Dong Liang, Ph.D.
Professor and Chair, Department of Pharmaceutical Sciences

Mailing Address:
Texas Southern University
3100 Cleburne Street
Houston, TX 77004

Office Location:
Pharmacy Building – GH #124B

Lab Location:
Pharmacy Building – GH #152

Contact:
- Voice: 713-313-1885
- Lab: 713-313-1897
- Fax: 713-313-1091
- E-mail: liang_dx@tsu.edu

Training and Education:
- B.S., Zhejiang University (Pharmacy)
- M.S., Zhejiang University (Pharmacy)
- Ph.D., University of Houston (Pharmaceutics)

Research Interest:
My research interests are primarily focused on two areas: (1) the pharmacokinetic analysis of factors that affects bioavailability of drugs. Therapeutic agents often exhibit poor and/or variable oral bioavailability due to their physico-chemical properties and physiological factors. Using rat as an animal model, pharmacokinetic studies are designed to identify mechanisms of oral drug

bioavailability and potential drug-drug interactions; (2) the pharmacogenetic analysis of anticancer therapy through integrating genetic determinants of cancer, pharmacokinetics and pharmacodynamics of anticancer drugs, and clinical outcome. Understanding genetic determinants of individual patient and their relationship with drug pharmacokinetics and clinical outcome would have a major impact on predicting drug response. Our long-term goal is to develop pharmacokinetically appropriate strategies for individualized chemotherapy and prevention.

Teaching:

- Professional program: Pharmaceutics; Pharmacokinetics
- Graduate program: Biopharmaceutics and Pharmacokinetics; Drug Delivery Systems; Pharmaceutical Analysis

Representative Publications:

- Saldivar, J.S., Lu, K.H., Liang, D., Gu, J., Huang, M., Vlastos, A., Follen, M., & Wu, X. (2007) Moving toward individualized therapy based NER polymorphisms that predict platinum sensitivity in ovarian cancer patients. Gynecologic Oncology, 107(1 Suppl 1), S223-S229.
- Chow, D. & Liang, D. (2008) Parenteral and oral formulations of benzimidazoles. U.S. Patent #7,419,996.
- Yang, Z., Leon, J., Martin, M., Harder, J.W., Zhang, R., Liang, D., Lu, W., Santos, C., Cai, C., Tian, M., Gelovani, J.G., Qiao, A., & Li, C. (2009) Influence of size and composition on pharmacokinetics and biodistribution of near-infrared fluorescence polymeric nanoparticles. Nanotechnology, 20(16), 1-11.
- Liang, D., Meyer, L., Chang, D.W., Lin, J., Pu, X., Ye, Y., Gu, J., Lu, K., & Wu, X. (2010) Genetic variants in microRNA biosynthesis pathways and binding sites modify ovarian cancer risk, survival, and treatment response. Cancer Research, 70(23), 9765-9776.
- Zhou, M., Zhang, R., Huang, M., Lu, W., Song, S., Melancon, M., Tian, M., Liang, D., & Li, C. (2010) A chelator-free multifuncational [64Cu]CuS nanoparticle platform for simultaneous micro-PET/CT imaging and photothermal ablation therapy. Journal of the American Chemical Society, 132(43), 15351-15358.
- Yin, J., Lu, K., Lin, J., Wu, L., Hildebrandt, M.A., Chang, D.W., Meyer, L., Wu, X., & Liang, D. (2011) Genetic variants in TGF-β pathway are associated with ovarian cancer risk. PLoS One, 6(9):e25559.
- You, J., Zhang, R., Zhang, G., Zhong, M., Liu, Y., Van Pelt, C.S., Liang, D., Wei, W., Sood, A.K., & Li, C. (2012) Photothermal-chemotherapy with doxorubicin-loaded hollow gold nanospheres: a platform for near-infrared light-trigged drug release. Journal of Controlled Release, 158(2), 319-328.
- Wei, B., Abobo, C.V., Ma, J., & Liang, D. (2012) Gender differences on pharmacokinetics of antipyrine in a simulated weightlessness rat model. Aviation, Space and Environmental Medicine, 83(1), 8-13.
- Meng, Q.H., Xu, E., Hildebrandt, M.A., Liang, D., Lu, K., Ye, Y., Wagar, E.A., & Wu, X. (2013) Genetic Variants in the Fibroblast Growth Factor Pathway as Potential Markers of Ovarian Cancer Risk, Therapeutic Response, and Clinical Outcome. Clinical Chemistry, 60(1), 222-232.
- Wang, Y., Ye, Y., Lin, J., Meyer, L., Wu, X., Lu, K., & Liang, D. (2013) Genetic variants in matrix metalloproteinase genes as disposition factors for ovarian cancer risk, survival, and clinical outcome. Molecular Carcinogenesis, Published online, DOI 10.1002/mc.22111

- John, J., John, M., Wu, L., Hsiao, C., Abobo, C.V., & Liang, D. (2013) Effects of etravirine on the pharmacokinetics and pharmacodynamics of warfarin in rats. British Journal of Pharmacology, 168(8),1851-1858.
- Liang, D., Joseph, M.K., John, J., & Abobo, C.V. (2014) Etravirine formulations and uses thereof. U.S. Patent #8,703,786 B2.
- You, J., Zhou, J., Zhou, M., Liu, Y., Robertson, J.D., Liang, D., Van Pelt, C., & Li C. (2014) Pharmacokinetics, clearance, and biosafety of polyethylene glycol-coated hollow gold nanospheres. Part Fibre Toxicol, 11(26), 1-14.
- Melancon, M.P., Zhou, M., Zhang, R., Xiong, C., Allen, P., Wen, X., Huang, Q., Wallace, M., Myers, J.N., Stafford, J., Liang, D., Ellington, A.D., & Li, C. (2014) Selective uptake and imaging of aptamer- and antibody-conjugated hollow nanospheres targeted to epidermal growth factor receptors overexpressed in head and neck cancer. ACS Nano, 2014, 8(5), 4530–4538.