Sniffing out Pathogens and Saving our Citrus!

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Huanglongbing, HLB (Citrus Greening)

- Currently the most serious citrus plant disease in the world
  - Florida citrus industry in rapid decline
  - Identified in Texas and California
  - $3.6 Billion loss over 5 years (USA alone)
  - 6,600+ jobs already lost
  - 2014 lowest harvest in Florida in 49 years
  - 60% decline in production

- Aggressive infection propagation

- No known cure

- Urgent need for early detection
Smell-based Citrus Disease Detection

Mass Spectrometry
- Direct field sampling of odors
- Ship to core lab for chemical analysis
- Rapid turn around (~1 day)

Scientific Status
- Multi-year/multi-state field tests (complete)
- Biomarker panel knowledge (complete)
- Robust data analysis pipeline (complete)
- Cost effective business model (complete)

No competing early detection available
Detection Accuracy

- Greenhouse testing Florida (100%, 2011)
- Greenhouse testing California (100%, 2012-2014)
- Initial field trial Florida (~90%, 2010-2012)
- Blinded field testing Texas (91%, 2012)
- Blinded field testing Texas (94%, 2014)
- Blinded field testing Texas (2015-2016, in progress)
- Blinded field testing California (2012-2013, in progress)
- Greenhouse testing California (2015-2017, in progress)

- Xylella fastidiosa infection in olives (contact initiated, Italian olive industry)
- Unaffiliated canine detection group in Texas (high accuracy)
XTB Laboratories, Inc.

- UC Davis Faculty Start-Up (organized Q1 2016)

- Executive team in place
  - Cristina Davis, Scientific Advisor
  - Ted Batkin, President
  - Bo Garret, CEO

- Pro forma completed, briefed to citrus industry & gov’t
  - Require 6 month start-up, equipment financing arranged
  - Cash positive in 1-2 months, seeking equity investment now

- Future expansion into additional markets