



# University of Kota

MBS Marg, Kota (Rajasthan)-324 005

## Faculty Profile

### Contact Details:

**Name** : Dr. Bhawani Singh  
**Designation** : Professor  
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### Educational Qualifications:

**B.Sc.** : Govt. R.R. College, Alwar (University of Rajasthan, Jaipur) **1997**  
**M.Sc.** : Mohan Lal Sukhadia University, Udaipur (Rajasthan) **2000**  
**Ph.D.** : Mohan Lal Sukhadia University, Udaipur (Rajasthan) **2002**  
**Title of Ph.D. Thesis** : Synthesis and biological activities of heterocyclic compounds and their oxygen substituted hydroxylamine derivatives.

### Teaching Experience:

**21 Years**

Banasthali Vidyapith : 04 July 2004 to 13 February 2013 08 Years & 7 Months  
University of Kota : 13 February 2013 to date 12 Years & 7 Months

### Career Profile:

#### Industrial:

- 22/05/2003 to 02/12/2003 : Research Scientist: Jubilant Organosys Limited, NOIDA (Uttar Pradesh).
- 03/12/2003 to 01/06/2004 : Officer (R&D): Vitalife Laboratories, Gurgaon (Haryana).

#### Academic:

- 04/07/2004 to 31/08/2007 : Lecturer, Banasthali Vidyapith, Banasthali (Rajasthan).
- 01/09/2007 to 30/06/2009 : Senior Lecturer, Banasthali Vidyapith, Banasthali (Rajasthan).
- 01/07/2009 to 30/09/2011 : Assistant Professor, Banasthali Vidyapith, Banasthali (Rajasthan).
- 01/10/2011 to 13/02/2013 : Associate Professor, Banasthali Vidyapith, Banasthali (Rajasthan).
- 13/02/2013 to 13/02/2016 : Associate Professor, University of Kota, Kota (Rajasthan).
- 14/02/2016 to date : Professor, University of Kota, Kota (Rajasthan).

### Job Responsibilities:

#### Current:

- Nodal Officer, RUSA
- Convener, UGC Cell
- Coordinator, Pharmacy
- Convener, COC Pharmacy
- Convener, Departmental Admission Committee
- Convener, University Examination Flying Squad
- Nodal Officer, UGC Online Students' Grievance Redressal
- Member:
  - BOS-Chemistry
  - AAA Committee
  - Discipline Committee
  - Task Force NEP 2020
  - IT Cell
  - Departmental Technical Committee
  - University Beautification Committee
  - DST-FIST Project Implementation Committee

#### Previous:

- Registrar
- Estate Officer
- Centre Superintendent
- Assistant Centre Superintendent
- OSD to the Hon'ble Vice Chancellor
- Head, Department of Pure & Applied Chemistry

- Chairperson-Cell for Differently Abled Persons
- University Representative in Management Committee/Governing Council of College
  - Mata Bhagwati Devi Dev Sanskriti Mahila Mahavidyalaya, Siswali
  - Saraswati Mahila TT College, Sawai Madhopur
  - Maharshi Dayanand College, Siswali
- University Representative during NAAC Peer Team Visits in the Affiliated Colleges
  - Govt. College, Kota
  - Govt. College, Bundi
  - Govt. Girls College, Baran
  - Govt. JDB Girls College, Kota
  - Maa Bharti PG College, Kota
  - Bhagwati College, Gangapur City
  - Govt. Birla College, Bhawani Mandi, Jhalawar
- Convener:
  - COC Applied Chemistry
  - Departmental Technical Committee
  - Presiding Officer, Student's Union Election
  - Printing Committee, University Convocations
  - Departmental Budget Preparation Committee
  - Departmental Physical Verification Committee
  - Diary/Telephone Directory Printing Committee
  - University Flying Squad, University Examination
  - Chief Counting Officer, Students' Union Election
  - e-Resources Requirement Preparation Committee
  - Departmental Committee, Smart Villages-Dungarjya and Jameetpura
- Member:
  - IQAC
  - UGC Cell
  - NIRF Committee
  - Academic Council
  - Building Committee
  - Discipline Committee
  - Examination Committee
  - NAAC Steering Committee
  - SSR Preparation Committee
  - Degree Checking Committee
  - Central Admission Committee
  - CBCS Implementation Committee
  - Guest House Management Committee
  - Annual Report Preparation Committee
  - Constitution Park Construction Committee
  - Principal and Faculty Selection Committee
  - DST-FIST Project Implementation Group (PIG)
  - Departmental / University Purchase Committee
  - Departmental Inventory Verification Committee
  - Departmental Technical Specification Committee
  - Central Admission Committee for General Courses
  - Central Admission Committee for Professional Courses
  - Lower Division Clerk (Computer Efficiency) Examination
  - Departmental Tender Documents Preparation Committee
  - Interdisciplinary Centre for Small and Medium Enterprises
  - COC Chemistry at M.L. Sukhadia University, Udaipur
  - BOS Chemistry at Banasthali Vidyapith
  - Faculty of Science at Banasthali Vidyapith
  - B.Tech. Admission Committee at Banasthali Vidyapith
  - Website Updating Committee at Banasthali Vidyapith
  - Technical Committee-DST funded CURIE Project, Banasthali Vidyapith

**Subject / Papers Taught:**

**(A) PG Level**

- |                       |                        |                          |
|-----------------------|------------------------|--------------------------|
| ○ Group Theory        | ○ Retrosynthesis       | ○ Photochemistry         |
| ○ Spectroscopy        | ○ Organic Synthesis    | ○ Enzyme Chemistry       |
| ○ Stereochemistry     | ○ Natural Products     | ○ Medicinal Chemistry    |
| ○ Chromatography      | ○ Pericyclic Chemistry | ○ Bio-organic Chemistry  |
| ○ Reaction Mechanisms | ○ Industrial Chemistry | ○ Heterocyclic Chemistry |

**(B) UG Level**

- Inorganic Chemistry    ○ Organic Chemistry    ○ Physical Chemistry    ○ Analytical Chemistry

**Research Interest:**

Organic Chemistry, Organic Synthesis, Asymmetric Synthesis, Catalysis, Heterocyclic Chemistry, Medicinal Chemistry, Drug Design & Development, QSAR study.

