INTERNATIONAL ORGANIZATION OF CITRUS VIROLOGISTS

NEWSLETTER December 2016

In this Issue

Click to jump to page

From the Past and New Chairperson

Juliana Freitas-Astúa, Past-Chairwoman

Dear IOCV Friends,

First of all, I would like to thank Changyong, the local organizing committee, the staff and supporters, government representatives, growers and volunteers of the XXth IOCV Conference for putting together such a wonderful event!! The IOCV tradition of having enriching conferences with discussions of high scientific level and good moments with friends from all over the world was maintained. We all experienced the famous Chinese hospitality, and we left Chongqing with more knowledge, stronger bonds, and increased hope that we are doing our best towards the mitigation of viral and graft-transmissible diseases worldwide. We also had the chance to enjoy the great post-conference tour visiting poorly and well conducted citrus orchards in an exquisite landscape. "Gan bei"!

I feel honored to have served as the chairwoman of the IOCV for the last three years. When I accepted this position in South Africa, I felt the responsibility and also the joy of being part of a very special group of people who had served our Organization before me. Many of the IOCV former chairs and members inspire me as a citrus pathologist and a scientist. As we all know, IOCV has old and new challenges, which go from the need to mitigate citrus diseases to bringing in new people that will carry on the dreams and efforts of those who created it, as well as our own dreams of contributing with the citrus industry worldwide.

When Pete Timmer stepped down as the IOCV chair, he mentioned that he wanted to do more, but time passed too fast. I feel exactly the same way now. Time really flew. Yet, we were able to do some important things for our Organization, and I thank you all, particularly the board of directors, for the support during my term as the IOCV chairperson. A highlight of the last years was, for sure, the creation and consolidation of the Journal of Citrus Pathology.

For that, I would like to thank Bill Dawson, who has been an invaluable contributor to the process, but also the editorial board, Georgios Vidalakis, Mike Melzer, Tim Gottwald, Pete Timmer and Josy Bové (in memorian), and those who have helped and supported this endeavor. They put a lot of effort on that project, and it is now a reality. So, I encourage you all to submit your research results to our journal.

Finally, during the business meeting in China, Georgios Vidalakis was announced as the new chair-elect, and California was chosen to host the next IOCV conference three years from now. I hope to see you all in Riverside, and I wish Changyong the best as the IOCV chairperson for the triennium of 2016-2019!!

Warmest regards,
Juliana

Changyong Zhou, Chairman

Dear IOCV friends

It is both a big honor and great responsibility for me to become the Chairman of IOCV after the 20th IOCV conference in mid April, 2016. Three years ago, Chairman Pete Timmer asked me whether I would like to serve IOCV as the Chair-elect. In spite of the trepidation over my competence, I couldn't refuse especially after the successful tenure of Juliana Freitas-Astua as IOCV Chairwoman who proved that the younger generation of IOCV scientists can shoulder the heavy responsibility of taking our organization to the next millennia.

It's also nice to see Georgios Vidalakis, who is also representing the young IOCV generation like Juliana Freitas-Astúa and me, become the Chair-elect this year. In the past three years, with the guidance and support of elder scientists, several young members of the Board have learned from each other through exchanges and eventually were brought to leading IOCV positions.

Our organization is facing many challenges. Firstly, we have seen a decrease of attendance in our conferences which is also reflected in the IOCV memberships (***please see membership renewal form at the end of the newsletter***). I am particularly worried about the absence of IOCV members from European countries like Spain, France, and Italy from the recent conference. In 2008, Chairwoman Núria Duran-Vila called for young scientists from more countries to join the organization. Unfortunately, the current IOCV membership, falls far short of her expectation. The growth of the citrus industry has increase the outbreak of graft-transmissible diseases of citrus, however, fewer young scientists are committed to solving these problems. It's a particularly great challenge to shift the attention of young scientists to our organization when young people have more and more international academic organizations to choose from. The following words of a famous Chinese song are suitable to describe the situation: *The outside world is wonderful, but beyond my reach*. We as IOCV need to do more.

Secondly, young scientists are hesitant to undertake lengthy field projects and are more willing to conduct lab research using molecular biology tools that produce quickly publications for SCI journals for the promotion of their academic careers. That is why the 19th IOCV conference in South Africa in 2013 decided to adjust the Proceedings of the IOCV Conferences to a formal, peer reviewed, open access, online journal entitled *Journal of Citrus Pathology* (***for more information please visit http://journalofcitruspathology.com/***). The unremitting efforts of IOCV Fellow William Dawson and the *Journal of Citrus Pathology* Editorial Board have turned this into a reality, but the *Journal* needs your contributions and submissions in order to be successful. Make the IOCV *Journal* your publishing destination. Plan your research and schedule your submission to the *Journal of Citrus Pathology* from the get-go.

Thirdly, we need to pass down the commitment and dedication of the previous generation of IOCV scientists, whose achievements have inspired us all. The advancements of our times makes it impossible for us to expect the younger IOCV generation to repeat the older generations' research path. However, we should learn and get motivated from their scientific spirit, which is a true treasure of our

organization. We should summarize our past as our current motto for the new generation in order to carry forward the undertakings of our predecessors and open new frontiers for IOCV.

Since the beginning of the 21st century, the outbreak and wide spread of Huanglongbing (HLB) in the Americas have plagued the citrus industries of U.S.A. and Brazil. The gravity of the problem has urged more and more scientists to conduct research into the prevention and control of the disease.

In the past decade, a few IOCV scientists like Tim Gottwald of US Department of Agriculture took the lead in organizing an International Workshop to discuss the HLB problem which was also a main topic at the two recent International Congresses for Citriculture. Scientists from different research fields presented their views after passionate, heated, but constructive discussions. There is no substantive breakthrough in the technology of prevention and control of HLB. In spite of the constant accumulation of molecular biology information on the pathogen, we still can't solve the problem of its *in vitro* culture despite the hard work for more than half a century.

However, the great and lasting HLB challenge has enhanced the cooperation of scientists to tackle this tough problem. At the recent IOCV conference, we discussed the opportunity and probably responsibility that our organization has for the HLB battle. We considered the joint organization of the IOCV conference and the International HLB Workshop and we saw this as an opportunity for IOCV to attract more scientists, especially young ones.

