

Currently, citrus growers rely heavily on traditional methods for delivery of pesticides and therapeutics to manage the devastating effects of citrus greening. However, these methods fail to provide the necessary protection growers need for a sustainable citrus industry. With funding from USDA NIFA, we have established a multi-institutional team of researchers focused on developing novel management strategies to prevent Asian Citrus Psyllids (ACP) from spreading the disease and reduce or eliminate CLAs, the Liberibacter that causes citrus greening.

To replace traditional pesticides, we are developing a pipeline to identify effective treatments and optimize the delivery of more effective inhibitors that target specific genes/proteins critical to the survival of ACP and their ability to transmit CLAs. We are currently testing various methods to design and deliver dsRNA, small protein and aptamer inhibitors.

We have also created a discovery and validation platform that integrates -omics data to enhance the development of appropriate analytical tools. This platform will not only enable us to discover novel targets but also validate previously identified targets for eradicating ACP and/or CLAs and for blocking CLAs transmission. This systematic approach to test and deliver novel treatments provides a robust foundation for sustainable management of citrus greening.