2nd International Research Conference on Huanglongbing

January 10-14, 2011

Agenda

Day 1: Monday, 10 January 2011

7:00 am – 9:00 pm	Registration
7:00 – 8:00 am	Continental Breakfast (tour attendees only)
8:15 am – 4:30 pm	Preconference Tour (by reservation only, tour sold out)
7:00 – 9:00 pm	Welcome Reception

Day 2: Tuesday, 11 January 2011

7:30 am – 5:00 pm	Registration
7:30 – 8:30 am	Continental Breakfast
8:30 – 9:15 am	Welcome Introduction – Mike Sparks, Jim Graham Mission, Goals, and Objectives – Wayne Dixon Rules of the House – Jackie Burns
9:15 – 10:15 am	Opening Keynote Address Geographical Distribution of Huanglongbing: Before and After 2004 – **Joseph Bové**
10:15 – 10:30 am	Break
10:30 am – 12:00 pm	**Session 1: Pathogen Genomics, Bioinformatics, Phylogenetics, and Culturing – John Hartung, Moderator**

Oral Presentations

10:30	**1.1**	Genomic comparisons of the '*Ca*. Liberibacter asiaticus' chromosome with other members of the Rhizobiales – **JS Hartung**, J Shao, LD Kuykendall
10:45	**1.2**	Genetic and functional characterization of the *znu* operon in the intracellular citrus pathogen, *Candidatus* Liberibacter asiaticus – CM Vahling, LS Benyon, **Y-P Duan**

11:00	**1.3**	Genomic comparison of *Ca*. Liberibacter asiaticus with a draft *Ca*. L. americanus genome reveal similar prophage with likely pathogenicity factors – SJ Zhang, NA Wulff, Z Flores-Cruz, LJ Zhou, B-K Kang, LA Fleites, MD Gooch, MJ Davis, Y-P Duan, **DW Gabriel**
11:15	**1.4**	Analysis of *Candidatus* Liberibacter americanus genome - **NA Wulff**, S Zhang, AJ Ayres, JM Bové, DW Gabriel
11:30	**1.5**	Population genetics analysis of '*Candidatus* Liberibacter asiaticus' from multiple continents – JM Glynn, Y Bai, C Chen, Y-P Duan, EL Civerolo, **H Lin**
11:45	**1.6**	Phylogenetic analysis of Asian '*Candidatus* Liberibacter asiaticus'; Asian common strains are distributed in Northeast India, Papua New Guinea, and Timor-Leste – **S Miyata**, H Kato, K Tomimura, R Davis, MW Smith, M Weinert, T Iwanami
Posters		
	1.7	Bioinformatic analysis of genome sequence data for *Ca*. Liberibacter asiaticus – **M Lindeberg**, S Saha
	1.8	Genetic diversity of *Candidatus* Liberibacter asiaticus isolates from Parana State, Brazil – L Menegium, **VV Marques**, MM Murata, TP Barreto, G Vasquez-Souza, LA Villas-Boas, LD Paccola-Meirelles, RP Leite Jr
	1.9	Analysis of endophytic bacterial diversity from huanglongbing pathogen-infected citrus tissues – **A Wang**, Y Yin, Y Li, J Li, J Xian, Z Wang
	1.10	Evolving diversity of '*Candidatus* Liberibacter asiaticus' revealed by comparative analysis of two intragenic tandem repeat genes – **LJ Zhou**, CA Powell, M Hoffman, WB Li, GC Fan, B Liu, Y-P Duan
	1.11	*In vitro* culture of the fastidious bacteria *Candidatus* Liberibacter asiaticus in association with insect feeder cells – **L Fontaine-Bodin**, S Fabre, F Gatineau, M Dollet
	1.12	Preliminary report of cultivation of '*Candidatus* Liberibacter asiaticus 'from citrus tissue with huanglongbing – **P Xie**, Y Yin, Y Li, J Li, Z Wang
	1.13	Genetic diversity of '*Candidatus* Liberibacter asiaticus' strains – **XF Wang**, CY Zhou, X Deng, M Irey, J Chen
	1.14	Further evidence that U. S. and China populations of "*Candidatus* Liberibacter asiaticus" are different – **X Deng**, R Liu, P Zhang, J Chen

12:00 – 1:30 pm Lunch and Keynote Lecture 1

RNAi strategies for insect vectors of plant pathogens – **Bryce Falk**

1:30 – 2:30 pm **Session 2: Asian Citrus Psyllid Biology and Genomics – David Hall, Moderator**