**Research Guidance:**

**Ph. D. Degree Awarded:**

- |                                  |  |
|----------------------------------|--|
| 1. Bharati Vashishtha            | Studies on the synthesis of hetero ring annulated benzimidazole derivatives of biological interest.  |
| 2. Neelam Kumari Yadav           | Studies on the synthesis of hetero ring annulated quinoxaline derivatives of biological interest.  |
| 3. Ruchi Tyagi                   | Studies on the synthesis of hetero ring annulated indazole derivatives of biological interest.   |
| 4. Taruna Yadav                  | Studies on the synthesis of hetero ring annulated quinoline derivatives of biological interest.  |
| 5. Patel Pradipkumar Chandubhai  | Synthesis and biological evaluation of novel isoflavone, isoxazole, pyrazole and indole based medicinally potent agents.                                     |
| 6. Shruti                        | Studies on the synthesis of hetero ring annulated phenoxazine derivatives of biological interest.  |
| 7. Anuradha Sharma               | Microwave assisted oxidation of alcohols with oxochromium(VI) supported on ZSM-5.  |
| 8. Pragati Sharma                | Synthesis and Evaluation of therapeutic profile of thiazole substituted hetero ring condensed pyrimidines derivatives.                                       |
| 9. Neha Bhardwaj                 | Synthesis and Evaluation of biological activity of thiazole-substituted hetero ring condensed carbazoles and azacarbazoles.                                  |
| 10. Patel Madhaviben Ragnathbhai | Analytical method development for selected newer active pharmaceutical ingredients (APIs) and their formulations.  |
| 11. Iram Khan                    | Synthesis and evaluation of pharmacological profile of some novel hetero ring fused five-, six- and seven-membered heterocyclic comp. and their derivatives. |
| 12. Anupma Kumari                | Synthesis, characterization and evaluation of therapeutic profile of hetero ring substituted s-triazine derivatives.   |
| 13. Shashi Shekhawat             | Studies on the synthesis of hetero ring annulated 1, 3, 5-triazene derivatives of biological interest.   |
| 14. Nidhi Jain                   | Synthesis, characterization and evaluation of biological activities of some aryliminothiazolo fused five-, six- and seven-membered heterocycles.             |
| 15. Ashok Kumar Suman            | Studies on Design, Synthesis and Evaluation of Biological Activities of Calcium Channel Blocker and Adrenergic Receptor Antagonist Analogues.                |

**Ongoing Research:**

- |              |  |
|--------------|--|
| 16. Priyanka | Design, Synthesis and Evaluation of Pharmacological Profile of Benzoxazepine based Some Heterocycles               |
| 17. Anu      | Design, Synthesis and Evaluation of Biological Activities of Benzothiazepine based Medicinally Potent Heterocycles |

**Research Projects Completed:**

S. No.	Title of Project	Amt. (in Rs)	Funding Agency	Duration
1.	Synthesis of biologically active hetero ring condensed carbazole derivatives.	50,000/-	Banasthali Vidyapith	2007-2009

- |    |  |             |   |           |
|----|--|-------------|---|-----------|
| 2. | Synthesis and evaluation of pharmacological profile of some novel hetero ring fused five-, six- and seven-membered heterocyclic compounds and their derivatives. | 5,25,000/-  | UGC, New Delhi                                    | 2012-2015 |
| 3. | Application of multi-component reactions in drug discovery: Synthesis and evaluation of therapeutic profile of some novel spirocyclic heterocycles.              | 11,58,000/- | Fast Track Young Scientist Scheme, DST, New Delhi | 2013-2016 |

