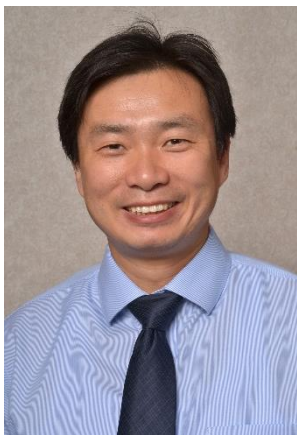


Translational Biomedical Informatics in Drug Interaction Research



Abstract: I will introduce two active drug interaction research projects. The first project will develop a translation drug interaction knowledgebase (TDIK). TDIK will translate the preclinical drug interaction studies into the clinical studies. I will introduce some new machine learning methods, such as active learning and natural language processing, in data curating for TDIK. The first project is more relevant to clinical informatics (text mining and database development) and biostatistics (phase I study design).

The second project is to develop systems pharmacology model in predicting drug response for drug resistance cancer cells. I will introduce novel systems biology and systems pharmacology models in characterizing active and essential pathways or sub-pathways using gene expression and CRISP screening data, and eventually identify targets or drugs in treating drug resistance. Here we will use prostate cancer enzalutamide resistance as one example. The second project is more relevant to bioinformatics.

About the Speaker: Dr. Li received his Biostatistics PhD in 2001. From 2001-2017, Dr. Li was a Professor in Medical Genetics at the Indiana University School of Medicine; and Director of the Center for Computational Biology and Bioinformatics. Starting from 2017, he has been the Chair of the Department of Biomedical Informatics. His research has covered both clinical informatics and bioinformatics. Dr. Li's lab has many ongoing projects related to drug interactions. They are interesting not only in the pharmacology mechanisms but also the clinical impact of drug interactions.

Lang Li, PhD
Friday, January 17th, 11:00am-12:00pm
105 BRT