Veerasamy R, Rajak H , Kumar KS & Agrawal RK.	Synthesis and evaluation of antimicrobial activity of thiazolidinone derivatives.	Letters in Drug Design and Discovery (Impact Factor: 1.1)	8	82-86	2011
76.	Rajak H , Singour PK, Kharya MD & Mishra Pradeep.	A novel series of 2,5-disubstituted 1,3,4-oxadiazoles: synthesis and sar studies for their anticonvulsant activity.	Chemical Biology & Drug Design (Impact Factor: 2.5)	77	152-158	2011
77.	Rajak H , Lanjhiyana SK, Kumar P, Thakur BS, Gupta AK & Kharya MD.	Synthesis and antimicrobial activity of some benzotriazole-substituted-1,3,4-	Indian Journal of Heterocyclic Chemistry	20	229-232	2011

		thiadiazoles.	(Impact Factor: 0.5)			
78.	Rajak H , Agrawal A, Parmar P, Thakur BS, Veerasamy R, Sharma PC & Kharya MD.	2,5-Disubstituted-1,3,4-oxadiazoles/thiadiazole as surface recognition moiety: design and synthesis of novel hydroxamic acid based histone deacetylase inhibitors.	Bioorganic and Medicinal Chemistry Letters (Impact factor: 2.8)	21	5735-5738	2011
79.	Veerasamy R, Jain A, Kumar KS, Rajak H , & Agrawal RK.	Design, synthesis and evaluation of thiazolidinone derivatives as antimicrobial and anti-viral agents.	Chemical Biology & Drug Design (Impact Factor: 2.5)	78	464-470	2011
80.	Veerasamy R, Hui LS, Ying KH, Reneeraj JS, Rajak H & Kumar S.	Prediction of anti-HCV activity of thiourea derivatives: QSAR approach.	Medicinal Chemistry Research (Impact Factor: 1.9)	20	1164-1169	2011
81.	Gupta A, Kashaw SK, Jain N, Rajak H , Soni A & Stable JP.	Design and synthesis of some novel 3-[5-(4-substituted) phenyl-1,3,4-oxadiazole-2-yl]-2-phenylquinazoline-4(3H)-ones as possible anticonvulsant agent.	Medicinal Chemistry Research (Impact Factor: 1.9)	20	1638-1642	2011
82.	Thakur DS, Rajak H , Kumar P & Vaishnav Y.	Synthesis of some novel 4-(4-chlorophenyl)-6-p-tolyl-4-pyrimidine derivatives and their anticonvulsant activity.	Acta Poloniae Pharmaceutica-Drug Research (Impact Factor: 0.4)	68	993-997	2011
83.	Veerasamy R, Shalini S, Sundram KM, Rajak H .	Validation of analytical methods – strategies & importance.	International Journal of Pharmacy and Pharmaceutical Sciences	2	18-22	2010
84.	Rajak H , Agrawal N, Kashaw SK, Kharya MD & Mishra P.	Synthesis of 2,5-disubstituted-1,3,4-thiadiazoles: structural requirements necessary for anticonvulsant activity.	Journal of Korean Chemical Society	54	158-164	2010
85.	Rajak H , Behera CK, Pawar RS, Singour PK & Kharya MD.	Synthesis and anticonvulsant evaluation of some novel 2,5-disubstituted 1,3,4-thiadiazoles: pharmacophore model studies.	Acta Poloniae Pharmaceutica-Drug Research (Impact Factor: 0.4)	67	503-510	2010

