

# University of Maryland

## Neuroscience and Cognitive Science Seminar

### *Using functional genomics to understand hearing regeneration*

**Dr. Shawn Burgess**

NHGRI, NIH



Regenerative medicine holds great promise for both degenerative diseases and traumatic tissue injury which represents significant challenges to the health care system. Hearing loss, which effects hundreds of millions of people worldwide, is caused primarily by a permanent loss of inner ear hair cells, which cannot regenerate after injuries resulting in cell death. However, this failure to regenerate is limited to mammals, while all other vertebrates are able to completely regenerate their mechanosensory receptors after injury. My lab uses a combination of genomics and genetics in zebrafish to understand the process of hearing regeneration in vertebrates. We integrate transcriptional profiling, enhancer detection, and high-throughput gene knockout technologies to systematically dissect the gene network necessary to understand the process of hearing regeneration.

**Friday, February 23, 2018**

10:15am, Room 1103 Bioscience Research Building

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