

May 24, 2019

CURRICULUM VITAE

NAME: Tanaji T. Talele
HOME ADDRESS: 6 Rhodes Drive
New Hyde Park, NY 11040
OFFICE ADDRESS: Department of Pharmaceutical Sciences
College of Pharmacy and Health Sciences
St. John's University, 8000 Utopia Parkway, Queens, NY 11439
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1. **EDUCATION**

Undergraduate

1985-1987 D. Pharm. Board of Technical Education, Mumbai, India
1988-1992 B. Pharm. University of Poona, India

Graduate

1992-1994 M. Pharm. Medicinal Chemistry, University of Mumbai, India
1995-1999 Ph.D. Medicinal Chemistry, University of Mumbai, India

2. **POSTDOCTORAL TRAINING**

Research Fellowships

3/99 - 12/02 Postdoctoral Fellow, Department of Biochemistry and Molecular Biology,
UMD-New Jersey Medical School, Newark, NJ
1/02 - 3/03 Postdoctoral Fellow, Department of Chemistry, Louisiana State University,
Baton Rouge, LA
4/03 - 2/04 Postdoctoral Fellow, Department of Chemistry, University of South Florida,
Tampa, FL
3/04 - 8/05 Postdoctoral Fellow, Drug Discovery Program, Moffitt Cancer Center & Research
Institute, Tampa, FL

3. **UNIVERSITY APPOINTMENTS**

9/05 - 8/09 **Assistant Professor**
Department of Pharmaceutical Sciences, College of Pharmacy & Health Sciences,
St. John's University, Queens, NY
9/09 - 8/10 **Associate Professor**
Department of Pharmaceutical Sciences, College of Pharmacy & Health Sciences,
St. John's University, Queens, NY
9/10 - 8/14 **Associate Professor (Tenured)**
Department of Pharmaceutical Sciences, College of Pharmacy & Health Sciences,
St. John's University, Queens, NY
9/14 - present **Professor**
Department of Pharmaceutical Sciences, College of Pharmacy & Health Sciences,
St. John's University, Queens, NY
9/14 - 8/17 **Assistant Chair**
Department of Pharmaceutical Sciences, College of Pharmacy & Health Sciences,
St. John's University, Queens, NY

4. **OTHER PROFESSIONAL POSITIONS**

- 8/87 – 4/88 **Hospital Pharmacist**, Central Railway Hospital, India
6/94 – 10/94 **Formulation Development Chemist**, US Vitamins (I) Ltd, India
1/95 – 8/95 **Synthetic Process Development Chemist**, Foods, Drugs, and Chemicals Ltd, India.

5. **AWARDS AND HONOR**

- 1992 Junior Research Fellowship**, UGC, Ministry of Education, India
1995 Senior Research Fellowship, Foods, Drugs, and Chemicals Ltd, India
2008 Chair, Medicinal Chemistry Section, ACS-Mid Atlantic Regional Meeting (MARM) May 18-22, 2008
2009 Chair, “Session – VI: Drug Targets, Inhibitors and Computational Resources” at Open Source International Conference on Computer-Aided Drug Discovery (OSCADD), IMTECH, Chandigarh, India. March 22-26, 2009
2007 – 2013 / 2015 – 2018 Faculty Recognition Award, College of Pharmacy & Health Sciences, St. John's University, Queens, NY

6. **MAJOR COMMITTEE ASSIGNMENTS**

College of Pharmacy and Health Sciences

- 2006 – 2009 Member, Faculty Development Committee
2007– 2010 Member, Undergraduate Curriculum Map
2008– 2017 Chair, Medicinal Chemistry Graduate Education Policy & Curriculum
2010– 2011 Member, Curriculum & Educational Policy Committee for Pharm.D.
2010–2012 Member, Committee on Library Development
2011–present Member, University Graduate Council
2012 Chair, Medicinal Chemistry I and II and Lab syllabus (for new B.S. in BioMed. Sci. program) writing committee
2012 Chair, Advoc committee for B.S. BioMed. Sci. syllabi
2012 Introduced Graduate Elective course – Computer-Aided Drug Design (MCM 267)
2016–present Member, New Pharm.D. Curriculum development committee

Editorial Boards

- Associate Editor** Bioorganic Chemistry, Elsevier publications
Guest Editor 2008 *Current Bioactive Compounds*, Bentham Science Publisher “Special issue on hot topics in Medicinal Chemistry”

