

## 2<sup>nd</sup> ISCHPP Congress Program Agenda

### Tuesday, October 25<sup>th</sup>

5:00-7:00 PM Registration of participants and Presenters turn in PowerPoint presentations at Lobby III

### Wednesday, October 26<sup>th</sup>

7:00-8:10 AM Registration of participants at Lobby III; presenters to update and turn in PowerPoint presentations at Lobby III.

8:00 AM-3:00 PM Poster set up at Bay Conference Room

7:15-8:15 AM Breakfast at Lobby III

8:20-8:35 AM Opening Remarks (Nian Wang/Kirsten Pelz-Stelinski) at Island Ballroom

8:35-9:10 AM **Welcome and Opening presentation: Michael Rogers (Center Director and Professor, CREC, UF/IFAS, Chair of Scientific Advisory Committee):** HLB Research: Guiding the future of the Florida Citrus Industry. (Moderator: Nian Wang) **Island Ballroom**

#### **General Session 1: Pathogen-plant-insect interactions I (Moderators: Lukasz L. Stelinski/Michelle L. Heck) Island Ballroom**

9:10-9:45 AM **Saskia Hogenhout (invited speaker):** Phytoplasmas – beneficial microbes of insects and pathogens of plants.

9:45-10:10 AM **Freddy Ibanez-Carrasco:** Effects of plant growth-promoting rhizobacteria inoculations on tomato - potato psyllid - *Candidatus Liberibacter solanacearum* interactions.

10:10-10:25 AM **Nicholas Larson:** Host switching induces changes in *Diaphorina citri* immunity that regulate acquisition and transmission of the citrus greening bacterium.

#### ***10:25-10:40 AM Coffee Break in Lobby III***

10:40-11:15 AM **Nabil Killiny (invited speaker):** Vector-pathogen interfaces in the Huanglongbing pathosystem.

11:15-11:50 AM **Cecilia Tamborindoguy (invited speaker):** Harnessing the tomato and '*Candidatus Liberibacter solanacearum*' to understand *Liberibacter* pathogenicity.

11:50 AM-12:05 PM **Sheo Shankar Pandey:** Dynamics of early events triggered by *Candidatus Liberibacter asiaticus* movement in young flushes of HLB-positive citrus trees.

#### ***12:05-1:20 PM Lunch at Rusty's Dining Room***

#### **General Session 2: Pathogen-plant-insect interactions II (Moderators: Kirsten Pelz-Stelinski/Amit Levy) Island Ballroom**

1:20-1:55 PM **Lukasz L. Stelinski: (invited speaker):** Response of *Citrus sinensis* to varying frequencies of insect herbivory and *Candidatus Liberibacter asiaticus* inoculation.

1:55-2:30 PM **Amit Levy: (invited speaker):** *Candidatus Liberibacter asiaticus* manipulate citrus phloem and psyllids gut cells to allow its propagation and movement.

2:30-2:45 PM **David O. Igwe:** An excised leaf assay to perform proteomics experiments, screen therapies, and measure acquisition of "*Candidatus Liberibacter asiaticus*" by psyllids associated with citrus Huanglongbing.

2:45-3:00 PM **Saeed Hosseinzadeh:** Role of small RNA in the development and cross-kingdom interaction of *Diaphorina citri* with its endosymbionts and *Candidatus Liberibacter asiaticus*.

3:00-3:15 PM **Mahnaz Rashidi:** *Diaphorina citri* toll signaling pathway: In silico analysis, expression in different life stages, and RNA interference.

#### ***3:15-3:30 PM Coffee Break in Lobby III***

#### **General Session 3: Pathogen biology, evolution, genomics, and biotechnology for pathogen/vector control (Moderators: Gitta L Coaker/Kranthi K. Mandadi) Island Ballroom**

3:30-4:05 PM **Raymond Yokomi (invited speaker):** Genetic analysis of *Spiroplasma citri* and observations of the pathogen in California.

