



**Abhay T. Sangamwar, Ph.D.**

**Academic Title:** Assistant Professor,

**Education:** Bachelor's- B. Pharm., 1991, Shivaji University, MS, India

Master's- M.S., 1994, BITS, Pilani, Rajasthan, India

Ph.D- Pharmacy, 2006, SRTM University, M.S. India

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Dr Sangamwar's laboratory studies the molecular pharmaceutics and chemico- biological interactions responsible for poor pharmacokinetics and pharmacodynamics of drugs. Most of this work involves elusive mechanisms of drug efflux by efflux transporters, P-gp, BCRP and MRP; studies on substrate specificity and reaction phenotyping of UGT1A4, UGT1A8, UGT1A9, UGT1A10; and substrate specificity in CYP1A1, CYP1A2, CYP1B1. Particular emphasis has been placed on increasing bioavailability of drugs which efflux through membrane transporters and extensively metabolised in gastrointestinal tract. Long term focus of the laboratory is towards drug development through molecular level interactions of the drug during absorption, distribution, metabolism and elimination.

An important project currently underway are prodrug synthesis and formulation, co-crystals, pH dependent solubility, and nanocarrier drug delivery of drugs for improving the pharmacokinetics and pharmacodynamics.

## **Professional Experience**

### **September 2009 to Present**

- Teaching courses in biopharmaceutics and pharmacokinetics, dosage form design parameters and in silico design of pharmaceutical formulations through GastroPlus.
- Design of the research projects
- Assist to the management in various administrative activities like joint entrance examination, standing purchase committee

### **August 2000 to August 2009**

- As a head, department of Pharmaceutics, my responsibility was to assist in the management of the department in consultation with the head of the institute
- Tutoring and mentoring the students
- Ensure timely execution and conduct of the course
- Ensure and timely conduct of the university examination and result

### **February 1995 to July 2000**

- To lead a team of production towards timely completion of the batches
- Interact with quality control team and ensure of the quality of batches
- Served as a core team member for the loan licence projects from Lupin Laboratories Ltd. Aurangabad

## **Professional Activities**

- Coordinator, 3<sup>rd</sup> International Symposium on Drug Metabolism and Pharmacokinetics at NIPER SAS Nagar, February 2011.
- Coordinator, 4<sup>th</sup> International Symposium on Drug Metabolism and Pharmacokinetics at NIPER SAS Nagar, February 2012.
- Coordinator, 5<sup>th</sup> International Symposium on Drug Metabolism and Pharmacokinetics at NIPER SAS Nagar, March 2013.
- Coordinator, 6<sup>th</sup> International Symposium on Drug Metabolism and Pharmacokinetics at NIPER SAS Nagar, March 2014.
- Coordinator, 7<sup>th</sup> International Symposium on Drug Metabolism and Pharmacokinetics at NIPER SAS Nagar, February 2015

## **Professional Trainings**

- GastroPlus, March 23, 2012, NIPER SAS Nagar, Punjab, India
- Good Clinical Practice in Clinical Research, March 11-12, NIPER SAS Nagar, Punjab, India

## **Invited Lectures**

- ‘Alternatives to animal experimentation’, National Symposium cum Workshop on Experimental Research and Alternatives, PGIMER, Chandigarh, March 3, 2012
- ‘Molecular modelling in Pharmaceutical research’, Two days orientation programme on Current developments in Pharmaceutical Technology and Practice (Sponsored by PCI), SNIOP, Pusad, Maharashtra
- ‘QSAR’s do they really work’, Training school on computer aided drug design: hands on workshop, Panjab University, Chandigarh, January-February, 2013
- ‘Exploiting hPepT1 specific interactions towards next generation peptidomimetics’, 5<sup>th</sup> International Symposium on Drug Metabolism and Pharmacokinetics at NIPER SAS Nagar, March 2013
- ‘Xenobiotics’, One day programme titled ‘Medicine and Media’ Goa College of Pharmacy, 25<sup>th</sup> July, 2014
- “Understanding ligand-P-gp interactions at the atomistic level” Society for the study of xenobiotics (SSX), First annual conference, IISc, Bangalore. Sept. 1-3, 2016

## **Honours**

- Member, Board of Studies in Phramaceutics, SRTM University, Nanded, Maharashtra
- Member, Board of Studies in Bioinformatics, SRTM University, Nanded, Maharashtra
- DAAD fellowship for research stay in Germany
- Member of the executive committee of ISSX India chapter
- Treasurer of Society for the study of Xenobiotics (SSX)

## **Achievements**

- Mr Gaurao Doke, MS student has offered PhD at RWTH Aachen University, Aachen, Germany.
- Ms Anuseema Bhadauriya, MS student has offered PhD at Heinrich Heine University Dusseldorf, Germany.
- Mr Prajwal P Nandekar, PhD student has offered DAAD fellowship at Heidelberg University, Germany.
- Mr Rameshwar Prajapati. PhD student has offered DAAD fellowship at University of Bonn, Germany.