Currently, we share more information with the International Society of Citriculture and International Society of Citrus Nurserymen, but have less contact with peer organizations like the International Society for Horticultural Science and International Society for Plant Pathology. IOCV was established with a clear target and has made positive contributions towards the sound development of the global citrus industry in the past 60 years. This narrow target and success however has led to declining numbers of citrus pathology researchers in quite a few countries. The development of virus-free schemes has effectively limited the damage of citrus viruses and virus-like diseases in many countries. Accordingly, both the research funds and the number of researchers have declined. On the other hand, the outbreak of Huanglongbing has drawn the attention of many countries which are now allocate more funds to more citrus researchers. We have a lot to discuss with them. Also, we should strengthen information exchange with non-pathology researchers who are not familiar with our organization, such as scholars of biotechnology and bioinformatics. Meanwhile, we should reach out to experts of other commodities such as apple, banana, grape, pear and other fruit trees.

Under the leadership of the previous IOCV generation, our organization made brilliant achievements. As long as we work hard and maintain our openness, exchange of information and cooperation, I firmly believe that our organization will thrive.

An old Chinese saying goes '*There is a cycle every six decades*'. With the advent of IOCV's 60th anniversary next year, we'll hold our next conference three years later at the University of California, Riverside where IOCV was established in 1957. Only by great efforts, can we contribute to the future of our organization which has experienced 60 years of twists and turns. I'm looking forward to the celebration of this milestone event.

With warmest regards,
Changyong

IOCV

From the 2016-2019 Chairman Elect

Georgios Vidalakis

Dear IOCV friends,

There is no much to add to Juliana's and Changyong's message. We are all members of a historical and very important organization. I am honored and humbled by the task you assigned to me.

Our upcoming 60th birthday has not arrived alone. Along with our successes and important history, we are witnessing a generational shift. Successful, influential, pillars of the international citrus pathology community have retired or passed away. As a younger IOCV member, I will do my best to carry IOCV in to the future. I have been fortunate to serve as the IOCV secretary for almost a decade (*I will be resigning for this post in 2017*) and my collaboration with the past IOCV Chairs has clearly showed the way for the passage of our organization through this very critical period of its history. As Juliana and Changyong indicated:

- A robust peer reviewed *Journal of Citrus Pathology* - We are in contact with UC Riverside Librarians to list our Journal in databases
- A successful well-attended IOCV conference – As discussed in our last business meeting we are in contact with California and Florida citrus industry representatives and scientists for co-ordination of the 2019 HLB and IOCV International Conferences
- A strong membership base of young talented scientists - Please renew your memberships and sponsor the young scientists in your labs to join the organization (membership form included) and
- Open collaboration among scientists around the world – Join, promote, and donate to IOCV and publish your work in our *Journal*

are the key ingredients of our current and future successes and these will be the focuses of my upcoming Chairmanship.

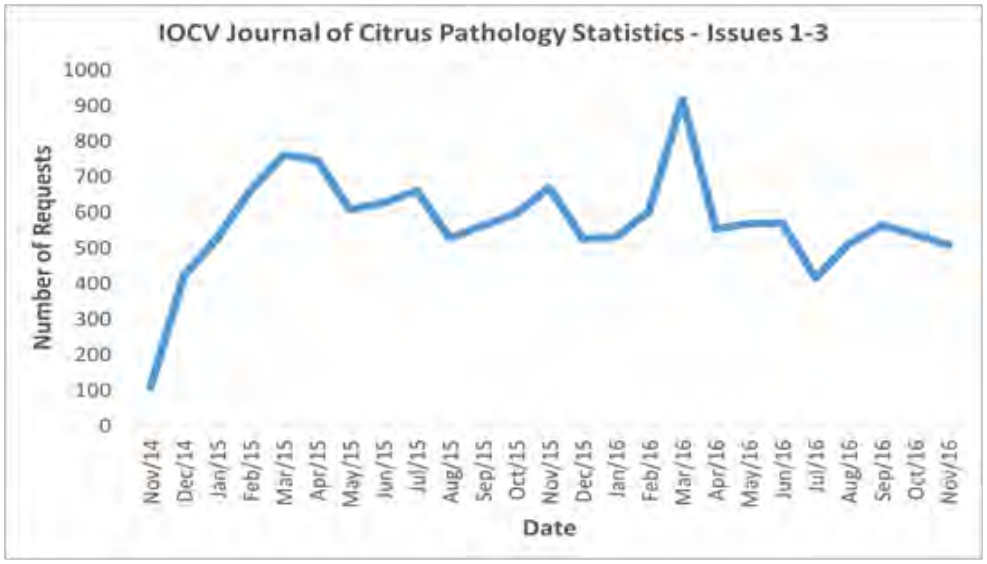
Your efforts and IOCV contributions have laid a very strong foundation that I can build on. You have my thanks for your trust and support and also my promise for hard work as a Chair Elect and future Chair.

With the warmest regards.
Georgios

The Journal of Citrus Pathology and the XX IOCV Conference Publications

Georgios Vidalakis Bill Dawson & Mike Melzer, Editors

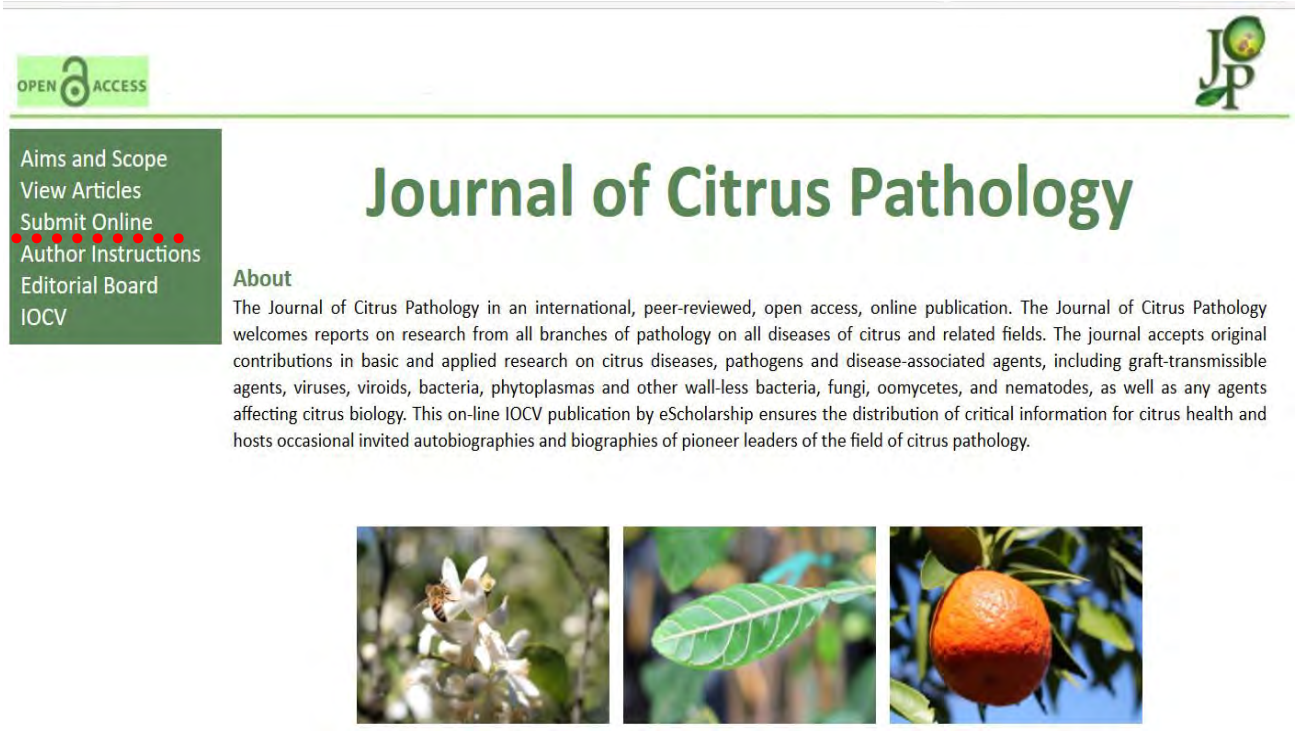
The *Journal of Citrus Pathology* (http://journalofcitruspathology.com/) has published its first three issues with 187 items including all the work presented at the 2013-3rd (Issue 1) and 2015-4th (Issue 2) International Research Conference on Huanglongbing (IRCHLB) and the 20th IOCV International Conference (Issue 3). Since its first issue in November 2014 the *Journal* has received more than 14,000 requests for article views and downloads with ~600 number of views in average per month (graph below).



