CURRICULM VITAE

***Name*:** **Dr. Diksha Katiyar**

***Present Position*:** Associate Professor

***Mailing Address*:** Department of Chemistry
MMV, Banaras Hindu University
Varanasi-221005

***E-mail*:** dikshakatiyar@gmail.com

Research Experience: Total ~16 Years

***Research Publications*:** 26 (Reviews: 4, Journals: 22)

Ph. D. Guidance: 03

***Supervised Dissertation at Master's Level*:** 05

***Conferences/Seminars/Workshop Attended*:** 16

***Teaching Experience*:** ~ 12 years

- **Assistant Professor (Stage-1)**, Department of Chemistry, MMV, Banaras Hindu University, Varanasi from November, 2005 to November, 2009.
- **Assistant Professor (Stage-2)**, Department of Chemistry, MMV, Banaras Hindu University, Varanasi from November, 2009 to November, 2014
- **Assistant Professor (Stage-3)**, Department of Chemistry, MMV, Banaras Hindu University, Varanasi from November, 2014 to November 2017.
- **Associate Professor (Stage-4)**, Department of Chemistry, MMV, Banaras Hindu University, Varanasi from November, 2017-till date.

Life Membership of Professional Societies

- Chemical Research Society of India (LM-1048)
- The Indian Science Congress Association (L21507)
- Indian Chemical Society (SF/7512 LM)

***Field of Research*:**

- Organic Chemistry
- Medicinal Chemistry

Research Experience and Positions Held

Aug 2001-March 2004: Research Scholar, Medicinal Chemistry Division, Central Drug Research Institute, Lucknow, India.

April 2004-Sept 2005: Senior Research Fellow (CSIR), Medicinal Chemistry Division, Central Drug Research Institute, Lucknow, India.

Completed Research Project

Design, synthesis and characterization of antifilarial compounds, funding agency **UGC**-New Delhi (01-02-2010 to 01-02-2012)

Ongoing Research Project

Studies on antifungal activity of a new antifungal peptides against some human pathogenic fungi and *in-silico* designing of peptidomimetics of best studied antifungal peptide. CST/SERDP/D-2793 DT 01-02-2016; **Grant 6.0 lacs**

Synthesis, characterization and pharmacokinetic evaluation of potent integrin antagonists for the prevention and treatment of fungal infections. DST-SERB/ EMR/2016/001396; **Grant 42.11 lacs**.

***Ph. D. Thesis supervised*: 3 (Ph.D. submitted: 01, Currently Supervising: 02)**

	Name	Title of Ph.D. Thesis	Year
1.	Lav K Singh	Synthesis and characterization of certain biologically relevant coumarin and chitosan derivatives and their applications in biomedicine	Thesis awarded (**2017**)
2.	Priyanka	Design, synthesis and structural analysis of pharmaceutically relevant compounds based on 2*H*-chromen-2-one framework	Submitted
3.	Rajesh K. Sharma	Synthesis, characterization, structural analysis and biological activities of benzopyone and oxazine derivatives	ongoing

***Master's Dissertation Supervised*: Total: 05**

1. Shubhangi Rai, M.Sc. Bioinformatics, MMV, **B.H.U.,** Title: Design and Molecular docking study of some novel 4H-chromenes as antifungal agents (**2018**).
2. Snigdha Tiwari, M.Sc. Bioinformatics, MMV, **B.H.U.,** Title: Design and molecular docking studies of 7-benzamide coumarins as novel inhibitors of Aspergillus fumigatus chitinase (**2017**).
3. Ekta, M.Sc. Bioinformatics, MMV, **B.H.U.**, Title: Design and docking studies of some coumarinyl amino alcohols against bacterial DNA gyrase (**2016**).
4. Jaya Patel, M.Sc. Bioinformatics, MMV, **B.H.U.**, Title: Design and molecular docking studies of some new closantel analogues as bacterial chitinase inhibitors (**2015**).
5. Shweta Jaiswal, M.Sc. Bioinformatics, MMV, **B.H.U.**, Title: Design and molecular docking studies of some new coumarin derivatives as potential antibacterial agent (**2014**).

