

Xiaowei Dong, PhD  
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Pharmaceutical Sciences  
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## Area of Expertise

Dr. Dong's research interests include pharmaceutical analysis/bioanalysis, drug formulation, and delivery. She develops novel formulation nanotechnologies to improve bioavailability of oral drugs and deliver macromolecules such as siRNAs and proteins. In addition to novel drug formulations, her lab evaluates these formulations for therapeutic efficacy (e.g. anticancer drugs), pharmacokinetics, and biodistribution. Thus, her lab has the capacity to perform bioassays for both small molecules and macromolecules. Additionally, she collaborates with the clinical pharmacy to test stability of compounding medications and Y-site compatibility.

## Qualifications

BS in Industrial Analysis

MS in Applied Chemistry, East China University of Science and Technology

PhD in Pharmaceutical Sciences, University of Kentucky

## Recent Publications

### **Design and Evaluation of Two-Step Biorelevant Dissolution Methods for Docetaxel Oral Formulations**

Shah, B. & Dong, X., Jul 2022, In: AAPS PharmSciTech. 23, 5, 113.

### **The stability of quetiapine oral suspension compounded from commercially available tablets**

Tran, J., Gervase, M. A., Evans, J., Deville, R. & Dong, X., Aug 2021, In: PLoS ONE. 16, 8 August, e0255963.

### **Development of in situ self-assembly nanoparticles to encapsulate lopinavir and ritonavir for long-acting subcutaneous injection**

Tanaodommongkon, I., Tanaodommongkon, A. & Dong, X., Jun 2021, In: Pharmaceutics. 13, 6, 904.

### **Quantitative measurements of IR780 in formulations and tissues**

Wang, J., Zhang, J., Nguyen, N. T. D., Chen, Y. A., Hsieh, J. T. & Dong, X., 5 Feb 2021, In: Journal of Pharmaceutical and Biomedical Analysis. 194, 113780.

### **Curcumin nanoparticles and their cytotoxicity in docetaxel-resistant castration-resistant prostate cancer cells**

Tanaodommongkon, I., Tanaodommongkon, A., Prathipati, P., Nguyen, J. T., Keller, E. T. & Dong, X., Aug 2020, In: Biomedicines. 8, 8, 253.

### **Determination of metformin bio-distribution by LC-MS/MS in mice treated with a clinically relevant paradigm**

Chaudhari, K., Wang, J., Xu, Y., Winters, A., Wang, L., Dong, X., Cheng, E. Y., Liu, R. & Yang, S. H., Jun 2020, In: PLoS ONE. 15, 6, e0234571.

### **Anticancer Efficacy of Oral Docetaxel Nanoformulation for Metronomic Chemotherapy in Metastatic Lung Cancer**

Le, S., Chang, C. M., Nguyen, T., Liu, Y., Chen, Y. A., Hernandez, E., Kapur, P., Hsieh, J. T., Johnston, K. & Dong, X., 1 May 2020, In: Journal of Biomedical Nanotechnology. 16, 5, p. 583-593 11 p.

### **Current strategies for brain drug delivery**

Dong, X., 2018, In: Theranostics. 8, 6, p. 1481-1493 13 p.

### **Preparation and characterization of novel HDL-mimicking nanoparticles for nerve growth factor encapsulation**

Zhu, J. & Dong, X., 22 May 2017, In: Journal of Visualized Experiments. 2017, 123, e55584.

**Development and characterization of docetaxel-loaded nanoparticles for docetaxel-resistant castration-resistant prostate cancer**

Tanaudommongkon, A., Tanaudommongkon, I., Prathipati, P., Nguyen, J. & Dong, X., 2017, In: Journal of Nanoscience and Nanotechnology. 17, 6, p. 3920-3926 7 p.

**Sponsored Projects**

**HEMAVET 950FS Purchasing for NIGMS R35 Award**

Dong, X. & Dong, X.

National Institute of General Medical Sciences

1/07/20 → 30/06/22

**Nanoparticle Drug Delivery to Overcome Multidrug Resistance to Cancer**

Dong, X.

Intramural Research(UNTHSC)

1/04/14 → 31/08/15

**Nerve Growth Factor Nanoparticles to Cross the Blood-Brain Barrier**

Dong, X.

NINDS: Neurological Disorders & Stroke

1/02/14 → 31/01/17

**Nerve Growth Factor Nanoparticles to Cross the Blood-Brain Barrier**

Dong, X. & Dong, X.

National Institute of Neurological Disorders and Stroke

1/02/14 → 31/01/17

**Nerve Growth Factor Nanoparticles to Cross the Blood-Brain Barrier**

Dong, X.

1/02/14 → 31/01/17

**Novel Formulation Technology to Enhance Oral Absorption of Water-insoluble Drugs**

Dong, X.

1/07/20 → 30/06/21