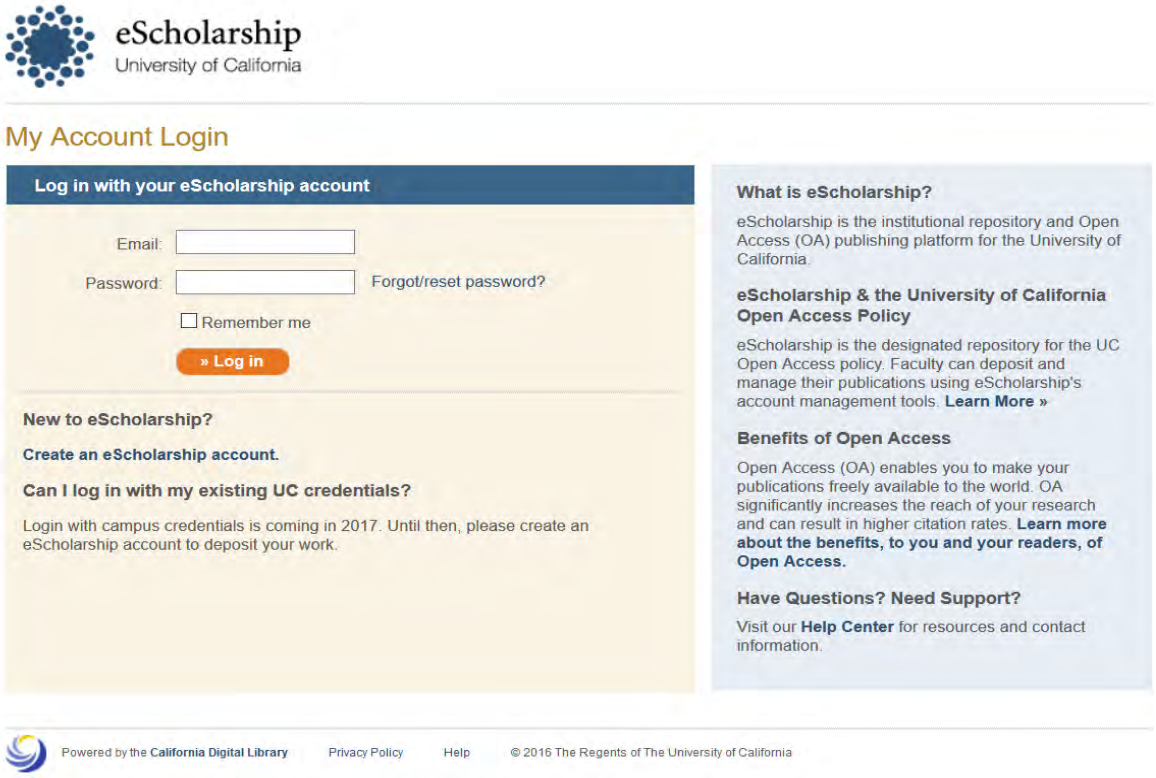
The ten articles with the highest number of requests are (see Table) are including HLB and its vector, virus and viroid diseases, as well as citrus physiology and the initiative for citrus microbiome. This clearly indicating that our decision to create a more inclusive IOCV publication platform of "citrus pathology" captured the needs of our times.

Title	Year Published	Total Number of Requests
The Asian Citrus Psyllid Genome (*Diaphorina citri*, Hemiptera)	2014	479
Heat-tolerant Asian HLB meets heat-sensitive African HLB in the Arabian Peninsula! Why?	2014	410
Announcement of the International Citrus Microbiome (Phytobiome) Consortium.	2015	386
Citrus phytophthora diseases: Management challenges and successes	2015	354
Where have all the flowers gone? Postbloom fruit drop of citrus in the Americas.	2015	323
Sunn hemp, a major source-plant of the phytoplasma associated with huanglongbing symptoms of sweet orange in São Paulo State, Brazil	2015	299
Xyloporosis: A history of the emergence and eradication of a citrus viroid disease	2015	294
RNAi-Based Strategy for Asian Citrus Psyllid (*Diaphorina citri*) Control: A Method to Reduce the Spread of Citrus Greening Disease	2014	286
Huanglongbing in Texas: Report on the first detections in commercial citrus	2015	275
The psorosis disease of citrus: a pale light at the end of the tunnel	2015	226

Despite this encouraging beginning, the *Journal* is still on its infancy and requires our support. Please, submit your full articles from the work you presented at the 20th IOCV Conference in China and bring to our *Journal* your citrus pathology work. The submission process has been streamlined via the eScholarship system. Simply click "Submit Online" on the *Journal's* home page



and log in to your account for submission



The *Journal* has invited Juliana Freitas-Astúa and Núria Duran-Vila for review papers and Pat Barkley and Chester Roistacher for biographies of Lilian Fraser and Claire Calavan and Lin Kung-hsiang, respectively. Finally, the Editors have invited Steve Garnsey and Pete Timmer to write their autobiographies while they will try to complete the autobiography that Jose Bové had started for the *Journal*.