Editorial Advisory Board

- 2016-present** *European Journal of Medicinal Chemistry*, Elsevier publications
<http://www.journals.elsevier.com/european-journal-of-medicinal-chemistry/editorial-board>
2012 –2018 *Journal of Chemistry*, Hindawi Publishing Corporation
<http://www.hindawi.com/journals/chem/editors/medicinal.chemistry/>
2013 –present *Journal of Cancer Research Updates*, Life Science Global
<http://lifescienceglobal.com/journals/journal-of-cancer-research-updates>

Reviewer

Medicinal Chemistry-

1) *J. Med. Chem.* 2) *Bioorg. Med. Chem.* 3) *Bioorg. Med. Chem. Lett.* 4) *ACS Med. Chem. Lett.* 5) *Eur. J. Med. Chem.* 6) *Tetrahedron* 7) *Mini Reviews in Med. Chem.* 8) *Curr. Topics in Med. Chem.* 9) *Curr. Bioactive Compounds* 10) *J. Enz. Inhibition and Med. Chem.* 11) *Org. Med. Chem. Lett.* 12) *Medicinal Chemistry*; 13) *Med. Res. Rev.*; 14) *Canadian J. Chemistry*; 15) *Drug Discovery Today*; 16) *Chem. Pharm. Bull.*; 17) *RSC Advances*

Molecular Modeling-

18) *J. Chem. Information and Modeling*; 19) *QSAR & Combinatorial Sciences* 20) *J. Computer-Aided Mol. Des.*; 21) *J. Mol. Modeling*; 22) *J. Cheminformatics*; 23) *Int. J. Mol. Sci.* 24) *Chem. Res. Tox.* 25) *Mol. Informatics*; 26) *Acta Pharmacologica Sinica*

Biochemical Sciences-

27) *Biochem. Pharmacol.* 28) *Chem. Biol. Drug Des.* 29) *Oligonucleotides* 30) *Antiviral Research* 31) *BBA Proteins & Proteomics*; 32) *ACS Chem. Neuroscience*; 33) *J. Pharmacol. Toxicol. Methods*; 34) *PLoS ONE*;

Text Book Reviewer

- 1) *Lemke & Williams, Foye's Principles of Medicinal Chemistry 6th edition 2007 reviewing assignment for upcoming 7th edition.*
- 2) *Remington: The Science and Practice of Pharmacy, Chapter 85, Central Nervous System Stimulants*

Invited Panel/External Reviewer for following Grant Agencies

- 1) The Campbell Foundation (Private foundation: Funds lab-based clinical Research in AIDS)
- 2) National Health and Medical Research Council (NHMRC), Government of Australia
- 3) Fondazione Telethon Italy foundation for development of therapeutics for genetic diseases

7. MEMBERSHIPS PROFESSIONAL SOCIETIES

Memberships

Member, American Chemical Society (ACS)
Member, American Association of University Professors
Member, American Association of Colleges of Pharmacy (AACP)
Member, American Association of Pharmaceutical Scientists (AAPS)
Member, American Peptide Society (APS)
Member, American Association for the Advancement of Science (AAAS)

8. MAJOR RESEARCH INTERESTS:

A) Development of Poly(ADP-ribose)polymerase (PARP) inhibitors for the treatment of cancer.

This project involves structure-based in silico approaches to identify new chemical entities for further synthesis and *in vitro* evaluation against PARP enzyme. Several nanomolar inhibitors are currently being investigated at NCI in *BRCA-2* deficient cell lines for selectivity and efficacy studies. Moreover, some of these inhibitors are also being studied at Université de Montréal to obtain co-crystal structure of PARP-inhibitor complex.

B) Development of P-glycoprotein inhibitors as MDR reversal agents.

This project involves design and synthesis of (*S*)-valine thiazole-derived peptides as P-

glycoprotein inhibitors. The (S)-valine thiazole-derived monomer and dimer units were derivatized with acid chlorides and amines, respectively, at amino and carboxyl terminus to obtain nanomolar inhibitors of P-glycoprotein. These inhibitors are being investigated as MDR reversal agents in Dr. Ambudkar's laboratory at NIH/NCI.

C) Development of highly active and selective inhibitors for the treatment of *Clostridium difficile* infections (CDI). Recently we discovered a small MW scaffold that inhibited *C. difficile* growth with MICs in the sub- μg range. This scaffold is currently being elaborated to improve drug features, including aqueous solubility, GI fluid stability, reduced intestinal permeability, and efficacy in *in vivo* models of CDI. Disclosure of invention is currently being pursued. This research project involves collaboration with a microbiologist (Dr. Seleem) from Purdue University.

