



The Connecticut Agricultural Experiment Station

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PRESS RELEASE

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The Connecticut Agricultural Experiment Station receives \$459,978 USDA National Institute of Food and Agriculture (NIFA) grant to investigate organic methods of controlling an apple disease

New Haven, CT - The USDA National Institute of Food and Agriculture (NIFA) has awarded Dr. Quan Zeng, Dr. Blaire Steven, and Dr. Jason C. White of The Connecticut Agricultural Experiment Station (CAES) a three-year \$459,978 grant to develop novel biological methods to control fire blight, an important disease of apple in the Eastern U.S. Additional collaborators on the project include Dr. George W. Sundin of Michigan State University and Dr. Ching-Hong Yang of the University of Wisconsin-Milwaukee.

In this project, scientists from CAES will take a multidisciplinary approach and utilize a combination of methods in plant pathology, microbiology, and microbial ecology to develop a more effective strategy for control of this devastating disease that is suited to the humid climate conditions in the Eastern U.S. Scientists will start by examining the microbes on healthy apple flowers. According to Dr. Blaire Steven, an Assistant Scientist at CAES, "We will utilize cutting-edge sequencing technologies to generate a complete characterization of the microbes living on apple flowers in the Eastern U.S." After this initial step, microbes that are the most abundant and persistent will be tested in research laboratories and in experimental orchards to evaluate their effectiveness in controlling fire blight. "It is basically developing 'Plant Probiotics.'" said Dr. Zeng. "We will let the healthy bacteria take over the apple flowers so that the harmful bacteria do not have a chance to grow." Dr. Jason C. White, Vice Director and Chief Analytical Chemist at CAES, will provide support in identifying potential antimicrobial substances produced by the biological control agents. According to Dr. White, "This project will not only be beneficial to the organic apple growers in Connecticut and the Eastern U.S. by providing an alternative disease control method that is urgently needed, but will also generate basic knowledge on apple microbial ecology and facilitate institutional collaborations."

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