### Research Publications:

#### (a) Research Papers published in Refereed/Peer Reviewed Journals:

1. Uttam Singh Baghel, Priyanka Kriplani, Neelam M. Patel, Manpreet Kaur, Kapil Sharma, Monika Meghani, Abhay Sharma, Deeksha Singh, **Bhawani Singh**, William N. Setzer, Javad Sharifi-Rad, Daniela Calina. Flavopiridol: a promising cyclin-dependent kinase inhibitor in cancer treatment. *Naunyn-Schmiedeberg's Archives of Pharmacology*, 2025, 398(4), 3489-3511. <https://doi.org/10.1007/s00210-024-03599-2>.
2. Ashok Kumar Suman, Anu, **Bhawani Singh**. Tetrazole containing 1,5-benzothiazepines: Design, synthesis, in silico and in vitro evaluation as medicinally potent ACE inhibitors. *Journal of Chemistry Letters*, 2024, 5(4), 192-205. <https://doi.org/10.22034/jchemlett.2024.468311.1214>.
3. Ashok Kumar Suman, Anu, **Bhawani Singh**. Synthesis and *in vitro* evaluation of tetrazole containing 1,5-benzothiazepines as new anticancer, antitubercular, antibacterial, and antifungal agents. *European Journal of Chemistry*, 2024, 15(3), 245-253. <https://doi.org/10.5155/eurjchem.15.3.245-253.2569>.
4. Ashok Kumar Suman, Anu Dushad, **Bhawani Singh**. 1,5-Benzothiazepines: Recent developments in the synthetic strategies. *Tetrahedron*, 2023, 142, 133513. <https://doi.org/10.1016/j.tet.2023.133513>.
5. Uttam Singh Baghel, Abhay Sharma, Harshit Gautam, Mohammad Mukim, Deeksha Singh, Shuchi Dave, B Srivastava, **Bhawani Singh**. Spectrophotometric Multi-Component Quantitation of Rosiglitazone, Glibenclamide and Metformin HCl in Pharmaceutical Dosages Form by using Cramer's Matrix. *Research Journal of Pharmacy and Technology*, 2023, 16(12), 5671-5676. <https://doi.org/10.52711/0974-360X.2023.00917>.
6. Havale Shrikant Hanumantappa, Bhavani Singh, Jaya Dwivedi, Dharma Kishore, S. Venkat Rao. Acid Catalyzed Synthesis of substituted-n-((1, 3-diphenyl-1h-pyrazol-4-yl)methyl)benzenamine. *Research Journal of Pharmacy and Technology*, 2021, 14(12), 6442-6446. [10.52711/0974-360X.2021.01114](https://doi.org/10.52711/0974-360X.2021.01114).
7. Havale Shrikant Hanumantappa, **Bhavani Singh**, Dharma Kishore, S. Venkat Rao and Jaya Dwivedi. Synthesis of antibacterial active substances 1-methyl-2-phenyl/o-tolyl-6-substitutedphenyl-1H-benzo[d]-imidazole derivatives. *Rasayan Journal of Chemistry*, 2021, 14(2), 943-949. <http://dx.doi.org/10.31788/RJC.2021.1426186>.
8. Aruna Sharma, D. Kishore and **Bhawani Singh**. An Expedient Method for the Synthesis of 1,2,4-Triazole Fused 1,5-Benzodiazepine, 1,5-Benzoxazepine and 1,5-Benzothiazepine Scaffolds-A novel Seven-membered Ring System of Biological Interest. *Journal of Heterocyclic Chemistry*, 2018, 55(3), 586-592. <https://doi.org/10.1002/jhet.3060>.
9. Nidhi Jain, Radha Chaudhary and **Bhawani Singh**. Dimethyl aminomethylene Ketones and  $\alpha,\beta$ -Unsaturated Ketones with Thiazolyl substituted 4-Thiazolidinone Framework: Versatile Reactive Intermediates to Synthesize a Variety of Medicinally Potent Heterocycles. *Research Journal of Chemical Sci*, 2017, 7(1), 37-44.
10. Nidhi Jain and **Bhawani Singh**. An Overview of Biological and Synthetic Aspects of Thiazole Derivatives in Heterocyclic Chemistry. *World Journal of Research and Review*, 2016, 3(5), 52-57.
11. Taruna Yadav, Neelam K. Yadav, Manju Yadav, **Bhawani Singh** and D. Kishore. Application of Pfitzinger Reaction in the Synthesis of Hetero Ring Annelated Quinoline Carboxylic Acid Derivatives. *Asian Journal of Chemistry*, 2016, 28(6), 1177-1180. <https://doi.org/10.14233/ajchem.2016.19532>.
12. Havale Shrikant Hanumantappa, S. Venkat Rao, K. Nalini Mohan and Bhawani Singh. Synthesis of Efavirenz by an innovative cost-effective cyclisation process. *Der Pharma Chemica*, 2015, 7(10), 292-295.
13. Taruna Yadav, D. Kishore and **Bhawani Singh**. Synthesis, characterization and evaluation of pyrazolo- and oxazolo-pyrido carbazoles and pyridoazacarbazoles as potent anti-microbial agents. *British Journal of Pharmaceutical Research*, 2015, 8(3), 1-9.
14. Anupma and **Bhawani Singh**. Synthesis of Isoxazoles and Pyrazoles Containing Pyrimidine Substituted s-Triazines. *Chemical Science Transactions*, 2015, 4(3), 649-653.
15. Anupama, Iram Khan and **Bhawani Singh**. Synthesis of Biologically important s-triazine based chalcones. *International Journal of Pharmaceutical Science and Research*, 2015, 6(8), 3209-3214.
16. Iram Khan & **Bhawani Singh**. Synthesis and biological evaluation of some novel aryl substituted thiazolyl-4-thiazolidinone fused pyrimidines as potent anti-microbial and anti-inflammatory agents. *International Journal of Chemistry and Pharmaceutical Sciences*. 2015, 3(6), 1759-1763.