Oral Presentations

1:30	**2.1**	Phylogeographic and population genetic studies uncover two founding events in Asian citrus psyllid populations collected in the Americas – **JH de León**, M Sétamou, GA Gastaminza, J Buenahora, S Cáceres, PT Yamamoto, GA Logarzo, CRW Stañgret
1:45	**2.2**	Alteration of microbiome of *Bactericera cockerelli* and *Diaphorina citri* based on *Candidatus* Liberibacter sp. infection – D Hail, W Hunter, **B Bextine**
2:00	**2.3**	Oral uptake of dsRNA increases mortality in diet fed psyllids – RG Shatters Jr, CA Powell, **D Borovsky**
2:15	**2.4**	The psyllid feeding process: composition and biosynthetic inhibition of the salivary sheath – **RG Shatters Jr**

Posters

2.5	A new method for short-term rearing of psyllid adults and nymphs on detached citrus leaves and young terminal shoots – **E-D Ammar**, DG Hall
2.6	Comparative analysis of Asian citrus psyllid and potato psyllid antennae – J Arras, W Hunter, **B Bextine**
2.7	The emerging psyllid genome: RNA-interference and insect biology – **WB Hunter**, BR Bextine, RG Shatters, J Reese, KS Shelby, DG Hall
2.8	Bacterial population diversity in Diaphorina citri: analysis by PCR-DGGE and RFLP methodology – **Z Wang**, S Tian, T Liu, Y Yin

2:30 – 2:45 pm Break

2:45 – 4:45 pm **Session 3: Asian Citrus Psyllid Ecology and Transmission – Lukasz Stelinski, Moderator**

Oral Presentations

2:45	3.1	Antennal responses of *Diaphorina citri* to host plant volatiles recorded using a coupled gas chromatograph electroantennogram detector system – **PS Robbins**, RT Alessandro, SL Lapointe
3:00	3.2	Population dynamics of the Asian citrus psyllid and potential generations in Northern Sinaloa, Mexico – E Cortez-Mondaca, **JI López-Arroyo,** J Pérez-Márquez, VM González
3:15	3.3	Localization of *Candidatus* Liberibacter asiaticus in dissected organs of its psyllid vector *Diaphorina citri* using fluorescent *in situ* hybridization and quantitative PCR – **E-D Ammar**, RG Shatters, DG Hall
3:30	3.4	Interactions of the Asian citrus psyllid, *Diaphorina citri*, with *Candidatus* Liberibacter asiaticus – **KS Pelz-Stelinski**, ME Rogers
3:45	3.5	Seasonal changes in numbers of Asian citrus psyllids carrying *Candidatus* Liberibacter asiaticus – **TA Ebert**, RH Brlansky, ME Rogers
4:00	3.6	Understanding *Diaphorina citri-Candidatus* Liberibacter asiaticus interactions and *D. citri* behavior for managing huanglongbing (HLB) in Florida – **RS Mann**, KS Pelz-Stelinski, RL Rouseff, LL Stelinski
4:15	3.7	Effects of soil-applied and foliar-applied insecticides on Asian citrus psyllid (*Diaphorina citri*) feeding behavior and their possible implication for HLB transmission – **RH Serikawa**, DM Okuma, EA Backus, ME Rogers
4:30	3.8	Effect of insecticides and mineral oil on probing behavior of *Diaphorina citri* Kuwayama (Hemiptera: Psyllidae) in citrus – **MP de Miranda**, MR Felippe, RB Garcia, PT Yamamoto, JRS Lopes

Posters

3.9	A new detached-leaf assay method to test the inoculativity of psyllids with *Candidatus* Liberibacter asiaticus associated with huanglongbing disease – **E-D Ammar**, A Walter, DG Hall
3.10	Preliminary study of comparative acquisition of '*Candidatus* Liberibacter asiaticus' and '*Ca*. L. americanus' by *Diaphorina citri* under different temperatures – **JC Barbosa**, B Eckstein, J Belasque Jr, AB Filho
3.11	Host range of *Diaphorina citri* Kuwayama and *Leuronota fagarae* on citrus and *Zanthoxylum spp.* – DN Russell, **SE Halbert**, PD Roberts
3.12	Abundance of *Diaphorina citri* (Hemiptera: Psyllidae) in orange jasmine and backyard citrus of Yucatán, Mexico – M Lozano-Contreras, **J Jasso-Argumedo,** D Morales-Koyoc, T Jasso-Laucirica, A González-Hernández, JI López-Arroyo

	3.13	Difference of gender and effect of photoperiod on Asian citrus psyllid feeding behavior – **DM Okuma**, RH Serikawa, ME Rogers
	3.14	Seasonal abundance of *Diaphorina citri* (Hemiptera: Psyllidae) and natural enemies in citrus groves of Yucatán, Mexico – **J Jasso-Argumedo**, M Lozano-Contreras, H Barroso-Aké, JI López-Arroyo
	3.15	Host plant usage by adult psyllids in South Texas – **DB Thomas**
4:45 – 6:00 pm		Poster Session 1
7:00 – 8:15 pm		Conference Dinner

