

1098-92-204

**Doron Levy\*** (dlevy@math.umd.edu), Department of Mathematics, University of Maryland,  
College Park, MD 20742. *The Dynamics of Drug Resistance in Cancer.*

The development of drug resistance is a major challenge in the treatment of cancer. In this talk we will overview some of the aspects of drug resistance that have been studied by the mathematical community. We will focus on two examples: 1) Modeling the dynamics of cancer stem cells and their role in developing drug resistance. 2) Studying the role of cell density and mutations on the dynamics of drug resistance in solid tumors. This is a joint work with J. Greene, C. Tomasetti, O. Lavi, and M. Gottesman. (Received January 26, 2014)