

Pharmacodynamics and Pharmacokinetics Models for Cancer Treatment

The project focuses the development of spatially distributed models associated with the transport of from the blood vessels to brain tumors through the interstitial fluid. The project motivation stems from current complexities associated with how to attain high dosages to brain tumors through oral uptake. The project will have two phases. The first will be a critical review of current articles in the open literature. The second phase will focus on developing an accurate model of the pharmacodynamics employing Matlab. A working knowledge of programming will be a partial objective of the second phase. Upon the successful completion of the model, the simulation results will be analyzed and compared to available experimental results in the literature. The ultimate focus of the project is the development of an accurate pharmacokinetics model that can be employed to improve the current treatment strategies.