## International Collaborations

- Prof. Dr. Rebecca Wade, Heidelberg University, Group Leader, Molecular and Cellular Modeling, DKFZ-ZMBH Alliance & Heidelberg Institute for Theoretical Studies, Germany.
- Prof. Dr Michael Wiese, Pharmaceutical Chemistry II, Pharmaceutical Institute, An der Immenburg 4, 53121, University of Bonn, Germany.

## Extramural Funding

Sr No.	Grant Agency	Title of the project	Duration/Status	Amount (INR)
1	DST, New Delhi	Design and pharmaceutical profiling of anti-inflammatory leads: small molecule approaches	2010-2013/Completed	18,40,000/-
2	CSIR, New Delhi	Investigations of the solid state properties of pharmaceutical solids by in silico approaches	2011-2014/Completed	6,63,000/-
3	DBT, New Delhi	Molecular dynamics studies of homology model of CYP1A1, structure based drug design and virtual screening of potential ligands that modulates the biological function of CYP1A1	2012--2015/Completed	38,04,000/-
4	DBT, New Delhi	Computational and in vitro screening of bioflavonoids for selective P-gp inhibition	2015/ On going	31,83,200/-

## **Publications**

### 2007

1. **A. T. Sangamwar**, U. D. Deshpande, S. S. Pekamwar, S. M. Vadvalkar. Improving decision making for drug candidates: A computational approach for benzothiazoles as antifungal. **Indian J Biotech** July (2007) 6:397-403.

### 2008

1. **Abhay T. Sangamwar**, Leena. B. Labhsetwar, Sharad. V. Kuberkar . Exploring CYP1A1 as anticancer target: homology modeling and in silico inhibitor Design. **J Mol Model** (2008) 14(11):1101-1109. DOI 10.1007/s00894-008-0354-4 IF: 1.797

2. **A. T. Sangamwar**, U. D. Deshpande, S. S. Pekamwar. Antifungal: A need for search for new molecular target. **Indian J Pharm Scien** (2008) 70(4): 423-430.

## 2009

1. Avinash Patil, Swastika Ganguly, Sanjay Surana, Sanjay Pekamwar, **Abhay Sangamwar**.
2. Docking studies of novel 2-[5-substituted-1-H benzo (d) imidazole-2-yl sulfinyl] methyl 3-substituted quinazoline-4(2H)one. **International J PharmTech Res CODEN (USA)** (2009) 1:1227-1233.

## 2011

1. A. L. Shirfule, **A. T. Sangamwar**, C. N. Khobragade. Exploring Glycolate oxidase (GOX) as an antiurolithic drug target: molecular modelling and in vitro inhibitor study. **International J Biol Macromolecules**. (2011) 49:62-70. DOI: 10.1016/j.ijbiomac.2011.03.016. IF: 2.661

