1112-34-673 **Qing Wang*** (qwang@shepherd.edu), **Zhijun Wang** and **David J Klinke**. *Modeling the efficacy of an immunochemotherapy against colorectal cancer.*

A recent study reported that the chemotherapy agent oxaliplatin (OXP) used in combination with interleukin-12 (IL-12) was able to eradicate pre-existing liver metastatic colorectal cancer in mice. A three-compartment mathematical model was developed to describe the interaction between the immune system and tumor in response to the combined immunochemotherapy. The effects of the combined therapy were approximated using impulses due to abrupt changes of IL-12 and OXP concentrations at the administration time. Model parameters were calibrated to published experimental data using a genetic algorithm. The calibrated model was also used to catch the median tumor growth responding to the combined therapy against a tumor rechallenge. The optimal therapeutic dosage and timing in mixed immunochemotherapy were investigated to control tumor growth based on the calibrated model. The study is supported by the NIGMS of the NIH grant as part of the West Virginia INBRE (P20GM103434). (Received August 11, 2015)