17. Madhavi Patel, Batuk Dabhi, Hetal Jebaliya, **Bhawani Singh** and Anamik Shah. Simultaneous estimation of Tolterodine tartrate and Tamsulosin HCl by validated HPTLC assay method from combination capsule form. *Journal of Chemical and Pharmaceutical Research*, 2015, 7(5), 81-88.
18. Iram Khan, Anupama and **Bhawani Singh**. 1,4-Benzodiazepine: An overview of biological properties. *Scientific Reviews & Chemical Communications*, 2015, 5(1), 13-20.
19. Aruna Sharma, D. Kishore and **Bhawani Singh**. Recurrence of cancer with long term side effects of cancer treatment. *World Journal of Pharmaceutical Research*, 2015, 4(6), 888-901.
20. Madhavi Patel, Sheetal Makwana, Hetal Jebaliya, Batuk Dabhi, Yashwantsinh Jadeja, **Bawani Singh**, Jatin Upadhyay and Anamik Shah. Simultaneous quantification of the nortriptyline, bupropion, milnacipran, fluoxetine and sertraline of the antidepressant class of drugs by HPLC-UV: A simple, rapid and sensitive quantification method. *Pharmanest*, 2015, 6(3), 2831-2833.
21. Madhavi Patel, **Bawani Singh** and Anamik Shah. Stability indicating UPLC method for quantification of tolperisone HCl and paracetamol from muscle relaxant combination tablet. *International Journal of Pharmacy and Pharmaceutical Sciences*, 2015, 7(8), 299-304.
22. Anupma and **Bhawani Singh**. Synthesis of Pharmacologically important some novel pyrimidine and chalcone moieties containing s-triazines. *Chemical Science International Journal*, 2015, 8(2), 1-7. <https://doi.org/10.9734/ACSJ/2015/18654>.
23. Anupma and **Bhawani Singh**. Synthesis of 1,3,5-Triazine Based Pyrimidines as Potent Anti-Bacterial and Anti-Fungal Agents. *World Journal of Pharmaceutical Research*, 2015, 4(6), 1395-1402.
24. Neelam K. Yadav, D. Kishore, **Bhawani Singh**. Synthesis and Characterization of Some Novel Isoxazoles and Pyrazoles of Carbazolo and Azacarbazolo Fused Quinoxalines. *International Journal of Current Research*, 2015, 7(5), 16074-16078.
25. Neelam K. Yadav, D. Kishore, **Bhawani Singh**. Synthesis of benzodiazepino / oxazepino / thiazepino fused some novel pyrazinocarbazoles and azacarbazoles. *International Journal of Scientific Res*, 2015, 4(6), 56-57.
26. Neelam K. Yadav, D. Kishore, **Bhawani Singh**. Synthesis of pyrimidine derivatives of carbazolo and azacarbazolo fused quinoxalines. *International Journal of Science and Research*, 2015, 4(5), 1181-1184.
27. Iram Khan & **Bhawani Singh**. Aryl substituted thiazolyl 4-thiazolidinopyrazoles and isoxazoles: Novel anti-microbial and anti-inflammatory agents. *International Journal of Scientific Research* 2015, 4(5), 3-5.
28. Iram Khan, Anupama and **Bhawani Singh**. The role of pyrazole and its derivatives in heterocyclic chemistry. *International Journal of Chemical and Pharmaceutical Sciences*, 2015, 6(1), 1-7.
29. Khan Iram, Anupama and **Singh Bhawani**. The Synthesis and Spectral Characteristics of Novel 7-(4-substituted-phenyl)-2-(4-phenyl-thiazol-2-ylimino)-2,3-dihydro-thiazolo[4,5-d]pyrimidine-5-thiols. *Research Journal of Chemical Sciences*, 2015, 5(3), 23-26.
30. Aruna Sharma, Dharm Kishore, and **Bhawani Singh**. Environmental and anthropogenic carcinogens and their carcinogenic effects on humans. *Journal of Biomedical and Pharmaceutical Research*, 2015, 4(2), 1-13.
31. Shashi Shekhawat, Aruna Sharma, D. Kishore and **Bhawani Singh**. Synthesis of Trisubstituted s-Triazine Templates to Prepare Some Reactive Intermediates for the Synthesis of Medicinally Potent Novel Heterocycles. *Journal of Chemistry and Chemical Sciences*, 2015, 5(9), 517-521.
32. Shashi Shekhawat, Aruna Sharma, D. Kishore and **Bhawani Singh**. Synthesis of Enol ether,  $\alpha,\beta$ -unsaturated carbonyl compound, Oxoketenedithio acetal and Dimethyl aminomethylene ketone derivatives of s-Triazines as Intermediates for Synthesis of Fused Heterocycles. *Research Journal of Chemical Sciences*. 2015, 5(11), 9-12.
33. Sheetal Makwana, Madhavi Patel, **Bhawani Singh**, Jatin Upadhyay and Anamik Shah. Development and validation of a stability indicating RP-UPLC method for the determination of Paracetamol and Ibuprofen in tablet. *Journal of Chemical and Pharmaceutical Research*, 2015, 7(4), 1308-1315.
34. Madhavi Patel, Hetal Jebaliya, Batuk Dabhi, Yashwantsinh Jadeja, Nidhi Jani, Deepali Desai, Nirag Mavani, **Bhawani Singh Yadav** and Anamik Shah. Chromatography method transfers from HPLC to a new generation instrument UPLC and studies on force degradation behavior of deflazacort. *Der Pharmacia Lettre*, 2015, 7(2), 142-149.
35. Swapnil G. Yerande, Kiran M. Newase, **Bhawani Singh**, André Boltjes, Alexander Dömling. Application of cyclic ketones in MCR: Ugi/amide coupling based synthesis of fused tetrazolo[1,5-a][1,4]benzodiazepines. *Tetrahedron Letters*, 2014, 55(21), 3263-3266. <https://doi.org/10.1016/j.tetlet.2014.04.040>.
36. Ruchi Tyagi, Navjeet Kaur, **Bhawani Singh** and D. Kishore. A novel synthetic protocol for the heteroannulation of oxocarbazole and oxoazacarbazole derivatives through corresponding oxoketene dithioacetals. *Journal of Heterocyclic Chemistry*, 2014, 51(1), 18-23. <https://doi.org/10.1002/jhet.1523>.
37. Ruchi Tyagi, **Bhawani Singh** and D. Kishore. A noteworthy mechanistic precedence in the exclusive formation of one regioisomer in the Beckmann rearrangement of ketoximes of 4-piperidones annulated to pyrazolo-indole nucleus by organocatalyst derived from TCT and DMF. *Synthetic Communications*, 2013,

