

CURRICULUM VITAE

Feng Cheng Ph.D

Assistant Professor

Department of Pharmaceutical Sciences, College of Pharmacy

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Education:

07/2006 – 05/2010

Ph.D. in Bioinformatics, University of Virginia

09/1998 – 01/2003

Ph.D. in Computational Chemistry, Chinese Academy of Science

09/1994 – 07/1998

BS in Chemistry, Nanjing University, China

Career:

06/2012 – present

Assistant Professor at the University of South Florida, Tampa, FL

05/2010 – 05/2012

Postdoc Associate at Yale University School of Medicine

01/2005 – 07/2006

Research Assistant in Applied Physics program, RICE University

01/2003 – 01/2005

Postdoc at the University of Illinois at Urbana and Champaign

Patent:

1. *In vitro* transcriptomic prediction of hepatotoxicity for large drug screening.

Professional Honors or Recognition:

1. SAS Company certified professional
2. 2009 Chinese Government Award for Outstanding Self-Financed Students (\$5000)

Professional Service:

1. Co-editor of *Open Bioinformatics Journal*

2. Editor Board member of

Journal of Proteomics & Bioinformatics

Open Bioinformatics Journal

Journal of Biomedical Science and Engineering

Clinical & Experimental Pharmacology

3. Invited Reviewer (more than 50 times) for

Journal of Theoretical Biology

Bioinformatics

Open Bioinformatics

Current Bioinformatics

Journal of Computational Chemistry

Current Computer Aided Drug Design

Chemical Biology & Drug Design

Journal of Applied Crystallography

Protein and Peptide Letters

Asian Journal of Control

Medicinal Chemistry

Current Medicinal Chemistry

3. Session leader of 5th International Conference on Bioinformatics and Biomedical Engineering (iCBBE 2011, Wuhan, China)

Grant Support:

1. USF Women's Health Seed Grant Awards (05/2013-05/2014) "Identification of human serum miRNAs for the early detection of ovarian cancer"
2. USF College of Pharmacy research start-up grant (06/2012-06/2015)

Publications:

Research Papers

- 1. Spatiotemporal transcriptome of the human brain**
Hyo Jung Kang*, Yuka Imamura Kawasawa*, Feng Cheng*, Ying Zhu*, Xuming Xu*, Mingfeng Li*, Nenad Šestan *et al.*
Nature **2011** 478, 483–489
* Equal Contribution and I am in charge of data analysis
- 2. Multi-gene molecular signatures for predicting the risk of atherosclerosis**
Feng Cheng, Ellen C. Keeley, Klaus Ley, and Jae K. Lee
BMC Medical Genomics **2012** 5:2
- 3. Blood MicroRNAs: Novel 'Omics' Biomarkers for Ovarian Cancer Early Detection**
Feng Cheng
Journal of Proteomics Bioinformatics **2012** 5: xx-xxi
- 4. Genome-Wide Association Studies on Attention Deficit Hyperactivity Disorder**
Kathryn Ashmore and Feng Cheng
Clin Exp Pharmacol **2013**, 3:1
- 5. Exploring the mysteries of traditional Chinese medicine systematically by expression microarrays**
Feng Cheng
Drug Development Research **2012** 73: 499–503
- 6. Applications of Artificial Neural Network Modeling in Drug Discovery**
Feng Cheng and Vijaykumar Sutariya
Clin Exp Pharmacol **2012** 2:e113
- 7. In vitro transcriptomic prediction of hepatotoxicity for large drug screening**
Feng Cheng, Dan Theodorescu Ira G. Schulman, and Jae K. Lee
Journal of Theoretical Biology **2011**, 290C, 27-36
- 8. Multi-gene expression-based statistical approaches to predicting patients' clinical outcomes and responses.**
Feng Cheng, Sanghoo Cho, Jae K. Lee
Methods Mol Biol. **2010**, 620:471-84.
- 9. Molecular Docking Studies on the Interactions between the Thioesterase Domain of Human Fatty Acid Synthase and Its Ligands**
Feng Cheng, Qinghua Wang, Florante A. Quioco and Jianpeng Ma
PROTEINS: Structure, Function, and Bioinformatics **2008**, 1228-1234.
- 10. A Solid State ¹³C NMR, Crystallographic and Quantum Chemical Investigation of Chemical Shifts and Hydrogen Bonding in Histidine Dipeptides**
Feng Cheng, Haihong Sun Yong Zhang, Dushyant Mukkamala and Eric Oldfield
J. Am. Chem. Soc. **2005**, 127(36): 12544-12554.