9. GRANT HISTORY (post-tenure list only)

(FUNDED)

- 1) **Proposal Title:** Development of water soluble single digit nanomolar PARP inhibitors
Agency: St. John's University Seed Grant
Role on the Project: Principal Investigator (PI)
Total award: \$5,000
Award Period: 6/1/14-5/31/15
- 2) **Proposal Title:** Development of dihydrobenzofuran-7-carboxamides as catalytic PARP inhibitors
Agency: College of Pharmacy, Dean's Initiative to promote research and external funding
Role on the Project: Principal Investigator (PI)
Total award: \$5,000
Award Period: 6/1/14-8/31/14
- 3) **Proposal Title:** Design and synthesis of thiazole-dimer-based P-glycoprotein inhibitors
Agency: St. John's University Seed Grant
Role on the Project: Principal Investigator (PI)
Total award: \$5,000
Award Period: 6/1/13-5/31/14
- 4) **Proposal Title:** Designing in balanced triple-active (HER2, EGFR and Nek2) inhibitory analogs of neratinib for the treatment of cancer
Agency: St. John's University Seed Grant
Role on the Project: Principal Investigator (PI)
Total award: \$5,000
Award Period: 6/1/12-5/31/13
- 5) **Proposal Title:** Design and synthesis of serine derived analogs as HCV NS5B polymerase inhibitors
Agency: St. John's University Seed Grant
Role on the Project: Principal Investigator (PI)
Total award: \$5,000
Award Period: 6/1/11-5/31/12
- 6) **Proposal Title:** Structure-based development of nonnucleoside anti-HIV-1 RT Drugs

- Agency:** NIH/NIAID (1R21AI074477-A2)
Role on the Project: Collaborator
Total award: \$441,112
Award Period: 4/1/09-3/31/11
 7) **Proposal Title:** Bisubstrate Analogs as Poly (ADP-ribose) Polymerase-1 (PARP-1) Inhibitors
Agency: St. John's University Seed Grant
Role on the Project: Principal Investigator (PI)
Total award: \$5,000
Award Period: 12/31/08-1/1/09
 8) **Proposal Title:** Design and synthesis of allosteric inhibitors of HCV NS5B polymerase inhibitors
Agency: St. John's University Seed Grant
Role on the Project: Principal Investigator (PI)
Total award: \$5,000
Award Period: 6/1/08-12/31/08

10. **MAJOR TEACHING EXPERIENCE**

- 1996-1999 Instructor (University Institute of Chemical Technology, Pharmaceutical Department, University of Mumbai, India)
 2005-2009 Assistant Professor (St. John's University)
 2009-2014 Associate Professor (St. John's University)
 2014-present Full Professor (St. John's University)

Graduate Courses

- 2005 – 2009 Principles of Drug Design I (MCM 265)
 2006 – Medicinal Chemistry Journal Club (MCM231)
 2013 – Computer-Aided Drug Design (MCM267)
 2015– Design of Nucleoside Analogs (MCM223)
 2017 – Principles of Drug Design II (MCM 266)
 2017 – Receptors and Mechanism of Drug Action (MCM 248)

Undergraduate Courses

- 2005-2006 Drugs and Psychiatric Disorders (PHR 5110)
 2005-2007 Drugs and Skin/Conn. Tissue Disorders (PHR 4104)
 2008 – present Drugs and Skin, Conn.Tissue & Heme Disorders (PHR 4109)
 2005 – 2012 Introduction to Medicinal Chemistry (PHS 3508)
 2012 Drugs and Respiratory Disorders (PHR 4107)
 2012 Drugs and Cardiorenal I Disorders (PHR 4110)
 2013 – Drugs and Neuro/Psych Disorders (PHR 4112)

PH.D. / M.S. THESIS MENTOR

| # | Year | Student's name | Degree | Current position |
|----|------------|----------------|------------------|------------------|
| 1. | 2016-contd | Xuwei Shao | Ph.D. Med. Chem. | |

COMPLETED THESIS:

| | | | | |
|----|-----------|----------------|-----------------|---|
| 1. | 2005-2007 | Maulik Patel | M.S. Med. Chem. | - |
| 2. | 2006-2009 | Kirandeep Kaur | M.S. Med. Chem. | - |

