

Shakti Sahi

Assistant Professor

School of Biotechnology

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EDUCATIONAL/PROFESSIONAL QUALIFICATION:

- Ph.D- AIIMS
- M.Pharma- Institute of technology, Banaras Hindu University

SUMMARY OF TEACHING/RESEARCH/INDUSTRY EXPERIENCE :

8 years of teaching & research experience; 2 years of industrial experience.

RESEARCH AREA : Drug design; molecular modelling & simulations, pharmaceuticals.

ONGOING RESEARCH PROJECT: Design synthesis and evaluation of potent aminopeptidase inhibitors for malarial therapy”, Funded by Department of Biotechnology, Govt. of India.

PUBLICATIONS

1. Sahi,S. and Chaudhary, M. (2011), *Indian J. Experimental Biology* (In press)
2. Dipty Shrivastava, Vikrant Nain, Shakti Sahi, Anju Verma, Priyanka Sharma, PC Sharma, P Ananda Kumar (2011) 'Insights from molecular modelling and dynamics simulation of pathogen resistance (R) protein from brinjal' *Bioinformation*, 5(8):326-330.
3. Bhatnagar Seema, Kaushik Swati and Sahi Shakti (2011) 'Stereoselective Bromination of 2-Vinyl Chromones Using NBS', *Synthetic Communications*, 41: 2, 219-226.
4. Nain V, Sahi S, Verma A.(2010) 'CPP-ZFN: a potential DNA-targeting anti malarial drug' *Malar J.*, Sep 16;9:258.
5. Bhatnagar S, Sahi S, Kackar P, Kaushik S, Dave MK, Shukla A, Goel A. (2010) 'Synthesis and docking studies on styryl chromones exhibiting cytotoxicity in human breast cancer cell line' *Bioorg Med Chem Lett.* Aug 15;20 (16):4945-50.
6. Sharma K.N, Kumar Y, Sahi S, Priyanka (2010) '3D-QSAR studies of Pyrrolo[2,1-F][1,2,4]Triazines as Tyrosine Kinase Inhibitors', *Int. J. of Pharmacy & Pharm. Sciences* Vol.2 (2), 118-21.

7. Jitendra N, Prachi S, Alpana V, Shakti S (2007) 'In Silico identification of Antioxidant gene G6PD in Caenorhabditiselegans' *Online Journal of Bioinformatics*, 8 (1) : 61-74.
8. Roberto Ciccoli, Shakti Sahi, Sandhya Singh, Hridayesh Prakash, Maria-Patapia Zafiriou, Ganchimeg Ishdorj, Johan L.F. Kock, Santosh Nigam (2005) 'Oxygenation by cyclooxygenase-2 (COX-2) of 3-Hydroxyeicosa-tertraenoic acid (3-HETE), a fungal mimetic of arachidonic acid, produces a cascade of novel bioactive 3-hydroxyeicosanoids' *Biochem J. Sep* 15;390(Pt 3):737-47.
9. Kothekar V. and Sahi S (2002) 'Design of peptides and peptidomimetics as COX-2 selective inhibitors' *J.Molecular Structure (Theochem)*,577,107-120.
10. Kothekar V, Sahi S, Srinivasan M, Mohan A. and Mishra J. (2001) 'Recognition of cyclooxygenase-2 (COX-2) active site by NSAIDs: a computer modelling study' *Indian J.Biochemistry and Biophysics*, 38, 56-63.
11. Kothekar V, Sahi S and Mishra J (2001) 'Molecular dynamics simulation of interaction of 5 keto substituted 7 tert Butyl 2,3 dihydrop, 3,3 dinethyl furan derivatives with cyclooxygenase -2, *Current Science*, 80, 764-769.
12. Kothekar V, Sahi Shakti and Mishra Jyoti (2000) 'Enzyme selectivity of new cyclooxygenase -2/5 lipoxygenase inhibitors using molecular modeling approach', *Indian J.Biochemistry and Biophysics*, 37, 86-96.
13. Kothekar, V, Sahi S and M.Srinivasan (1999) 'Computer Simulation of the interaction of non-steroidal anti-inflammatory drugs:Indoprofen and NS398 with cyclooxygenase' , *J. Biomolecular Structure & Dynamics* 16,4,901-915.
14. Sahi Shakti., Srinivasan M. and Kothekar V (1999) '530 ps Molecular dynamics simulation of NSAIDs with COX-1 and COX-2. Study of perturbative changes' *J.Molecular structure (Theochem)* 498, 133-138.