R*eviewer of the Journal*

- Medicinal Chemistry Research
- Plos-one

Administrative Experience

- Worked as NSS Programme Officer from 21-08-09 to 21-08-12
- Member of Anti Ragging Squad, 2013-14
- Member of B. Sc part I admission committee, 2006-2015
- Member of Attendance Monitoring committee, MMV, 2006-2015
- Member of Canteen Committee, MMV, 2006-2015
- Member of Leave Monitoring Committee, MMV,2007-2009
- Member, LOC, National Seminar and Workshop on Bioinformatics and Computational Biology, MMV, B.H.U., March 22-24, 2006
- Member, LOC, National Symposium on Designing the Molecular World through Chemistry, Department of Chemistry, B.H.U., March 24-25, 2006
- Member, LOC, National Symposium on Current Trends in Chemistry, Department of Chemistry, B.H.U., March 24-25, 2007.
- Member, LOC, National seminar and workshop on metabolic networks and drug designing, MMV, B.H.U., March 28-30, 2008
- Member, LOC, National Conference on Experimental Tools for Material Science Research: State of Art, 3-4 Dec 2010, Department of Physics, MMV, B.H.U., Varanasi, India.
- Member, LOC, National symposium on emerging trends in chemical sciences, Department of Chemistry, B.H.U., Feb 19-20, 2011
- Member, LOC, National Symposium on Emerging Trends In Chemical Sciences, 19-20 Feb 2011, Department of Chemistry, Faculty of Science, B.H.U., Varanasi, India.
- Member, LOC, National Seminar on Mahamana's vision and the challenges of the millennium development goals, MMV, B.H.U., March 01-02, 2011
- Member, LOC, National Seminar on Allama Iqbal Shakhsiyat aur Karname, MMV, B.H.U., November 09-10, 2012

- Member, LOC, National seminar on The Relevance of Gandhi and his Timeless Legacy, MMV, B.H.U., Varanasi, India, March 20-21, 2012
- Member, LOC, 15th CRSI National symposium in Chemistry, Department of Chemistry, Faculty of Science, B.H.U., Varanasi, India, February 1-3, 2013
- Member, LOC, National symposium on organic synthesis and advanced materials, Department of Chemistry, Faculty of Science, B.H.U., Varanasi, India, March 1-2, 2014
- Member, LOC, Science academies' lecture workshop on supramolecular chemistry-concepts and perspectives, Department of Chemistry, MMV, B.H.U., Varanasi, India, April 4-5, 2014
- Member, LOC, National symposium on organic synthesis and advanced materials, Department of Chemistry, Faculty of Science, B.H.U., Varanasi, India, March 1-2, 2014.
- Member, LOC, National symposium on Nanomaterials and sustainable synthetic strategies, Department of Chemistry, Faculty of Science, B.H.U., Varanasi, March 21-22, 2015.
- Member, LOC, Satellite conference on Recent trends in carbohydrate chemistry, Department of Chemistry, Faculty of Science, B.H.U., Varanasi, Nov. 12, 2016.

Research Publications

I. Research papers

1. Singh V, Haque S, Khare S, Tiwari AK, **Katiyar D**, Banerjee B, et al. Isolation and purification of antibacterial compound from *Streptomyces levis* collected from soil sample of north India. PLoS ONE, **2018**, 13(7), e0200500. https:// doi.org/10.1371/journal.pone.0200500

2. Priyanka, Sharma RS, Butcher RJ, Katiyar D. Facile construction of 4*H*-chromenes via Michael addition of phenols to benzylidene oxobutanoates and their successful conversion into pyranocoumarins. *Tet. Lett*., **2018**, 59, 2347-2351**.**

3. Priyanka, Misra S, Misra-Bhattacharya S, Butcher RJ, Katiyar D. Resolution, absolute configuration and antifilarial activity of coumarinyl amino alcohols. *Tetrahedron Asymmetry*, **2017,** 28(5), 734-743. (IF 2.126)

4. Priyanka, Singh V, Ekta, Katiyar D. Synthesis, antimicrobial, cytotoxic and *E. coli* DNA gyrase inhibitory activities of coumarinyl amino alcohols. *Bioorg. Chem*., **2017**, 71, 120-127. (IF 3.231)

