



International Organization of Citrus Virologists

20TH IOCV CONFERENCE

April 10-15, 2016 Chongqing, China.



Program & Abstracts





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PROGRAM

SUNDAY - 10 APRIL 2016

9:00 - 21:00 Registration (Lobby of Haiyu Hotspring Hotel)

18:30 - 21:00 Welcome cocktail (Taiyang Hall, Haiyu Hotspring Hotel)

MONDAY - 11 APRIL 2016

8:00 - 9:20 Registration (Lobby of Haiyu Hotspring Hotel)

9:30-10:20 Opening Ceremony (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Changyong Zhou

9:30-9:40 Welcome remark from Weiguo Zhang, President of Southwest University

9:40-9:50 Welcome remark from Chongqing Municipal Government

9:50-9:55 Welcome remark from Department of International Cooperation & Exchange, MOE

9:55-10:00 Opening remark from Juliana Freitas-Astúa, the IOCV Chairperson

10:00-10:20 Group photo

10: 20-10:35 Coffee break

10:35-11:55 Oral session 1 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Juliana Freitas-Astúa

10:35-11:15 Genome research and genetic improvement of citrus during the past years in China

Xiuxin Deng (The Key Laboratory of Horticultural Crop Biology of MOE, Huazhong Agricultural University, China) (Invited speaker)

11:15-11:55 Using the CTV vector to attempt to control HLB

William O. Dawson (Department of Plant Pathology, Citrus Research and Education Center, University of Florida, USA) (Invited speaker)

12:00-13:00 Buffet lunch

14:30-15:50 Oral session 2 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Georgios Vidalakis

14:30-15:10 Breeding of scion and rootstock HLB tolerance through genome-based information

Fred G. Gmitter Jr. (Citrus Research and Education Center, University of Florida, USA) (Invited speaker)

15:10-15:50 Molecular mechanisms behind the HLB symptom variations and rapid selection for variant citrus plants with greater HLB resistance/tolerance

Yongping Duan (Horticultural Research Laboratory, USDA-ARS, USA) (Invited speaker)

15: 50-16:05 Coffee break

16:05-17:45 Oral session 3 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Hong Lin

16:05-16:25 Molecular characterization of a group 16SrDNA III phytoplasma associated with HLB-like symptoms in sweet orange in Brazil

Nelson A. Wulff (Departamento de Pesquisa & Desenvolvimento, Fundecitrus, Brazil)

16:25-16:45 Genetic variation and high frequency transposition of non-autonomous transposable elements from *Candidatus Liberibacter asiaticus*

Xuefeng Wang (Citrus Research Institute, Chinese Academy of Agricultural Sciences / Southwest University, China)

16:45-17:05 Antibody-based diagnosis of citrus Huanglongbing and Stubborn using pathogen secreted proteins as detection markers

Deborah Pagliaccia (Department of Plant Pathology & Microbiology, University of California, Riverside, USA)

17:05-17:25 Research progress of the insect vectors of Huanglongbing in China

Yijin Cen (South China Agricultural University, China)

17:25-17:45 Monitoring citrus flush shoot ontogeny as a potential strategy for HLB and psyllid management

Juan Camilo Cifuentes-Arenas (Sao Paulo State University, Brazil) (IOCV sponsored young scientist)

17:45-18:30 Poster session 1 (International Meeting Center, Haiyu Hotspring Hotel)

P1 Backyard hosts of Asian citrus psyllid and *Candidatus Liberibacter asiaticus*

- P2 Infection route of *Candidatus Liberibacter asiaticus* in the body of its insect vector, *Diaphorina citri*
- P3 First report of Huanglongbing disease on Mexican lime in Iran
- P4 Study of the natural host range of *Candidatus Liberibacter asiaticus* in several herbaceous plants and shrubs in southern Iran
- P5 Transcriptome analysis of periwinkle to infection with *Candidatus Liberibacter asiaticus*
- P6 First report of *Candidatus Liberibacter asiaticus* associated with HLB disease in grapefruit from Southern of Iran

