

CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

Name(s)	Project Number
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Project Title	
Loop Mediated Isothermal Amplification to Detect Huanglongbing Infections	
Abstract	
Objectives/Goals Huanlongbing is a disease spread by the Asian Citrus Psyllid vector which has the elifitons of dollars in damage to the citrus industry worldwide. Presently, tests for the bactern are expendented and must be performed in sophisticated labs. My objective was to validate the Lave process is a portable, inexpensive, simple method for verifying the infection in psyllids Methods/Materials Smart-DART unit, Android tablet with Smart-DART software, mint centifuze, loaded PCR tubes, fixed-volume pipette Results Using known positive samples and controls in the reaction strips, twa-cole to verify that the LAMP process is simple and effective. With a few hours of turning, a farmer rould learn to perform the test on his/her own samples. After validating the process, I used in the transport of the strain around Riverside County and was unable to find any Psyllids carrying the Huangtong disease. Conclusions/Discussion Huanglongbing has devastated citrus orchards in trizon. Mexico, South America, and Florida. California is known to have Asian Citrus Psyllids, the vector for the duse. Presently, there are no Psyllids in California known to be infected. Affercollecting Psyllids from numerous citrus trees around the county, I did not find any infected specimens.	
Summary Statement I validated a simple mexpensive method for testing Asian Citrus Psyllids for th Huanglongbing (Citrus Greening Disease)	e bacteria that causes
Help Received UCR online biological safety course, Dr. Keremane gave me access to and train system	ing on the Smart-DART