

# Duan Wang

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## EDUCATION

**PhD candidate in Drug metabolism, GPA: 3.8/4** Sep 2007~Jun 2013  
University of Maryland School of Pharmacy, Maryland, USA

Dissertation: The role of Constitutive Androstane Receptor in Drug Metabolism  
Advisor: Dr.Hongbing Wang

**Bachelor of Science** Sep2003~Jun 2007  
Huazhong University of Science & Technology, Wuhan, China

## ACADEMIC EXPERIENCE

**Research Assistant** Aug 2007~Now  
University of Maryland School of Pharmacy, Maryland, USA

- Established an innovative cell-based co-culture system to quantitatively monitor the metabolism of cyclophosphamide and its main active metabolite, 4-hydroxycyclophosphamide using LC-MS/MS. Tested this assay on mouse, rat and human primary hepatocytes.
- Evaluate the toxicity of anti-cancer drugs on their target cells as well as hepatocytes and other cells/tissues both *in vitro* and *in vivo* using multiple end points and biomarkers.
- Explored the role of Constitutive Androstane Receptor (CAR) in the induction of Drug Metabolizing Enzymes by a variety of drugs, drug candidates and other compounds.
- Used a variety of biotechnological methods to test the induction profiles of different clinically applied drugs, drug candidates and other compounds on the CYP450s and other relevant phase I&II enzymes and transporters.
- Conducted the construction of His-tagged, pEGFP-tagged, and GST-tagged protein expression plasmids, amplification and purification of these proteins.
- Conducted an *in vitro* GABA binding assay using radio labeled GABA and mouse primary neurons.
- Established the construction and screening of a N1-Mouse Opioid Receptor expressing cell line based on transfected CHO cells.

**Teaching Assistant** Aug 2007~Jul 2008  
University of Maryland School of Pharmacy, Maryland, USA

- Served as teaching assistant in pharmacology class, helped proctoring, grading exams and explaining results to over 120 students. Established good working and personal relationships with professors, colleagues and fellow students
- Helped to identify and solve a design flaw of the electronic grade-posting system

## RESEARCH SKILL SETS

- Molecular biology: DNA transfection, cloning, Realtime-PCR, Western Blot, Luciferase Assay, et al.
- Cell biology: Human, mouse and rat primary hepatocyte isolation and culture, Human hepatic cell line and hematopoietic cell line culture, cryopreservation, cell viability assays, cell apoptosis assays, et al.
- In vivo: Experiment design, rodent tumor generation, isolation and analysis.
- Analytical techniques: LC-MS/MS, flow cytometry, platereader, confocal microscopy, automated cell counter, et al.
- Software: SigmaPlot, GraphPad Prism, Microsoft Office, Photoshop CS, et al.

## **PUBLICATIONS**

- Wang, D., Li, L., Yang, H., Fuhrman, J., Ferguson, S. & Wang, H. A novel in vitro model to investigate pro-drug activation and metabolism. (**Blood**, Accepted) 2012
- Wang, D. & Wang, H.. Oxazaphosphorine bioactivation and detoxification: The role of xenobiotic receptors. *Acta Pharmaceutica Sinica B*, April 2012
- Wang, D., Li, L., Fuhrman, J., Ferguson, S. & Wang, H. The Role of Constitutive Androstane Receptor in Oxazaphosphorine-Mediated Induction of Drug-Metabolizing Enzymes in Human Hepatocytes. *Pharm Res.* 2011

## **ABSTRACTS**

- Wang, D., Li, L., Yang, H., Fuhrman, J., Ferguson, S. & Wang, H. Constitutive Androstane Receptor is a novel therapeutic target for leukemia (Abstract to 18<sup>th</sup> North American ISSX meeting) 2012
- Wang, D., Li, L., Fuhrman, J., Ferguson, S. & Wang, H. Different roles of CAR and PXR in oxazaphosphorine-mediated induction of Drug-Metabolizing Enzymes (Abstract to GPEN2010 Meeting) 2010

## **SOCIAL ACTIVITIES**

**President of CSSA (Chinese Students and Scholars Association)** 2008~2009

- Persuaded University Student Government Association (USGA) to increase funding to CSSA by 15% when it was tightening budget, through presentation and oral defense in front of USGA senators and the executive board
- Organized five major cross-campus events with more than 150 participants each, took primary responsibility to secure their success as the president
- Developed a partnership between CSSA and Chinese Biopharmaceutical Association
- Established or strengthened partnership with more than 20 other educational, governmental and business organizations and individuals all over the world

## **HONORS**

**Travel Award to 18th North American ISSX meeting** 2012  
Awarded to 8 out of 125 applicants worldwide to an international academic meeting

**Departmental travel award to GPEN 2010 meeting** 2010  
Awarded to 2 out of 20 fellow graduate students to an international academic meeting

**Membership of Rho Chi Honor Society, Chapter Omega, USA** 2008  
The membership represents national-wide outstanding academic performance at graduate level

**Excellent Student Leader of Huazhong University of Science & Technology** 2006  
**Scholarship for Excellent Academic Performance** 2004~2006

## **PERSONAL INTERESTS**

**Photography** Website: <https://picasaweb.google.com/117382207160355270901>