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|-----|-----------|-------------------|------------------|--------------------------------|
| 3. | 2006-2009 | Pallav Patel | M.S. Med. Chem. | Patent Attorney |
| 4. | 2006-2009 | Shridhar Kulkarni | M.S. Med. Chem. | - |
| 5. | 2008-2011 | Aaditya Bhatt | M.S. Med. Chem. | - |
| 6. | 2008-2011 | Nikhil Khadtare | M.S. Med. Chem. | - |
| 7. | 2008-2012 | Maulik Patel | Ph.D. Med. Chem. | Scientist at Regeneron Biotech |
| 8. | 2010-2012 | Bhargav Patel | M.S. Med. Chem. | - |
| 9. | 2010-2013 | Olukemi Oyem | M.S. Med. Chem. | - |
| 10. | 2008-2013 | Satyakam Singh | Ph.D. Med. Chem. | Scientist at Juno Therapeutics |
| 11. | 2009-2014 | Shridhar Kulkarni | Ph.D. Med. Chem. | Clinical Scientist at Celgene |
| 12. | 2011-2014 | Aaditya Bhatt | Ph.D. Med. Chem. | Scientist at Amneal Pharm. |
| 13. | 2012-2015 | Snehalatha Reddy | M.S. Med. Chem. | - |
| 14. | 2014-2016 | Xuwei Shao | M.S. Med. Chem. | Pursuing Ph.D. (SJU) |
| 15. | 2012-2017 | Bhargav Patel | Ph.D. Med. Chem. | Postdoc Notre Dame University |
| 16. | 2013-2019 | Uday Kiran V. | Ph.D. Med. Chem. | Scientist, PACE Analytical |

VISITING SCIENTISTS/SCHOLARS:

1. Dr. Vikas Telvekar (Associate Professor), University Institute of Chemical Technology, Mumbai, India, September 2011 – February 2012
2. Dr. Chandrakant Bonde (Associate Professor), NmiMS, Institute of Pharmacy & Technology, Shirpur, India, September 2011 – February 2012

GRADUATE STUDENT THESIS COMMITTEE

2005-present Served as a committee member for 16 M.S. & 24 Ph.D. theses in Medicinal Chemistry, Pharmacology & Pharmaceutics

Ongoing: Serving on 7 Ph.D. thesis proposals

BIBLIOGRAPHY (91 articles being cited in 2004 research papers as of May 1, 2019)

H-Index = 26 (as per www.mendeley.com);

PubMed link: <http://www.ncbi.nlm.nih.gov/pubmed/?term=talele+t>

11. ARTICLES

1998-2006

1. Hariprasad, V.; Talele T. T.; Kulkarni, V. M. Design and synthesis of a novel series of nonpeptidic HIV-1 protease inhibitors. *Pharmacy and Pharmacology Communications*, **1998**, *4*, 365-372.
2. Talele T. T.; Hariprasad, V.; Kulkarni, V. M. Docking analysis of a series of cytochrome P-450_{14αDM} inhibiting azole antifungal agents. *Drug Design and Discovery*, **1998**, *15*, 181-190.
3. Talele T. T. and Kulkarni, V. M. Three-dimensional quantitative structure-activity relationship (QSAR) and receptor mapping of cytochrome P-450_{14αDM} inhibiting azole antifungal agents. *J. Chem. Inf. Comput. Sci.*, **1999**, *39*, 204-210.
4. Talele T. T.; Kulkarni, S. S.; Kulkarni, V. M. Development of pharmacophore alignment models as input for comparative molecular field analysis (CoMFA) of diverse set of azole antifungal agents. *J. Chem. Inf. Comput. Sci.*, **1999**, *39*, 958-966.
5. Kaushik, N.; Talele, T. T.; Pandey, P. K.; Harris, D.; Yadav, P. N. S.; Pandey, V. N. Role of glutamine 151 of human immunodeficiency virus type 1 RT in substrate selection as assessed by site directed mutagenesis. *Biochemistry*, **2000**, *39*, 2912-2920.
6. Pandey, P. K.; Kaushik, N.; Talele, T. T.; Yadav, P. N. S.; Pandey, V. N. The β7-β8 loop of the

p51 subunit in the heterodimeric (p66/p51) human immunodeficiency virus type 1 reverse transcriptase is essential for the catalytic function of the p66 subunit. *Biochemistry* **2001**, *40*, 9505-9512.

