



# Research In Progress Seminar

**Tuesday, February  
28, 2017  
2:00PM**

**Location: The Fishbowl,  
2120 Biological Sciences 3**

## **Speakers:**

Kerrigan Blake & Leo  
Lagunes, MCSB PhD  
Program &  
Developmental & Cell  
Biology

## **Talk Title:**

The Effect of Gli  
phosphorylation on Sufu  
and DNA binding

## **Abstract:**

Basal Cell Carcinoma (BCC) has been shown to be the product of improper regulation of the Hedgehog (Hh) signaling pathway. Activation of the Hh signaling pathway involves the upregulation of the Gli transcription factors. Gli regulates proteins associated with proliferation and Epithelial to Mesenchymal Transition, phenotypes commonly found in cancers. However, drugs for BCC do not target Gli, but rather Smo, an upstream regulator, allowing some BCCs to acquire drug resistance through Gli or its direct regulator Sufu. There is limited understanding of these proteins and their potential to activate tumorigenesis. We propose to combine mathematical modeling and experimental techniques to better understand the Gli and Sufu protein interactions in BCC. Specifically, we aim to develop a stochastic mathematical model of Gli-Sufu interaction and test our model with in vitro and in vivo techniques.

## **Questions:**

Please  
contact Naomi Carreon at:  
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Blake at: [kerrigab@uci.edu](mailto:kerrigab@uci.edu)