4:05-4:40 PM **Dean Gabriel (invited speaker)**: A flexible self-amplifying RNA system for screening and silencing plant target genes.  
4:40-4:55 PM **Erica W. Carter**: The protein interactome of *Candidatus Liberibacter asiaticus*.  
4:55-5:10 PM **Jessica Trinh**: The evolution of microbial features in vector-borne bacterial pathogens.  
5:10-5:25 PM **Amelia H. Lovelace**: *In planta* transcriptome profiling of '*Candidatus Liberibacter asiaticus*' in source and sink Citrus tissues.

**5:25-5:40 PM Group Photo**

**5:40-7:30 PM Poster presentations and Reception in the Bay Conference Room and Lobby III**

Poster Viewing with Authors Present (Odds: 5:40-6:20 PM; Evens: 6:20-7:00 PM)

## Thursday, October 27<sup>th</sup>

**7:00-8:10 AM** Registration of participants at Lobby III; presenters to update and turn in PowerPoint presentations at Lobby III.

**7:15-8:15 AM** Breakfast at Lobby III

**8:20 AM** Moderators check-in at the stage (Island Ballroom)

### **General Session 4: Pathogen-plant interactions (Moderators: Ute Albrecht/ Erica Watson Carter) Island Ballroom**

8:25 - 9:00 AM **Wenbo Ma (invited speaker)**: Defense and counter-defense in citrus Huanglongbing.

9:00-9:35 AM **Gitta L. Coaker (invited speaker)**: Investigating the role of pathogen effectors and plant immunity in *Candidatus Liberibacter* associated vector-borne disease.

9:35-10:00 AM **Christopher Vincent**: Citrus shows buffered responses of carbon fixation and transport to HLB-induced phloem dysfunction.

10:00-10:15 AM **Chiara Bernardini**: *Candidatus Liberibacter asiaticus* inhibits callose and ROS to enable its movement and propagation.

**10:15-10:30 AM Coffee Break in Lobby III**

### **General Session 5: Pathogen/vector biology, management and cultural practices for disease control I (Moderators: Davie Kadyampakeni/Zhiqian Pang) Island Ballroom**

10:30-11:05 AM **Kirsten Pelz-Stelinski (invited speaker)**: Targeting *Candidatus Liberibacter asiaticus* and endosymbionts of the Asian citrus psyllid, *Diaphorina citri* Kuwayama (Hemiptera: Liviidae), using antisense oligonucleotides.

11:05-11:20 AM **Zhiqian Pang**: Evaluation of PAMPs in citrus Huanglongbing control.

11:20 AM-11:35 AM **Abdelaziz Kishk**: Citrus mediated silencing of *Diaphorina citri* cytochrome increases susceptibility to various insecticide groups.

11:35 AM-11:50 AM **Clebson S. Tavares**: Difference in abundance of gut surface proteins between nymphs and adults of the Asian citrus psyllid, *Diaphorina citri*.

11:50 AM-12:05 AM **Jinyun Li**: Effect of multiple-year injection of oxytetracycline and streptomycin on Huanglongbing diseased Hamlin sweet orange trees.

**12:05-1:20 PM Lunch Break at Rusty's Bistro**

### **General Session 6: Biotechnology and Plant breeding for disease and vector control (Moderators: Choa A. El Mohtar/Jessica Trinh) Island Ballroom**

1:20-1:55 PM **Bryony Bonning (invited speaker)**: Targeting Asian citrus psyllid with the Bacillus thuringiensis-derived pesticidal protein, Cry1Ba1.

1:55-2:30 PM **Michelle L. Heck (invited speaker)**: Identification of plant-derived nodule specific cysteine rich peptides that are antimicrobial against "*Candidatus Liberibacter asiaticus*", the citrus greening disease bacterium.

2:30-2:55 PM **Choa A. El Mohtar**: Using citrus tristeza virus (CTV)-based vector as a platform for the management of Huanglongbing (HLB).