- 43(1), 16-25. <https://doi.org/10.1080/00397911.2011.589558>.
38. Peeyush Jain, Nishant Paliwal, Naveen Dubey, Sandeep Sharma and **Bhawani Singh**. Liquid chromatography tandem mass spectrometry method for quantification of Bupropion and hydroxy Bupropion in Human Plasma and its application to Bioequivalence Study. *International Journal of Drug Development and Research*, 2012, 4(2), 381-392.
  39. Ruchi Tyagi, **Bhawani Singh** & D. Kishore. Synthesis of novel precursors for Pfitzinger reaction: A facile one pot strategy to the synthesis of pyrazolo oxocarbazoles and pyrazolo oxoazacarbazoles precursors and their conversion to corresponding quinoline carboxylic acid derivatives. *Journal of Chemical Sciences*, 2012, 124(2), 431-435.
  40. Pramila Sharma, Bharti Vashishtha, Ruchi Tyagi, Vidushi Srivastava, Monika Shorey, **Bhawani Singh** and D. Kishore. Application of microwave induced delepine reaction to the facile one pot synthesis of 7-substituted 1,3-dihydro-2H-[1,4]benzodiazepine-2-one-5-methyl carboxylates from the corresponding 1-chloroacetyl isatins. *International Journal of Chemical Sciences*, 2010, 8(1), 41-51.
  41. Arti Jhanwar, Ruchi Tyagi, Bharti Vashishtha, Vidushi Srivastava, **Bhawani Singh** and D. Kishore. Application of Japp-Klingemann reaction in the synthesis of azacarbazole derivatives: Synthesis of 1,8-disubstituted-2,3-dihydro-1H-pyrido[3,2-b]indol-4-(5H)-ones from aryl amines *International Journal of Chemical Sciences*, 2009, 7(4), 2222-2226.
  42. Lalit K. Baregama, Ranjana Sharma, **Bhawani Singh**, Shilpi Jain & G L Talesara. Novel synthesis of oxygen substituted hydroxylamine derivatives of heterocyclic compounds. *International Journal of Chemical Sciences*, 2003, 1(1), 25-30.
  43. Lalit K. Baregama, **Bhawani Singh** & G.L. Talesara. Synthesis of 3-alkoxy-(substituted aryl) biguanidino-4-methyl-2, 3-dihydro-1H-[1,5]benzodiazepine-2-one and related compounds. *Heterocyclic Communications*, 2002, 8(6), 607-612.
  44. **Bhawani Singh**, A. Maheshwari, G. Dak, K. Sharma & G. L. Talesara. Studies of antimicrobial activities of some 4-thiazolidinone fused pyrimidines, [1,5]-benzodiazepines and their oxygen substituted hydroxylamine derivatives. *Indian Journal of Pharmaceutical Sciences*, 2010, 72(5), 607-612. <https://doi.org/10.4103%2F0250-474X.78529>.
  45. **Bhawani Singh**, Lalit K Baregama, Ranjana Sharma, Maqbool Ahmed & G. L. Talesara. Synthesis of alkoxyphthalimide derivatives of p-bis-(2-hydroxy-4-aryl-6-iminothiazolidino[4,5-b]pyrimidin-N<sup>2</sup>-yl)biphenyls. *Journal of Indian Chemical Society*, 2005, 82(4), 337-341.
  46. **Bhawani Singh**, Lalit K Baregama, Maqbool Ahmed, Neha Dixit & G. L. Talesara. Synthesis of 3H, 9H, 10H,10aH-10-aryl-2-aryliminothiazolidino[4,5-b][1,5]benzodiazepines and their alkoxyphthalimide derivatives. *Indian Journal of Chemistry*, 2005, 44B(6), 1243-1247.
  47. **Bhawani Singh**, Deepika Mehta, Lalit K Baregama & G L Talesara. Synthesis and biological evaluation of 7-N-(n-alkoxyphthalimido)-2-hydroxy-4-aryl-6-aryliminothiazolidino[2,3-b] pyrimidines and related compounds. *Indian Journal of Chemistry*, 2004, 43B(6), 1306-1313.
  48. Maqbool Ahmed, **Bhawani Singh**, Ranjana Sharma & G. L. Talesara. Synthesis of 1-N-(alkoxyphthalimido)-3,5-diaryl-2-pyrazolines. *Indian Journal of Heterocyclic Chemistry*, 2004, 14, 23-26.
  49. Lalit K. Baregama, **Bhawani Singh**, Tahira Banu & G L Talesara. Synthesis of some benzotriazole derivatives as antibacterial and antifungal agents. *Indian Journal of Heterocyclic Chem.*, 2002, 12, 203-206.
- (b) Research Papers published in Edited Books as Book Chapters:**
50. Uttam Singh Baghel, Anil Makwana, Neelam M Patel, Kapil Sharma, Manpreet Kaur, Abhay Sharma, Deeksha Singh, **Bhawani Singh**. Formulation, Development and Standardization of Herbal Extracts of *Withania Somnifera* and *Tinospora Cordifolia*. *Novel Approaches in Science & Pharma Fraternity*, pp 36-51. Edited by Prof. (Dr.) Dharmesh Trivedi and Dr. Seema Joshi. Published by P.K. Publishers & Distributors New Delhi, 2023, ISBN: 978-93-92239-66-3. Page 299.
  51. **Bhawani Singh**, Bharti Vashishtha and D. Kishore. Synthesis of five-, six- and seven-membered hetero ring annulated imidazo[4,5-b]carbazoles and azacarbazoles of medicinal interest. *Chemistry for Sustainable Development*. 2012, pp.453-472, DOI: 10.1007/978-90-481-8650-1\_30. Edited by Gupta Bhowon, M.; Jhaumeer-Laulloo, S.; Li Kam Wah, H.; Ramasami, P. Published by Springer. 2012, XVII, 486 pages.

### Papers Presented in Conferences /Symposia / Workshops:

#### (a) International Conferences / Symposia / Seminars:

1. Paper entitled "**Bhawani Singh**. Synthesis of 1,2,4-Triazolo fused 1,5-Benzodiazepine, 1,5-Benzoxazepine and 1,5-Benzothiazepines as Medicinally Potent Agents" presented in International Congress on Plant Based Natural Products: Phytocosmetics, Phytotherapeutics and Phytonutraceuticals: *Exploring Natural Wealth*. Jointly organized at Udaipur during February 19-21, 2018 by Indian Society of Chemists and Biologists Local Chapter (West Zone): Udaipur (Rajasthan), International Society for Phytocosmetic Science, Boston

