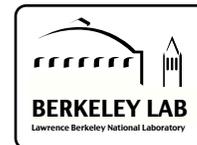


# THE JOHN LAWRENCE SEMINARS



## "ORGANS ON A CHIP: THE FUTURE OF PERSONALIZED MEDICINE?"

**KEVIN HEALY, PH.D.**

UNIVERSITY OF CALIFORNIA, BERKELEY

Drug discovery is hampered by high failure rates attributed to reliance on non-human animal models employed during safety and efficacy testing. Using human iPS cells, we have developed *in vitro* disease-specific tissue models for patient-specific medicine. This presentation will discuss our progress in developing integrated *in vitro* models of human cardiac and liver tissue, based on populations of normal and patient specific human iPS cells differentiated into cardiomyocytes, hepatocytes, or supporting cells. The benefits of our approach include: 1) a microengineering platform that controls microtissue organization and function; 2) precise delivery of molecules (e.g., drugs) in a computationally predictable manner; 3) ability to model human disease; and, 4) cost-efficient and high-content characterization of multi-organ drug response.

**TUES., OCT. 27<sup>TH</sup>**  
**4:00 P.M.**

**717 POTTER STREET**  
**ROOM 141**  
**BERKELEY LAB**

**HOST:**  
**MARK LABARGE**

Schedule of Seminars: [lsd.lbl.gov/News\\_&\\_Events/seminars.html](http://lsd.lbl.gov/News_&_Events/seminars.html)  
Non-LBNL attendees: please RSVP to [FGuagliardo@lbl.gov](mailto:FGuagliardo@lbl.gov) or 510-486-6490