- **Patent**

Styryl chromones as selective estrogen receptor modulators (Under draft for complete specification after filing provisional application No 993 DEL 2009)

AWARDS & ACHIEVEMENTS :

- Prof. M. L. Schroff Award for Standing first all over India in B.Pharm.
- Gold medal from Banaras Hindu University, Varanasi for securing first rank in B.Pharm.
- Appointed Honorary Research coordinator for Bioinformatics in Eicosanoid & Lipid Research Division, University Medical Centre, Berlin May 2006.

- Research Associateship from Council of Scientific Industrial and Research (CSIR), New Delhi, India
- Senior Research Fellowship from CSIR, New Delhi, India
- Junior Research Fellowship from UGC, India for qualifying in GATE.
- Prof. M. L. Schroff Award for Standing first all over India in B.Pharm.

List of conference Presentations

1. Tawatia P., Malik BK , Sahi S , Molecular dynamic simulation studies of membrane bound fully solvated β_3 Adrenergic Receptor, 9th European Conference on Computational Biology, Ghent, Belgium; September 26th-29th 2010.
2. Parul Tawatia, B.K. Malik, Shakti Sahi; Molecular modeling and docking studies of β_3 adrenoreceptor agonists as potential antidepressants and in treatment of overactive bladder; APBC 2010 The eighth Asia Pacific Bioinformatics Conference, Bangalore, India; 18-21st January 2010.
3. Seema Bhatnagar, Swati Kaushik, Puneet Kakkar, Shakti Sahi,; Synthesis and Docking Studies on Styryl Chromones as Antagonists for Estrogen Receptor Beta Second Binding Site in Target Discovery World Congress" on 4th-5th August 2009, USA.
4. Parul Tawatia, Jitendra narayan, Shakti Sahi; " Structure Prediction of the β_3 Adrenergic G-protein coupled Receptor"; 2nd Conference on drug development for third world: from Computational Molecular Biology to Experimental Approaches" in The Abdus Salam International Centre for Theoretical Physics Co sponsored by ICS UNIDO (Trieste) , IAEA(Vienna), ICGEB (Trieste) and INFM-DEMOCRITOS (Trieste) held at Miramare, Trieste-Italy from 1-5 June 2009
5. Apoorv Gupta, Parul Tawatia, Shakti Sahi, Jitendra Narayan "ALMIGHTY: Tool for analysis of DNA and Protein Sequence", 2nd Conference on drug development for third world: from Computational Molecular Biology to Experimental Approaches" in The Abdus Salam International Centre for Theoretical Physics Co sponsored by ICS UNIDO (Trieste) , IAEA(Vienna), ICGEB (Trieste) and INFM-DEMOCRITOS (Trieste) held at Miramare, Trieste-Italy from 1-5 June 2009
6. Rashmi S Srivastava, Anamika Arora, Parul Tawatia Yatendra Kumar, Shakti Sahi, "Docking Studies of Dual Inhibitors of Cyclooxygenase-2 and 5-Lipoxygenase as potential anticancer agents" in National Symposium-2009 on emerging trends in Biomedical Sciences held in Dehradun 27-28 Feb 2009
7. Parul Tawatia and Shakti Sahi; National Conference On Drug Discovery And Development held in New Delhi 21-23 Jan 2009

