



## ***RNA Innovation Seminar***

Monday, November 26th at 3:00pm  
ABC Seminar rooms, Biomedical Research Science  
Building (BSRB), 109 Zina Pitcher

**[Abby Lamb](#)**

PhD candidate

**[Wittkopp Lab](#)**

## ***“Coordinate regulation of genes controlling *Drosophila* pigmentation development by microRNAs”***

**Abstract:** Pigmentation within the genus *Drosophila* is a fruitful model system of development and evolution. Decades of intense study of *Drosophila* pigmentation have provided an increasingly well-characterized developmental genetic network rich with many empirically identified cis-regulatory sequences and transcriptional regulatory connections, many of which are at the center of case studies of regulatory evolution. While great effort has gone into the identification of transcriptional regulators of pigmentation genes, very little is known about the role of post-transcriptional regulation in this model system. We conducted a screen of 172 microRNAs to identify those which may be involved in the regulation of *Drosophila* pigmentation. Here we present the results of this screen, as well as follow-up experiments on a subset of identified microRNAs that affect pigmentation. This set of experiments indicates a previously unappreciated role of post-transcriptional regulation in the development of *Drosophila* pigmentation. Expanding the pigmentation regulatory network to include microRNAs may allow *Drosophila* pigmentation to serve as a useful model system of the development and evolution of post-transcriptional regulatory networks..