## 2012

1. Varikoti, Rohith Anand, Gangwal, Rahul, Dhoke, Gaurao, Ramaswamy, Venkata Krishnan, and **Sangamwar, Abhay**. Structure based de novo design of IspD inhibitors as anti-tubercular agents. Available from **Nature Precedings**. DOI: 10.1038/npre.2012.7088.1 (2012)
2. Pravin Ambure, Rahul Gangwal, **Abhay Sangamwar**. 3-D QSAR and molecular docking analysis of biphenyl amide derivatives as p38  $\alpha$  mitogen activated protein kinase inhibitors. **Mol Divers**. (2012) 16(2):377-88. DOI: 10.1007/s11030-011-9353-y. IF: 3.153
3. Kailash S Khomne, Prajwal P Nandekar, Banrida Wahlang, Pravin Bagul, Naeem Shaikh, Yogesh B Pawar, Chhuttan Lal Meena, **Abhay T Sangamwar**, Rahul Jain, K Tikoo, Arvind K Bansal. Mechanistic Insights into PEPT1-Mediated transport of a novel antiepileptic, NP-647. **Mol Pharm**. (2012) 9(9):2458-68. DOI: 10.1021/mp200672d. IF: 4.782
4. Prajwal Nandekar, **Abhay Sangamwar**. Cytochrome P4501A1 mediated anticancer drug discovery: In silico findings. **Expert Opin Drug Discov**. (2012) 7(9):771-89. DOI: 10.1517/17460441.2012.698260. IF: 2.116
5. Aeshna Amin, Manish Dare, **Abhay Sangamwar**, Arvind Kumar Bansal. Interaction of antimicrobial preservatives with blow-fill-seal packs: correlation sorption with solubility parameters. **Pharm Dev Technol**. (2012) 17(5):614-24. DOI: 10.3109/10837450.2011.557733. IF: 1.363
6. Udghosh Singh, Rahul P Gangwal, Rameshwar Prajapati, Gaurao V Dhoke, Mangesh Damre, **Abhay T Sangamwar**. 3D QSAR and molecular docking analysis of (4-piperidinyl)-piperdiny-piperazines as acetyl-CoA carboxylase inhibitors. **Arabian J of Chemistry**. (2012). DOI: 10.1016/j.arabjc.2012.10.023  
Accepted In Press

7. Gaurao V. Dhoke, Rahul P. Gangwal, **Abhay T. Sangamwar**. A combined ligand and structure based approach to design potent PPAR-alpha agonists. **Journal of Molecular Structure.** (2012) 1028(28): 22–30. DOI:10.1016/j.molstruc.2012.06.032 IF: 1.611
8. Santosh S Chobe, Bhaskar S Dawane, Khaled M Tumbi, Prajwal P Nandekar, **Abhay T Sangamwar**. An ecofriendly synthesis and DNA binding interaction study of some pyrazolo [1,5-a] pyrimidines derivatives **Bioorg Med Chem Lett.** (2012) 22(24):7566-72. DOI: 10.1016/j.bmcl.2012.10.027 IF: 2.539
9. Babasaheb Bandgar, Baliram Hote, Rahul Gangwal, and **Abhay Sangamwar**. Synthesis, biological evaluation and pharmacokinetic profiling of benzophenone derivatives as tumonecrosis factor-alpha and Interleukin-6 inhibitors. **Medicinal Chemistry Research** (2012) 21(10): 3177-3181. DOI: 10.1007/s00044-011-9856-1. IF: 1.271
10. . Dara Ajay, **Abhay T. Sangamwar** and Parikshit Bansal. Improved diffusion cell for drug binding and release studies. **Journal of Bioequival Availab.** (2012) 4(3)139-141 DOI: 10.4172/0975-0851.S1.11

## 2013

1. Prajwal P Nandekar, Khaled M Tumbi, Nitu Bansal, Vijay P Rathod, Leena B Labhsetwar, Neelagiri Soumya, Sushma Singh, **Abhay T Sangamwar**. Chem-bioinformatics and in vitro approaches for candidate optimisation: a case study of NSC745689 as promising antitumor agent. **Med Chem Res** (2013) 22:3728-3742 DOI: 10.1007/s00044-012-0364-8. IF: 1.628
2. Anuseema Bhadauriya, Gaurao V Dhoke, Rahul Gangwal, Mangesh V Damre, **Abhay T Sangamwar**. Identification of Acetyl-CoA carboxylase 1 and 2 inhibitors by Pharmacophore based virtual screening and molecular docking approach. **Molecular Diversity.** (2013) 17(1):139-149. DOI: 10.1007/s11030-013-9425-2. IF: 3.153
3. Udghosh Singh, Rahul P Gangwal, Rameshwar Prajapati, Gaurao V Dhoke, **Abhay T Sangamwar**. 3D QSAR pharmacophore based virtual screening and molecular docking studies to identify novel matrix metalloproteinase 12 (MMP-12) inhibitors. **Molecular Simulation** (2013) 39(5):1-12. DOI: 10.1080/08927022.2012.731506. IF: 1.328
4. Rameshwar Prajapati, Udghosh Singh, Abhijit Patil, Kailash S Khomane, Pravin Bagul, Arvind K Bansal, **Abhay T Sangamwar**. In silico model for P-glycoprotein substrate prediction: insights from molecular dynamics and in vitro studies **J Compu Aided Mol Design.** (2013) 27(4): 347-363. DOI: 10.1007/s10822-013-9650-x. IF: 3.386
5. Rahul P Gangwal, Anuseema Bhadauriya, Mangesh V Damre, Gaurao V Dhoke, **Abhay T Sangamwar**. p38 mitogen activated protein kinase inhibitors: A review