Day 3: Wednesday, 12 January 2011

7:00 am – 5:00 pm		Registration
7:00 – 8:00 am		Continental Breakfast
8:00 – 10:15 am		**Session 4: Survey, Detection and Diagnosis – John da Graça, Moderator**
Oral Presentations		
8:00	**4.1**	Development and reactivity of polyclonal antibodies based on OMP sequences of *Candidatus* Liberibacter asiaticus – **HD Coletta-Filho**, LA Peroni, AA De Souza, MA Takita, DR Stach-Machado
8:15	**4.2**	Development of single-chain antibody fragments (scFvs) against '*Candidatus* Liberibacter asiaticus' by phage display – Q Yuan, R Jordon, R Brlansky, O Minenkova, **J Hartung**
8:30	**4.3**	Highly sensitive detection by real-time PCR targeting the multiple tandem-repeats of two prophage region genes of the citrus huanglongbing disease bacterium, '*Candidatus* Liberibacter asiaticus' – **JK Morgan**, L Zhou, RG Shatters Jr, K Manjunath, Y-P Duan
8:45	**4.4**	Comparison of different extraction and assay protocols in different laboratories to develop a standardized assay for detection of huanglongbing-associated bacteria from psyllids – **K Manjunath**, M Irey, C Ramadugu, RF Lee, C LeVesque, B Brady, M Polek, H Lin, E Civerolo, M Afunian, G Vidalakis
9:00	**4.5**	Assessment of various spectroscopic techniques for detection of HLB – GH Poole, SA Hawkins, WR Windham, J Heitschmidt, JP Albano, B Park, KC Lawrence, **TR Gottwald**
9:15	**4.6**	Seasonal variability in HLB testing data in plant and psyllid samples in Florida – **M Irey**, T Gast, J Cote, P Gadea, O Santiago, L Briefman, J Graham
9:30	**4.7**	Survey to estimate the rate of HLB infection in Florida citrus groves – **M Irey**, RA Morris, M Estes
9:45	**4.8**	Two survey protocols to detect newly introduced HLB and other exotic pathogens and pests – **T Gottwald**, T Riley, M Irey, S Parnell, D Hall
10:00	**4.9**	Distribution of '*Candidatus* Liberibacter americanus' and '*Ca.* L. asiaticus' in foliage of naturally infected citrus trees – MC Sousa, MVF Lemos, GF Frare, MA Santos, **SA Lopes**
Posters		
	4.10	A perspective on the activities of Texas HLB Diagnostic Laboratory – M Kunta, **JV da Graça**, M Sétamou, M Skaria

	4.11	Two new real-time PCR-based surveillance systems for "*Candidatus* Liberibacter" species detection – **H Lin**, Y Bai, EL Civerolo
	4.12	Detection of *Candidatus* Liberibacter solanacearum in potato psyllid isolated from sticky traps – K Kwok, **CS LeVesque**, K Manjunath, M Irey, M Polek
	4.13	Detection of *Candidatus* Liberibacter asiaticus (Las) on yellow sticky traps by real time PCR – **M Irey**, P Gadea, D Hall
	4.14	Validation of the starch-iodine reaction for field pre-diagnosis of huanglongbing in citrus of Mexico – RX Loredo-Salazar, A Uribe-Bustamante, CG Rodríguez-Quibrera, SA Curtí-Díaz, EI Alanís-Martínez, JJ Velázquez-Monreal, **JI López-Arroyo**
	4.15	Detecting HLB using NIR remote sensing – **J Gonzalez-Mora**, CS Dima, M Irey, R Ehsani
	4.16	Isothermal detection of huanglongbing in psyllids and citrus tree samples – **PF Russell**, N McGowen, R Bohannon
	4.17	Assessment of '*Candidatus* Liberibacter asiaticus' in the psyllids, *Diaphorina citri* collected from *Murraya paniculata* in Thailand – **A Jantasorn**, Y-P Duan, M Hoffman, S Zhang, T Puttamuk, N Thaveechai
	4.18	Liberibacter reservoirs in cities and villages in the state of São Paulo, Brazil – **SA Lopes**, GF Frare, LEA Camargo, NA Wulff, DC Teixeira, RB Bassanezi, GAC Beattie, AJ Ayres
	4.19	Pictorial gallery of foliar HLB symptoms on various citrus varieties and citrus relatives – **DJ Robl**, TD Riley, H Gomez

10:15 – 10:30 am Break

10:30 – 11:45 pm **Session 5: Economics, Fruit Quality, and Crop Loss – Mike Irey, Moderator**