11. **Inhibition of Isoprene Biosynthesis Pathway Enzymes by Phosphonates, Bisphosphonates, and Diphosphates**
Feng Cheng and Eric Oldfield
J. Med. Chem. **2004**, 47: 5149-5158.
12. **Quantum Chemistry Study on the Interaction of the Exogenous Ligands and the Catalytic Zinc Ion in Matrix Metalloproteinases**
Feng Cheng, Xiaomin Luo, Jianhua Shen, Xin Li, Jiande Gu, Weiliang Zhu, Ruihao Zhang, Jingkang Shen, Irit Sagi, Ruyun Ji, Kaixian Chen and Hualiang Jiang.
J. Phys. Chem. B, **2002**, 106: 4552-4559
13. **Steered Molecular Dynamics Simulations on the Tail Helix Latch Hypothesis in the Gelsolin Activation Process**
Feng Cheng, Jianhua Shen, Xiaomin Luo, Hualiang Jiang and Kaixian Chen.
Biophys. J. **2002**, 83: 753-762.
14. **Molecular Docking and 3D-QSAR Studies on the Possible Antimalarial Mechanism of Artemisinin Analogues**
Feng Cheng, Jianhua Shen, Xiaomin Luo, Weiliang Zhu, Jiande Gu, Ruyun Ji, Hualiang Jiang and Kaixian Chen.
Bioorg. & Med. Chem. **2002**, 10: 2883-2891.
15. **Interaction Models of a Series of Oxadiazole-Substituted alpha-Isopropoxy Phenylpropanoic Acids Against PPAR alpha and PPAR gamma: Molecular Modeling and Comparative Molecular Similarity Indices Analysis Studies**
Feng Cheng, Jianhua Shen, Xiaoying Xu, Xiaomin Luo, Kaixian Chen, Xu Shen and Hualiang Jiang
Protein and Peptide Letters **2009**, 16, 150-162.
16. **The progress in the design of Matrix metalloproteinase**
Feng Cheng, Hong Liu, Hualiang Jiang, Kaixian Chen and Ruyun Ji
Progress in Chemistry (Chinese), **2001**, 13(4): 283-293
17. **The research progress of PPAR agonists**
Feng Cheng, Jianhua Shen, Xiaomin Luo, Jingkang Shen, Hualiang Jiang and Kaixian Chen
Chin. Med. Chem.(Chinese) **2003**, 13: 110-120.
18. **Crystal Structure of Unliganded Influenza B Virus Hemagglutinin**
Qinghua Wang, Feng Cheng, Mingyang Lu, Xia Tian, and Jianpeng Ma
Journal of Virology **2008**, 82: 3011-3020
19. **Agonist-PPAR Interactions: A Molecular Modeling Study with Docking Approach**
Xiaoying Xu, Feng Cheng, Jianhua Shen, Xiaomin Luo, Lili Chen, Liduo Yue, Yi Du, Fei Ye, Shanhao Jiang, Dayuan Zhu, Hualiang Jiang and Kaixian Chen.
Int. J. Quantum Chem. **2003**, 93: 405-410.
20. **Binding Mechanism of H₅N₁ Influenza Virus Neuraminidase with Ligands and its Implication for Drug Design**
Medicinal Chemistry **2009**, 5, 242-249
K. Gong, L. Li, J.-F. Wang, F. Cheng, D.-Q. Wei and K.-C. Chou
21. **Concordant gene expression signatures predict clinical outcomes of cancer patients undergoing chemotherapy**
Paul D. Williams, Sooyoung Cheon, Dmytro M. Havaleshko, Hyeon Jeong, Feng Cheng, Dan

