

**A postdoctoral position is available as part of a collaborative project between the Newton (<https://discogenome.wordpress.com/>) and Hardy (<http://thehardylab.mystrikingly.com/>) laboratories, in the Department of Biology, Indiana University, Bloomington.**

This position is part of an NSF Rules of Life: Microbiome Theory and Mechanisms award focused on identifying how microbes alter the epitranscriptome.

Successful host-associated microbes sculpt host cell biology in ways that are useful to them. Often, these changes in host biology alter the ability of other microbes to colonize, protecting the host niche for the first microbe. For example, colonization of insects with Wolbachia endosymbionts can preclude infection by viruses. This fact has led to the deployment of Wolbachia-infected mosquitos across the globe to limit the transmission of vectored diseases. We have identified RNA modifications induced by Wolbachia that directly alter Drosophila cell biology and affect the ability of viruses to colonize. Wolbachia upregulates a host methyltransferase to limit virus replication and our preliminary data suggest that the virus genome itself is modified in a Wolbachia infected cell, altering mRNA stability. These data lead us to ask “How does a microbial symbiont alter the epitranscriptomic landscape of host cells?”

The ideal candidate will have experience in Drosophila, molecular virology, and/or bioinformatics. The candidate will be trained in molecular virology, and the use of direct sequencing approaches (PacBio and ONT) to identify modified nucleotides.

The position will be funded for three years, with the potential to extend for an additional year.

<https://indiana.peopleadmin.com/postings/9951>