Oral Presentations

10:30	**5.1**	Evaluation of chemical flavor compounds in orange juice from multiple harvests of Hamlin and Valencia fruit from HLB-symptomatic versus healthy trees – **E Baldwin**, J Bai, S Dea, A Plotto, J Manthey, R Rouseff, M Irey
10:45	**5.2**	Evaluation of bitterness caused by huanglongbing disease in orange juice – **S Dea**, A Plotto, J Manthey, E Baldwin, M Irey
11:00	**5.3**	Sensory evaluation of juice made with fruit from huanglongbing (HLB) affected trees – **A Plotto**, F Valim, R Rouseff, S Dea, J Manthey, J Narciso, J Bai, M Irey, E Baldwin
11:15	**5.4**	Economic considerations to treating HLB with the standard protocol or an enhanced foliar nutritional program – **RA Morris**, RP Muraro
11:30	**5.5**	When should a grower stop removing trees? – **M Irey**

Posters

	5.6	Use of electronic sensor technology to discriminate between juices from huanglongbing infected and healthy orange trees – **J Bai**, S Dea, A Plotto, E Baldwin, M Irey
	5.7	A regional epidemiological approach for yield loss estimates due to *Candidatus* Liberibacter under different risk scenarios – **G Mora-Aguilera**, G Acevedo, JI López-Arroyo, J Velazquez, R Gómez, M Robles, D Salcedo

12:00 – 1:30 pm Lunch and Keynote Lecture 2

Lessons from Zebra Chip: Prospects for HLB Management – **Dennis Gross**

1:30 – 2:30 pm **Session 6: Epidemiology – Tim Gottwald, Moderator**

Oral Presentations

1:30 **6.1** Five years of experience with huanglongbing in Florida: current assessment; how did we get here? – **SE Halbert**, K Manjunath, C Ramadugu, RF Lee

1:45 **6.2** Designing sampling schemes to maximize the probability of early detection of a huanglongbing outbreak – **SR Parnell**, TR Gottwald, F van den Bosch

2:00 **6.3** Spatial increase and temporal spread of HLB affected by management practices – **T Gottwald**, C Gilligan, M Irey

2:15 **6.4** "*Candidatus* Liberibacter africanus" subspecies capense on *Calodendrum capense* in South Africa – MNB Phahladira, R Viljoen, **G Pietersen**

Posters

6.5 Distribution of psyllids positive for *Candidatus* Liberibacter asiaticus in citrus groves in southwest Florida – **SE Halbert**, K Manjunath, C Ramadugu, P Mears, RF Lee

6.6 Seasonal prevalence of citrus huanglongbing (*Candidatus* Liberibacter asiaticus) in a central Florida sweet orange grove – **V Parkunan**, N-Y Wang, TA Ebert, ME Rogers, MM Dewdney

6.7 A mathematical model for transmission of HLB by psyllids – **C Chiyaka**, B Singer, S Halbert, AHC van Bruggen

6.8 Potential spread of huanglongbing through soil – **U Nunes da Rocha**, ER Dickstein, AHC van Bruggen

2:30 – 2:45 pm Break

2:45 – 4:30 pm **Session 7: International Citrus Industries, Regulation, and Grower Experiences – MaryLou Polek, Moderator**

Oral Presentations

2:45 **7.1** Laws, huanglongbing management, and the current status of the disease in São Paulo, Brazil – **J Belasque Jr**, AJ Ayres, JC Barbosa, CA Massari, JM Bové

3:00 **7.2** Distribution of citrus huanglongbing in the Dominican Republic – **L Matos**, ME Hilf, X Cayetano, A Feliz, H Puello, F Méndez, J Borbón, SY Folimonova

3:15 **7.3** Citrus huanglongbing in Cuba: current situation, management, and main research – **D López,** M Luis, C Collazo, L Batista, I Peña, C González, L Pérez, V Zamora, A Borroto, D Pérez, E Alonso, I Acosta, R Llauger, JC Casín

3:30 **7.4** Spreading and symptoms of huanglongbing in Mexican lime groves in the state of Colima, Mexico – MM Robels Gonzalez**, JJ Velázquez Monreal**, MA Manzanilla Ramirez, M Orozco Santos, R Flores Virgen, VM Medina Urrutia, SH Carrillo Medrano

3:45 **7.5** The Asian Citrus Psyllid/huanglongbing detection, treatment, and regulatory program in California – **T Galindo**

4:00 **7.6** Detection and reporting of Asian citrus psyllid and huanglongbing in commercial citrus within California: an industry program – **BJ Taylor**, ML Polek, T Batkin

4:15 **7.7** Citrus Health Research Forum: a national research effort – **M Polek,** G Wisler

