UNIVERSIDADE DE LISBOA

Faculdade de Ciências

FACULDADE · DE · CIÊNCIAS UNIVERSIDADE · DE · LISBOA

COLÓQUIO DE MATEMÁTICA

A free boundary problem in cancer therapy

Avner Friedman
Mathematical Biosciences Institute
The Ohio State University

One approach to fighting cancer is by injection of virus into the tumor. The virus is engineered so that it attacks only cancer cells, and after killing a cell a large colony of virus bursts out of the dying cell and infects other tumor cells. This process encounters a difficulty: the immune cells interfere to destroy the virus infected cancer cells, thus not allowing the virus to multiply and burst one. We shall present a mathematical model based on PDEs in the tumor region. This is a free boundary problem. In the radially symmetric case there exists a unique solution for all $t > 0$, and the asymptotic behavior of the free boundary is an open problem.

Segunda-feira, 6 de Junho de 2005, 16h

Apoio

FUNDAÇÃO LUSO-AMERICANA

Anfiteatro do Complexo Interdisciplinar
Universidade de Lisboa
Av. Prof. Gama Pinto 2,
1649-003 LISBOA Tel. 217 904 700