7. Pandey, P. K.; Kaushik, N.; Talele, T. T.; Yadav, P. N. S.; Pandey, V. N. Insertion of a peptide from MuLV RT into the connection subdomain of HIV-1 RT results in a functionally active chimeric enzyme in monomeric conformation. *Mol. and Cellular Biochemistry*, **2001**, *225*, 135-144.
8. Kaushik, N.; Talele, T. T.; Monel, R.; Palumbo, P.; Pandey, V. N. Destabilization of tRNA₃^{Lys} from the primer-binding site of HIV-1 genome by anti-A loop polyamide nucleotide analog. *Nucleic Acids Res.* **2001**, *29*, 5099-5106.
9. Clark, J. C.; Talele, T. T.; McLaughlin, M. L. Fronczek, F. R. (*E*)-3-Hexene-1,6-diyl dibenzoate. *Acta Crystallographica*, **2003**, *E59*, o962-963.
10. Talele, T. T. and McLaughlin, M. L. Asymmetric syntheses of enantiomerically pure α,α -dialkylated glycines as core structural units for novel HIV-1 protease inhibitors. *Pept. Proc. Am. Pept. Symp.*, 18th, (Michael Chorev and Tomi K. Sawyer, eds.), **2003**, 135-136.
11. Talele, T. T. and McLaughlin, M. L. Stereospecific synthesis of α -alkyl α,α -diamino- α -carboxylates as core structural units for novel HIV-1 protease inhibitors. *Pept. Proc. Am. Pept. Symp.*, 18th, (Michael Chorev and Tomi K. Sawyer, eds.), **2003**, 29-30.

2007

12. Patel, M. R. and Talele, T. T. 3D-QSAR Studies on malonyl coenzyme A decarboxylase inhibitors. *Bioorg. Med. Chem.* **2007**, *15*, 4470-4481.
13. Patel, M. R.; Dimmock, J. R.; Talele, T. T. CoMFA and CoMSIA studies on 1,3-bis(benzylidene)-3,4-dihydro-1H-naphthalen-2-one, 2,6-bis(benzylidene) cyclohexanone and 3,5-bis(benzylidene)-4-piperidone series of cytotoxic compounds. *J. Chem. Info. Modeling* **2007**, *47*, 2110-2123.

2008 (8 manuscripts)

14. Taldone, T.; Zito, W. S.; Talele, T. T. Inhibition of dipeptidyl peptidase-IV (DPP-IV) by atorvastatin. *Bioorg. Med. Chem. Lett.* **2008**, *18*, 479-484.
15. Patel, P. D.; Patel, M. R.; Basu, N. K.; Talele, T. T. 3D-QSAR and molecular docking studies of benzimidazole derivatives as hepatitis C virus NS5B polymerase inhibitors. *J. Chem. Info. Modeling* **2008**, *48*, 42-55.
16. Talele, T. T. and McLaughlin, M. L. Molecular docking/dynamics studies of Aurora A kinase inhibitors. *J. Mol. Graphics and Modeling* **2008**, *26*, 1213-1222.
17. Basu, N. K.; Alain B-W.; Talele, T. T.; Basu, A.; Chen, Y.; and Kucukguzel, S. G. 4-Thiazolidinone: A novel class of hepatitis C virus NS5B polymerase inhibitors. *Frontiers in Bioscience* **2008**, *13*, 3857-3868.
18. Basu, N. K.; Alain, B-W.; Talele, T. T.; Basu, A.; Paulo, R. R.; Alcides J. M.; Sarafianos, S. G.; Noël, F. Identification and characterization of coumestans as inhibitors of hepatitis C virus replicase. *Nucleic Acids Res.* **2008**, *36*, 1482-1496.
19. Kulkarni, S. S.; Patel, M. R.; Talele, T. T. CoMFA and HQSAR studies on 6,7-dimethoxy-4-pyrrolidylquinazoline derivatives as phosphodiesterase10A inhibitors. *Bioorg. Med. Chem.* **2008**, *16*, 3675-3686.
20. Talele, T. T. Multiple allosteric pockets of HCV NS5B polymerase and its inhibitors: A structure-based insight. *Curr. Bioactive Compounds* **2008**, *4*, 86-109.
21. Kaur, K.; Talele, T. T. 3D QSAR studies of 1,3,4-benzotriazepine derivatives as CCK₂ receptor antagonists. *J. Mol. Graphics and Model.* **2008**, *27*, 409-420

2009 (4 manuscripts)

22. Kaur, K.; Talele, T. T. Structure-based CoMFA and CoMSIA study of indolinone inhibitors of PDK1. *J. Comput.-Aided Mol. Des.* **2009**, *23*, 25-36.
23. Chen, Y.; Bopda-Waffo, A.; Basu, A.; Krishnan, R.; Silberstein, E.; Taylor, D.; Talele, T.T.; Arora, P.; Kaushik-Basu, N. Characterization of aurintricarboxylic acid as a potent hepatitis C virus replicase inhibitor. *Antiviral Chem. Chemother.* **2009**, *20*, 19-36.
24. Patel, P.D.; Talele, T.T.; Fronczek, F.R.; Synthesis and crystallographic characterization of 1-((2-(2,4-difluorophenyl)oxiran-2-yl)methyl)-1*H*-1,2,4-triazole: a crucial intermediate for the synthesis of azole antifungal drugs. *J. Chem. Crystall.* **2009**, *39*, 923-926.
25. Talele, T. T.; Upadhyay, A.; Pandey, V. N. Influence of the RNase H Domain of Retroviral Reverse Transcriptases on the Metal Specificity and Substrate Selection of Their Polymerase Domains. *Virology J.* **2009**, *6*, 159.