2:55-3:10 PM **Tianrun Li**: Stacking pattern recognition receptors (PRRs) for disease control.

**3:10-3:25 PM Coffee Break in Lobby III**

- 3:25-4:00 PM **Fred Gmitter (invited speaker)**: Breeding, genomic resources, and their applications to developing genetic solutions to HLB.
- 4:00-4:25 PM **Chandrika Ramadugu**: Novel genomes of three Australian Limes: Towards the identification of resistance source against Huanglongbing (HLB) disease.
- 4:25-4:50 PM **Laura Fleites**: The peptidome is a battleground between '*Candidatus Liberibacter asiaticus*', the bacteria associated with Huanglongbing disease of citrus and the Asian citrus psyllid vector.
- 4:50-5:15 PM **Luke Thompson**: Functional evaluation of a *Diaphorina citri* gene predicted to be involved in synthesis of diaphorin, a small polyketide toxin produced by the psyllid bacterial endosymbiont '*Candidatus Proffotella armatura*'.
- 5:30 -6:00 PM **Meeting: Organization and Scientific advisory committee members and potential hosts for 2025 meeting (Island Ballroom).**

**6:30 PM Conference Dinner at Poolside Grass\***

\*Weather permitting, alternate location is Palm and Bay Conference Rooms

**Friday, October 28<sup>th</sup>**

**7:00-8:10 AM** Registration of participants at Lobby III; presenters to update and turn in PowerPoint presentations at Lobby III.

**7:15-8:15 AM** Breakfast at Lobby III

**8:15 AM** Moderators check-in at the stage (Island Ballroom)

**General Session 7: Pathogen biology and pathogenesis mechanisms (Moderators: Fred Gmitter/Chiara Bernardini) Island Ballroom**

8:20-8:55 AM **Laure Béven (invited speaker)**: Novel insights into mechanisms controlling shape and motility in *Spiroplasma citri*.

8:55-9:30 AM **Nian Wang (invited speaker)**: Citrus Huanglongbing is a pathogen-triggered immune disease and its implications in HLB management.

9:30-9:55 AM **Yongping Duan**: Factors affecting the completion of "Koch's Postulates" for *Candidatus Liberibacter asiaticus*.

**9:55-10:10 AM Coffee Break in Lobby III**

**General Session 8: Epidemiology and disease control (Moderators: Yongping Duan/Sheo Shankar Pandey) Island Ballroom**

10:10-10:45 AM **Hailing Jin (invited speaker)**: A citrus-derived dual-functional stable antimicrobial peptide inhibits citrus Huanglongbing and potato zebra chip diseases.

10:45-11:20 AM **Kranthi K. Mandadi (invited speaker)**: Evaluation of defensin antimicrobial peptides and small molecules as therapies for citrus greening disease management.

11:20 -11:45 AM **Burton Singer**: Representations of Psyllid and HLB invasion in Florida.

11:45 AM -12:10 PM **Brian W. Bahder**: Palm-infecting phytoplasmas in Florida, the Caribbean and their vectors.

**12:10-1:30 PM Lunch Break at Rusty's Bistro**

**General Session 9: Pathogen/vector biology, management and cultural practices for disease control II (Moderators: Christopher Vincent/Jinyun Li) Island Ballroom**

1:30-2:05 PM **Ute Albrecht (invited speaker)**: Trunk injection of oxytetracycline and imidacloprid to systemically target the Huanglongbing associated pathogen *Candidatus Liberibacter asiaticus* and its vector the Asian citrus psyllid.

2:05-2:30 PM **Marco Pitino**: The Symbiont™: a novel autonomous biological technology that combines production and delivery of therapeutic molecules to reduce their environmental impact and improve host-plant defenses.

2:30-2:55 PM **Jam Nazeer Ahmad**: Silver based nanoparticles can be an alternate eco-friendly technology to control HLB disease as well as Asian citrus psylla.