8. Parul Tewatia, Subodh Srivastava, Shakti Sahi; "Comparative Analysis of the Genes in Cytochrome P450" 7th INCoB (The International Conference of Bioinformatics) held from 20th -22nd Oct 08, Taiwan.
9. Roberto Ciccoli, Rupal Deva, Shakti Sahi, Lodewyk Kock, Santosh Nigam "Conversion by fungi *Dipodascopsis uninucleata* of AA to 3-Hydroxy-eicosatetraenoic acid (3-HETE), a novel potent bioactive mimetic of AA, involves β -oxidation associated multifunctional enzyme-2 (MFE-2)" International Symposium on Non-mammalian Eicosanoids, Berlin (2006)
10. Roberto Ciccoli, Shakti Sahi, Rupal Deva, Lodewyk Kock, Santosh Nigam Oxygenation by COX-2 and 5-, 12- and 15-lipoxygenases of 3-hydroxy-eicosatetraenoic acid, a fungal mimetic of AA, produces a cascade of novel bioactive 3-hydroxy-eicosanoids. International Symposium on Non-mammalian Eicosanoids, Berlin (2006)
11. Santosh Nigam, Rupal Deva, Maren Lohse, Julia Dewitz, Aynur Baran, Ganchimeg Ishdorj, Roberto Ciccoli, Shakti Sahi, Lodewyk Kock, Anna Wesell and Hennie Cronjé "Azole drug treatment is insufficient for therapy of recurrent vulvovaginal candidiasis: activation of COX-2 gene and production of novel bioactive arachidonic acid metabolites by *C. albicans* require novel therapy approach" International Symposium on Non-mammalian Eicosanoids, Berlin (2006)
12. Shakti Sahi, Vidya Kothekar, Roberto Ciccoli, Lodewyk Kock, Santosh Nigam "Conformational analysis of the interaction of 3-hydroxy-eicosatetraenoic acid (3-HETE), a novel fungal mimetic of AA, with cyclooxygenases" International Symposium on Non-mammalian Eicosanoids, Berlin (2006)
13. Kothekar, V. Sahi, Shakti., Srinivasan, M.Mohan Alok and Mishra Jyoti," (Sept.1999) Recognition of cyclooxygenase active cavity by NSAIDs: Computer Modeling study". *Satellite symposium of XIIIth International Biophysics congress on structural Biology and Molecular Recognition, Calcutta,India*, Invited Talk.
14. Kothekar, V. Sahi, Shakti and Srinivasan, M. (1999)," *Structural basis of inhibition of integrase activity by ligands. A computer modelling study*", *XIIIth International Biophysics congress, Delhi, India*. J.Biosciences24,74-74.
15. Kothekar, V. Sahi, Shakti and Srinivasan, M.(1999)," Molecular dynamics study of ligand induced perturbative changes in cyclooxygenase-I and 2", *XIIIth International Biophysics congress, Delhi, India*. J.Biosciences24,50-50.
16. Kothekar, V. Sahi, Shakti and Mishra Jyoti (1999)," Study of the enzyme selectivity of new cyclooxygenase -2/5 lipoxygenase inhibitors using

molecular modeling approach”,*XIIIth International Biophysics congress, Delhi, India.*

17. Kothekar, V. and Sahi, S. (2000) ”Design of peptides and peptidomimetics as cyclooxygenase (COX) inhibitors” *National Symposium on Magnetic resonance and Biomolecular structure and Function, Bombay, India .*
18. Kothekar,V. and Sahi,S. (2001) "Computational study of structure based ligand design" *71st Annual meeting of Indian Academy of Sciences, Pune, India . The paper was awarded a best research presentation award.*
19. Shakti Sahi and Kothear, V. (2002) “Design of peptides and peptidomimetics as COX-2 selective inhibitors” *International Symposium on Recent BioMedical Advances in Eicosanoid Research”, Berlin, GERMANY.*
20. Shakti Sahi, Kothekar, V and Nigam, S. (2002)” Molecular Modeling studies of interaction of HETE with COX-1 and COX-2” *International Symposium on Recent BioMedical Advances in Eicosanoid Research”, Berlin, GERMANY.*