18:30 **Session close**

TUESDAY - 12 APRIL 2016

8:30-10:10 **Oral session 4** (International Meeting Center, Haiyu Hotspring Hotel)

Chair: **William O. Dawson**

8:30-9:10 Development of genome-based therapeutics to control HLB

Hong Lin (San Joaquin Valley Agricultural Sciences Center, USDA-ARS, USA)
(Invited speaker)

9:10-9:30 Control progress of citrus Huanglongbing in Guangxi, P. R. China

Xianjin Bai (Guangxi Academy of Agricultural Sciences, China)

9:30-9:50 Asian citrus psyllid and Huanglongbing in California

Georgios Vidalakis (Department of Plant Pathology & Microbiology, University of California, Riverside, USA)

9:50-10:10 Impact of the environment on *Candidatus Liberibacter asiaticus* multiplication in young shoots of citrus trees

Silvio A. Lopes (Departamento de Pesquisa & Desenvolvimento, Fundecitrus, Brazil)

10: 10-10:25 **Coffee break**

10:25-11:45 **Oral session 5** (International Meeting Center, Haiyu Hotspring Hotel)

Chair: **Nerida Donovan**

10:25-11:05 Graft-transmissible citrus diseases in China-research developments

Changyong Zhou (National Citrus Engineering Research Center, Southwest University, China) (Invited speaker)

11:05-11:25 Effect of bacterial DNA concentration in diagnosis of HLB using conventional and qPCR methods

Alberto Gochez (Instituto Nacional de Tecnologia Agropecuaria, Argentina) (IOCV sponsored young scientist)

11:25-11:45 Diversity and variation of *Candidatus Liberibacter asiaticus* associated phage in Southern China

Zheng Zheng (South China Agricultural University, China)

11:45-12:15 Poster session 2 (International Meeting Center, Haiyu Hotspring Hotel)

P7 Predominance of single prophage carrying a CRISPR/cas system in *Candidatus Liberibacter asiaticus* strains in Southern China

P8 Genetic diversity of *Candidatus Liberibacter asiaticus* in Iran

P9 Multiplex qPCR detection of *Candidatus Liberibacter* spp. and *Spiroplasma citri*

P10 False positives in molecular detection of *Candidatus Liberibacter* in citrus associated to endophytic bacteria

P11 Anatomical research on tolerant citrus variety infected with Huanglongbing

12:15-13:15 Buffet lunch

14:30-16:10 Oral session 6 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Nelson A. Wulff

14:30-15:10 Diversity of virus associated with citrus leprosis symptom

Juliana Freitas-Astúa (Embrapa Cassava and Fruits and Biological Institute, Brazil)
(Invited speaker)

15:10-15:30 Field performance of various *Citrus tristeza virus* cross-protection sources trialed in grapefruit in different climatic regions

Glynnis Cook (Citrus Research International, South Africa)

15:30-15:50 Evolutionary dynamic of a new CTV genetic lineage: what does the history tell us?

Maria Jose Benitez Galeano (University of the Republic, Uruguay) (IOCV sponsored young scientist)

15:50-16:10 Survey and molecular detection of *Citrus yellow vein clearing virus* and *Citrus chlorotic dwarf virus associated virus* in citrus nurseries at east Mediterranean region in Turkey

Nüket Önelge (Department of Plant Protection, Faculty of Agriculture, Cukurova University, Turkey)

16: 10-16:25 Coffee break

16: 25-18:00 Poster session 3 (International Meeting Center, Haiyu Hotspring Hotel)