### 2:55-3:10 PM Coffee Break in Lobby III

- 3:10-3:45 PM **Davie Kadyampakeni (invited speaker)**: Micronutrients are therapeutic for rehabilitation of huanglongbing-affected sweet-orange trees.
- 3:45-4:10 PM **Donald Hopkins**: Biological control of citrus Huanglongbing by *Xylella fastidiosa* strain EB92-1 in field trials.
- 4:10-4:35 PM **Sam T. Mugford**: Geographic patterns in genetic diversity of the meadow spittlebug *Philaenus spumarius*, an insect vector of *Xylella fastidiosa*.
- 4:35-4:45 PM **Kirsten Pelz-Stelinski**: Award Ceremony.
- 4:45-4:55 PM: Introduction and welcome to 3<sup>rd</sup> ISCHPP Congress.
- 4:55 PM Closing remarks (Nian Wang introduction of next ISCHPP President Kirsten Pelz-Stelinski and closing remarks by Kirsten Pelz-Stelinski)

## Poster Session

**Poster Set-up**: Wednesday, October 26<sup>th</sup>, 8:00 AM-3:00 PM (Bay Conference Room)

**Poster Viewing with Authors Present (Odds)**: Wednesday, October 26<sup>th</sup>, 5:40-6:20 PM.

**Poster Viewing with Authors Present (Evens)**: Wednesday, October 26<sup>th</sup>, 6:20-7:00 PM.

**Poster Take-Down**: Prior to 10:00 AM Thursday, October 27<sup>th</sup>. (Posters left after 10:00 AM on Thursday, October 27<sup>th</sup> will not be kept).

### Session 1: Diagnostics and epidemiology

- P1 Hernán Mauricio Romero**: Identification of *Candidatus Liberibacter* sp. as the causal agent of oil palm lethal wilt using a metagenomic approach.
- P2 Fabian Pilet**: A multi-locus sequence typing scheme to investigate the genetic diversity of coconut lethal decline associated phytoplasma in East Africa.
- P3 Chuanyu Yang**: Developing a rapid viability propidium monoazide-qPCR method for assessing treatment effectiveness against *Candidatus Liberibacter asiaticus* in citrus.
- P4 Samina Jam Nazeer Ahmad**: Devastating impact of wide occurrence of Parthenium weeds (*Parthenium hysterophorus* L.) associated diseases of phyllody (16SrII-D) and host insects in Pakistan.
- P5 Samina J N Ahmad**: First report of identification, genetic variation and diseases transmission study through vectors in *Medicago sativa* (16Sr-II-D).

### Session 2: Pathogen-plant-insect interactions

- P6 Alexander J McClelland**: Citrus proteases target an outer membrane protein of *Candidatus Liberibacter asiaticus*.
- P7 Jacobo Robleo**: Proteomic analysis of healthy and infected 'Duncan' grapefruit seed coats: a helpful molecular approach and model tissue to study *Candidatus Liberibacter asiaticus* host cellular interactions.
- P8 Chun-Yi Lin**: *Diaphorina citri* gut virome and its association with *Candidatus Liberibacter asiaticus*.
- P9 Ke Wu**: Primary cell cultures from the Asian citrus psyllid *Diaphorina citri* Kuwayama.
- P10 Poulami Sarkar**: Comparative transcriptome profiling and promoter sequence analysis on grapefruit seed vasculatures reveal potential regulatory network behind high *Liberibacter* titer.

### Session 3: Pathogen biology, evolution, and genomics

- P11 Martin Stallone**: Metaproteomics analysis of the microbial communities in the Asian citrus psyllid, vector of citrus huanglongbing.
- P12 Wenting Wang**: Characterization of transcriptional regulators in '*Candidatus Liberibacter asiaticus*'.
- P13 Douglas Stuehler**: Strain tracking of '*Candidatus Liberibacter asiaticus*', citrus greening disease pathogen, enabled by high-resolution microbiome analysis of the Asian citrus psyllid.

### Session 4: Biotechnology and Plant breeding for disease and vector control

- P14 Joseph Krystel**: DMR6 downregulated citrus show basal defense activation and are highly resistant to *Xanthomonas citri* infection.