If you have any questions about the *Journal* please contact Mike Melzer at melzer@hawaii.edu or Bill Dawson at wodtmv@ufl.edu.

The XX Conference of the International Organization of Citrus Virologists April 10-15, 2016, Chongqing, China

Changyong Zhou & Juliana Astúa

The 20th IOCV conference was held from April 10 to 15, 2016 at Beibei, Chongqing, mainly organized by the Citrus Research Institute (CRI) of Southwest University (SWU)/Chinese Academy of Agricultural Sciences (CASS) and the National Citrus Engineering Research Center, with the collaboration of Chongqing Agriculture Commission, Guangxi Academy of Agricultural Sciences and Guangxi Academy of Specialty Crops. It was also sponsored by organizations and companies, such as the

Chinese Society of Citriculture, Chongqing Society for Horticultural Science, Chongqing Industrial Technology System for Late-maturing Citrus, Chongqing Lvkang Co., Ltd, Jiangxi Yang's Fruits Co., Ltd, and Chongqing Paisenbai Orange Juice Co., Ltd.

Over 110 participants from 15 countries, including China, USA, Brazil, Korea and Australia etc. attended the conference. During the conference, 11 experts were invited to give plenary speeches, including Academician Xiuxin Deng from Huazhong Agricultural University, IOCV Follow Bill Dawson from University of Florida, and IOCV Chairwoman Juliana Freitas-Astua from Brazilian Agricultural Research Corporation (Embrapa) et al.

Another 25 experts and scientists gave oral presentations. In addition, 33 posters and 79 abstracts were submitted by experts and scientists from 18 countries, including the six IOCV sponsored young scientists.

Agustina De Francesco (Argentina)

Alberto Gochez (Argentina)

Sagheer Atta (Pakistan)

Maria Jose Benitez Galeano (Uruguay)

Gabriella Dlas Arena (Brazil)

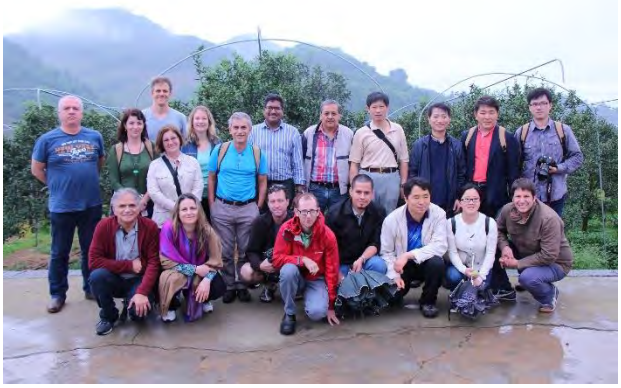
Juan Camilo Cifuentes-Arenas (Brazil)

During the business meeting, Núria Duran-Vila, Xueyuan Zhao and Pedro Moreno were selected as IOCV Fellows (see below), Georgios Vidalakis was announced as the new chair-elect, and California was chosen to host the next IOCV conference.

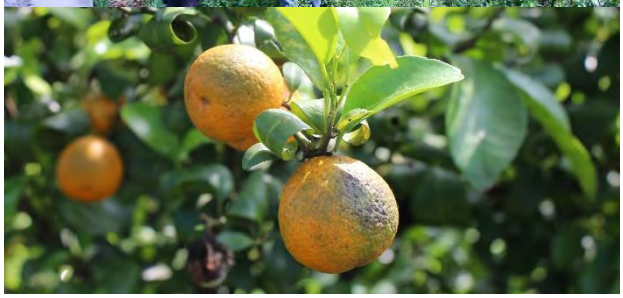
A mid-conference tour was arranged to visit a virus-free propagation scheme, virus symptomatic trees, biological indicators for virus identification as well as laboratories at CRI, SWU/CAAS, and a field late-maturing citrus base in Changshou, Chongqing, where vein clearing symptoms were investigated on lemon trees infected with citrus vein clearing virus.

From April 16 to 19, 2016, a post-conference tour was organized for over 20 participants from 9 countries to visit the virus-free nursery, mother block and Guangxi Key Laboratory of Citrus Biology at Guangxi Academy of Specialty Crops.

Delegates also visited kumquat orchards with mulch-covering cultivation in Yangshuo…



and the poor- and well- managed orchards for HLB control in Lipu.



XX IOCV Business Meeting Minutes & Summary
Beibei, Chongqing, China
April 14, 2016

AGENDA

1. Welcome
2. Approval of minutes of the last IOCV Business meeting
3. Report from the Treasurer
4. Report of the Secretary
5. IOCV Fellows
6. Invitations to organize the next IOCV Congress
   a) USA, California
7. Other business
8. Adjourn

BUSINESS MEETING MINUTES & SUMMARY

INTERNATIONAL ORGANIZATION OF CITRUS VIROLOGISTS

20th IOCV Conference
Beibei, Chongqing, China
April 10-15, 2016

Business meeting April 14, 2016

Juliana Freitas-Astúa: Opened the meeting at 16:15. Welcomed everyone, thanked the XX IOCV organizing committee, hotel staff, volunteers, and participants.

Georgios Vidalakis: Presented the agenda and proceeded to the presentation of the minutes and requested a motion for their approval. Motion by Juliana Freitas-Astúa to approve minutes, second by Glynnis Cook, no discussion, motion passed unanimously.

GVidalakis: Treasurer Robert Krueger was not able to attend GVidalakis gave the report. Highlighted the opening of an IOCV PayPal account so the credit card numbers will not be necessary anymore for the IOCV memberships. GVidalakis thanked the local organizing committee for the donation back to IOCV of committed funds for young scientists support.

3. Report from the Treasurer 2016

- IOCV typically has few financial activities
- We currently sell few hard copies of the Proceedings, and this has decreased due to their availability online, so most income is from dues
- Expenses are limited to a few supplies
- The largest actual expense is rental of the credit card processing machine
- For this reason, a PayPal account was established recently
- Although not yet implemented, we will (if permitted by UC Riverside, the institution hosting our website) place a link on the website that will allow payment via PayPal.
- In the meantime, we should be able to process credit card payments by PayPal and eliminate the charge for the credit card processing machine

3. Report from the Treasurer: as of Dec. 31, 2015

Account/Fund	2010 ($)	2013 ($)	2016 ($)	Notes
Checking	3,802	2,292	2,617	This will increase upon receipt of dues for 2016-2019
Wallace	13,609	11,558	12,962	
Schwartz	7,447	6,325	7,006	The Local Organizing Committee just donated the funds back to IOCV
Gumpf	3,238	2,750	3,046	
IOCV	7,244	6,152	6,815	
Dreyfus Fund	31,538	26,785	29,829	These totals may decrease depending upon the awards conferred during the 2016 meeting.
Total	**35,340**	**29,077**	**32,287**	

GVidalakis: Presented secretary's report.
The IVIA-IOCV website is down; UCR is hosting the www.iocv.org now.