- P12 Molecular identification of *citrus tristeza virus* isolates from citrus growing regions of Nigeria
- P13 Multiple genes expression from *Citrus tristeza virus* based vectors
- P14 Application of RNAi to improvement of citrus to acquire resistance to *Citrus tristeza virus*
- P15 Lateral flow immunoassay for the rapid detection of *Citrus tristeza virus*
- P16 Molecular characterization of Peruvian *Citrus tristeza virus* isolates based on 3' untranslated region sequences
- P17 Influence of the quantity of *Citrus tristeza virus* on transmissibility by different aphid species
- P18 Genome sequencing through viral small RNAs of a *Citrus tristeza virus* isolate from Hunan province reveals the presence of multiple stem pitting strains
- P19 Interactions between structural and nonstructural proteins of *Citrus tristeza virus*
- P20 *Citrus leprosis* and *Brevipalpus* in the Lower Rio Grande Valley-Texas
- P21 *Citrus psorosis virus* in Tunisia: prevalence and molecular characterization
- P22 Distribution of CYVCV and cell structural change in infected Eureka lemon leaves
- P23 Deep sequencing and characterization of *Citrus yellow vein clearing virus* isolates from Chongqing and Yunnan, China
- P24 Current status of *Citrus chlorotic dwarf associated virus* disease in the eastern Mediterranean region of Turkey

18:00-Session close

WEDNESDAY - 13 APRIL 2016

8:10-15:40 Visit Citrus Research Institute (CRI) and field trip

- 8:10 Depart from Haiyu Hotspring Hotel
- 8:30-10:00 Visit CRI (Laboratories, diseases and virus-free nursery)
- 10:00-10:15 Coffee break (CRI Canteen)
- 10:15 Depart from CRI
- 12:00-14:00 Lunch provided by Changshou District Government (Lakeside Restaurant)

14:30-15:40 Visit standardized orchards and *Citrus yellow vein clearing virus*-infected lemons

15:40-17:20 Leave Changshou for Hongyadong, a traditional culture street at downtown

18:00-19:30 Dinner (Chongqing hotpot, Hongyadong)

19:30-21:00 Leave Hongyadong for Hotel (Night sightseeing on bus)

THURSDAY - 14 APRIL 2016

9:00-10:20 Oral session 7 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Nüket Önelge

9:00-9:40 Citrus viroids-research developments

Georgios Vidalakis (Department of Plant Pathology & Microbiology, University of California, Riverside, USA) (Invited speaker)

9:40-10:00 The virus/vector relationship in the *Citrus leprosis virus C* pathosystem

Elliot W. Kitajima (LFN/ESALQ/USP, Brazil)

10:00-10:20 A novel citrus viroid found in Australia, tentatively named *Citrus viroid VII*

Grant A. Chambers (Elizabeth Macarthur Agricultural Institute, New South Wales Department of Primary Industries, Australia)

10:20-10:35 Coffee break

10:35-11:35 Oral session 8 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Xuefeng Wang

10:35-11:15 *Citrus psorosis virus*: state of art

Maria Laura Garcia (University of La Plata, Argentina) (Invited speaker)

11:15-11:35 ihpCP sweet orange transgenic lines are resistant to psorosis A and psorosis B

Agustina De Francesco (Instituto de Biotecnología y Biología Molecular, Argentina) (IOCV sponsored young scientist)

11:35-12:15 Poster session 4 (International Meeting Center, Haiyu Hotspring Hotel)

P25 Investigating the TsnRNA-IIIb-induced citrus dwarfing mechanism

P26 One-step multiplex quantitative RT-PCR for the simultaneous detection of three regulated citrus viroids from different genera

P27 Identification of viroids in citrus orchards at Cukurova region in Turkey

- P28 Six-years experience with the high throughput robotic nucleic acid extraction and purification protocol for citrus diagnostics
- P29 Digital PCR for detection of citrus pathogens
- P30 Identification and molecular characterization of *Citrus viroid VI* isolates from China
- P31 The molecular variation of p23 populations of *Citrus tristeza virus* in sweet orange and grapefruit

12:15-13:15 Buffet lunch

14:00-16:00 Oral session 9 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Xiaochun Zhao