Posters

	7.8	The identification and distribution of citrus greening disease in Jamaica – AP Oberheim, **SE Brown**, WA McLaughlin
	7.9	Fitting a spatial analysis grid for research on huanglongbing in Mexico – **C Aldama-Aguilera**, LA Olvera-Vargas, MG Galindo-Mendoza
4:30 – 5:45 pm		Poster Session 2
6:00 pm		Dinner on your own

Day 4: Thursday, 13 January 2011

7:00 am – 5:00 pm		Registration
7:00 – 8:00 am		Continental Breakfast
8:00 – 10:00 am		**Session 8: Host-Pathogen Interactions – Bill Dawson, Moderator**
Oral Presentations		
8:00	**8.1**	Examination of stages of HLB disease development in citrus trees – **SY Folimonova**, DS Achor, ME Hilf
8:15	**8.2**	New defense response insights of sweet orange infected with two *Candidatus* Liberibacter species – VS Mafra, PK Martins, EC Locali-Fabris, M Ribeiro-Alves, CS Francisco, J Freitas-Astúa, LT Kishi, **MA Machado**
8:30	**8.3**	Differential expression of potential virulence genes of *Candidatus* Liberibacter asiaticus in infected plants and psyllids – A Sreedharan, S Wei, **N Wang**
8:45	**8.4**	Metabolome analysis of tolerant and susceptible citrus varieties in response to infection with *Candidatus* Liberibacter asiaticus – **U Albrecht**, K Skogerson, KD Bowman, O Fiehn
9:00	**8.5**	Deep transcriptome profiling of citrus fruit in response to huanglongbing disease – F Martinelli, SL Uratsu, U Albrecht, RL Reagan, E Leicht, R D'Souza, KD Bowman, **AM Dandekar**
9:15	**8.6**	Carbohydrate metabolism and related gene expression changes in huanglongbing-affected sweet orange – **C Chen**, J Fan, Q Yu, R Brlansky, Z-G Li, F Gmitter Jr
9:30	**8.7**	Analysis of colonization of citrus seeds by '*Ca*. Liberibacter asiaticus' and its possible role in seed transmission – **ME Hilf**
9:45	**8.8**	Natural transmission of huanglongbing caused by '*Candidatus* Liberibacter americanus' and '*Ca*. L. asiaticus' and with two different sources of inoculum plants (*Citrus sinensis* or *Murraya exotica*) – MCG Gasparoto, **RB Bassanezi**, L Amorim, LH Montesino, SA Lourenço, NA Wulff, A Bergamin Filho
Posters		
	8.9	Callose predominates over phloem protein 2 in phloem plugging of trees affected with huanglongbing – **LG Albrigo**, DS Achor
	8.10	Influence of HLB on the oligosaccharides of citrus leaves – **PF Cancalon**, C Bryan, C Haun, J Zhang
	8.11	Gene expression in *Citrus sinensis* fruit tissues harvested from huanglongbing-infected trees – **H-L Liao**, JK Burns
	8.12	Expression profiling of host response of citrus to *Candidatus* Liberibacter asiaticus infection – V Aritua, **N Wang**