4. Report of the Secretary

1. The Web page
2. eScholarship report
   - IOCV proceedings
   - Journal of Citrus Pathology
3. IOCV Membership
4. Wallace Award discussion

4. Report of the Secretary-The web page

I. www.iocv.org is active.
II. IVIA website is shut down

Past IOCV publications-proceedings are scanned-digitalized. Need an algorithm to upload proceedings to eScholarship as a cluster and not single papers. The *Journal of Citrus Pathology* is up and running and you can submit short comminutions and full papers form the XX IOCV Conference. The abstracts of the XX IOCV will be published at the *Journal of Citrus Pathology* as a special issue (Issue 3).

IOCV membership was down to 71 at the time of the 2016 election. Many members are retired while other groups will renew memberships during the conference so the number of members should increase again *(Note: see end of newsletter IOCV membership form)*.

4. Report of the Secretary-eScholarship report

eScholarship report
- Past IOCV proceedings
- Journal of Citrus Pathology
- 20th IOCV Abstracts in Journal of Citrus Pathology special Issue 3
- Full papers and short communications are expected

IOCV Membership

- At the 2010 elections: 126 IOCV members-28 Countries-5 Continents
- At the 2013 elections: 145 IOCV members-32 Countries-5 Continents
- At the 2016 elections: 71 IOCV members-35 Countries-5 Continents

Wallace award discussion – The current protocol for the Wallace award is based on papers that have had significant impact and are published at the IOCV Conference Proceedings. However, today we are not pushing full papers in the proceedings anymore but in the *Journal of Citrus Pathology*. We need to start thinking about a new protocol for the Wallace award (e.g. maybe the best-highest impact paper published in the *Journal*) and discuss it further in our next business meeting.

Wallace Award Discussion

- Full papers are submitted to the IOCV conference proceedings
- A committee selects the best for the Wallace Award
- This is not possible any more since we changed IOCV conference papers style to Abstracts or Short Communications
- Please, think about alternative protocols for the Wallace Award
- Maybe, the best paper in the Journal of Citrus Pathology per year or whenever appropriate?
- Let's think about it and decide in the next IOCV

GVidalakis: Invited the speakers for the IOCV fellow nominations.
Bill Dawson: Presented the nomination of Pedro Moreno, by BDawson and SGarnsey.
Changyong Zhou: Presented the nomination of Xueyuan Zhao by CZhou.
GVidalakis: Presented the nomination of Núria Duran-Vila by PTimmer.
(*Note: see below for nominations text*)

Motion to approve all three nominations by GVidalakis, second by JFreitas-Astúa, there was no discussion, motion passed unanimously.

IOCV Fellows – Nominations

Pedro Moreno
Nomination by Bill Dawson & Steve Garnsey
Presentation by Bill Dawson

Xueyuan Zhao
Nomination & Presentation by Changyong Zhou

Nuria Duran-Vila
Nomination by Pete Timmer
Presentation by Georgios Vidalakis

Ask the IOCV assembly for a motion to approve Fellow nominations

GVidalakis: Presented the proposal of U.S.A., California for the XXI IOCV Conference with the options of a pre-conference in Florida and a post-conference in citrus producing areas in California.
Motion to approve the proposal by BDawson, second by Glynnis Cook, there was no discussion, motion passed unanimously.

GVidalakis: Opened the floor for other business.
Maria Laura Garcia suggested that the IOCV sponsorship of young scientists for participation to the IOCV Conference should be more flexible to include young scientists, post docs etc. More experienced scientists, that are not students were unable to get funds to travel to the XX conference.
GVidalakis commented that as one of the organizers of the next conference will propose to create a second funding source for post-doctoral researchers.
Nelson Wulff commented that the 2010 IOCV conference in Brazil, included more young scientists not only students.
CZhou proposed to create different tiers of support (full or partial support, e.g. travel, registration, etc.).
MLGarcia moved in support of IOCV creating tiers of support for IOCV Conference participation of young scientist. GVidalakis second, there was no discussion, motion passed unanimously.
A comment from the floor indicated that smaller developing citrus producing countries require more of this kind of support. GVidalakis commented that an effort will be made to target such countries but at the end the decision for IOCV support is based on the merit of the presented work.

BDawson: In the future IOCV may need to open its membership to citrus pathology.
GVidalakis commented that this has been a long-standing question and has been discussed in the past and IOCV will have to make this decision. Hopefully the 2019 IOCV Conference in California will attract young citrus scientist from around the world to rejuvenate the IOCV membership. This year also there was competition with other citrus conferences like the International Citrus Congress so hopefully in 2019 there will be less completion.
Silvio Lopes: commented that in 2019 there will be the following HLB international conference and if that conference can be held in California then we could combine it with the IOCV. In addition, IOCV should become the future organizer of the HLB meeting every 3 years in coordination with the IOCV Conference.
CZhou asked who supports the HLB conference organization.
GVidalakis responded that the HLB conference is supported by many different industry, government etc. organizations.
BDawson commented that the HLB conference is too frequent to be held every 2 years.
GVidalakis commented that if IOCV wants for the Board of Directors to submit a proposal for IOCV to facilitate the organization of the HLB conference every 3 years along the IOCV conference, then this business meeting should ask the IOCV to do so in 2017 during the next HLB conference.

SLopes made the motion that the IOCV Board of directors present this idea during the 2017 HLB conference in Orlando, Florida, BDawson second the motion. During the discussion SLopes suggested that if IOCV comes in contact with the HLB conference organizers Jim Graham and Tim Gottwald they will be in support of this idea. In addition, 3 years is appropriate for the HLB conference in order to have data for quality presentations and if the HLB conference combined with the IOCV conference it will boost the IOCV organization. A question was asked about an annual HLB meeting in Colorado but it was clarified that this is a closed meeting for HLB scientist to interact about federal funded HLB projects. It was also discussed that the Florida organizers have been contacting California and Brazil to organize the HLB conference so if combined with the California IOCV conference in 2019 then this is a good start for the HLB conference to follow the IOCV conference around the world every 3 years. There was no more discussion and the motion passed unanimously.

JFreitas-Astúa and CZhou recognized the IOCV supported young scientists.

MLGarcia moved to adjourn the meeting, GCook second, meeting adjourned at 5:35 pm.