14:00-14:40 Genome-based molecular breeding of viral resistant silkworm

Qingyou Xia (State Key Laboratory of Silkworm Genome Biology, Southwest University, China) (Invited speaker)

14:40-15:00 Genome sequence of a new *Dichorhavirus* associated to citrus leprosis nuclear type disease

Juliana Freitas-Astúa (Embrapa Cassava and Fruits and Biological Institute, Brazil)

15:00-15:20 Plant defense mechanisms during the locally-restricted infection of *Citrus leprosis virus C*

Gabriella Dias Arena (Centro APTA Citros Sylvio Moreira, Brazil) (IOCV sponsored young scientist)

15:20-15:40 Identification and functional analysis of wing development-related genes in the *Citrus tristeza virus* (CTV) vector *Toxoptera citricida*

Feng Shang (College of Plant Protection, Southwest University, China)

15:40-16:00 Variability and sequence diversity of *Citrus tristeza virus* isolates from Pakistan

Sagheer Atta (Ghazi University, Pakistan) (IOCV sponsored young scientist)

16:00-16:15 Coffee break

16:15-17:45 IOCV Business meeting (International Meeting Center, Haiyu Hotspring Hotel)

18:00-18:45 Chinese traditional music and opera performance (Golden Hall, Haiyu Hotspring Hotel)

18:45-21:00 Conference banquet (Golden Hall, Haiyu Hotspring Hotel)

FRIDAY - 15 APRIL 2016

8:30-9:50 Oral session 10 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Glynnis Cook

8:30-9:10 Applications of next generation sequencing in plant virology

Mengji Cao (National Center for Citrus Virus Exclusion, Citrus Research Institute, Chinese Academy of Agricultural Sciences, China) (Invited speaker)

9:10-9:30 QUANTIGENE PLEX: a non-PCR, high throughput, multiplex detection assay for citrus pathogens

Georgios Vidalakis (Department of Plant Pathology & Microbiology, University of California, Riverside, USA)

9:30-9:50 Citrus virus detection in NGS data using E-probes

Hans Maree (Department of Genetics, Stellenbosch University, South Africa)

9:50-10:05 Coffee break

10:05-11:05 Oral session 11 (International Meeting Center, Haiyu Hotspring Hotel)

Chair: Changyong Zhou

10:05-10:25 USA citrus clean plant network

Greg W. Douhan (Cooperative Extension Advisor, University of California, USA)

10:25-10:45 California's citrus nursery stock pest cleanliness program: a success story of the collaborative power of industry, university, and regulatory agencies

Georgios Vidalakis (Department of Plant Pathology & Microbiology, University of California, Riverside, USA)

10:45-11:05 Virus identification in citrus red mites (*Panonychus citri*)

Xiaoqing Wang (College of Plant Protection, Southwest University, China)

11:05-11:15 Closure

12:00-13:00 Buffet lunch

15:00-17:00 Free time/Leave for home/Visit Southwest University

SATURDAY- 16 APRIL 2016

Leave for home

POST-CONF. INVESTIGATION

Fri. evening- 15 April to Tue. - 19 April

FRIDAY EVENING- 15 APRIL 2016

18:40 Leave Haiyu Hotspring Hotel for Airport

20:55 Leave Chongqing on Flight PN6277 for Guilin

SATURDAY- 16 APRIL 2016

Visit the Elephant Trunk Mountain in Guilin and Guangxi Academy of Specialty Crops

Welcome dinner provided by Guangxi Academy of Agricultural Sciences

SUNDAY- 17 APRIL 2016

Cruise Li River to Yangshuo to visit kumquat orchards with mulch-covering cultivation

Impression Sanjie Liu show

MONDAY- 18 APRIL 2016

Investigate well- and poor-managed orchards for HLB control in Lipu

Farewell banquet provided by Guangxi Academy of Specialty Crops

TUESDAY- 19 APRIL 2016

Leave Guilin for home

第二十届国际柑桔病毒学专家组织大会
Twentieth conference of the IOCV

