CMCF Seminar Series

NSF-Simons Center for
Multiscale Cell Fate Research
UC Irvine

The Tumor-Immune Interaction: Pieces of a Multiscale Story

Herbert Levine, Ph.D.

University Distinguished Professor of Physics and Bioengineering,
Northeastern University

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@ ISEB Auditorium, Room 1010

Abstract: One of the most important advances in cancer research over recent years has been the renewed excitement regarding using the immune system to attack malignant cells. Understanding and managing the battle between adaptive immunity and the tumor is a complex multiscale problem, involving the molecular biophysics of immune recognition, the cellular processes of direct checkpoint-dependent evasion, and the ecological dynamics of the microenvironmental milieu. This talk will highlight some of our recent attempts to analyze pieces of this problem and to begin to assemble these pieces into a coherent picture.

Bio: Dr. Herbert Levine is a University Distinguished Professor of Physics and Bioengineering at Northeastern University. His research focus includes physical modeling of cancer progression, metastasis and interaction with the immune system. His most recent research interests include Physics of Living Systems, utilizing tools from statistical physics and non-linear dynamics to understand the functionality of biological processes; Applications to cancer research and treatment.