2010 (6 manuscripts)

26. Upadhyay, A.; Talele, T. T.; Pandey, V. N. Impact of template-overhang binding region of HIV-1 RT on the binding and orientation of the duplex region of the template-primer. *Molecular and Cellular Biochemistry*, **2010**, *338*, 19-33.
27. Talele, T. T.; Khedkar, S. A.; Rigby, A. C. Successful Applications of Computer Aided Drug Discovery: Moving Drugs from Concept to the Clinic. *Curr. Topics in Med. Chem.* **2010**, *10*, 127-141.
28. Upadhyay, A.; Pandey, N.; Mishra, C.A.; Talele, T. T.; Pandey, V. N. A single deletion at position 134, 135 or 136 in the beta 7-beta 8 loop of the p51 subunit of HIV-1 RT disrupts the formation of heterodimeric enzyme. *J. Cellular Biochem.* **2010**, *109*, 598-605.
29. Patel, P. D.; Patel, M. R.; Kocsis, B.; Kocsis, E.; Graham, S. M.; Warren, A. R.; Nicholson, S. M.; Billack, B.; Fronczek, F. R.; Talele, T. T. Design, synthesis and determination of antifungal activity of 5(6)-substituted benzotriazoles. *Eur. J. Med. Chem.* **2010**, *45*, 2214-2222.
30. Talele, T. T.; Arora, P.; Kulkarni, S. S.; Patel, M. R.; Singh, S.; Chudayeu, M.; Kaushik-Basu, N. Structure-based virtual screening, synthesis and SAR of novel inhibitors of hepatitis C virus NS5B polymerase. *Bioorg. Med. Chem.* **2010**, *18*, 4630-4638.
31. Hardej, D.; Ashby, C.; Khadtare, N.; Kulkarni, S.S.; Singh, S.; Talele, T. T. The synthesis of phenylalanine-derived C5-substituted rhodanines and their activity against selected methicillin-resistant *Staphylococcus aureus* (MRSA) strains. *Eur. J. Med. Chem.* **2010**, *45*, 5827-5832.

2011 (6 manuscripts)

32. Bhatt, A.; Patel, P. D.; Patel, M. R.; Singh, S.; Lau-Cam, C. A.; Talele, T. T. CoMSIA study on substituted aryl alkanolic acid analogs as GPR40 agonists. *Chem. Biol. Drug Des.* **2011**, *77*, 361-372.
33. Shi, Z.; Tiwari, A. K.; Shukla, S.; Robey, R. W.; Singh, S.; Kim, I.W.; Bates, S.E.; Peng, X.; Abraham, I.; Fu, L. W.; Ambudkar, S. V.; Talele, T. T.; Chen, Z.S. Sildenafil reverses ABCB1- and ABCG2-mediated chemotherapeutic drug resistance. *Cancer Res.* **2011**, *71*, 3029-3041.
34. Ding, P. R.; Tiwari, A. K.; Ohnuma, S.; Lee, J.W.K.K.; An, X.; Dai, C.L.; Lu, Q.; Singh, S.; Yang, D.H.; Talele, T. T.; Ambudkar, S. V.; Chen, Z.S. The phosphodiesterase-5 inhibitor vardenafil is a potent inhibitor of ABCB1/P-glycoprotein transporter. *PLoS ONE* **2011**, *6*, e19329.
35. Pandey, N.; Mishra, C.A.; Manvar, D.K.; Upadhyay, A.K.; Talele, T.T.; Comollo, T.W.; Kaushik-Basu, N.; Pandey, V.N. The glutamine side chain at position 91 on the β 5a- β 5b loop of human immunodeficiency virus type 1 reverse transcriptase is required for stabilizing the dNTP binding pocket. *Biochemistry* **2011**, *50*, 8067-8077.
36. Yan, Y.Y.; Zheng, L.S.; Zhang, X.; Chen, L.; Singh, S.; Wang, F.; Zhang, J.; Liang, Y.; Dai, C.;

Gu, L.; Zeng, M.; Talele, T.T.; Chen, Z.; Fu, L. Blockade of Her2/*neu* binding to Hsp90 by emodin azide methyl anthraquinone derivative induces proteasomal degradation of Her2/*neu*. *Mol. Pharmaceutics* **2011**, *8*, 1687-1697.