- on Pharmacophore mapping and QSAR studies. **Curr Top Med Chem.** (2013) 13(9):1015-35. DOI: 10.1016/j.annder.2013.02.009. IF: 4.174
6. Sameer Modi, Ajay K R Dantuluri, Vibha Puri, Yogesh B Pawar, Prajwal Nandekar, **Abhay T Sangamwar**, Sathyanarayana R Perumalla, Changquan Calvin Sun, Arvind K Bansal. Impact of crystal habit on biopharmaceutical performance of celecoxib. **Cryst. Growth Des.** (2013), 13 (7): 2824-2832. DOI:10.1021/cg400140a. IF: 4.720
  7. Rahul P Gangwal, Gaurao V Dhoke, Mangesh V Damre, **Abhay T Sangamwar**. Structure based virtual screening and molecular dynamic simulation studies to identify novel cytochrome bc1 inhibitors as antimalarial agents. **J of Computational Medicine.** (2013) 637901 DOI: 10.1155/2013/637901 Accepted In Press
  8. Kaushik Thanki, Rahul P Gangwal, **Abhay T Sangamwar**, Sanyog Jain. Oral delivery of anticancer drugs: Challenges and opportunities **J Control Release.** (2013) 170(1):15-40. DOI: 10.1016/j.conrel.2013.04.020. IF: 7.529
  9. Manisha Lalit, Rahul P Gangwal, Gaurao V Dhoke, Mangesh V Damre, Kanchan Khandelwal, **Abhay T Sangamwar**. A combined Pharmacophore modelling, 3D-QSAR and molecular docking studies of substituted bicycle – [3.3.0]oct-2-enes as liver receptor homologue-1 (LRH-1, NR5A2) agonists. **J of Molecular Structure.** (2013) 1049:315-325. DOI: 10.1016/j.molstruc.2013.06.035 IF: 1.611
  10. Satya Prakash Tripathi, Anuseema Bhadauriya, Abhijit Patil, **Abhay T Sangamwar**. Substrate selectivity of human intestinal UDP-glucuronosyltransferases (UGTs): In silico and in vitro insights. **Drug Metabolism Reviews.** (2013) 45(2):231-252. DOI: 10.3109/03602532.2013.767345. IF: 5.538

## 2014

1. Khaleed M Tumbi, Prajwal P Nandedkar, Naeem Shaikh, Siddharth S Kesharwani, **Abhay T Sangamwar**. Molecular dynamics simulation studies for DNA sequence recognition by reactive metabolites of anticancer compounds. **J Molecular Recognition.** (2014) 27: 138-150. DOI:10.1002/jmr.2342 IF: 3.006
2. Kanchan Khandelwal, Rahul P Gangwal, Udghosh Singh, Rameshwar Prajapati, Mangesh V Damre, **Abhay T Sangamwar**. Computational insights into the active site of human breast cancer resistance protein (BCRP/ABCG2): A similarity search approach. **Med Chem Res** (2014) 23(11):4657-4668 DOI: 10.1007/s00044-014-1035-8
3. Varun Kumar, Mahesh Rachamalla, Prajwal Nandekar, Gopal L Khatik, **Abhay T. Sangamwar**, Kulbhushan Tikoo, Vipin Nair. Design and synthesis of optically pure 3-aryl-6-methyl-2-thioxotetrahydropyrimidin-4(1H)-ones as anti-prostate cancer agents, **RSC Advances** (2014) 4:37868-37877 DOI: 10.1039/C4RA056391k

