

Xiaowei Dong, PhD
UNT System College of Pharmacy
Pharmaceutical Sciences
Institute for Healthy Aging
Email: Xiaowei.Dong@unthsc.edu

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

PhD in Pharmaceutical Sciences, University of Kentucky
MS in Applied Chemistry, East China University of Science and Technology
BS in Industrial Analysis

Recent Publications

Current strategies for brain drug delivery

Dong, X., 1 Jan 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., 1 Jan 2017, In : *Journal of Nanoscience and Nanotechnology*. 17, 6, p. 3920-3926 7 p.

Development of novel HDL-mimicking α -tocopherol-coated nanoparticles to encapsulate nerve growth factor and evaluation of biodistribution

Prathipati, P., Zhu, J. & Dong, X., 1 Nov 2016, In : *European Journal of Pharmaceutics and Biopharmaceutics*. 108, p. 126-135 10 p.

Novel in situ self-assembly nanoparticles for formulating a poorly water-soluble drug in oral solid granules, improving stability, palatability, and bioavailability

Guo, S., Pham, K., Li, D., Penzak, S. R. & Dong, X., 7 Apr 2016, In : *International Journal of Nanomedicine*. 11, p. 1451-1460 10 p.

Development and in vivo evaluation of child-friendly lopinavir/ritonavir pediatric granules utilizing novel in situ self-assembly nanoparticles

Pham, K., Li, D., Guo, S., Penzak, S. R. & Dong, X., 28 Mar 2016, In : *Journal of Controlled Release*. 226, p. 88-97 10 p.

Nanomedicinal strategies to treat multidrug-resistant tumors: Current progress

Dong, X. & Mumper, R. J., 1 Jun 2010, In : *Nanomedicine*. 5, 4, p. 597-615 19 p.

Development of new lipid-based paclitaxel nanoparticles using sequential simplex optimization

Dong, X., Mattingly, C. A., Tseng, M., Cho, M., Adams, V. R. & Mumper, R. J., 1 May 2009, In : *European Journal of Pharmaceutics and Biopharmaceutics*. 72, 1, p. 9-17 9 p.

Doxorubicin and paclitaxel-loaded lipid-based nanoparticles overcome multidrug resistance by inhibiting P-glycoprotein and depleting ATP

Dong, X., Mattingly, C. A., Tseng, M. T., Cho, M. J., Liu, Y., Adams, V. R. & Mumper, R. J., 1 May 2009, In : Cancer Research. 69, 9, p. 3918-3926 9 p.

Development of idarubicin and doxorubicin solid lipid nanoparticles to overcome Pgp-mediated multiple drug resistance in leukemia

Ma, P., Dong, X., Swadley, C. L., Gupte, A., Leggas, M., Ledebur, H. C. & Mumper, R. J., 1 Apr 2009, In : Journal of Biomedical Nanotechnology. 5, 2, p. 151-161 11 p.

Sponsored Projects

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 → 31/01/16