5. Priyanka, Sharma RK, **Katiyar D**. Recent advances in transition-metal catalyzed synthesis of coumarins, *Synthesis*, **2016**, 48(15), 2303-2322. (IF 2.689)

6. Diksha Katiyar, Lymphatic filariasis: a neglected disease of India, *Everyman`s Science*, **2016**, Vol. L, No. 5, 295-300. (IF 0.64)

7. Sharma RK, Priyanka, **Katiyar D**, L-Proline catalyzed condensation of salicylaldehydes with ethyl nitroacetate: an efficient access to 3-nitrocoumarins, *Monatsh. Chem.*, **2016,** 147(12), 2157-2161. (IF 1.3).

8. Priyanka, Srivastava SK, **Katiyar D**, Combined experimental and theoretical studies on 4-(2-Hydroxy-3-morpholin-4-yl-propoxy)-chromen-2-one, *J. Theor. Comput. Chem.*, **2016**, 15(2). (doi: 10.1142/S0219633616500176) (IF 0.953)

9. Misra S, Singh LK, Priyanka, Gupta J, Misra-Bhattacharya S, **Katiyar D**, Synthesis and biological evaluation of 4-oxycoumarin derivatives as a new class of antifilarial agents, *Eur. J. Med. Chem.*, **2015**, 94, 211-217 (IF 4.519).

10. **Katiyar D**, Priyanka, Singh V, Antimicrobial activity of some carbamate, coumarins and oxobutanoate derivatives, *Int. Res. Rev. Jour***, 2014,** 3(3), 27-32.

11. Singh LK, Singh V, **Katiyar D**, Design, Synthesis and biological evaluation of some coumarin derivatives as potential antimicrobial agents, *Med. Chem.*, **2015,** 11, 128-134. (IF 2.331)

12. **Katiyar D** and Singh LK, Filariasis**:** Current status, treatment and recent advances in drug development, *Curr. Med. Chem.,* **2011,** *18,* 2174-2185. (IF 3.85**)**

13. Tiwari VK, Tiwari N, **Katiyar D** and Tripathi RP, One-pot amberlite IR-120 catalysed synthesis of glycosyl dihydropyridones, *Monatsh. Chem.*, **2007,** 138, 1297-1302. (IF 1.282)

14. Tripathi RP, **Katiyar D**, Dwivedi N, Singh BK, Pandey, J, Recent developments in search of antifilarial agents, *Curr. Med. Chem.*, **2006,** *13(27)*, 3319-34. (IF 3.859)

15. Tripathi RP, Tiwari VK, Tewari, N, **Katiyar D**, Saxena N, Gaikwad A, Sinha S, Shukla PK, Srivastava R and Srivastava BS, Synthesis and antitubercular activities of *bis*-glycosylated diamino alcohols, *Bioorg. Med. Chem.*, **2005,** 13(19), 5668-79. (IF 2.93)

16. **Katiyar D,** Tiwari VK, Tiwari N, Verma SS, Sinha S, Gaikwad A, Srivastava A, Chaturvedi V, Srivastava R, Srivastava BS, Tripathi RP, Synthesis and antimycobacterial activities of glycosylated aminoalcohols and amines, *Eur. J. Med. Chem.*, **2005**, *40*, 351-360. (IF 4.519)

17. Bajpai P, Verma SK, **Katiyar D**, Tewari N, Tripathi RP, Bansal I, Saxena JK, Bhattacharya SM, Search for new prototypes for the chemotherapy of filariasis: a chemotherapeutic and biochemical approach, *Parasitol. Res.*, **2005,** *95*,383-390. (IF 2.33)

18. **Katiyar D,** Mishra RC and Tripathi RP, Diastereoselective synthesis of galactopyranosyl amino esters and their transformation into C-nucleosides, *J. Carbohydr. Chem.***, 2004**, *23 (1)*, 49-70. (IF 1.08)

19. Mishra RC, **Katiyar D,** Tiwari N and Tripathi RP, A versatile synthesis of dihydropyrimidinone C-nucleosides, *Nucleos. Nucleot. Nucl.*, **2004**, *23(3)*, 531-544. (IF 1.02)

