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A Multiscale Model for Tumor Growth

Date: Tuesday, February 7

Time: 11:00 A.M. EST

Location: Clark 110

Simulcast to Talbot Library, 709 Traylor Bldg

Podcast available after seminar

Abstract

Cancer has become the leading cause of death for Americans. The development of prognostic tools could have immediate impact on the lives of millions of cancer patients. We have developed a multiscale model that integrates a cellular model for cell dynamics (cell growth, division, death, and cell adhesion), an intracellular protein regulatory network for cell cycle control, and extracellular reaction-diffusion chemical dynamics. This model has produced tumor growth dynamics that agree with tumor spheroid experiments, and generated a few hypotheses on tumor biology that can be tested by experiment. The model has the potential to become a comprehensive and predictive model for tumor development and therapy based on quantitative experiments.

CCBM mailing list

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