

1145-VN-2979 **Qing Wang***, Shepherd University, Shepherdstown, WV 25443, and **Zhijun Wang** and **David J Klinke**. *Analysis of A Calibrated Tumor Growth Model in Response to a Combination Therapy Involving 4-1BB & IL-12.*

Recent preclinical studies have demonstrated synergistic therapeutic benefit by combining 4-1BB agonists with multiple antitumor therapies including IL-12. In this work, we developed a multi-scale model using a system of impulsive ordinary differential equations (IODE) to describe the interaction between the immune system and tumor in response to the combination therapy involving 4-1BB and IL-12. Model parameters are calibrated to experimental data using a genetic algorithm. Results of stability and sensitivity analysis, optimal treatment strategies will be discussed. This research was supported by NIH Grant P20GM103434 to the West Virginia INBRE. (Received September 26, 2018)