20. Bhattacharya SM, **Katiyar D,** Tripathi RP and Saxena JK, 4-Methyl-7-(tetradecanoyl)-2H-1-benzopyran-2-one: a novel DNA topoisomerase II inhibitor with adulticidal and embryo static activity against sub periodic *Brugia malayi. Parasitol. Res.*, **2004**, *92(3)*, 177-184. (IF 2.33)

21. Gupta S, Arora K, Tiwari VK, **Katiyar D**, Tripathi RP, Srivastava AK, Walter RD, Inhibitors of filarial gamma-gutamyl cycle enzymes as possible macrofilaricidal agents, *Med. Chem. Res.*, 13:8/9, **2004**, 707-723. (IF 1.28)

22. Katiyar D, Tiwari VK, Tripathi R P, Reddy VJM, Bhattacharya SM, Saxena JK, Synthesis and antifilarial evaluation of 7-*O*-acetamidyl-4-alkyl-2H-1-benzopyran-2-ones, *Arzn Forsch/Drug Res.***, 2003**, *53(12)*, 857-863. (IF 0.701)

23. Katiyar D, Tiwari VK, Tripathi RP, Srivastava AK, Chaturvedi V, Srivastava R and Srivastava BS, Synthesis and antimycobacterial activity of 3,5-disubstituted thiadiazine thiones, *Bioorg. Med. Chem.*, **2003**, *11*, 4369-4375. (IF 2.93)

24. Tewari N, **Katiyar D**, Tiwari VK and Tripathi RP, Amberlite IR-120 catalysed efficient synthesis of glycosyl enaminones and their application, *Tetrahedron Lett.*, **2003**, *44*, 6639-6642. (IF 2.13)

25. Tiwari VK, Tewari N, **Katiyar D,** Tripathi R P, Arora K, Gupta S, Srivastava AK, Khan A and Murthy PK, Synthesis and antifilarial evaluation of N^1, N^n-diglycosylated diaminoalkanes, *Bioorg. Med. Chem.***, 2003**, *11*, 1789. (IF 2.93)

26. Mishra RC, **Katiyar D,** Tewari N, Tripathi, RP, Gaikwad A, Sinha S, Shukla PK, Srivastava R and Srivastava BS, Synthesis of glycosyl hydroxamates as new class of anti-malarial agents, *Bioorg. Med. Chem.*, **2003**, *11*, 5363-5374. (IF 2.93)

II. Books and book chapter:

1. Recent advances in the development of coumarin derivatives as antifungal agents. Diksha Katiyar, Rajesh Kumar Sharma, 2018, Springer

2. Recent progress in coumarin-based fluorescent probes for small molecular weight thiols **Chapter-8** in Advances in multifunctional materials, **2017**, Diksha Katiyar and Priyanka, Ideal book publishers and distributors (ISBN-978-81-929869-4-4).

3. Design and synthesis of potential chemotherapeutic agents, Lambert Academic Publishing Germany, Diksha Katiyar and R. P. Tripathi, ISBN: 978-3-659-63273-0

III. *List of Patents Filed*

1. Novel 1,3,5-thiazidine-2-thiones useful in chemotherapy of tubercular infections, Rama Pati Tripathi, **Diksha Katiyar**, Ranjana Srivastava, Anil Srivastava, Vinita Chaturvedi, Kishor Kumar Srivastava, Brahm Shankar Srivastava 1098DEL2004 Filing Date 6/11/2004

2. A process for the preparation of 1,3,5-thiazidine -2-thiones useful in chemotherapy of tubercular infections, Rama Pati Tripathi, **Diksha Katiyar**, Ranjana Srivastava, Anil Srivastava, Vinita Chaturvedi, Kishor Kumar Srivastava, Brahm Shankar Srivastava, 1098DEL2004 Filing Date 6/11/04

Paper Presented at Conferences/Seminars

1. Green synthesis of bioactive benzopyran and coumarin derivatives in National conference on ''Changing paradigm of environment protection in India'' 18th March 2018 held at I.M.S. Banaras Hindu University.

