Meeting: 1006, Lubbock, Texas, SS 16A, Special Session on Partial Differential Equation and Its Application in Biomedical Study

1006-92-139   **Bruce P Ayati*** (`ayati@smu.edu`), SMU Math Dept., Clements 208, 3200 Dyer St., Dallas, TX 75205, and **Glenn F. Webb**. *Computations of Multi-Scale Models of Cancer Tumor Invasion.* Preliminary report.

We present multi-scale models of cancer tumor invasion where behavior on the cellular scale depends on physiological traits such as age and size, and where the behavior of the tumor depends on space. These so-called structured population models have independent variables representing age, size, space and time. We present computational results for a reduced model that depends only on age, time and two space dimensions, and consists of one mutation class. (Received February 11, 2005)