- (USA) and Department of Pharmaceutical Sciences, Mohanlal Sukhadia University, Udaipur (Rajasthan).
2. Paper entitled "**Bhawani Singh**, Taruna Yadav and D. Kishore. Synthesis of enolic ethers, chalcones, oxoketenedithio acetals and dimethyl aminomethylene ketones of corresponding carbazole and azacarbazole frameworks as versatile intermediates to synthesize heterocycles" presented in 2015 GITS-MTMI International Conference on Innovation in Science, Technology, Management & Well being held during December 27-29, 2015 at Geetanjali Institute of Technical Studies, Udaipur (Rajasthan).
  3. Paper entitled "**Bhawani Singh**, Bharti Vashishtha, Ruchi Tyagi & D. Kishore. Synthesis of indazole / imidazole-carbazoles and azacarbazoles" presented in international conference on emerging trends & development in Science, Management & Technology held during March 11-12, 2013 at Raj Kumar Goel Institute of Technology, NOIDA (Uttar Pradesh).
  4. Paper (OP-115) entitled "**Bhawani Singh**, Bharti Vashishtha, Neelam Yadav, Taruna Yadav, Ruchi Tyagi & D. Kishore. Synthesis of hetero ring condensed some carbazoles & azacarbazoles" presented in the 19<sup>th</sup> International Conference of Indian Society of Chemists and Biologists (ISCB-2013) held during March 02-05, 2013 at Department of Chemistry, Mohan Lal Sukhadia University, Udaipur (Rajasthan).
  5. Paper (PP-15) entitled "**Bhawani Singh**, Bharti Vashishtha, Neelam Yadav, Taruna Yadav, Ruchi Tyagi & D. Kishore. Hetero ring condensed some carbazoles & azacarbazoles as medicinally potent compounds" presented in the CTDDR-2013 5<sup>th</sup> International symposium on drug development for Orphan/neglected diseases held during February 26-28, 2013 at Central Drug Research Institute Lucknow (Uttar Pradesh).
  6. Paper (P-66) entitled "**Bhawani Singh**, Patel Pradipkumar Chandubhai, & D. Kishore. "Eco-friendly synthesis and evaluation of biological activity of some novel indole derivatives using deoxybenzoin as intermediates" presented in the international workshop on chemistry for a sustainable future held during December 10-12, 2012 at Chokhi Dhani ethnic village jointly organized by the Department of Chemistry, University of Rajasthan, Jaipur; Malviya National Institute of Technology Jaipur and Green Chemistry Network Centre, University of Delhi, Delhi.
  7. Paper (OL-19) entitled "Patel Pradipkumar Chandubhai, **Bhawani Singh** & D. Kishore. "Synthesis and characterization some novel indole derivatives using suzuki coupling reaction" presented in the 3<sup>rd</sup> International Conference on Heterocyclic Chemistry held on December 10-13, 2011 at Hotel Clark Amer organized by the Department of Chemistry, University of Rajasthan, Jaipur, Rajasthan.
  8. Paper (OP-16) entitled "**Singh, Bhawani**; Patel, Pradipkumar C; Kishore, D. Synthesis of some novel isoflavones and their derivatives from deoxybenzoin intermediates" presented in the International Conference on Green Chemistry held on December 7-9, 2011 at Hotel Bela Casa organized by the Department of Chemistry, Central University of Rajasthan, Kishangarh (Ajmer), Rajasthan.
  9. Paper entitled "**Bhawani Singh**, Patel Pradipkumar Chandubhai and D. Kishore. Synthesis of some novel isoflavones and their derivatives as medicinally potent agents" presented in the 15<sup>th</sup> ISCB international conference: Bridging gaps in discovery and development: chemical and biological sciences for affordable health, wellness and sustainability held on February 04-07, 2011 at Department of Chemistry, Saurashtra University, Rajkot (Gujrat).
  10. Paper (P-121) entitled "**Bhawani Singh**, Arti Jhanwar, Ruchi Tyagi, Bharti Vashishtha, Vidushi Srivastava and D. Kishore. Application of Japp-Klingemann Reaction in the synthesis of Carbazoles and Azacarbazole derivatives: Synthesis of 1,8-disubstituted-2,3-dihydro-1*H*-pyrido[3,2-*b*]indol-4-(5*H*)-ones from aryl amines" at 13<sup>th</sup> International conference of Indian council of Chemists and Biologists (ISCB) held on February 26 to March 01, 2009 at Department of Chemistry, University of Delhi, Delhi.

**(b) National Conferences / Symposia / Seminars:**

11. Paper entitled "Taruna Yadav, D. Kishore and **Bhawani Singh**. Synthesis of Oxoketene dithioacetals and dimethylaminomethylene ketones of corresponding carbazole and azacarbazole frameworks as versatile intermediates to synthesize heterocycles" presented in National School on Quantum Mechanics held during December 21-24, 2015 at Department of Pure & Applied Physics, University of Kota, Kota (Rajasthan).
12. Paper entitled "Aruna Sharma & Bhawani Singh. Synthesis of some 1,5-benzodiazepines and their derivatives using eco-friendly methods" presented in the national seminar on Recent Advancements in the Protection of Environment and its Management Issues (NSRAPEM-2015) held during February 27-28, 2015 at Maharishi Arvind College of Engineering & Technology, Kota (Rajasthan).
13. Paper (PP-40) entitled "**Bhawani Singh**, Patel Pradipkumar Chandubhai & D. Kishore. Synthesis of Medicinally Potent Some Novel Indole Derivatives Using Dexoybenzoin as Intermediates" presented in the National Conference on the Global Challenges: New frontiers in Chemical Sciences held during September 22-23, 2012 at the Department of Chemistry, Kurukshetra University, Kurukshetra (Haryana).
14. Paper entitled "Iram Khan, Nidhi Jain & **Bhawani Singh**. 4-Thiazolidinones: Active pharmacophores for synthesis of medicinal potent heterocyclic compounds" presented in the UGC sponsored National Conference on Current Status and Opportunities in Medicinal plants of Thar desert held during December

- 17-18, 2011 at the Mahila P. G. Mahavidyalaya, Jodhpur (Rajasthan).
15. Paper (OP-10) entitled "Patel Pradipkumar Chandubhai, **Bhawani Singh** & D. Kishore. Some novel triptan analogues: synthesis and characterization some novel indoles using suzuki coupling reaction under microwave condition" presented in the national conference "Green Chemistry- Safer Chemistry" held on September 23-24, 2011 at Department of Chemistry, R.R. (PG) College, Alwar (Rajasthan).
  16. Paper (PP-15) entitled "Patel Pradipkumar Chandubhai, **Bhawani Singh** and D. Kishore. Synthesis of some novel isoflavones as potent anxiolytic agents" presented at national symposium on organic synthesis held on February 18-19, 2011 at Department of Chemistry, International College for Girls, Jaipur (Rajasthan).
  17. Paper (ORG-AP-17) entitled "**Bhawani Singh**. Synthesis of 2-phenyliminothiazolidin- $\Delta^2$ -2-hydroxy-6-phenylpyrimidine derivatives of alkoxyphthalimide" at 38<sup>th</sup> National Conference of Indian Chemical Society held on December 26-29, 2001 at Department of Chemistry, Jai Narayan Vyas University, Jodhpur (Raj.).
  18. Paper (PP-72) entitled "**Bhawani Singh**. Synthesis of pharmacologically important 2-[ $\omega$ -(4-morpholinyl) alkoxy]-1*H*-isoindole-1,3-(2*H*)-diones" presented at 37<sup>th</sup> National Conference of Indian Chemical Society held on November 28-30, 2000 at Department of Chemistry, Gurukul Kangari University, Harwar (UP).