2016 IOCV Fellows Nominations Pedro Moreno

Bill Dawson & Steve Garnsey
February 1, 2016
Dr. Juliana Freitas-Astua
Chair of the International Organization of Citrus Virologists


Pedro Moreno

Dear Juliana,

We are nominating Dr. Pedro Moreno for consideration for the 2016 IOCV Fellow. Dr. Moreno's laboratory has made major advances in the understanding of several citrus viruses, with a major focus on *Citrus tristeza virus* (CTV). Additionally, he has made major contributions collaborating with other laboratories in the production of a clean stock program in Spain, development of pathogen detection methods, determining the pathogenic determinants of viral gene products, development of virus-resistant citrus, development of a virus-based transient expression vector, dissecting the complexity of the citrus psorosis complex, and establishment and comparison of the worldwide citrus pathogen collection. He has participated in numerous international research projects that have benefited many countries in Latin American, Caribbean, and Mediterranean areas plus the USA. Additionally, he has been a very active and long supporter of the IOCV.

Dr. Moreno was born in Alicante and grew up in the rural Spanish village of Galera, province of Granada, several hundred kilometers south of Valencia. Following his basic college education and PhD in Spain, he continued his training with David Gumpf in the Department of Plant Pathology at the University of California, Riverside. After he finished his graduate training, he became a member of the faculty at IVIA, at Moncada (Valencia). During his career there helped the institution gain the worldwide recognition as the leader in citrus pathology.

Dr. Moreno played a fundamental role in preserving the valuable Spanish citrus industry in the face of a serious threat posed by the introduction and spread of CTV in a country where sour orange was the predominant rootstock. Switching to tolerant rootstocks was complicated by the presence of numerous other pathogenic agents (some recognized but not characterized and some that had yet to be recognized). When CTV was first detected there in 1957, the complexity of the virus was unknown and identification of it and all other citrus pathogens was based entirely on bio-indexing. He played an active role in development of the clean budwood program and the development and application of technical advances in detection methodologies.

A large proportion of Dr. Moreno's contributions have been the development of understanding of CTV. These accomplishments are included in what is considered the definitive authority of work on this virus, the review of which he is the senior author in Molecular Plant Pathology, '*Citrus tristeza virus*: a pathogen that changed the course of the citrus industry'.

Work from his lab group characterized the complexity of CTV isolates in Spain. His pioneering work has established new frontiers. They demonstrated:
1) That different isolates from different strains differed substantially in sequence;
2) That most isolates contained a population of different strains;
3) That aphid transmission or changes in hosts could change the constitution of the populations;
4) That most populations also contained one or more defective RNAs;
5) They demonstrated the existence, diversity, and frequency of recombinants of different strains.
Dr. Moreno also has developed new research technologies including single-strand conformation polymorphism (SSCP) analysis of viral RNAs and improved PCR detection and quantification of CTV.

As described above, a large part of Dr. Moreno's contributions have been in interactions with other laboratories. He has been instrumental in assisting Dr. Luis Navarro in establishing the clean stock program in Spain. He has been a collaborator with Dr. Leandro Peña in transforming citrus and determining the effects of ectopic expression of viral gene products on citrus phenotypes. He worked with Dr. Mariano Cambra in developing serological detection methods for virus diseases. He worked with Dr. Ricardo Flores in characterizing CTV genes. And he has worked with Dr. José Guerri in characterizing the citrus psorosis complex and developing the citrus blotch virus infectious cDNA clone and expression vector.

Perhaps his major contribution has been in advising and mentoring of the next generation of citrus scientists. His students include M. Luis-Arteaga, J. Navas-Castillo, J. Aramburu, M.A. Ayllón, M.R. Albiach-Martí, I. M. Cuadrado, L. Rubio, L. Gallipeinso, A. Domíinguez, G. Narvaez, S. Ruiz-Ruiz, Mari Carmen Vives, A. Troise, S. Martín, M. A. Renovell, P. Moya, M. Comellas, J. Agüero, and A. Sambade.

We also point out that Dr. Moreno has been a strong supporter of the IOCV, elected chairman in 2001, and as an editor of the 12th and 13th Proceedings and has routinely attended and participated in all meetings during his illustrious career. For these reasons, we strongly support his election as Fellow of the IOCV.

Sincerely,
Bill Dawson
Steve Garnsey

Xueyuan Zhao

Changyong Zhou
March, 2016
Proposal for the Nomination of Prof. Xueyuan Zhao as a Fellow of IOCV, 2016
To IOCV Board


Xueyuan Zhao

I am writing this letter nominating Prof. Xueyuan Zhao for consideration for the IOCV Fellow, 2016. It is an honor and great pleasure for me to write supporting a truly deserving scientist whom I have had the privilege of working with and knowing well over the past 30 years.

Graduated from Zhejiang Agricultural College (later merged with Zhejiang University) in 1954, he was assigned to work at North China Institute of Agricultural Sciences (later merged into Chinese Academy of Agricultural Sciences (CAAS)). He once participated in the research into diseases such as persimmon angular leaf spot, persimmon leaf spot and jujube witches' broom. Since he began to conduct research into citrus Huanglongbing (HLB) in 1959, he has conducted research into the prevention and control of citrus graft-transmissible diseases for more than half century. In 1961 he

transferred to Citrus Research Institute (CRI), CAAS due to the request of HLB issue.

From the end of 1960s to the beginning of 1970s, his identification by indicate plants showed that most citrus trees in the field sick with HLB were also infected with *Citrus tristeza virus* (CTV) except a very few diseased trees. It turned out that CTV is not the pathogen of HLB, proving that the conclusion on this issue made by a group from Chinese Academy of Sciences was wrong. His experiments in the mid 1970s proved the sensitivity of the pathogen of HLB to tetracycline. It serves as an indirect evidence that the pathogen of HLB is not virus, but mycoplasma-like organism. His suggestion that tetracycline be used to cultivate pathogen-free nursery trees was adopted. He won the National Sci. & Tech. Congress Award in 1979 due to this achievement. His investigation in Guanxi confirmed that the distribution of citrus psyllids is basically consistent with the major outbreak area of HLB. His experiments also showed that citrus psyllids spread HLB, justifying the initiatives to prevent and control HLB by stringent prevention and elimination of citrus psyllids. Between 1970s and 1980s, he confirmed the distribution of citrus tristeza, exocortis and tatter leaf in China with identification by indicate plants and established virus-free mother tree repository with shoot-tip grafting. From 1986-1995, he took part in the formulation and implementation of citrus virus-free propagation scheme of Sichuan province and Chongqing municipality. Then he guided the establishment of National Center for Citrus Virus Exclusion, took the lead in the formulation of Criteria for the Propagation of Citrus Virus-free Budling and Technical Criteria for Virus Exclusion of Citrus Budling and guided the Construction and Extension of Three-level Virus-free Citrus Propagation Scheme, which won the Second-class Prize of National Award for Sci. & Tech. Progress in 2012.