86.	Rajak H , Veerasamy R, Kharya MD & Mishra P.	Design, synthesis and pharmacological evaluation of some novel oxadiazole and oxadiazoline analogues as anti-inflammatory agents.	Journal of Enzyme Inhibition and Medicinal Chemistry (Impact Factor: 1.5)	25	492-501	2010
87.	Rajak H , Behera CK, Pawar RS, Singour PK & Kharya MD.	A novel series of 2,5-disubstituted 1,3,4-thiadiazoles as potential anticonvulsant agent.	Chinese Chemical Letters. (Impact Factor 0.5)	21	1149-1152	2010
88.	Jain P, Sharma PK, Rajak H , Pawar RS, Patil UK & Singour PK.	Design, synthesis and biological evaluation of some novel benzimidazole derivatives for their potential anticonvulsant activity.	Archives of Pharmacal Research (Impact factor: 1.1)	33	971-980	2010
89.	Sharma PK, Jain P, Pawar RS, Patil UK, Singour PK & Rajak H.	Design, synthesis and biological evaluation of some dual acting novel thiazolidindione derivatives.	International Journal of Drug Design and Discovery	1	124-135	2010
90.	Rajak H , Deshmukh R, Veerasamy R, Sharma AK, Mishra P & Kharya MD.	Novel semicarbazones based 2,5-disubstituted-1,3,4-oxadiazoles: one more step towards establishing four binding site pharmacophoric model hypothesis for anticonvulsant activity.	Bioorganic and Medicinal Chemistry Letters (Impact factor: 2.8)	20	4168-4172	2010
91.	Verma L, Singour PK, Chaurasiya PK, Rajak H , Pawar RS & Patil UK.	Effect of ethanolic extract of <i>Cassia occidentalis</i> Linn. for the management of alloxan-induced diabetic rats.	Pharmacogony Research	2	132-137	2010
92.	Rajak H , Deshmukh R, Aggarwal N, Kashaw SK, Kharya MD & Mishra P.	Synthesis of novel 2,5-disubstituted 1,3,4-thiadiazoles for their potential anticonvulsant activity: pharmacophoric model studies.	Archiv Der Pharmazie-Chemistry in Life Sciences (Impact Factor: 1.5)	342	453-461	2009
93.	Rajak H , Veerasamy R, Singour P, Kharya MD & Mishra P.	Anticonvulsant activity of a novel series of 2,5-disubstituted 1,3,4-oxadiazoles: semicarbazones based pharmacophoric model studies.	Letter in Drug Design and Discovery (Impact Factor: 0.9)	6	456-463	2009

94.	Shalini S, Shanooja VP, Jameel SA, Basima, Harilal KK, Rajak H & Ravichandran V.	Application of uv-spectrophotometric methods for estimation of lamivudine in tablets.	Digest Journal of Nanomaterials and Biostructures (Impact Factor 1.8)	4	357-360	2009
95.	Rajak H , Veerasamy R, Gupta AK, Kharya MD & Mishra P.	Synthesis, characterization and biological evaluation of some novel 2,5-disubstituted 1,3,4-thiadiazoles for their potential antimicrobial activity.	Digest Journal of Nanomaterials and Biostructures (Impact Factor 1.75)	4	443-451	2009
96.	Veerasamy R, Ravichandran S, Jain A, Rajak H & Agrawal RK.	QSAR studies on novel anti-hiv agents using fa-mlr, fa-pls and pcra techniques.	Digest Journal of Nanomaterials and Biostructures (Impact Factor 1.75)	4	823-834	2009
97.	Rajak H , Gupta AK, Kharya MD & Mishra P.	Synthesis and antimicrobial activity of new 2,5-disubstituted 1,3,4-oxadiazoles.	Indian Journal of Heterocyclic Chemistry (Impact Factor 0.5)	19	25-28	2009
98.	Rajak H , Gupta AK, Kharya MD & Mishra P.	Synthesis and antimicrobial evaluation of some 1,3,4-oxadiazole incorporated indoles.	Indian Journal of Heterocyclic Chemistry (Impact Factor 0.5)	19	29-32	2009
99.	Rajak H , Kharya MD & Mishra P.	Synthesis and local anesthetic activity of some novel N-[5-(4-substituted) phenyl-1,3,4-oxadiazol-2-yl]-2-(substituted)-acetamides.	Archiv der pharmazie-Chemistry in Life Sciences (Impact Factor 1.5)	341	247-261	2008
100.	Rajak H , Kharya MD & Mishra P.	Synthesis of some novel oxadiazole and oxadiazoline analogues for their anti-inflammatory activity.	Yakugaku Zasshi (The Pharmaceutical Society of Japan) (Impact Factor 0.7)	127	1757-1764	2007
101.	Mishra P, Rajak H & Mehta A.	Synthesis of Schiff bases of 2- amino-5-aryl-1, 3,4-oxadiazoles and their screening for antimicrobial activity.	Journal of General & Applied Microbiology (Published by Microbiology Research Foundation, Japan) (Impact Factor: 0.92).	51	133-141	2005

Recent Books/Book Chapters/Monographs etc.