- P15 Filipe S Meira:** Transgene stacking as effective tool for enhanced disease resistance in citrus.
- P16 Ruchir Mishra:** Streamlined phage display library protocol for identification of enriched *Diaphorina citri* gut binding peptides.
- P17 Maria B. Besilla:** Selecting HLB tolerant citrus in a segregating population.
- P18 Menaka Ariyaratne:** Developing the molecular infrastructure for the delivery of novel therapeutic agents to fight citrus HLB disease.
- P19 Matthew R. Mattia:** Phenotyping for HLB tolerance in Mandarin and Poncirus-introgressed Mandarin germplasm lessons learned after 7 Years in the field.

#### **Session 5: Pathogen/Vector biology, management and cultural practices for disease control**

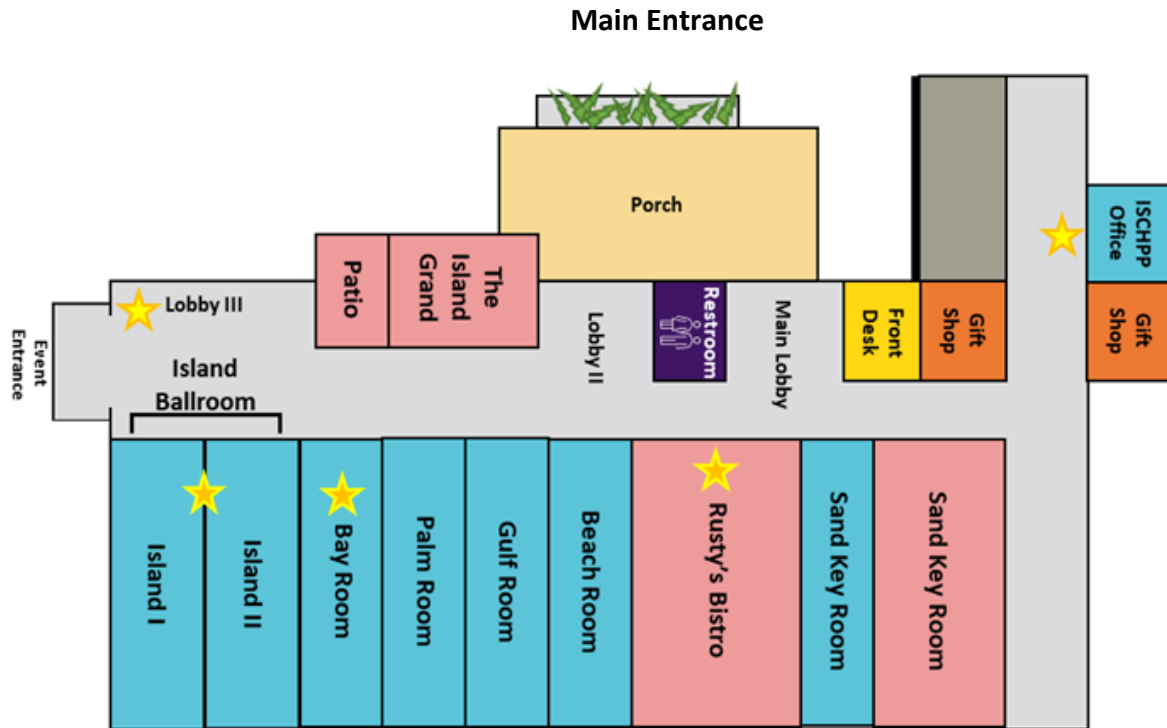
- P20 Christopher Drozd:** A high throughput fluorescence based bioassay to identify compounds with anti-Liberibacter activity.
- P21 Flavia Campos Vieira:** *In vitro* antibacterial activity of *Bacillus* spp. against *Liberibacter crescens* and *Phytophthora* spp. and identification of the antimicrobial metabolite, amicoumacin.
- P22 Guilherme Locatelli:** Plant sap analysis as a tool to optimize fertilizer application for sustainable citrus production under HLB disease.
- P23 Norma Itzel De Anda:** Unraveling competition-based niche selection within the citrus microbiome.
- P24 Lakshmi A. Pasupuleti:** Assessing the effect of trunk-injected oxytetracycline on *Candidatus Liberibacter asiaticus* titers in flushing and non-flushing citrus branches.
- P25 Lorenzo Rossi:** Sustainable horticultural practices to increase soil health and prolong lifespan of HLB-affected citrus trees in the Florida Indian River district.
- P26 Connor Hendrich:** Foliar micronutrient and antioxidant application in combatting Huanglongbing.
- P27 Brian Rhodes:** Direct plant infusion device for therapeutic molecule delivery in woody plants.
- P28 Marina Mann:** Disease incidence data of "*Candidatus Liberibacter asiaticus*" in Florida informs model results from a genome-wide association study of grove-collected *Diaphorina citri*.
- P29 Christopher Vincent:** Moderate shading increases growth and yield and reduces vector pressure on HLB-affected trees.
- P30 Jam Nazeer Ahmad:** Molecular Identification, characterization and implementation of entomopathogenic fungus for the management of phytoplasma insect vector (*Orosius orientalis*) in Pakistan.