#### **Invited Lectures Delivered in Conferences / Symposia / Seminars:**

1. Delivered an invited lecture on "Hidden Secrets of Non-edible Peels and Seeds of Different Edible Fruits and Vegetables" in the "International Conference on Multidisciplinary Approach Towards Sustainable Development and Climate Change for a Viable Future (ICMSDC-2022)" organized by Raj Rishi Govt. College, Alwar (Rajasthan) during August 12-14, **2022**.
2. Delivered an invited lecture online on July 28, **2022** as Resource Person in two weeks advanced level bridge course on Chemistry on "Basic Applications of Chromatography" organized by Ganpat University, Mehsana (Gujarat) during July 18-30, **2022**.
3. Delivered an invited lecture online on April 28, 2022 as Resource Person in one week FDP programme on "Research Methodology-Tools and Techniques" organized by the Geetanjali Institute of Technical Studies during April 25-29, **2022**.
4. Delivered an invited lecture on April 19, 2021 in a national webinar on "The Two M's of Chemistry: Molecules and Materials" organized by JECRC University, Jaipur (Rajasthan) during April 19-20, **2021**.
5. Delivered an invited lecture on "Separation and Purification Techniques" on 19 November 2017 in the National Workshop on "Emerging Sophisticated Analytical Techniques (ESAT-2017)" organized by the Faculty Development Center, Banasthali Vidyapith, Rajasthan during November 01-21, **2017**.
6. Delivered an invited lecture on "Spectroscopy: A Laboratory Approach and Hands on the Spectroscopic Instruments" on February 01, 2017 in the UGC-HRDC, MDS University, Ajmer sponsored short-term programme on "Separation Techniques and Instrumental Methods of Analysis" organized by the University of Kota, Kota (Rajasthan) during January 30-February 04, **2017**.
7. Delivered an invited lecture as Resource Person on the topic "Use of Technical Terminology in the Chemical Science Teaching" in the National Seminar on "Use of Scientific and Technical Terminology" organized by the Commission for the Scientific and Technical Terminology, MHRD, New Delhi at DAV College, Ajmer (Rajasthan) during August 12-13, **2016**.
8. Invited lecture delivered in the "Course Work of Ph.D. programme" on the topic "Writing for Publication and Errors in Research" on May 10, 2016 at University of Kota, Kota (Rajasthan).
9. Invited lecture delivered in the "Entrepreneurship Development Programme on the Establishment of Small-Scale Industries" on May 02, **2016** during EDP at the Department of Commerce & Management, University of Kota, Kota (Rajasthan).
10. Delivered an invited lecture on the "Establishment of Small-Scale Industries for Pharmaceuticals" on April 25, **2016** during Entrepreneurship Development Programme (EDP) organized by the Department of Commerce & Management, University of Kota, Kota (Rajasthan).
11. Delivered an invited lecture on the "Establishment of Small-Scale Industries for Pharmaceuticals" on April 23, **2016** during Entrepreneurship Development Programme (EDP) organized by the Department of Commerce & Management, University of Kota, Kota (Rajasthan).
12. Delivered an invited lecture on the topic "Establishment of Small-Scale Pharmaceutical Industries" on March 04, **2014** during Entrepreneurship Development Programme (EDP) organized by the Department of Commerce & Management, University of Kota, Kota (Rajasthan).
13. Delivered an invited lecture on the topic "Thesis Writing: Planning of Thesis, Thesis Structure, writing up Schedule, The Oral Examination and Viva-voce" on August 05, **2013** in the "Ph.D. Course Work in the Computer Science" organized by the Department of Computer Science & Informatics, University of Kota, Kota (Rajasthan).

14. Lecture delivered in the "National Conference on Green Chemistry" organized by the Department of Chemistry, SRM University, NCR Campus, Modi Nagar (Ghaziabad) held during September 18-19, **2012**.
15. Lecture delivered on "Development of Science for Development of the Nation" during INSPIRE Science Camp on March 25-29, **2012** at the Nathdwara Institute of Engineering and Technology, Nathdwara (Raj.)

#### **Conferences / Symposia / Seminars / Workshops Attended:**

1. Attended a workshop-cum Hands-on practice programme on "Artificial Intelligence in New Molecular Discoveries" organized by Adesh University, Bathinda (Punjab) during April 27-29, **2023**.
2. Attended a one-day online workshop-cum-discussion meet on "Implementation of NEP-2020 in the light of UGC" organized by the IQAC and Micro Task Force NEP-2020, University of Kota, Kota (Rajasthan) on April 27, **2023**.
3. Attended in the two days Online Skill Development Program "Data Interpretation of GCMS & LCMS" organized by CytoGene Research & Development, Lucknow during April 02-03, **2022**.
4. Attended a one-day workshop on "Intellectual Property Rights" held on November 20, **2013** organized by the University Intellectual Property Rights Cell, University of Kota, Kota.
5. Attended a workshop "Advanced Materials Characterization" held during October 3-7, **2012** at Banasthali Vidyapith, Rajasthan sponsored by the Department of science and Technology, New Delhi under CURIE programme.
6. Attended a seminar on "Intellectual Property and Innovation Management in Knowledge Era" organized by National Research Development Corporation (NRDC), New Delhi held on 28<sup>th</sup> January **2012** at Banasthali Vidyapith, Rajasthan.
7. Attended a workshop on "Computer Aided Drug Design and Discovery (CAD3)-2011" held on April 15-17, **2011** at NIPER Hyderabad, Andhra Pradesh.
8. Attended a "Jubilee conference on Women's Education: Vision and mission of women's universities in a global society" held on November 11-13, **2008** at Banasthali University, Banasthali (Rajasthan).
9. Attended a Summer School on NMR: From Molecules to Human behaviour. May 27-June 1, **2007**. Organized by Indian Institute of Science, Bangalore and Sikkim Manipal Institute of Medical Sciences, Gangtok, Sikkim and Sponsored by the Department of Science & Technology, Government of India, New Delhi.
10. Attended a conference on 56<sup>th</sup> Indian Pharmaceutical Congress held on December 3 to 5, **2004** at Kolkata.
11. Attended a UGC sponsored symposium on "Recent Trends in Chemical Sciences", December 27-30, **2000**. Mohan Lal Sukhadia University, Udaipur (Rajasthan).