	8.13	Arabidopsis responses to the HLB-relative *Candidatus* Liberibacter psyllaurous – **S Patne**, KL Manjunath, ML Roose
	8.14	Comparative studies of the endophytic microbial community structures in huanglongbing-infected and non-infected citrus plants – X-F Zheng, B Liu, **C-Q Ruan**, Y-Z Lin, R-F Xiao, Y-J Zhu, G-C Fan, Z-J Cai, Y-P Duan
	8.15	HLB influences the diversity, structure, and function of the bacterial community associated with citrus – P Trivedi, **N Wang**
	8.16	Functional studies of putative effectors of '*Candidatus* Liberibacter asiaticus' using citrus tristeza virus vector – **S Hajeri**, Y-P Duan, S Gowda
	8.17	First report of a new host (*Pithecellobium lucidum* Benth) of the citrus huanglongbing bacterium, '*Candidatus* Liberibacter asiaticus' – **GC Fan**, ZJ Cai, QY Weng, C Ke, B Liu, LJ Zhou, Y-P Duan
	8.18	Citrus seed grafting a simple technology for testing seed transmission of citrus greening/HLB and of other pathogenic agents – **M Bar-Joseph**, C Robertson, M Hilf, WO Dawson
	8.19	Lack of transmission of HLB by citrus seed – **JH Graham**, EG Johnson, DB Bright, MS Irey
	8.20	Visualization of '*Ca*. Liberibacter asiaticus' in immature citrus seed coats by Fluorescent *In Situ* Hybridization (FISH) of 16S rRNA – **ME Hilf**
	8.21	Rapid, sensitive, and non-radioactive tissue-blot diagnostic method for the detection of citrus greening disease (HLB) – **S Gowda**, N Nageswara Rao, S Miyata, DK Ghosh, MS Irey, ME Rogers, SM Garnsey
10:00 – 10:15 am		Break
10:15 – 12:00 pm		**Session 9: Asian Citrus Psyllid Management – Michael Rogers, Moderator**
Oral Presentations		
10:15	**9.1**	A database for analysis of *Diaphorina citri* population monitoring data from commercial groves – **T Gast**, M Irey, H Hou
10:30	**9.2**	RNAi strategy in citrus trees to reduce Hemipteran pests: psyllids and leafhoppers – **W Hunter**, E Glick, BR Bextine, N Paldi
10:45	**9.3**	Application of insecticidal sprays to citrus in winter provide significant reduction in Asian citrus psyllid *Diaphorina citri* populations and opportunity for additional suppression through conservative and augmentative biological control – **JA Qureshi**, PA Stansly
11:00	**9.4**	Studies on imidacloprid and management of ACP in California – **F Byrne**, J Morse, J Bethke
11:15	**9.5**	Selection and dosage of insecticides for the control of the Asian citrus psyllid in the citrus groves of Mexico – **JI López-Arroyo**, U Díaz-Zorrilla, LM Hernández-Fuentes, E Cortez-Mondaca, MM Robles-González, JA Villanueva-Jiménez, H Cabrera-Mireles, J Loera-Gallardo, J Jasso-Argumedo, S Curti-Díaz
11:30	**9.6**	Asian citrus psyllid (ACP) control: potential use of systemic insecticides in citrus bearing trees – **PT Yamamoto**, MP Miranda, MR Felippe
11:45	**9.7**	Insecticide resistance and susceptibility of uninfected and *Candidatus* Liberibacter asiaticus-infected Asian citrus psyllid in Florida – **S Tiwari**, ME Rogers, LL Stelinski
Posters		
	9.8	Development of area-wide Asian citrus psyllid management strategies in Texas – **DW Bartels**, M Sétamou, MA Ciomperlik, JV da Graça

9.9	Asian citrus psyllid management strategies for California citrus growing regions – **EE Grafton-Cardwell**, JG Morse, BJ Taylor
9.10	Area wide management of Asian citrus psyllid in Southwest Florida – **PA Stansly**, HA Arevalo, M Zekri, R Hamel
9.11	Evaluation of low volume sprayers used in citrus psyllid control applications – C Hoffmann, B Fritz, D Martin, R Atwood, T Hurner, M Ledebuhr, M Tandy, **JL Jackson**, G Wisler
9.12	Identification of parasitoids and haplotypes of *Tamarixia radiata* (Waterston) (Hymenoptera: Eulophidae) from *Diaphorina citri* in Yucatán, Mexico – A González-Hernández, J Jasso-Argumedo, R Cruz-García, M Lozano-Contreras, **JI López-Arroyo**, OK Villanueva-Segura
9.13	Host specificity testing of *Tamarixia radiata* for the classical biological control of Asian citrus psyllid, *Diaphorina citri*, in California – **RR Pandey**, MS Hoddle
9.14	Predators in non-commercial citrus and preliminary evaluation of their potential against the Asian citrus psyllid in Texas – **RS Pfannenstiel**, TR Unruh
9.15	Suitability of *Diaphorina citri*, *Toxoptera citricida*, and *Aphis spiraecola* as prey for *Hippodamia convergens* – **JA Qureshi**, PA Stansly
9.16	Molecular analysis of *Tamarixia radiata* from America uncovers extensive haplotype variation: multiple groups? – **JH de León**, GA Gastaminza, M Sétamou, S Cáceres, LHB Kanga, J Buenahora, JR Parra, GA Logarzo, CRW Stañgret
9.17	Molecular characterization of a new entomopathogenic fungus *Isaria poprawskii*: a potential biocontrol agent for *Diaphorina citri*. Development of *Isaria*-specific molecular markers – **JH de León**, HE Cabanillas, RA Humber, KD Murray, P Moran, WA Jones
9.18	RNAi – evaluating injection into citrus trees and grapevine to target psyllids and leafhoppers – **W Hunter**, E Stover, E Glick, BR Bextine, N Paldi
9.19	Using novel photonic fence technology to protect foundation block and nursery stock from Asian citrus psyllid – **E Johanson**, J Patt, E Mullen, P Rutschman, N Pegram
9.20	Development of a *Diaphorina citri*-specific molecular diagnostic marker for gut content examinations – **JH de León**, D Thomas, M Sétamou, JR Hagler
9.21	Development of a pathogen dispenser to control Asian citrus psyllid (ACP) in residential citrus – **J Patt**, M Jackson, C Dunlap, W Meikle, J Adamczyk
9.22	Producing new flush at will in citrus to study ACP-plant interactions – NSA Malik, **J Brockington**, JL Perez, RL Mangan
9.23	Thresholds for vector control in young citrus treated for symptoms of HLB with a nutrient/SAR package – **C Monzó**, HA Arevalo, PA Stansly
9.24	Experimental release rate analysis of volatile compounds from wax-based dispensers – **RD Neuman**, AB Shelton, DR Mills
9.25	Vegetation canopy airflow modeling for airborne dispersion of DMDS – **AB Shelton,** RD Neuman
9.26	Methods and systems to deliver volatile compounds for biological control strategies – **RD Neuman**, AB Shelton, RH Zee

