

Mei Tian

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OBJECTIVE

Seeking a research position in pharmaceutical industry to utilize knowledge and experience in medicinal biochemistry and molecular biology.

EDUCATION

Doctor of Philosophy, Pharmaceutical Sciences May 2012
University of Connecticut, Storrs, CT
Dissertation: "Employing site-directed metagenesis strategy in tandem with covalent cannabinergic ligands to elucidate key residues in GPCRs"

Bachelor of Science, Biological Sciences May 2007
Sichuan University, Sichuan, China GPA: 3.7/4.0

RESEARCH EXPERIENCE

Research Assistant September 2007 – Present
Center for Drug Discovery, University of Connecticut

Advisor: Dr. Alexandros Markiyannis

- Utilize biochemical and molecular biology techniques from experimental design, DNA construction generation and drug screening to target validation
- Identify novel inhibitors to an enzyme (anandamide amidase) utilizing a high throughput RP-HPLC screening method
- Create two mutation pools in both human and mouse CB2 receptors to determine the target amino acid for current and future drug candidates utilizing cysteine substitution strategy
- Identify key amino acids in cannabinoid receptor-ligand interactions as well as in receptors functions utilizing Molecular Biology and Biochemical strategies
- Investigate the structural difference of a micro domain between human CB1 and CB2 receptors
- Develop or optimize assay methods for compounds screening and characterization: HPLC screening, radio-ligand binding assays, cAMP accumulation assay and covalent labeling assay
- Train fellow graduate students and undergraduate students on skills in molecular biology and biochemistry (HPLC, Binding assays, cell culture, etc.)
- Write scientific manuscripts and conduct scientific notebooks and protocols

Voluntary Trainee

October 2007 – May 2008

Biotechnology Research Center, Southwest Agricultural University, China

- Analyzed pesticide ability of the hypha-free fermented broth of T6, a T-DNA mutant of *Beauveria bassiana*
- Assisted in the project: ‘purification and characterization of a chitinase from bitter melon leaves *Momordica charantia*

PRESENTATIONS

Invited Speaker

March 2013

Current Trends in Drug Abuse Research Annual Symposium

Center for Drug Discovery, Northeastern University, Boston, MA

Title of talk, “Utilizing a cysteine substitution Strategy to elucidate key residues in CB2 binding pocket”

Guest Lecturer

Fall 2012

Department of Plant Science, University of Connecticut, Storrs, CT

Taught an undergraduate course, Biotechnology: Bioinformatics

SKILLS

• **Receptor / Drug Interaction Analysis:**

Handling of radioisotopes and radioactive materials; Saturation binding assays; Competition binding assays; Covalent labeling assays

• **Functional Analysis**

Intact cell cAMP accumulation assay

• **DNA and RNA Manipulation**

Construct design; DNA cloning; DNA and RNA purifications; PCR and RT-PCR; Site-directed mutagenesis; DNA sequencing and analysis; DNA transfection

• **Enzyme Characterization**

High performance liquid chromatography (HPLC) screening; Enzyme-linked immunosorbent (ELISA) assays; Enzyme kinetics analysis

• **Tissue and Cellular Culture**

Bacterial, fungal, plant and mammalian cell cultures

• **Protein Expression, Purification, and Analysis**

Mammalian cell line expression system; Affinity chromatography; Protein electrophoresis (SOS-PAGE); Western blots; Protein assays

• **Analysis of Experiment:**

Proficient in GraphPad Prism; familiar with MiniTAB, ClustalX; Sequencher VectorNT1; experienced in non-linear regression and nonparametric statistics

• **Microsoft Office Software:**

Proficient in Microsoft Word, PowerPoint, Excel and Access; Expert in Excel programming for data manipulation and analysis

PUBLICATIONS

- Tian, Mei**, Liu, Q., Mercier, R.W., and Makriyannis, A. (2012). The role of two cysteine residues in seventh transmembrane domain of human CB2 receptor in biarylpyrazole ligand binding and receptor's functions. (*To be submitted*)
- Tian, Mei**, Lu, D., Mercier, R.W., and Makriyannis, A. (2012). Species differences of ligand binding domains in CR2 cannabinoid receptor. (*To be submitted*)
- Tian, Mei**, Anday, J.K., Thakur, G., Zvonok, A.M., Mercier, R.W., and Makriyannis, A. (2012). The role of cysteine 6.47 in ligand recognition and receptor activation; towards elucidating human CR2 tertiary structure. *J Biol Chem.* (*Submitted*)
- Ariday, J.K., **Tian, M.**, Thakur, G., Lai, X., Dai, L., Mercier, R.W., and Makriyannis, A. (2012). Cannabilactone binding to the human CR2 cannabinoid receptor. *Biochemistry.* (*Submitted*)
- Woelkart, K., Xu, W., **Tian, M.**, Makriyannis, A., Picone, R.P., Bauer, R. (2011) The Endocannabinoid System as a Target for Alkamides from *Echinacea angustifolia* Roots. *Planta Med.* 71 (8): 7091 -5.
- Xiao, Y.H., Hou, L., Yuan, X.H., Yang, X.Y., **Tian, M.**, Luo, X.Y. (2008). Cloning and characterization of a homologous gene of plant class V chitinase from balsampear, *Momordica charantia* Linn. *Ada Genetica Simica.* 29(11):1028-33.