Theodorescu and Jae K. Lee
Cancer Research **2009**, 69 (21), 8302-8309

- 22. Virtual Screening on Natural Products for Discovering Active Compounds and Target Information**
Jianhua Shen, Xiaoying Xu, Feng Cheng, Hong Liu, Xiaomin Luo, Jingkang Shen, Kaixian Chen, Weimin Zhao, Xu Shen and Hualiang Jiang.
Curr. Med. Chem. **2003**, 10, 1241-1253.
- 23. Structure-Based 3-D-QSAR Analysis of Marine Indole Alkaloids**
Biao Jiang, Wen-Nan Xiong, Cai-Guang Yang, Hua-Liang Jiang, Feng Cheng, Kai-Xian Chen.
Bioorg. Med. Chem. **2002**, Aug;10(8):2775-8.
- 24. Binding analyses between Human PPARgamma-LBD and ligands.**
Changying Yu, Lili Chen, Haibing Luo, Jing Chen, Feng Cheng, Chunshan Gui, Ruihao Zhang, Jianhua Shen, Kaixian Chen, Hualiang Jiang and Xu Shen
Eur J Biochem, **2004**, 271: 386-397.
- 25. Structure-Based Discovery of Potassium Channel Blockers from Natural Products: Virtual Screening and Electrophysiological Assay Testing**
Hong Liu, Yang Li, Mingke Song, Xiaojian Tan, Feng Cheng, Suxin Zheng, Jianhua Shen, Xiaomin Luo, Ruyun Ji, Jianmin Yue, Guoyuan Hu, Hualiang Jiang, and Kaixian Chen
Chemistry & Biology, **2003**, 10,1103-1113.
- 26. Differentiation of Cation-pi Bonding from Cation-pi Interactions: A Quantum Chemistry Study Using Density-Functional Theory and Morokuma Decomposition Methods.**
Weiliang Zhu, Xiaojian Tan, Jianhua Shen, Xiaomin Luo, Feng Cheng, Puah Chum Mok, Ruyun Ji, Kaixian Chen, Hualiang Jiang.
J. Phys. Chem. A, **2003**, 13: 2296-2303.
- 27. Steered Molecular Dynamics Simulation on the Binding of NNRTI to HIV-1 RT.**
Lingling Shen, Jianhua Shen, Xiaomin Luo, Feng Cheng, Yechun Xu, Kaixian Chen, Edward Arnold, Jianping Ding, and Hualiang Jiang.
Biophysical Journal, **2003**, 84:3547-3563.
- 28. Structure Feature of AChE Inhibitor Huperzine B in Nature and in the Binding Site of AChE: Density Functional Theory Study Combined with IR Determination**
Xiaomin Luo, Feng Cheng, Xiaojian Tan, Dayuan Zhu, Kaixian Chen, Hualiang Jiang et al.
J. Theo. Comput. Chem. **2002**, 1: 81-92.
- 29. Structural Characterization of the Catalytic Active Site in the Latent and Active Natural Gelatinase B from Human Neutrophils**
Oded Kleifeld, Philippe E. Van den Steen, Anatoly Frenkeli, Feng Cheng, Hualiang Jiang, Ghislain Opendakker, and Irit Sagi.
J. Biol. Chem. **2000**, 275: 34335-34343.

Conference papers

- 30. A Universal Computational Model for the Hepatotoxicity Evaluation in vivo and in vitro**
Feng Cheng and Jae K. Lee
Travel Award Poster in 18th annual Growth Factor and Signal Transduction Symposium titled "Systems Biology: Integrative, Comparative, and Multi-Scale Modeling" in Ames, IOWA, **2009**

- 31. Molecular recognition of oxadiazole-substituted alpha-isopropoxy phenylpropanoic acids by PPAR-gamma and PPAR-alpha: Molecular modeling and 3D-QSAR studies**
Feng Cheng and Hualiang Jiang
Poster and Abstract in 51st Biophysical Society Annual Meeting in Baltimore, Maryland
BIOPHYSICAL JOURNAL 387A-387A 2007.
- 32. Interleukin-6 and TNF Inhibit Insulin Uptake and Insulin-Induced Phosphorylation of Caveolin-1 in Bovine Aortic endothelial Cells**
Hong Wang, Feng Cheng, Zhenqi Liu, Eugene J. Barrett
Abstract in American Diabetes Association conference in Chicago, Illinois 2007