2. A computational analysis of the binding mode of closantel analogs as inhibitor of filarial chitinase in ''26th National Congress of Parasitology on addressing new challenges and emerging trends in parasitology and disease biology, 21st -23rd January 2016'' organized jointly by Department of Biochemistry, Institute of Science, Banaras Hindu University & The Indian Society for Parasitology.

3. Synthesis and X-ray structural analysis of 7-(2-hydroxy-3-piperidin-1-yl-propoxy)-benzopyran-2-one: a novel antimicrobial lead compound in ''6th IJAA-JSPS International conference on Contemporary advances of science and technology, 7-9th August, 2015'' held at Banaras Hindu University, Varanasi.

4. Synthesis, spectral characterization and ab initio and DFT calculations of 4-(2-hydroxy-3-octadecenylamino-propoxy)-chromen-2-one in National seminar on impact of industrial effluent on the self purification capacity of river Ganga, 29-30th March, 2015'' held at Department of Chemistry, Harish Chandra PG College, Varanasi.

5. Resolution and isolation of enantiomers of ($\pm$)-coumarinyl amino alcohols by thin layer and column chromatography using L-amino acids as Chiral auxiliaries in International conference on ''Frontiers of Spectroscopy'' 10-12 January, **2015** held at Department of Physics, Banaras Hindu University in association with Mississipi State University, USA and Laser and Spectroscopy Society of India.

6. Synthesis and activity of substituted coumarins against filarial parasite, *Brugia malayi* in 25th National congress of Parasitology on "Global challenges in the management of parasitic diseases" 16th-18th October, 2014 held at Central Drug Research Institute, Lucknow.

7. Synthesis, antifilarial activity and photophysical investigation of 4-(2-hydroxy-3-octadecenylamino-propoxy)-chromen-2-one in 5th CTDDR International Symposium on Drug Development for Orphan/Neglected Diseases 26-28 Feb., 2013 held at Central Drug Research Institute, Lucknow.

8. Synthesis, antibacterial activities of some benzopyran-2-one derivatives and prediction of their binding to bacterial DNA gyrase by molecular docking in 7th RSC-CRSI and 15th CRSI National Symposium in Chemistry Feb 01-03, 2013 held at Department of Chemistry, Faculty of Science, Banaras Hindu University, Varanasi-221005, India.

9. Synthesis and antibacterial activities of some quinolone derivative in National seminar on advances in chemical sciences held at Department of Chemistry, Udai Pratap Autonomous College, Varanasi on 8th Sept. 2012.

10. Spectroscopic Studies of Some New 7- and 4-Hydroxy Coumarin Derivatives in 4th CDRI-NIPER (RBL) symposium on medicinal chemistry and pharmaceutical sciences held at the Central Drug Research Institute, Lucknow from 23rd to 25th February 2012.

11. Tuberculosis: Major problems and challenges for disease control in National seminar on Mahamana's vision and the challenges of the millennium development goals, 1-2 March, 2011 held at MMV, BHU.

12. Synthesis and Spectral Characterization of Biologically Active 7-*O*-(2-hydroxy aminoalkyl)-4-Methyl Coumarins in 13th CRSI National Symposium in Chemistry Feb 04-06, 2011 organized by NISER and KIIT University, Bhubaneswar.

13. Synthesis and spectral characterization of 4-alkyl-2H-1-benzopyran-2-ones in National conference on experimental tools for materials science research: State of art 3-4 Dec., 2010 organized by Department of Physics, MMV, BHU, Varanasi.

14. Synthesis and Antimycobacterial Activities of Digalactopyranosylated aminoesters and aminoalcohols in XIX Carbohydrate Conference 1-3 Dec., 2004 organized by Forest Research Institute, Dehradun.

15. Diastereoselective synthesis of galactopyranosyl amino alcohols: development of new antitubercular agents in CTDDR 17-20 Feb. 2004, organized by CDRI, Lucknow.

16. Glutathione modulatory potential of 4-alkyl-7-O-acetamidyl coumarins in malarial and filarial parasites in International conference on Free Radical Research 10-12 Feb., 2003 organized by Chattrapati Shahuji Maharaj Medical University, Lucknow.