12:00 – 1:30 pm Lunch and Keynote Lecture 3:
Viral Vectors and Prospects for HLB Control – **Bill Dawson**

1:30 – 3:00 pm **Session 10: HLB Management – Tim Spann, Moderator**
Oral Presentations

1:30	**10.1**	Trunk injection of copper sulfate pentahydrate (Magna-Bon) affects expression of HLB – **JH Graham**, MS Irey, F Meile
1:45	**10.2**	Chemical compounds effective against the citrus huanglongbing bacterium, '*Candidatus* Liberibacter asiaticus' *in planta* – M Zhang, CA Powell, L Zhou, Z He, E Stover, **Y-P Duan**
2:00	**10.3**	Regional HLB management on the effectiveness of local strategies of inoculum reduction and vector control – **RB Bassanezi**, PT Yamamoto, LH Montesino, TR Gottwald, L Amorim, A Bergamin Filho
2:15	**10.4**	The theory of managing huanglongbing with plant nutrition and real world success in Florida – **TM Spann**, RE Rouse, AW Schumann
2:30	**10.5**	Nutritional treatments: inconsequential effect on HLB control and promote areawide titer increase and disease spread – **T Gottwald**, M Irey, J Graham, B Wood
2:45	**10.6**	Nutritional approaches for management of huanglongbing (citrus greening) in China – **Y Xia**, R Sequeira
Posters		
	10.7	First steps towards rescuing *Las*-infected citrus germplasm – **G McCollum**, E Stover
	10.8	Screening chemical compounds against citrus huanglongbing using an optimized grafting system from '*Candidatus* Liberibacter asiaticus'-infected citrus scions – M-Q Zhang, Y-P Duan, **CA Powell**
	10.9	Discovery of antimicrobial small molecules against *Candidatus* Liberibacter asiaticus by screening novel SecA inhibitors using structure based design – N Akula, **N Wang**
	10.10	The low pressure trunk injection system: a technology to fight against HLB – **J Tomas**
	10.11	Does systemic acquired resistance (SAR) control HLB disease development? – **JH Graham**, MM Myers, MS Irey, TR Gottwald
	10.12	Use of growth-priming agents to extend the growth of HLB-affected citrus – **Z He**, M-Q Zhang, E Viana, T Merlin, Y-P Duan, PJ Stoffella, A Liptay, CA Powell
	10.13	Evaluation of foliar zinc and manganese for control of HLB or associated symptom development – **EG Johnson**, MS Irey, T Gast, DB Bright, JH Graham
	10.14	Role of nutritional and insecticidal treatments in mitigation of HLB: main effects and interactions – **PA Stansly**, HA Arevalo, RE Rouse
	10.15	Use of horticultural practices in citriculture to survive huanglongbing – **ES Stuchi**, EA Girardi
	10.16	Critical control point (CCP) analysis to build a model system for measuring citrus propagation risk mitigations II. Sampling and monitoring – **LG Brown**, EM Jones, HM Hartzog
	10.17	The need of an epidemio-surveillance network to prevent huanglongbing arrival in the south of the Mediterranean Basin – **M Dollet**, B Aubert, E Imbert, F Gatineau
	10.18	Presence of *Candidatus* Liberibacter asiaticus in *Diaphorina citri* Kuwayama collected from plants for sale in Florida – **SE Halbert**, K Manjunath, C Ramadugu, RF Lee
	10.19	A model system for studying huanglongbing – **K Manjunath**, C Ramadugu, G Kund, J Trumble, RF Lee

3:00 – 3:15 pm Break

3:15 – 5:00 pm **Session 11: Host Tolerance and Resistance – Fred Gmitter, Moderator**

Oral Presentations

3:15 **11.1** Incidence of huanglongbing on several sweet orange cultivars budded onto different rootstocks at the Citrus Experimental Station (EECB), Bebedouro, São Paulo, Brazil – **ES Stuchi**, ET Reiff, OR Sempionato, EA Girardi, LG Parolin, DA Toledo

3:30 **11.2** Host preference and suitability of native North American Rutaceae for the development of the Asian citrus psyllid, *Diaphorina citri* Kuwayama – JL Sandoval II, M Sétamou, **JV da Graça**

