

Proprietary Dual Action Compound Could Save the Citrus Industry from Citrus Greening Plague

PT Compounds as a Method of Eradicating Citrus Greening and For Disrupting the Citrus Greening Life Cycle

CLIFFSIDE PARK, NJ, UNITED STATES, February 15, 2022 /EINPresswire.com/ -- Palisades Therapeutics, working in collaboration with Central State University and University of Florida and consulting from AgriThORITY and Florida

Pesticide Research, Inc., has developed a dual action compound that shows promise in controlling citrus greening. Palisades Therapeutics was invited to present data at the annual [California Citrus Conference](#) on October 6th 2021. Latest data can be seen as a [preprint on BioRxiv.org](#) <https://www.biorxiv.org/content/10.1101/2022.02.07.479449v1>



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Tom Minter, President of Florida Pesticide Research

According to Scientists at University of Florida, the newly patented [Palisades Therapeutics' compounds](#) were the most promising they had evaluated in the lab and should be field tested in the groves. The USDA (United States Department of Agriculture) advised that the compounds could be tested in up to 10 acres of infected groves to see if there is efficacy. Industry expert, Tom Minter, President of Florida Pesticide Research believes "The combination of both a bactericide and insecticide to control both the bacteria and the vector with one application would be the "Holy Grail" of a control method for citrus greening." He is

leading the next step of grove testing of the compound.

The disease Huanglongbing (citrus greening or HLB) is caused by the unculturable, gram negative bacterium *Candidatus Liberibacter asiaticus* (Las). Genomic analysis of the Las genome identified glucocorticoid response elements. Palisades Therapeutics' novel compounds were tested against *Liberibacter crescens* (Lc), the only culturable HLB model. Between

concentrations of 0.5-10 µg mL⁻¹, 100% growth inhibition was achieved with 80% or higher inhibition occurring at concentrations as low as 0.05 µg mL⁻¹. These concentrations are achievable within tree phloem.

Central State University, Principal Investigators Anthony Arment, PhD and Catherine Farrell, PhD have also demonstrated inhibited rates of pupation and increased lethality in insects which will probably pertain to the Asian psyllid that is the chief insect vector for the infectious bacterium. These data suggest dysregulation of developmental cues and/or metabolism inhibiting bacterial reproduction within the vector. Thus, both the vector and the bacterium are treated, in a one-two-punch, by these novel compounds.

We propose that success of these compounds against Lc will translate into effectiveness against other unculturable *Liberibacter* species (such as Las) and offer potential treatments to limit or eliminate HLB from infected citrus.

Understanding the Global Impact of Citrus Greening Disease

- Since 2004, HLB has eliminated 52.6 million sweet orange trees in Brazil, a 31 percent reduction in area.
- As of 2018, China's top producing Jiangxi Province had lost 25 percent of its groves.
- In the past decade in the U.S., HLB has caused a 72 percent decline in production of oranges used for juice and other products.
- The U.S. Department of Agriculture forecasts that Florida citrus growers would produce a 16% reduction in harvested boxes from 2021 to 2022.

This current 2022 harvest would be the smallest in more than 75 years

According to Bayer Crop Science, Citrus greening is a devastating and incurable disease destroying groves of citrus fruits around the globe. Without more innovative and affordable solutions to control HLB, citrus greening could lead to the total loss of all oranges, lemons and limes.

Palisades invites leading crop science companies such as Syngenta (NYSE:SYT), Bayer AG (ETR: BAYN) and Corteva Agriscience (NYSE:CTVA) to review our data.

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