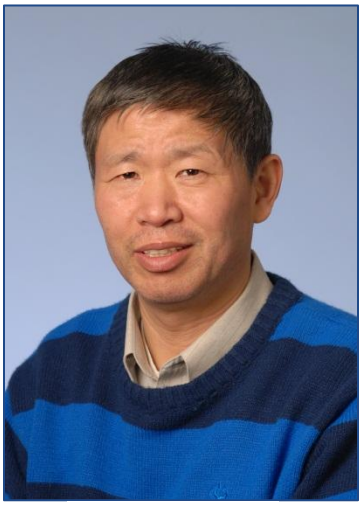
RECIPIENTS OF THE $10,000 CHALLENGE ANNOUNCED

In July 2013, Clinical Pharmacology received a $10,000 donation from Robert and Sue Elgar. Dr. and Mrs. Elgar chose to donate this money because "we are really hoping to bring more attention to the issues with adverse drug reactions and are hoping more physicians will take part in donating funds for research in this area".

Dr. Flockhart challenged the fellows and graduate students in Clinical Pharmacology to submit their best ideas on an adverse drug reaction research project where they could utilize the money received. Dr. Flockhart received eight excellent entries! After much consideration, he chose the entries submitted by Heqaio Dai and Kimberly Burgess for being thorough, innovative, doable, relevant to important adverse drug reactions, and the potential to generate new knowledge. Heqaio and Kimberly were each awarded $5,000 to be used to conduct their research.

The winning entries are below. Congratulations to Heqaio and Kimberly!



Heqaio Dai

STUDY OF HISTOPATHOLOGY AND PHARMACOKINETICS

Benzodiazepines are widely used psychoactive drugs, but they also result in significant adverse effects. This project investigates the histopathologic changes that occur in the brain, liver, kidney and lung in tumor xenograft mice treated with high dose diazepam and examines the distribution of diazepam and its metabolites in those tissues using pharmacokinetic methods. This data will allow us to anticipate toxicity better and manage the use of benzodiazepine in the clinic with greater effect.

VALIDATION OF CYP286 REGULATION BY miR-483-3p USING TALE-TFs

MicroRNAs are anticipated to target approximately 60% of human genes, mostly by decreasing the amount of the targeted gene being made. A decrease in genes involved in drug absorption, distribution, metabolism, and excretion, contribute to differing drug response and potentially cause adverse drug reactions. Focusing on microRNAs that changed during development from fetal to pediatric to adult, we want to determine which microRNAs target which genes and how these changes affect each group. This will allow us to improve dosing and drug recommendations in the different groups, especially in children.

Kimberly Burgess