37. Bhatt, A.; Gurukumar, K.R.; Basu, A.; Patel, M.R.; Kaushik-Basu, N.; Talele, T.T. Synthesis and SAR optimization of diketo acid pharmacophore for HCV NS5B polymerase inhibition. *Eur. J. Med. Chem.* **2011**, *46*, 5138-5145.

2012 (8 manuscripts)

38. Patel, M.R.; Pandya, K.G.; Lau-Cam, C.A.; Singh, S.; Pino, M.A.; Billack, B.; Degenhardt, K.; Talele, T.T. Design and synthesis of *N*-substituted indazole-3-carboxamides as PARP-1 inhibitors. *Chem. Biol. Drug Des.* **2012**, *79*, 488-496.
39. Kulkarni, S.S.; Singh, S.; Shah, J.R.; Low, W.K.; Talele, T. T. Synthesis and SAR optimization of quinazolin-4(3*H*)-ones as PARP-1 inhibitors. *Eur. J. Med. Chem.* **2012**, *50*, 264-273.
40. Sodani, K.; Tiwari, A. K.; Singh, S.; Patel, A.; Xiao, Z.-J.; Chen, J.-G.; Sun, Y.-L.; Talele, T. T.; Chen, Z.-S. GW583340 and GW2974, human EGFR and HER-2 inhibitors, reverse ABCG2- and ABCB1-mediated drug resistance. *Biochem. Pharmacol.* **2012**, *83*, 1613-1622.
41. Zhao, X.-Q.; Xie, J.-D.; Chen, X.-G.; Sim, H. M.; Zhang, X.; Liang, Y.-J.; Singh, S.; Talele, T. T.; Sun, Y.; Ambudkar, S. V.; Chen, Z. S.; Fu, L.W. Neratinib Reverses ABCB1-Mediated Chemotherapeutic Drug Resistance in vitro, in vivo and ex vivo. *Mol. Pharmacol.* **2012**, *82*, 47-58.
42. Sun, Y. L.; Kathawala, R. J.; Singh, S.; Zheng, K.; Talele, T. T.; Jiang, W. Q.; Chen, Z. S. Zafirlukast antagonizes ATP-binding cassette subfamily G member 2-mediated multidrug resistance. *Anticancer Drugs*, **2012**, *23*, 865-873.
43. Cheng, C.; Liu, Z.G.; Zhang, H.; Zhong, F. T.; Wang, F.; Liang, Y. J.; Chen, L. K.; Singh, S.; Chen, J. J.; Talele, T. T.; Chen, Z. S.; Fu, L.W. Enhancing Chemosensitivity in ABCB1- and ABCG2-Overexpressing Cells and Cancer Stem-Like Cells by An Aurora Kinase Inhibitor CCT129202. *Mol. Pharm.*, **2012**, *9*, 1971-1982.
44. Dana, D.; Das, T. K.; Kumar, I.; Morinigo, A. D.; Mark, K. J.; Ramai, D.; Chang, E. J.; Talele, T. T.; Kumar, S. Design, Synthesis and Evaluation of 2-(Arylsulfonyl)oxiranes As Cell Permeable Covalent Inhibitors of Protein Tyrosine Phosphatases. *Chem. Biol. Drug Des.* **2012**, *80*, 489-499.
45. Golub, A. G.; Gurukumar, K. R.; Basu, A.; Bdzholia, V. G.; Bilokin, Y.; Yarmoluk, S. M.; Lee, J.-H.; Talele, T. T.; Nichols, D. B.; Kaushik-Basu, N. Discovery of New Scaffolds for Rational Design of HCV NS5B Polymerase Inhibitors. *Eur. J. Med. Chem.* **2012**, *58*, 258-264.

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 35. Shao, Xuwei.; Pak, Steven.; Patel, Bhargav.; Velagapudi, U.K.; Talele, T. T. Identification and optimization of 2,3-dihydrobenzo[b][1,4]dioxine-5-carboxamide as PARP-1 inhibitors. 250th American Chemical Society National Meeting, Boston, MA, August 16-20, **2015**.
 36. Velagapudi, U.K.; Bhatt, A.; Talele, T. T. Synthesis and evaluation of 2,3-dihydrobenzofuran-3(2H)-one-7-carboxamide derivatives as poly(ADP-ribose)polymerase-1 inhibitors. 250th American Chemical Society National Meeting, Boston, MA, August 16-20, **2015**.
 37. Patel, B.A.; Oyem, O.; Vilacha, J.F.; Talele, T. T. Synthesis and SAR optimization of 2-substituted imidazo[1,2-a]pyridine-8-carboxamides as poly(ADP-ribose)polymerase-1 inhibitors. 250th American Chemical Society National Meeting, Boston, MA, August 16-20, **2015**.

