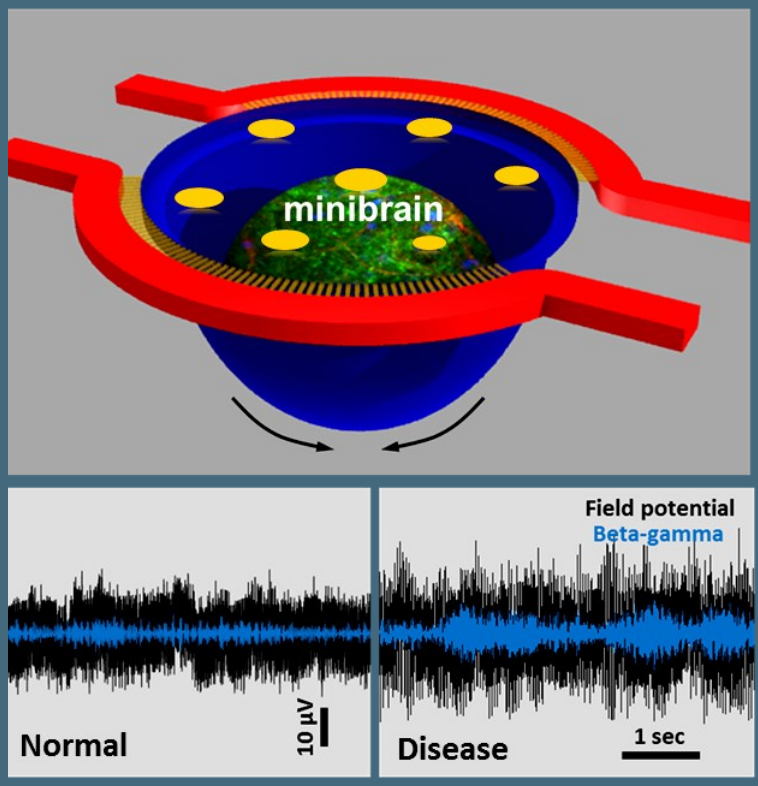

The Berkeley Sensor & Actuator Center
presents

The BSAC Researcher Seminar Series

featuring

SoonGweon Hong

of the

Luke Lee Research Group

New Drug Discovery Platforms and Organ-on-a-Chip Models

January 9

2018

12:15 | 490 Cory Hall

Login to the BSAC website to view the event live:
http://www-bsac.eecs.berkeley.edu/rsscast/

The January BSAC Research Seminar Series will feature Dr. SoonGweon Hong of BSAC Co-Director Prof. Luke Lee's group.

The presentation will focus on physiologically-modeled drug discovery platforms for various human organs. To avoid high costs and health risks caused by unexpected drug failures, there is a critical need for new drug discovery methods. Micro- and nanoscale engineering enabling precise microphysiological regulation is recognized as a potential approach to facilitate new drug discovery with better biological understanding. Two neuropathological models will be presented: an organoid minibrain model in physiological microfluidics and a vertebrate model representing human brain diseases. These models are integrated with unique electrical interfaces for real-time monitoring of brain development and neuropathology. Other human organ models will be presented including liver, heart and pancreas, which allow a precise characterization of drug effects on individual organs. A novel nanofluidic approach capable of assessing molecular accessibility into intracellular space especially for efflux pump-based drug resistant bacteria will conclude the presentation.

Dr. Hong joined BSAC and Prof. Lee's group as a graduate research student in 2008 and is currently a project scientist. His doctoral research focused on nano-optics and biological applications. After receiving his Ph.D. in 2012, he participated in developing drug discovery platforms recapitulating human physiology/pathology and precisely assessing drug-resistant pathogens through the organ-on-a-chip concept and micro/nanofluidics.

THE BSAC RESEARCHER SEMINAR SERIES IS OPEN TO BSAC MEMBERS, FACULTY, AND RESEARCHERS ONLY.