Since 1978, China's reform and opening-up have gradually normalized international exchanges. In 1979, he received an Australian survey team in Liuzhou, Guangxi and introduced the development of Guangxi's research into HLB to Drs. Patricia Barkley and Ken Bevington et al. Between 1980 and 1993, he served as a Deputy Director of CRI, CAAS and was in charge of foreign affairs. During the period, he attended thirteen international conferences and introduced HLB as well as the outbreak, prevention and control of other graft-transmissible diseases in China to foreign experts. As a convener or co-convener, he helped host The Sino-US China Symposium in 1986, The 13th IOCV Conference in 1995 and The China-France Symposium on Citrus Diseases in 1999. He was one of the two keynote speakers invited by The 11th International Citrus Congress in 2008 at which he delivered a speech entitled A General Review on Citrus Huanglongbing. His lifelong research into HLB and relevant achievements have been internationally acknowledged, and outstandingly benefited to the world citrus industry.

As an open-minded scholar and the head of Chinese side, he has actively promoted project cooperation among members of IOCV, such as the European Community Cooperative Project jointly developed with researchers like Italian professor Antonio Catara and the Cooperative Project of ACIAR jointly developed with researchers like professor Patricia Barkley from 1980s to 1990s. He also attached great importance to the cultivation of young scholars and helped quite a few young scholars go abroad for further studies. I also had the honor of being his graduate student. Thanks to the joint support by him and Prof. Patricia Barkley, I won the John Allwright Fellowship of ACIAR to study for my doctorate at The University of Sydney and succeeded to his scientific research. Meanwhile, he also took part in the organization and coordination of FAO/UNDP HLB Project. He headed several investigation delegations to US, Spain, Italy, Australia, Turkey, Mexico, India and carried out extensive exchanges with IOCV members. He also invited professor Chet Roistacher and professor Jose Bové to lecture in China many times and frequently received IOCV members in China, including hundreds of visitors from over 20 countries. In particular, although he was over 80, in 2013 he accompanied a six-member team headed by French professor Jose Bové and Brazilian Fundecitrus manager Juliano Ayres throughout their trip to Guangxi, Jiangxi and Zhejiang to investigate the outbreak , prevention and control of HLB. His modesty and dedication have drawn wide acclaim. For instance, some delegates called him 'God Father' during the Post-conference Tour organized by him after The 13th IOCV Conference in 1995. From 1970s to 1990s, some Chinese scientific and technological personnel couldn't read English materials. He organized the translation of foreign

materials including Indexing Procedures for 15 Virus Diseases of Citrus Trees, the virus section of The Proceedings of 1st International Citrus Congress as well as the abstracts of papers of the 12th, 13th and 14th IOCV Conferences. He has made important contributions to the promotion of the exchanges of IOCV members and its development.

As a well-known Chinese scholar tenaciously devoting himself to the research into the prevention and control of citrus epidemics, he organized and coordinated relevant work, such as the survey of HLB in nine provinces of China in 1960,1963,1967, 1976-1983, The HLB Research Work Symposium in 1959 and 1974 as well as HLB Research Symposium in Guangxi in 1978. Thanks to his initiative, The National Research and Coordination Team for Prevention and Control of HLB, Virus and Virus-like Diseases was founded in 1984. The team held five national symposiums between 1984 and 1993. Between 1986 and 1995, he led the study of national IPM projects on citrus diseases and pests. Since 1959, he has collected all of the research literature of HLB in China and the research literature related to other virus and virus-like diseases of the study group and assembled them for reference.

Between 1963 and 1992, he and Prof. Yuanhui Jiang (his wife) stayed in Shatang town of Liuzhou, Guangxi to conduct research on the prevention and control of HLB and other graft-transmissible diseases in spite of the difficult living and work conditions. Their two daughters grew up with their grandmother. Young people should learn from their dedication and commitment. Inspired by their devoted spirit, I came back to serve my country after I earned my doctoral degree in Australia. As the well-known advisor and expert of Ministry of Agriculture and national advanced worker, he served as the member of the 7th and 8th National Committee of the Chinese People's Political Consultative Conference, a representative of the first People's Congress of Chongqing municipality and the long-term editor-in-chief of China Citrus (later renamed South China Fruits). I wholeheartedly recommend him for the honorary title of Fellow of IOCV for his diligence, modesty, sincerity and accomplishments.

Núria Duran-Vila

Pete Timmer
February 16, 2016
To: Members of the IOCV Board of Directors
Subject: Nomination of Núria Duran-Vila for Fellow of IOCV


Núria Duran-Vila

When Núria started her career, the primary detection method for exocortis was by indexing on 'Etrog' citron and the causal agent was assumed to be a virus. When she retired in 2015, exocortis was known to be caused by a viroid and many other diseases (e.g. cachexia-xyloporosis) and symptoms (e.g. trifoliate orange bark cracking) that were believed to be reactions to moderate and mild "exocortis virus" isolates, had been found to be caused by distinct viroid species. All the known citrus viroids have now been sequenced, detection by RT-PCR and hybridization is relatively simple and rapid, and much is understood about the biological effects of many of these viroids. Núria is largely responsible for all of those findings and she has had an extremely successful and productive career.

Núria received her degree in Agricultural Engineering in 1974 from the Polytechnic University in Madrid. Subsequently, she received a scholarship from INIA/BIRF and obtained her M.S. degree focusing on growth regulators and tissue culture at the Department of Vegetable Crops, University of California, Davis. During this period she spent six months at UC Riverside taking some citrus courses. In 1977, she returned to Spain to join a tissue culture group headed by Luis Navarro at INIA-CRIDA 07 in Burjasot, which was later converted to IVIA, in Moncada. In 1979, Luis suggested that she would be a good candidate for a position with Joe Semancik at UC Riverside to work on cell cultures infected with citrus exocortis viroid. Núria quickly accepted the offer. Initially she stayed for a year, but accepted Joe's proposal for her to do her PhD on the "Studies of viroid pathogenesis: responses of CEV-containing tissues and cells", which she completed in 1982. In 1983, she returned to Spain for a position at an organization that would

later become IVIA where she remained as a Research Professor until she retired.