Book(s)

- [1] **Rajak H. Practical Medicinal Chemistry** (for B Pharm Sem-IV and VI), CBS Publishers and Distributors Ltd., New Delhi.
- [2] **Rajak H. and Patel VK. Practical Biochemistry** (for B Pharm Sem-II), Pharma Career Publication, Nashik (MS)

Book Chapter(s)

- [1] Patel VK and **Rajak H.** Advances in chemoradiotherapy for treatment of colon cancer. In Shukla D, Vishvakarma NK, Ganji P. (Ed.) Colon Cancer Diagnosis and Therapy (Volume-3) 2021. pg 217-239, **Springer Nature**.
- [2] Patel VK, Shirbhate E, **Rajak H.** Lessons from COVID-19 In Kaklauskas A, Abraham, Kingsley Okoye A, Shankru G (Ed.) Coronavirus reinfections: An outlook on evidences and effects. 2022, pg 01-26, **Elsevier Publisher**.
- [3] Singh V, Afsana Sheikh, **Rajak H**, Talegaonkar S, Hamid H, Alam MS, Kesharwani P. Combination drug delivery approaches in rheumatoid arthritis In Combination Drug Delivery Approach as an Effective Therapy for Various Diseases, Kesharwani P. (Ed.) 2022, pg 81-106, **Elsevier Publisher**.

Research Supervision : **Ph. D :** 03 (Awarded); 01 (Ongoing)

M. Pharm.: 17 (Awarded); 02 (Ongoing)

Administrative Responsibilities :

- [1] Coordinator of Committee for Pharmacy Council of India (PCI), approval and related work of Department of Pharmacy, GGV, Bilaspur
- [2] Member of Library Committee, Department of Pharmacy, GGV, Bilaspur
- [3] Member of Committee for Admission to M. Pharm. Courses of Department of Pharmacy, GGV, Bilaspur

- [4] Coordinator of Committee constituted for the publication of e-Newsletter (three times a year) of Department of Pharmacy, GGV, Bilaspur
- [5] Member of committee for preparation of proposal for recognition of Department of Pharmacy, GGV as AICTE-QIP Centre.
- [6] Served as Teacher Coordinator in Alumni Meet "Samagam 2019" organized by Department of Pharmacy, GGV.
- [7] Member of Committee for Internship and Industrial training of B. Pharm. students.
- [8] Served in various capacities for organization of National Seminar/International Seminar in Department and University.
- [9] Member of several committees at University level: Examination Committee, Seating management in Convocation, Student Election, Roaster Committee, University Entrance Test.

Additional Information :

Resource Person More than 10 in various national and international conferences

Paper Presentations More than 55 in various national and international conferences

Training Programme Participated in more than 25 workshops/STTP/Orientation/Refresher course/FDP.

Patents

S. No.	Title; Application/Patent Number	Country	Status Filed/published/granted
1	Title: Triazolo-thiazole Based Hydroxamic Acid Analogues as Novel Anticancer Agent. Application Number: 202021056509 This filed patent is an outcome of Young Scientist Research Project Sanctioned by SERB, New Delhi during 2014-18	Indian Patent	Filed: 26.12.2020 Published 01.07.2022
2	Title: A Device to Recognize Fungal Diseases Using Image Processing and Ann Approach in Plants. Application No: 202141046612	Indian Patent	Filed: 12.10.2021 Published: 05.11.2021
3	Title: A process for synthesizing n-(6,12-dioxo-6,12-dihydroindolo[2,1-b]quinazolin-8-	South African patent	Filed: 17.12.2021

	y)benzenesulfonamide derivatives for anticancer Activities. Application No: 2021/10563		Granted: 29.06.2022
4	Title: A Machine Learning Model to Predict the Severity of Cancer and to Decrease Surgical Treatment Application No: 202141059326	Indian Patent	Filed: 20.12.2021 Published: 04.02.2022
5	Title: Design and Biological study on new Anti-inflammatory hybrid derivatives Application No: 202241006304	Indian Patent	Filed: 06.02.2022 Published: 11.02.2022
6	Title: A System for Synthesizing Novel Analogues of Nitrofurantoin Based Hydroxamic Acids as Anticancer Agents (EIN SYSTEM ZUR HERSTELLUNG NEUER ANALOGA VON HYDROXAMSÄUREN AUF NITROFURANTOINBASIS ALS KREBSBEKÄMPFUNGSMITTEL) Application No: 202022100777.2 German Patent DE202022100777	German Patent	Filed: 10.02.2022 Granted: 03.03.2022
7	Title: A framework to measure the public health interventions Application No: 202241006224 A	Indian patent	Filed: 05.02.2022 Published: 11.02.2022

