

TOP SCIENTIST DI HARVARD AI SEMINARI UNINA SPONSORIZZATI DA BIOGEM

Monday
February 8, 2021
10:00 (CET)

**Computational and
Quantitative Biology
Lecture Series**

The seminar will be held on line using TEAMS. Please register at <https://bit.ly/3m2XOYF>.
You will receive an invite with the link to the seminar.

Finding Drivers in Cancer: from Primary Cancers to Resistance

Cancer progresses via an evolutionary process in which subclones with increased fitness can expand and take over less fit clones. Therapy exerts additional pressure on the cancer cells, often resulting in the selection of subclones with unique resistance mechanisms that eventually drive recurrence of the disease. Preventing or delaying the emergence of resistance remains a major medical need and is a highly active topic of research.


In this talk, I will describe different approaches to studying resistance, including studying pre- and post-resistance samples; modeling the dynamics of subclones and estimating their fitness; and comparing frequencies of events in unmatched cohorts of treated and untreated cases. I will describe recent analytical tools (PhylogenET) that we have developed for studying tumor heterogeneity, dynamics, and timing of events, which we have applied to discover mechanisms of resistance. In addition, I will demonstrate the power of using cell-free DNA collected before and after treatment, as well as the power of using autopsy samples to uncover the emergence of resistance. Finally, I will discuss the implications of leveraging the heterogeneity of resistance mechanisms to enhance our ability to map these changes, and potentially develop strategies to delay or overcome their emergence.


Gad Getz is an internationally acclaimed leader in cancer genomics and is pioneering widely used tools for analyzing cancer genomes. Getz is an institute member of the Broad Institute of MIT and Harvard, where he directs the **Cancer Genomes Computational Analysis Group**. Getz is a professor of pathology at Harvard Medical School, and he is a faculty member and director of bioinformatics at the Massachusetts General Hospital (MGH) Cancer Center and Department of Pathology. He is also the inaugural incumbent of the Paul C. Zamecznik Chair in Oncology at the MGH Cancer Center.

Prof. Gad Getz
Broad Institute of MIT and
Harvard

With the contribution of:

Hosted by:





Sarà Gad Getz, direttore del gruppo di Genomica Analitica e Computazionale del Cancro presso l'Ateneo di Harvard, il protagonista del prossimo seminario del dottorato di ricerca in Computational and Quantitative Biology dell'Università di Napoli Federico II, sponsorizzato da Biogem.

L'intervento, in programma il prossimo 8 febbraio, prevede, tra l'altro, un approfondimento sui differenti approcci nello studio della resistenza tumorale. Il professore Getz si soffermerà, in particolare, sull'importanza, per la ricerca, del ricorso a campioni raccolti prima e dopo il trattamento medico. Nel corso del seminario verranno infine descritti gli approcci computazionali più all'avanguardia per consentire una maggiore caratterizzazione dell'eterogeneità, delle dinamiche, e dell'evoluzione dei processi tumorali.

La partecipazione a tutti gli eventi è prevista in versione on-line previa registrazione.