4. Vijay Rathod, Sumit Jain, Prajwal Nandekar, **Abhay T Sangamwar**. Human Pregnane X receptor: A novel target for anticancer drug development. **Drug Discovery Today**. (2014) 19(1) 63-70. DOI:10.1016/j.drudis.2013.08.009 IF: 6.890
5. Dedeepya Uppalapati, Nihar Das, Rahul Gangwal, Mangesh V. Damre, **Abhay Sangamwar** and Shyam Sunder Sharma. Neuroprotective Potential of Peroxisome Proliferator Activated receptor- $\alpha$  (PPAR- $\alpha$ ) agonist in cognitive impairment in Parkinson's disease: Behavioral, biochemical and PBPK profile. **PPAR Research** (2014) 753587 DOI: 10.1155/2014/753587 IF: 2.685
6. Mangesh V Damre, Rahul P Gangwal, Gaurao V Dhoke, Manisha Lalit, Dipna Sharma, Kanchan Khandelwal, **Abhay T Sangamwar**. 3D QSAR and molecular docking studies of aminopyrimidine derivatives as PknB inhibitors. **J of Taiwan Institute of Chemical Engineers**. (2014) 45:354-364 DOI:10.1016/j.jtice.2013.05.016. IF: 2.213
7. Dara Ajay and Abhay T Sangamwar. Identifying the Patent Trend, Licensing Pattern and Geographical Landscape Analysis of the Council for Scientific & Industrial Research (CSIR) of India between 2000 and 2011. **World Patent Information** (2014) 38:42-49 DOI:10.1016/J.wpi.2014.03.006
8. Inderjit S Yadav, Prajwal P Nandekar, Shambhavi Shrivastava, **Abhay Sangamwar**, Ashok Chaudhary, Subhash Mohan Agrawal. Ensemble docking and molecular dynamics identify knoevenagel curcumin derivatives with potent anti-EGFR activity. **Gene** (2014) 539:82-90. DOI: 10.1016/j.gene.2014.01.056 IF: 2.196
9. Rahul P Gangwal, Nihar R Das, Kaushik Thanki, Mangesh V Damre, Gaurao V Dhoke, Shyam S Sharma, Sanyog Jain, **Abhay T Sangamwar**. Identification of p38 MAP kinase inhibitors by Pharmacophore based virtual screening. **J Molecular Graphics and Modeling**. (2014) 49:18-24 DOI:10.1016/j.jmgm.2014.01.002 IF: 2.238
10. Nihar R Das, Rahul P Gangwal, Mangesh V Damre, Abhay T Sangamwar and Shyam S Sharma. A PPAR- $\beta/\delta$  agonist is neuroprotective and decreases cognitive impairment in a rodent model of parkinson's disease. **Current Neurovascular Research** (2014) 11:114-124. DOI:10.2174/1567202611666140318114037 IF:2.844
11. Pradipbhai D Kalariya, B Raju, Roshan M Borkar, Deepak Namdev, S Gananadhamu, Prajwal P Nandekar, Abhay T Sangamwar and R Srinivas. Characterization of forced degradation products of ketorolac tromethamine using LC/ESI/Q/TOF/MS/MS and in silico toxicity prediction. **J of Mass Spectrometry**. (2014) 49: 380-391 DOI: 10.1002/jms.3351 IF: 3.214
12. Ganesh Shete, Swathi Kuncham, Vibha Puri, Rahul P Gangwal, Abhay T Sangamwar and Arvind Kumar Bansal. Effect of different states of 'sorbed' water on amorphous celecoxib. **J Pharm Sci** (2014) 103: 2033-2041 DOI:10.1002/jps.23999 IF: 3.003