#### **Conferences / Symposia / Other activities Organized:**

1. Organized XXXXII Annual National Conference of the Indian Council of Chemists (ICC) during 20-22 December **2023** in the in the Department of Pure & Applied Chemistry, University of Kota, Kota (Raj.).
2. Organized a one-day workshop on "IP Awareness/Training Program under National Intellectual Property Awareness Mission" on January 19, **2023** in the Department of Pure & Applied Chemistry, University of Kota, Kota (Rajasthan).
3. Organized a national webinar on "A Roadmap towards making the takeaways of NEP-2020 a reality in HEIs" on June 28, **2021** as a member of organizing committee under the IQAC and Micro Task Force NEP-2020, University of Kota, Kota (Rajasthan).
4. Celebrated National Science Day 2021 online on February 28, **2021** as Head, Department of Pure & Applied Chemistry, University of Kota, Kota (Rajasthan).
5. Organized a 7<sup>th</sup> National Academic Workshop on "Facets of Synthetic and Analytical Approaches in Chemical Science" during March 12-14, **2020** at the Department of Pure & Applied Chemistry, University of Kota, Kota (Rajasthan).
6. Organized a one-day Workshop & Hands-on-Training on Scientific Innovation for Advance Research: XRD Technique on February 28, **2020** on the Occasion of the Science Day in the in the Department of Pure & Applied Chemistry, University of Kota, Kota (Rajasthan).
7. Organized a workshop on GST on January 07, **2018** as Convener at the University Kota, Kota (Rajasthan).
8. Organized a National Seminar on "Science, Spirituality and Vivekanand" during September 19-20, **2017** as Convener under the Vivekanand Shodhpeth, University of Kota, Kota (Rajasthan).
9. Organized a workshop on "Academic Ethics and Integrity" on July 27, **2017** as a member of organizing committee under the IQAC, University of Kota, Kota (Rajasthan).
10. Organized a seminar on the theme "Science and Technology for Especially Abled Persons" as Convener on the occasion of celebration of National Science Day 2017 on February 28, **2017** under the Cell for Differently Abled Persons, University of Kota, Kota (Rajasthan).

11. Organized the 37th Annual Conference of the Rajasthan Economics Association on "Sustainable Development and Inclusive Growth: Prospects and Challenges" during January 27th & 28th, **2017** at the University of Kota, Kota.
12. Organized 93rd Orientation Programme for College and University Teachers from February 15 to March 12, **2016** under the MoU with UGC-HRDC, Jai Narain Vyas University, Jodhpur at University of Kota, Kota (Raj.).
13. Organized the 69<sup>th</sup> Annual conference of Indian Society of Agricultural Statistics (ISAS) on Statistics and Informatics in Agricultural Research during December 14-16, **2015** at University of Kota, Kota (Rajasthan).
14. Organized the 6<sup>th</sup> National Academic Workshop on "Atmospheric Chemistry" during December 19-20, **2014** at the Department of Pure & Applied Chemistry, University of Kota, Kota (Rajasthan).
15. Organized a 5<sup>th</sup> National Academic Workshop on "Organic Reaction Mechanisms & Analytical Techniques used in Chemical Sciences" during October 21-25, **2013** at the Department of Pure & Applied Chemistry, University of Kota, Kota (Rajasthan).
16. Organized a Department of Science and Technology, Government of India sponsored workshop on "Advanced Materials Characterization" during October 3-7, **2012** at the Banasthali Vidyapith (Rajasthan)
17. Organized a national conference on the Science for Shaping the Future of India (Meeting on the challenges of water and energy) during August 24-25, **2012** under the ISCA Banasthali Chapter at Banasthali Vidyapith, Banasthali (Rajasthan).
18. A Department of Science and Technology, Government of India sponsored National workshop on "NMR: From Elementary to Advanced Applications" organized on December 3-4, **2011** at Department of Chemistry, Banasthali University, Banasthali (Rajasthan)
19. Organized a national exhibition: THE CHEM UNIVERSE at the occasion of science day (28-02-2011) for commemorates International Year of Chemistry-**2011** on the "Achievements of Chemistry and its Contribution to Mankind" in the Department of Chemistry, Banasthali University, Banasthali (Rajasthan).
20. A Department of Science and Technology, Government of India sponsored symposium on "Advanced Functional Materials: Opportunities and Challenges in New Global Era" organized on October 4-5, **2010** at Department of Chemistry, Banasthali University, Banasthali (Rajasthan).

#### **Sessions Chaired in Conferences / Symposia / Workshops:**

1. Chaired a Paper Presentation session in UGC-sponsored National Conference on Modern Trends in Chemical Sciences organized by Department of Chemistry, Mohan Lal Sukhadia University, Udaipur (Rajasthan) during January 30-31, **2016**.
2. Chaired a session of 69<sup>th</sup> Annual Conference of Indian Society of Agricultural Statistics on Statistics and Informatics in Agricultural Research during December 14-16, **2015**.
3. Chaired a Session in the National Symposium on Advanced Functional Materials: Opportunities and Challenges in New Global Era (NSAFM-2010) organized by the Department of Chemistry, Banasthali Vidyapith during October 4-5, **2010**.

#### **Orientation/Refresher Courses/Summer School Attended:**

1. A General Orientation Course (GOC-71) attended at Academic Staff College, Guru Nanak Dev University, Amritsar (Punjab) from June 12 to July 09, 2007.
2. Summer School on NMR: From Molecules to Human behavior. From May 27-June 1, **2007**. Organized by Indian Institute of Science, Bangalore and Sikkim Manipal Institute of Medical Sciences, Gangtok, Sikkim and Sponsored by the Department of Science & Technology, Government of India, New Delhi.

#### **Awards:**

1. Fast Track Young Scientist Award-**2012** by DST, Govt. of India, New Delhi.
2. Best Paper Presentation Award in National Symposium on Organic Synthesis at ICG, Jaipur in **2011**.

#### **Memberships:**

1. Life Member (ID 137) : National Magnetic Resonance Society of India, Bangalore.
2. Life Member (ID 1860) : Vijnana Bharati (VIBHA), Chittor Prant, Rajasthan