

## Research Opportunities in Genomics

What genes allow animals to persist in changing environments?

What genes are responsible for life at high or low temperatures, little oxygen, too much of too little salt?

How do animals adapt to human influences (e.g., pollution, change in temperatures, low oxygen)?

What are the genes that effect a change in the way animals live?

Research opportunities to investigate the evolution of genomes and how they affect the ability for animals to adapt to changing environments is available in Drs. Oleksiak and Crawford laboratory. We take advantage of the massive increase in sequence technologies to define the DNA sequence variation that is important for adaptation and to define the changes in gene expression responsible for the variation in animal physiology.

If you are interested in quantifying animal physiology and linking physiological performance with variation in the genome, we invite you to apply to work in our laboratories.

You may want to pursue this type of research to enhance your skills, your ability to do science and have writing, statistical and computation skill that increase your ability to get a job, to succeed in graduate school and to be a better scientist.

### **For example:**

- Learn how to quantify physiological performance, sequence genomes, and measure mRNA expression.
- Build the computational skills to manipulate and analyze large data.
- Write more interesting and readable scientific papers
- Better understand how evolution works and how animals adapt.

### Contacts:

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Douglas L. Crawford - [dcrawford@rsmas.miami.edu](mailto:dcrawford@rsmas.miami.edu)

### Publications:

Marjorie F Oleksiak -

<https://scholar.google.com/citations?user=8x5ZKegAAAAJ&hl=en&oi=sra>

Douglas L. Crawford -

<https://scholar.google.com/citations?user=fpNZWv8AAAAJ&hl=en&oi=ao>