13. Dara Ajay , **Abhay T. Sangamwar** Anticancer patent landscape and technology assessment of Indian public-funded research institutes and organizations, **Expert Opin. Ther. Patents.** (2014) 24(8)
14. Preeti Pragyan, Siddharth S. Kesharwani, Prajwal P. Nandekar, Vijay Rathod, **Abhay T. Sangamwar**. Predicting drug metabolism by CYP1A1, CYP1A2, and CYP1B1: insights from MetaSite, molecular docking and quantum chemical calculations. **Mol. Divers.** (2014) 18(4): 865-78. DOI 10.1007/s11030-014-9534-6
15. Rameshwar Prajapati, **Abhay T. Sangamwar**, Translocation mechanism of P-glycoprotein and conformational changes occurring at drug binding site: Insights from Multi-targeted Molecular Dynamics. **Biochim Biophys Acta** (2014) 1838: 2882-2898. DOI:10.1016/j.bbame.2014.07.018
16. Pamita Bhandari, Neeraj Kumar Patel, Rahul P. Gangwal, **Abhay T. Sangamwar**, Kamlesh Kumar Bhutani. Oleanolic acid analogues as NO, TNF- $\alpha$  and IL-1 $\beta$  inhibitors: Synthesis, biological evaluation and docking studies. **Bio. Med. Chem. Letters** (2014) 24: 4114-4119 DOI:10.1016/j.bmcl.2014.07.056
17. Sanjay R. Patel, Rahul Gangwal, **Abhay T. Sangamwar**, Rahul Jain. Synthesis, biological evaluation and 3D-QSAR study of hydrazide, semicarbazide and thiosemicarbazide derivatives of 4-(1-adamantan-1-yl)quinoline as anti-tuberculosis agents. **Eur. J. Med. Chem.** (2014) 85: 255-267 DOI: 10.1016/j.ejmech.2014.07.100
18. Dara Ajay , **Abhay T. Sangamwar**. Clearing the fog of anticancer patents through an in-depth technology landscape and target analysis of pioneer research institutes and universities worldwide. **PLoS ONE** (2014) 9(8): e103847 DOI:10.1371/journal.pone.0103847
19. Sumit Jain, Vijay Rathod, Rameshwar Prajapati Prajwal Nandekar, **Abhay T. Sangamwar**. Pregnane X receptor and P-glycoprotein: a connexion for alzheimer's disease management. **Mol. Divers** (2014) 18(4): 895-909. DOI: 10.1007/s11030-014-9550-6
20. Pravin Bagul, Lailash S Khomane, Siddharth S Kesharwani, Preeti Pragyan, Prajwal P Nandekar, Chhuttan Lal Meena, Arvind K Bansal, Rahul Jain, Kulbhushan Tikkoo, **Abhay T Sangamwar**. Intestinal transport of TRH analogues through PepT1: The role of in silico and in vitro modelling. **J. Mol. Recognit.** (2014) 27: 609-617. DOI: 10.1002/jmr.2385
21. Siddharth S. Kesharwani, Prajwal P. Nandekar, Preeti Pragyan, **Abhay T. Sangamwar**. Comparative proteomics among cytochrome p450 family 1 for differential substrate specificity. **Protein J.** (2014) 33(6):536-48 DOI:10.1007/s10930-014-9586-6

22. Rahul P. Gangwal, Mangesh V. Damre, Nihar R. Das, Shyam S. Sharma, Abhay T. Sangamwar. Biological evaluation and structural insights for design of subtype-selective peroxisome proliferator activated receptor- $\alpha$  (PPAR- $\alpha$ ) agonists. **Bioorg. Med. Che. Lett.** (2014) 15;25(2) 270-5 DOI: 10.1016/jbmc1.2014.11.052

## 2015

1. Roshan M. Borkar, Murali Mohan Bhandi, Ajay P. Dubey, Prajwal P. Nandekar, **Abhay T. Sangamwar**, Sanjay K. Baberjee, R. Srinivas. Plasma protein binding, pharmacokinetics, tissue distribution, and CYP450 biotransformation studies of fidarestat by ultra high performance liquid chromatography-high resolution mass spectrometry. **J Pharm Biomed Anal.** (2015) 102: 386-399 DOI:10.1016/j.jpba.2014.10.008
2. Patel SR, Gangwal R, **Sangamwar AT**, Jain R. Synthesis, biological evaluation and 3D QSAR study of 2,4-disubstituted quinolines as anti-tuberculosis agents **Eur J Med Chem** (2015) 26(93):511-22. DOI: 10.1016/j.ejmech.2015.02.034
3. Amit Mahindra Rahul P. Gangwal Sunil Bansal, Nathan E. Goldfarb, Ben M. Dunn, **Abhay T. Sangamwar** and Rahul Jain Antiplasmodial activity of short peptide-based compounds **RSC Adv.**, (2015) 5:22674-22684 DOI: 10.1039/C5RA00779H
4. Prinesh N. Patel, Roshan M. Borkar, Pradipbhai D. Kalariya, Rahul P. Gangwal, **Abhay T. Sangamwar**, Gananadhamu Samanthula and Srinivas Ragampeta Characterization of degradation products of Ivabradine by LC-HR-MS/MS: a typical case of exhibition of different degradation behaviour in HCl and H<sub>2</sub>SO<sub>4</sub> acid hydrolysis **J Mass Spectro** (2015) 50(2): 344–353 DOI: 10.1002/jms.3533
5. Gangwal RP, Damre MV, Das NR, Dhoke GV, Bhadauriya A, Varikoti RA, Sharma SS, **Sangamwar AT**. Structure based virtual screening to identify selective phosphodiesterase 4B inhibitors **J Mol Graph Model** (2015) 57:89-98 DOI: 10.1016/j.jmgm.2015.01.007
6. Sunil K Jena, Sarsija Suresh, **Abhay T Sangamwar**. Modulation of tamoxifen induced hepatotoxicity by tamoxifen-phospholipid complex. **J Pharm Pharmacol** (2015) Apr 23 DOI: 10.1111/jphp.12422
7. Dara A, **Sangamwar AT**. Technology Whitespaces India Should Focus: A Comparative Anticancer Patent Rational Analysis of Indian and International Public Funded Universities. **Recent Pat Anticancer Drug Discov.**(2015) 10(2): 163-9
8. Prakram Singh Chauhan, Satya Prakash Tripathi, **Abhay T Sangamwar**, Neena Puri, Prince Sharma, Naveen Gupta. Cloning, molecular modelling, and docking analysis of