15. INVITED LECTURES

1. "Molecular Modeling and It's Applications in Drug Discovery" at College of Pharmacy, Nashik, India (March 22, 1999).
2. "Antifungal Drug Discovery & Enantioselective Syntheses of Chiral Bulding Blocks" St. John's University, Queens, NY (April 14, 2005)
3. "Design and Synthesis of Novel Antifungal Compounds" Hofstra University, Queens, NY, Long Island Section of American Chemical Society (September 11, 2008)
4. "Virtual Screening Guided Discovery of HCV NS5B Polymerase Inhibitors" Open Source International Conference on Computer-Aided Drug Discovery (**OSCADD**), IMTECH, Chandigarh, India, March 22-26, 2009
5. "Combined Ligand- and Structure-Based Design and Synthesis of Novel Antifungal Compounds" Open Source International Conference on Computer-Aided Drug Discovery (**OSCADD**), IMTECH, Chandigarh, India, March 22-26, 2009
6. "Virtual Screening Guided Discovery of HCV NS5B Polymerase Inhibitors" National Institute of Pharmaceutical Education & Research (NIPER), Govt. of India, Mohali, Punjab, India, March 27, 2009
7. "QSAR & Molecular Modeling" Tapi Valley Education Society's, College of Pharmacy, Faizpur, India, April 11, 2009
8. "Virtual Screening Guided Discovery of HCV NS5B Polymerase Inhibitors" Tapi Valley Education Society's, College of Pharmacy, Faizpur, India, April 11, 2009
9. "Indazole-3-carboxamide dioxindoliny PARP-1 inhibitors" Department of Biochemistry, UMD-New Jersey Medical School, Newark, NJ, April 16, 2010
10. "Design and Synthesis of Novel PARP inhibitors" Dept. of Pharmaceutical Sciences, University of Mumbai, Institute of Chemical Technology, Mumbai, India, July 22, 2010
11. "Discovery of Novel PARP-1 inhibitors-in vitro/in vivo study" NMIMS, Institute of Pharmacy &

- Technology, Shirpur, India, August 7, 2010
12. "Virtual screening, synthesis and SAR of novel NS5B polymerase inhibitors" R.C. Patel Institute of Pharmaceutical Education & Research, North Maharashtra University, India, August 7, 2010
 13. "Design and synthesis of PARP-1 inhibitors." College of Pharmacy, Chopada, India, August 9, 2010
 14. "Chemistry of medicinally active compounds" D.N. College of Arts and science, Department of Chemistry, Faizpur, India, August 11, 2010
 15. "Discovery of Novel PARP-1 inhibitors-in vitro/in vivo study" METs, Institute of Pharmacy, Adgaon, Nashik, India, August 14, 2010
 16. "Scope of Pharmacists in developed countries" Jalgaon District Pharmacists Association, College of Pharmacy, Jalgaon, India, August 17, 2010
 17. "Design and Synthesis of PARP-1 Inhibitors" Laboratory of Cell Biology, NCI, NIH, Bethesda, MD, May 31, 2011
 18. "Design and Synthesis of indazole and dihydrobenzofuran carboxamides as PARP-1 inhibitors" Dept. of Pharmaceutical Sciences, College of Pharmacy, North Eastern University, Boston, MA, September 15, 2011
 19. "Discovery of 2-arylidene-3-oxo-2,3-dihydrobenzofuran-7-carboxamide derivatives as sub-micromolar inhibitors of poly(ADP-ribose)polymerase-1" Dept. of Chemistry & Biochemistry, Queens College, CUNY, Queens, Flushing, NY, March 18, 2013
 20. "Novel Dihydrobenzofuran-Based Poly(ADP-ribose)Polymerase-1 Inhibitors" Dept. of Chemistry, City College of New York, CUNY, New York, NY, May 6, 2013
 21. "Comprehensive Synthesis of Amino Acid-derived Thiazole Peptidomimetic Analogues to Understand Enigmatic Drug/Substrate-Binding Site of P-glycoprotein" 1st International Conference on Cancer Pharmacology Research, St. John's University, Queens, New York, NY, December 13-16, 2017
 22. "Design and synthesis of poly(ADP-ribose) polymerase inhibitors" The Hudson-Bergen Chemical Society, The Sigma XI Chapter and The School of Natural Sciences of Fairleigh Dickinson University, The 20th Annual Undergraduate Research Symposium, April 20, 2018