Abroad Visits

- [1] Malaysia (2011) - Travel grant from DST, New Delhi
- [2] Singapore (2011) - Travel grant from DST, New Delhi
- [3] Thailand (2012) - Travel grant from CSIR, New Delhi
- [4] Hong Kong (2014) - Travel grant from AICTE, New Delhi
- [5] Germany (2016) - Travel grant from AICTE, New Delhi
- [6] Netherlands (2017) - Travel grant from AICTE, New Delhi.

Membership (Life Membership)

- [1] Indian Science Congress Association (ISCA), Calcutta.
- [2] Association of Pharmaceutical Teachers of India (APTI).
- [3] Indian Society for Technical Educations (ISTE), New Delhi.
- [4] Indian Pharmacy Graduate's Associations (IPGA), New Delhi.
- [5] Indian Pharmacological Society (IPS), Hyderabad.
- [6] Associate of the Institution of Chemists (India), Kolkata
- [7] Society of Pharmaceutical Education and Research (SPER), Gwalior
- [8] Society of Biological Chemists (India), Bangalore
- [9] Association of Chemistry Teachers (ACT), Mumbai
- [10] Association of Pharmacy Professionals (APP), Bhopal
- [11] Indian Pharmacist Association (IPA), New Delhi
- [12] Indian Pharma Educational Society (IPES), Lucknow

Consultancy Services being Offered:

Structural elucidation using FT-IR Spectroscopy (Samples for IR spectroscopy are being accepted from researchers). Web link is https://www.ggu.ac.in/Admin/Files/Document/12152022103441_Consultancy%20Document%20to%20be%20uploaded%2015.12.22.pdf

Editorial Board of Journals

- Associate Editor, **Frontiers in Drug Discovery**
- **Editorial Board member in** International Journal of Pharmaceutical and Bioanalytical Research, Advance Pharmaceutical Journal.

Reviewer : Bioorganic & Medicinal Chemistry, Bioorganic & Medicinal Chemistry Letters, Journal of Enzyme Inhibition and Medicinal Chemistry, Organic Communications, European Journal of Medicinal Chemistry, Medicinal Chemistry Research, Arabian Journal of Chemistry, Chemical Biology and Drug Design, Life Sciences, Letters in Drug Design and Discovery, Molecules and many more international and national Journals of Pharmaceutical and Allied Sciences.

Administrative / Academic Experience :

- Convener, Pharmacy Council of India - Approval Process Committee, Department of Pharmacy, GGV.
- Member, Board of Studies, Department of Pharmacy, GGV.
- Member, Board of Studies, Department of Pharmacy, Sant Gahira Guru University, Ambikapur (CG).
- Member, Departmental Research Committee, Department of Pharmacy, GGV.
- Convener, Project Purchase Committee, DST/AICE/ICMR Projects, GGV.
- Assistant Superintendent, University Examination, GGV.
- Convener, "E-News Letter" Publication, Department of Pharmacy, GGV.
- Member, Sessional Examination Committee, Department of Pharmacy, GGV.
- Member, Library Committee, Department of Pharmacy, GGV.
- Member, Admission Committee for M Pharm/B Pharm/D Pharm/ Various University Courses, GGV.
- Member, Guru Ghasidas Jayanti Celebration Committee, GGV.
- Member, Establishment Day Celebration Committee, GGV.
- Member, Physical Verification Committee, GGV.
- Counting Officer in Students' Council Election, GGV.
- Coordinator in Atulyam, PharmaFest, GGV.
- Member, Committee for monitoring Conduction of UGC National Eligibility Test (NET) at GGV.
- Member of Committee for organization of "Vigilance Awareness Week", GGV.
- Member, "Academic and Administrative Audit" Report Preparation, Department of Pharmacy, GGV.

Date: 30.03.2023


(Dr. Harish Rajak)