



BIOINFORMATICS SEMINAR

Joao Xavier

Associate Faculty, Computational & Systems Biology

MEMORIAL SLOAN KETTERING CANCER CENTER

The dynamic microbiome of bone marrow transplantation patients

The gut microbiome protects its human host against invasion by pathogens. Antibiotics, however, can compromise this protection and lead to resistant infections. We study this phenomenon in patients hospitalized to receive bone marrow transplantation, where due to their immune-compromised state the microbiome protection is even more important. This talk describes lessons learned from thousands of patients hospitalized at MSKCC, and the results of a pilot trial to restore microbiome composition with autologous microbiota transplantation.

BIOGRAPHY

Joao Xavier is a Cancer Systems Biologist whose goal is to identify mathematical principles governing the behaviors of groups of cells. As an associate member of MSKCC's program for Computational and Systems Biology he works at the interface of basic science and biomedicine to integrate theory and experiment to understand how collective dynamics emerge from the interactions among individual cells in systems such as cancerous tumors and bacterial communities. He also aims to use clinical data and apply mathematical models to cancer treatment.

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**3:30 PM
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