

## O. Helen Chan PhD

### Affiliate Consultant

**Summary.** Drug development expert with 20+ year experience in pharmaceutical industry in small molecules and oligonucleotides. Areas of experience and expertise include:

- Drug Development through Phase 1
- Regulatory Strategies and IND Filing
- Project Planning and Execution
- CRO Management
- Drug Absorption and First-Pass
- Clinical and Preclinical PK, PK/PD
- Transporters
- Due Diligence & Portfolio Assessment

### Professional Experience

---

Private Practice

Consultant: 2010- present

Genentech, Inc.

Associate Director, Drug Metabolism and Pharmacokinetics: 2004-2009

ArQule, Inc.

Senior Investigator, Group Leader – ADMET, Preclinical Pharmacology: 2001-2004

Pfizer Global Research & Development / Parke-Davis Pharmaceutical Research

Discovery & Preclinical Development; Drug Transport Group; In Vitro/In Vivo Screening Group

Pharmacokinetics, Dynamics, and Metabolism: 1991 to 2001

### Education/Certification

---

**1983; BS, Pharmacy**, University of Minnesota

**1991; PhD, Pharmaceutics (Pharmacokinetics)**, University of Minnesota

**2012; Regulatory Affairs Certificate: Pharmaceutics**, RAPS

### Drug Development Experience

---

- INDs and IBs; pre-meeting packages for FDA
- Drug discovery and drug development – oncology, immunology, inflammation, CNS, pain, antibacterial, cardiovascular, metabolic disease with small molecules, peptidomimetics, and oligonucleotides
- Pharmacokinetics, pharmacodynamics, toxicokinetics (experimental and simulation)
- *in silico* models for prediction of absorption, bioavailability, and blood-brain barrier penetration
- solubility, cell permeability/transport, protein binding; blood-plasma partitioning metabolic stability, CYP inhibition, cytotoxicity screening; dosing vehicles optimization for *in vivo* studies for discovery & development support
- Caco-2, MDCK, intestinal membrane vesicles, Ussing chamber, and in situ perfused intestine models for oral absorption, membrane transport mechanism, and BBB penetration
- animal models (rodent, rabbit, dog and primate) for absorption, first-pass effects and formulation development
- Prodrugs
- Biopharmaceutics Classification System
- Bioanalytical methods for small molecules

## **Selected Publications**

---

- Hamilton H, Steinbaugh B, Blankley J, Taylor M, Chan OH, Stewart B, et al. Evaluation of the intestinal permeability and hepatic handling of peptidomimetic analogs. *Bioorg. Med. Chem. Lett.*, 1993;3(5):813-818.
- Stewart BH, Chan OH, Lu RH, Reyner EL, Schmid HL, et al. Comparison of intestinal permeabilities determined in multiple in vitro and in situ models: relationship to absorption in humans. *Pharm Res.*, 1995;12(5):693-699.
- Hamilton HW, Steinbaugh BA, Stewart BH, Chan OH, et al. Evaluation of physicochemical parameters important to the oral bioavailability of peptide-like compounds; implications for the synthesis of renin inhibitors. *J. Med. Chem.*, 1995;38(9):1446-1455.
- Chan OH, Schmid HL, Kuo B, Wright DS, Howson W, Stewart BH. Absorption of Cam-2445, an NK<sub>1</sub> neurokinin receptor antagonist: *In vivo*, *in situ*, and *in vitro* evaluations. *J. Pharm. Sci.*, 1996; 85(3):253-257.
- Chan OH and Stewart BH. Physicochemical and drug delivery considerations to oral drug bioavailability. *Drug Disc. Today*, 1996; 1(11):461-473
- Stewart, BH, Chan OH, Jezyk N, and Fleisher D. Discrimination between drug candidates using models for evaluation of intestinal absorption. *Adv. Drug Del. Rev.*, 1997; 23(1-3):27-45.
- Chan OH, Sinz, MW and Stewart BH. Multiple-model evaluation of absorption of tachykinin receptor antagonists. *Adv. Drug Del. Rev.*, 1997; 23(1-3):121-131.
- Chan OH, Schmid HL, Stilgenbauer LA, Howson W, Horwell DC, Stewart BH. Evaluation of targeted prodrug strategy to enhance oral absorption of water-insoluble compounds. *Pharm. Res.*, 1998; 15(7):1012-1018.
- Stewart BH, Chung FY, Tait B, Blankley CJ, Chan OH. Hydrophobicity of HIV protease inhibitors by immobilized artificial membrane chromatography: Application and significance to drug transport. *Pharm. Res.*, 1998; 15(9):1401-1406.
- Stewart BH, Chan OH. Use of immobilized artificial membrane chromatography for drug transport applications. *J. Pharm. Sci.*, 1998, 87(12): 1471-1478.
- Zhu Z, Chen HG, Goel OP, Stilgenbauer LA, Stewart BH, Chan OH. Phosphate prodrugs of PD 154075. *Bioorg. Med. Chem. Lett.*, 2000, 10, 1121-1124.
- Smail JB, Chan OH, et al. Tyrosine Kinase Inhibitors. 17. Irreversible Inhibitors of the Epidermal Growth Factor Receptor: 4-(Phenylamino)quinazoline- and 4-(Phenylamino)pyrido[3,2-*d*]pyrimidine-6-acrylamides Bearing Additional Solubilizing Functions, *J. Med. Chem.*, 2000, 43: 1380-1397.
- Flygare JA, Chan OH, et al. Discovery of a Potent Small-Molecule Antagonist of Inhibitor of apoptosis (IAP) Proteins and Clinical Candidate for the Treatment of Cancer (GDC-0152), *J. Med. Chem.*, 2012, 55(9):4101-13.

## **Professional Activities**

---

- American Association for Pharmaceutical Scientists
- International Society for the Study of Xenobiotics