alkali-thermostable  $\beta$ -mannanase from *Bacillus nealsonii* PN-11. **Appl Microbiol Biotechnol** (2015) 99(21): 8917-25 DOI: 10.1007/s00253-015-6613-2

9. Neeraj K Patel, Khemraj Bairwa, Rahul Gangwal, Gaurv Jaiswal, Sanjay M Jachak, **Abhay T Sangamwar**, Kamlesh K Bhutani. 2'-hydroxy flavanone derivatives as inhibitors of pro-inflammatory mediators: Experimental and molecule docking studies. **Biorg and Med chem letters**. (2015) 25 (9): 1952-1955
10. Chhuttan L. Meena, Shubdha Ingole, Satyendra Rajpoot, Avinash Thakur, Prajwal P. Nandekar, **Abhay T. Sangamwar**, Shyam S. Sharma, Rahul Jain. Discovery of a low affinity thyrotropin releasing hormone (TRH) like peptide that exhibits potent inhibition of scopolamine induced memory impairment in mice. **RSC Advances** (2015) 5:56872-56884 DOI: 10.1039/C5RA06935A
11. Dara Ajay, Rahul P Gangwal, **Abhay T Sangamwar**. IPAT: A freely accessible software tool for analysing multiple patent documents with inbuilt landscape visualizer. **Pharmaceutical Patent Analyst**. (2015) 4(5):377-386. DOI 10.4155/ppa.15.25

## **2016**

1. Geetika Aggarwal, Rameshwar Prajapati, Rajan K Tripathy, Priyanka Bajaj, A R Satvik Iyengar, **Abhay T Sangamwar**, Abhay H Pande. Toward understanding the catalytic mechanism of human paraoxonase 1: Site specific mutagenesis at position 192. **PLoS ONE** (2016) 11(2): e0147999. DOI: 10.1371/journal.pone.0147999
2. Chhuttan L Meena, Avinash Thakur, Prajwal P Nandekar, Shyam S Sharma, **Abhay T Sangamwar**, Rahul Jain. Synthesis and biology of ring-modified l-histidine containing thyrotropin releasing hormone (TRH) analogues. **Eur. J Med Chem**. (2016) 111: 72-78. DOI: 10.1016/j.ejmech.2016.01.038
3. Neelagiri soumya, Hitendra Tandan, Mangesh V Damre, Rahul P Gangwal, **Abhay T Sangamwar**, Sushma Singh. Leucine-684: A conserved residue of an AMP-acetyl CoA synthetase (AceCS) from *Leishmania donovani* is involved in substrate recognition, catalysis and acetylation. **Gene** (2016) 580:125-133
4. Satya Prakash Tripathi, Rameshwar Prajapati, Neha Verma & **Abhay T. Sangamwar** Predicting substrate selectivity between UGT1A9 and UGT1A10 using molecular

modelling and molecular dynamics approach. **J Molecular Simulation** (2016) 42(4): 270-288J

5. Kesharwani SS, Nandekar PP, Pragyani P, Rathod V, Sangamwar AT. Characterization of differences in substrate specificity among CYP1A1, CYP1A2 and CYP1B1: an integrated approach employing molecular docking and molecular dynamics simulations **J Mol Recognit** (2016) Feb 25. DOI: 10.1002/jmr.2537
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