

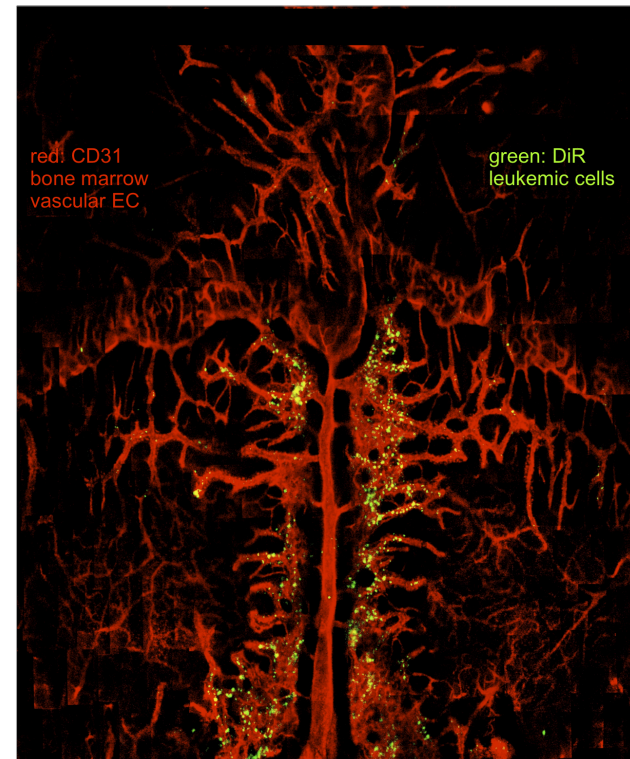
Cell tracking in live animals: extending intravital microscopy in time and space



Dr. Charles Lin

Associate Professor, Harvard Medical School
MGH Wellman Center for Photomedicine
MGH Center for Systems Biology

I will describe our multidisciplinary in vivo imaging approach to address questions such as how immune cells respond to foreign grafts, how hematopoietic stem cells find their "niche" after transplantation, and how cancer cells spread to distant sites.



3:00 pm Monday, April 23, 2012
Sloan Auditorium, Goergen 101
Refreshments served

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Abstract:

Immune cells, stem cells, and cancer cells are some of the most dynamic cell populations in the body, with extraordinary capacity to proliferate and migrate in response to physiological demands or during disease progression. Intravital microscopy is a powerful tool that enables direct visualization of these dynamic processes with single cell resolution in live animals. I will describe our multidisciplinary in vivo imaging approach to address questions such as how immune cells respond to foreign grafts, how hematopoietic stem cells find their "niche" after transplantation, and how cancer cells spread to distant sites. I will also discuss technical limitations and some of the outstanding challenges.

Biography:

Dr. Lin leads an advanced microscopy group at the MGH Wellman Center for Photomedicine and the MGH Center for Systems Biology, where an interdisciplinary team of imaging scientists and biomedical investigators work closely together to develop optical techniques for in vivo cell tracking and molecular imaging. The goal is to use innovative imaging approaches to improve understanding of cell biology in the context of the living organisms, and ultimately to improve cell transplantation, stem cell therapy, and cancer therapy.

Dr. Lin is an Associate Professor at Harvard Medical School and an affiliated faculty member at the Harvard Stem Cell Institute and the Harvard/MIT Division of Health Sciences and Technology.