



## **Translational Imaging Center Guest Speaker**

**Thursday, May 7, 2015 at 1 pm**

*Ray R Irani Hall Conference Room 101*



### **Carlos Carmona-Fontaine**

**Independent Research Fellow**

**Computational Biology Program**

**Memorial Sloan Kettering Cancer  
Center (MSKCC)**

### **“Role of Extracellular Metabolites in Multicellular Organization”**

I am an independent postdoctoral fellow in the Computational Biology Department at MSKCC. My research aims at deciphering the understudied role of metabolites in cell-cell interactions. I use mammalian cancer cells as a model to look at how cells can alter metabolite levels in their environment, how these changes affect other cells and how they propagate across cell populations. My current research focuses on the non-cell autonomous effects of cancer cell metabolism on the phenotype and behavior of neighboring immune cells. I am extending these studies by analyzing how different cells share or compete for metabolites leading to density-dependent cooperative and antagonistic interactions. I use a multidisciplinary approach that combines quantitative microscopy, metabolomics and computer modeling. I envision developing a diverse research program that will be linked by the general theme of how cell metabolism lead to the creation of extracellular niches that drive the persistence or extinction of different cell populations. I believe that this innovative approach will play an important role in our understanding of cancer and will have important implications in normal multicellular processes, such as embryonic development.

Hosts: Ben Steventon/Provost Professor Scott Fraser  
Tel: 213-740-2411 <http://bioimaging.usc.edu/events.html#>