3:45 **11.3** Progress using transgenic approaches and biotechnology-facilitated conventional breeding to develop genetic resistance/tolerance to HLB in commercial citrus – **JW Grosser**, M Dutt, A Shohael, GA Barthe

4:00 **11.4** Promoter regulation of the beta-glucoronidase (GUS) gene and antimicrobial peptide D4E1 in a citrus rootstock – **LS Benyon**, E Stover, K Bowman, G McCollum, R Niedz

4:15 **11.5** Responses of transgenic 'Hamlin' sweet orange plants expressing the *attacin A* gene to *Candidatus* Liberibacter asiaticus infection – **RTA Felipe**, FA Mourão-Filho, EV Pereira Jr, SA Lopes, MC Sousa, BMJ Mendes

4:30 **11.6** Screening antimicrobial peptides *in vitro* for use in developing huanglongbing and citrus canker resistant transgenic citrus – **E Stover**, R Stange, G McCollum, J Jaynes

4:45 **11.7** Response of citrus transgenic plants expressing *STX 1A* gene to *Candidatus* Liberibacter asiaticus – **VV Marques**, TZ Bagio, VH Sugahara, GV Vasquez, L Meneguim, L Grange, J Bespalhok, AK Kobayashi, LFP Pereira, LGE Vieira, RP Leite Jr

Posters

11.8 Rootstocks and pruning effects on huanglongbing incidence on Tahiti limes in Bebedouro, Northern São Paulo State, Brazil – **ES Stuchi**, ET Reiff, OR Sempionato, T Cantuarias-Avilés, EA Girardi, LG Parolin, DA Toledo

11.9 *Candidatus* Liberibacter asiaticus (CLas) titer in field HLB-exposed commercial citrus cultivars – **E Stover**, G McCollum, RG Shatters Jr, D Hall, Y-P Duan

11.10 Host response of different citrus genotypes and relatives to *Candidatus* Liberibacter asiaticus infection – RL Boscariol-Camargo, M Cristofani-Yaly, A Malosso, **HD Coletta Filho**, MA Machado

11.11 *Candidatus* Liberibacter asiaticus (CLas) titer in *Poncirus trifoliata* and *P. trifoliata* hybrids: inferences on components of HLB resistance – **E Stover**, RG Shatters Jr, G McCollum, D Hall, Y-P Duan

11.12 The role of salicylic acid and systemic acquired resistance in the response of citrus to HLB – **A Khalaf**, VJ Febres, RH Brlansky, FG Gmitter, GA Moore

11.13 Observations of *Citrus* × *Poncirus* hybrid tolerance to infection with *Candidatus* Liberibacter asiaticus – **KD Bowman**, U Albrecht

11.14 Performance of a phage gene in transgenic citrus resistant to citrus greening – **Y Jiang**, G Perazzo, A Septer, R Kress, DW Gabriel

11.15 Genome sequences of haploid Clementine mandarin and diploid sweet orange – **FG Gmitter Jr**

11.16 Exploring metabolic profiles of plant tissue with increased or decreased susceptibility – NSA Malik, JL Perez, **J Brockington**, RL Mangan

5:00 – 6:15 pm Poster Session 3

7:00 – 8:15 pm	Conference Banquet and Keynote Lecture 4 Understanding the Lifestyle of Plant Pathogens Towards Successful Management of Vectored Plant Diseases – **Steven Lindow**
8:15 – 9:30 pm	Entertainment

Day 5: Friday, 14 January 2011
Grower Day

7:00 am – noon	Registration
7:00 – 8:00 am	Continental Breakfast
8:00 am – 12:45 pm	**Session 12: Grower Day – Megan Dewdney, Moderator**
8:00 – 9:30 am	Take Home Messages: What Can Be Implemented Now or in the Near Future?
8:00	HLB Pathology Lessons – M Dewdney/T Schubert
8:30	Entomology Lessons – LL Stelinski/M Setamou
9:00	Horticulture Lessons – C Oswalt/E Stover
9:30 – 11:15 am	Managing HLB in Florida and Brazil
9:30	The Florida Experience – M Irey
10:00	The Brazil Experience – R Bassanezi
10:30 – 10:45 am	Break
10:45	Citrus Health Management Areas – ME Rogers
11:15 – 12:15 pm	WORKSHOP: Nutrition and Tree Health – TM Spann/JH Graham/Y Xia
12:15 – 12:45 pm	Grower/Industry Responses – Jerry Newlin/Bobby Barben/Others
12:45 – 2:15 pm	Lunch and Keynote Lecture 5 Sustaining Productivity in an Endemic HLB Environment – J Ayres
2:15 – 5:00 pm	CHRP HLB Research Coordinating Group Meeting – G Wisler, M Polek