## Program at a Glance

Tuesday (October 25 <sup>th</sup> )	Wednesday (October 26 <sup>th</sup> )	Thursday (October 27 <sup>th</sup> )	Friday (October 28 <sup>th</sup> )
	Registration (7:00-8:10 AM)	Registration (7:00-8:10 AM)	Registration (7:00-8:10 AM)
	Breakfast (7:15-8:15 AM)	Breakfast (7:15-8:15 AM)	Breakfast (7:15-8:15 AM)
	Open Remarks (8:20-8:35 AM)	General Session 4 (8:20-10:15 AM)	General Session 7 (8:20-9:55 AM)
	Opening Presentation (8:35-9:10 AM)		
	General Session 1 (9:10-10:25 AM)		
	Coffee Break (10:25-10:40 AM)	Coffee Break (10:15-10:30 AM)	Coffee Break (9:55-10:10 AM)
	General Session 1 (Cont.) (10:40 AM-12:05 PM)	General Session 5 (10:30 AM-12:05 PM)	General Session 8 (10:10 AM-12:10 PM)
	Lunch Break (12:05-1:20 PM)	Lunch Break (12:05-1:20 PM)	Lunch Break (12:10-1:30 PM)
	General Session 2 (1:20-3:15 PM)	General Session 6 (1:20-3:10 PM)	General Session 9 (1:30 -2:55 PM)
	Coffee Break (3:15-3:30 PM)	Coffee Break (3:10-3:25 PM)	Coffee Break (2:55-3:10 PM)
	General Session 3 (3:30-5:25 PM)	General Session 6 (Cont.) (3:25-5:15 PM)	General Session 9 (Cont.) (3:10 -4:35 PM)
Registration and Oral Presentations Submission (5:00-7:00 PM)	Group Photo (5:25-5:40 PM)	Organization Committee Meeting: potential hosts for 2025 (5:30: -6:00 PM)	Award Announcement (4:35-4:45 PM)
	Poster Session and Reception (5:40-7:30 PM)	Conference Dinner (6:30 PM)	Introduction of 3 <sup>rd</sup> ISCHPP Congress (4:45-4:55 PM)
			Closing Remarks (4:55 PM)

## Sheraton Sand Key Resort Conference Room Map

### Floor 1



### Important Locations:

**Island Ballroom:** General Sessions

**Bay Conference Room:** Posters and Reception

**Lobby III:** Registration Desk, Oral Presentations Submission, Coffee Breaks and Breakfast

**Rusty's Bistro:** Lunch Wednesday, Thursday, and Friday

**Conference office:** First Floor; Near the gift shop

**Conference dinner:** Poolside Grass