My research was focused on the relationship between lipid storage in preparation for diapause and diapause length using an agricultural pest (*Ostrinia nubilalis*) as a model organism. Diapause is a genetically regulated life history strategy used by many insects in temperate regions to protect themselves from winter stress. During winter, access to nutrition in the environment is scarce or absent. To overcome this stress, many insects increase lipid storage in preparation for diapause and use those stored lipids as nutrition during winter. I measured lipid storage during diapause preparation in two strains of *O. nubilalis* with different diapause length genotypes. I found the genotype with the longer diapause length stored significantly more lipids in preparation for diapause than the strain shorter diapause length. However, lipids represent one of three nutrient molecules insects store in preparation for diapause. Future studies should focus on the association between carbohydrate and protein storage as well as lipids. Characterizing this relationship could uncover possible targets for pest management.

Presentations:

* Invited speaker at 2018 ACS AGRO Division in Boston, MA.

Outreach

* Volunteer entomology guide at 2018 Learning Gate Community School BioBlitz in Lutz, FL.
* Invited guest at 2018 Glen Springs Insect Day in Gainesville, FL.
* Invited guest at 2018 University of Florida Bug Camp in Gainesville, FL.
* Invited judge at 2018 University of Florida 4H Insectathon

Undergraduates

* Jeremiah Martinez ([martinezjeremiah@ufl.edu](mailto:martinezjeremiah@ufl.edu))
  + January 2018 - Present
* Erin Lapasaran ([elapasaran@ufl.edu](mailto:elapasaran@ufl.edu))
  + December 2018 - Present