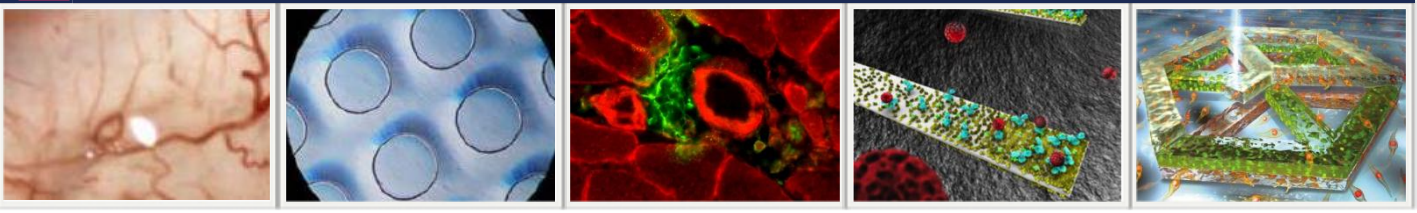
BioNanotechnology Seminar Series

Spring 2013



Sensing the Tension: Investigation of a Role for the Integrin as a Mechanotransducer of Hypertrophic Signaling and Growth in Skeletal Muscle

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Date: **Tuesday, April 23, 2013**
Time: **12:00 – 1:00 p.m. Central (10:00 – 11:00 a.m. Pacific)**
Location: **1000 MNTL (KL 361 at UC Merced)**

Abstract:

Resistance exercise or application of mechanical strain to skeletal muscle can dramatically stimulate growth as a result of increased protein synthesis. Mechanical stimulation can elicit an increase in hypertrophic signaling and myotube size in the absence of systemic factors, yet the mechanosensor underlying these positive adaptations in muscle has not been identified. Despite the fact that the integrin has the potential to act as an intrinsic stimulator for growth in response to strain, few studies have examined the myotube response to strain and a role for the integrin in this process has not been established. This session will provide evidence for the integrin as an intrinsic and extrinsic modulator of hypertrophic signaling and muscle growth in response to strain.

Seminar Presented by:

Center for Cellular Mechanics
University of Illinois at Urbana-Champaign

IGERT Integrative Graduate Education and Research Traineeship
Cellular and Molecular Mechanics and BioNanotechnology

M-CNTC NCI Alliance for Nanotechnology in Cancer
Midwest Cancer Nanotechnology Training Center

CNST University of Illinois Center for Nanoscale Science and Technology