Identifying Proteins that Could Lead to Deterring the Spread of HLB

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HLB has been become a worldwide problem which affects every country that produces citrus. This devastating disease is spread by a psyllid which feeds on citrus plants. When feeding, the psyllid transfers the bacteria and infects citrus plants which, when infected, has no current cure. Our work focuses on the bacteria most capable of producing the HLB disease, *C*Las. In our research project, we have discovered a protein called LdtR. This protein prompts a large number of *C*Las genes to be produced in an infected citrus plant. One of the proteins that LdtR impacts is called LotP, a potential player in HLB. LdtR controls the expression of the LotP encoding gene. Within the citrus plant, LotP has the potential to travel through the plant and wreak havoc on the plant system. Pure LotP, when put into healthy citrus tissue, caused chlorosis and photoinhibition. Our research suggests that the LotP protein is helping the *C*Las bacteria to survive in the citrus host. Now that it has been identified, stopping this protein from this reaction in the citrus host is work that is ongoing.

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