



# ARMI

EXTERNAL SPEAKER  
PROGRAM

# 2018

## Enhancing regeneration

# Professor Ken Poss

Director, Regeneration Next Initiative,  
Duke University

### Bio

Ken Poss is a world leading scientist and pioneer in regenerative biology and medicine using zebrafish and mouse models. His laboratory has made many seminal findings in tissue regeneration, for example, the first to demonstrate that the vertebrate heart can regenerate and identifying the underlying cellular sources and molecular mechanisms. His work is widely recognised and has resulted in numerous publications in leading journals (*Cell*, *Science* and *Nature*).

The primary research goal of the Poss laboratory is to understand mechanisms of vertebrate tissue regeneration. We study regeneration of cardiac muscle, spinal cord, and major appendages in zebrafish, which possess especially high regenerative capacity. We have established several tools to interrogate regeneration and morphogenesis in zebrafish, including inducible, Cre-based single and multicolor lineage tracing, cell-specific ablation injury models, transgenic reporter and loss-of-function strains, live imaging platforms, and genetic screening. We have begun to extend this work into mammalian models with collaborators and within my own group. Our long-term goal is to delineate how and why tissue regeneration happens, and to use this information to improve the poor regenerative capacity of human tissues like the heart and spinal cord.



**DATE:** Friday 2<sup>nd</sup> Feb 2018

**TIME:** 1:30 pm

**VENUE:** G19  
Ground floor  
15 Innovation Walk  
Monash University  
Clayton Campus