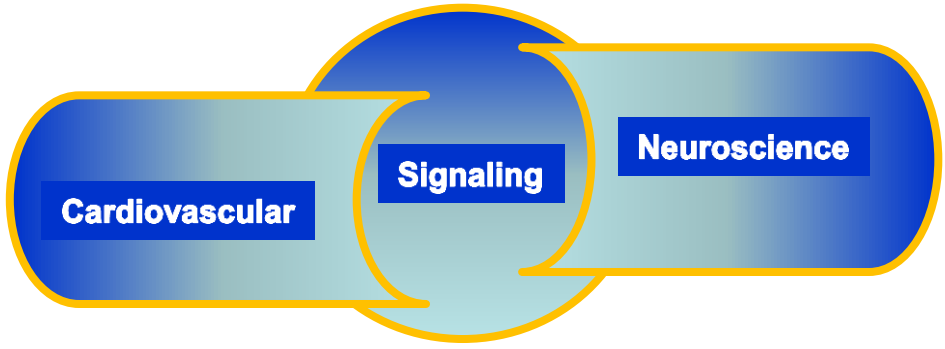

The Department of Pharmacology

Proudly Presents the Seminar Series:

Frontiers in Pharmacology

"Caveolae as capacitors for energy and metabolism: Implications for cardiac injury, aging and diabetes"

In addition to sensing extracellular signals that modulate cellular function, the plasma membrane separates and helps protect intracellular structures and activities from insults by the external environment. My laboratory has been interested in defining the role of one specific membrane microdomain, caveolae (cholesterol- and sphingolipid-enriched invaginations of the plasma membrane that are a subset of lipid rafts) in adaptation to cardiac stress. We propose that caveolae serve as capacitors for energy and metabolism. Our data implicate the existence of a physical association between caveolae and mitochondria and a role for this association in facilitating the transfer of caveolin and potentially other proteins to mitochondria in the stabilization of mitochondrial function and structure in response to cardiac stress. Such a mechanism may lead to generalized stress-adaptation of cells and has clear therapeutic implications for cardiovascular disease, neurological disorders, cancer, diabetes, and aging. This talk will focus specifically on caveolin and stress adaptation in the heart and how mitochondrial localized caveolin defines a molecular mechanism for this adaptation

Hemal Patel, Ph.D
Associate Professor,
***Department of* Anesthesiology,**
University of California, San Diego

Tuesday, February 17, 2014
4:00 pm
GBSF Auditorium
(Rm. # 1005)

Light refreshments will be served.

Host : Kevin Xiang
ykxiang@ucdavis.edu