Núria has been a central figure in almost all of the viroid work since she began studying these pathogens. She characterized the small RNA that causes exocortis and determined that many other viroids were present in samples from exocortis-infected trees. The development of sPAGE, silver staining, and later sequencing and PCR technology made possible the characterization of many viroids. Cachexia (xyloporosis) was found to be caused by a viroid very similar to Hop stunt viroid. Núria characterized many other viroids from citrus trees and we now know that there are viroids from citrus that belong to four different genera. Several citrus viroids have been characterized: Citrus exocortis viroid (CEVd) (Pospiviroid), Hop stunt viroid (Hostuviroid), Citrus bark cracking viroid (Cocadviroid) (named based on Núria's research), as well as Citrus bent leaf viroid, Citrus dwarfing viroid (named based on Núria's research), Citrus viroid V, a new discovery from Núria's research, and viroid VI (all Apscaviroid).

The definition of the specific viroids and the improvement in the detection methods were key to freeing budwood sources from viruses and viroids by Shoot Tip Grafting in vitro. Rapid detection enabled Luis Navarro to proceed with the Spanish Citrus Improvement Program and free the most important Spanish cultivars from systemic pathogens in a relatively short time. Núria continued working on tissue culture and established a research program on viroids. She made important contributions on in vitro host/pathogen interactions, somatic hybridization by protoplast fusion, genetic transformation and germplasm cryopreservation. In addition to her molecular work on viroids, she undertook long-term studies in the field to determine the role of the different viroids in symptoms such as dwarfing, bark cracking, gum pockets, pits and other symptoms.

Núria has been very helpful to investigators in other countries in ascertaining the role of viroids in various disease syndromes observed there. Supervising students has been a very important aspect of her research activities. She supervised or co-supervised the following PhD students: M.L. Marin, R. Peñalver, A. Galiana, C. Fagoaga, R.M. Pérez, J. Romero, X. Li, M. Cervera, O. Olivares, A. Palacio, M. Chaffai, Z.G. N. Fadda, M. Gandía, C. Barbosa, K. Velazquez, L. Bernad, P. Serra, S.M.B. Hashemian, and N. Murcia. Since 2010 she was also involved in the coordination of International Scientific Relationships of the National Institute for Agricultural Research (INIA).

Núria has always been active in IOCV since the beginning of her career. She served as Chairperson-Elect from 2004 to 2007, Chairperson from 2007 to 2010, and Past-Chairperson from 2010 to 2014. Núria has published numerous papers in the IOCV Proceedings including review articles summarizing the status of viroid diseases at the time. The 18th Conference was held in Brazil in 2010 and, with the help of Brazilian colleagues, she organized one of the most successful meetings ever. It was particularly noteworthy in that funds were raised to support the attendance of many young professionals working in the field. When she was Chairperson, the IOCV website was located at IVIA and she oversaw its establishment and helped maintain the site. She also obtained reviews of many diseases from other IOCV members and had those posted on the website. When the situation changed at IVIA and they were no longer able to maintain the site, she assisted in the smooth transition of the website to California. She was very helpful to me in the transition to my Chairman duties.

Núria Duran-Vila is richly deserving of the Fellow award. She has contributed greatly to the understanding of citrus viroids and the diseases they cause. In addition, she has been active in the organization as a member and on the Board of Directors.

AROUND THE WORLD

Núria Duran-Vila Retires

Dear friends and colleagues,
As of February 2016 I started a new period of my life. I will be retired from IVIA and starting new projects and challenges. I wish that this message is a farewell but also a way to keep contact by e-mail (duranvila.nuria@gmail.com) and phone (+34 690171150).

My life as a scientist is linked to our collaborations and I want to thank you for your dedication as citrus pathologists.

My time at IVIA is an important part of my life (40 years), and as everything else, with good memories and less good memories. However, I am a very positive person trying to remember only the good things, and I must say that I hold very good memories of all that we had a chance to share in IOCV and other situations.

Thanks and let's stay in contact.
Núria Duran Vila

Chester Roistacher
My dear Núria,

Yes, this will be a new period in your life and as with myself, a most enjoyable and productive period. I retired in 1986 - but as I have often said, I never really retired for I never really worked and I enjoyed so much of what I was doing.

In truth, my real productive life began after I retired where most of my trips and consultancies were made after 1986. I hope you will continue to give of your knowledge and experience to others as you have done all of your working life.

It has been a rich experience to know you Núria over these many years and I send you my deep affection and good wishes for you continued contributions to our world of citrus virology.

Chet, Josy, and Núria …

Norma Costa Retires

Dear Georgios and IOCV friends,

With this letter I would like to inform you that as of December 1, 2016, I will be retired.

My activity for 37 years in the EEA Concordia of INTA, at Concordia, Entre Rios, Argentina has been completed, leaving my place to the new generation of scientists such as Claudio Gomez who will be taking my place in the Citrus Sanitation Program.
Claudio Gomez contact information:
Email: gomez.claudio@inta.gob.ar
INTA phone: 54 345 429 0000/0215 Int. 141

For me, it was a huge pleasure to work on the citrus program and get so many friends around the world for more than three decades.

My contact information for future communication is:
Email: lalialesanti@gmail.com
Mobile: +54 9 345 418 0680
Phone: +54 345 4219715

You will always be in my heart!
Norma

María Laura Garcia
Dear Norma,

You have been for me and for the current researchers and postdocs from La Plata University, a teacher in the management of citrus for almost 30 years, as well as a constant collaborator in all the experiments that we have carried out together, even when we were 600 km away. We have had many difficulties, both economic and technical, and many of them were overcame because of your expertise and dedication. Your retirement will surely create a big gap in all these aspects.

María Inés Plata
Norma you have been a very important member of the team of researchers at INTA's Concordia Experiment Station dedicated for more than 30 years in producing disease-free citrus varieties. First, as a project of regional scope for the citrus growing area of the Uruguay river and later in PROCITRUS a national scope project. The goal was 100 scion and rootstock cultivars and now we have over 200 disease-free mother plants! Your expertise in

biological indexing and greenhouse management will be missed as well as your hard work and struggle for funds to keep the system going. You will also be missed at the IOCV meetings or maybe you will surprise us all…

This picture was taken February 2000 with Norma and students from Universidad Nacional de Quilmes (Province of Buenos Aires), IFFIVE-INTA Córdoba, INTA EEA Concordia, when Núria Duran-Vila came to Concordia to give a course in viroid detection by electrophoresis and molecular hybridization. María Inés Plata

CONFERENCES / MEETINGS / PUBLICATIONS / ANNOUNCEMENTS

5th International Research Conference on Huanglongbing
Caribe Royale Hotel
Orlando, Florida
March 14-17, 2017

Conference Location, Date, & Registration

- Caribe Royale Hotel, Orlando Florida
- March 14-17, 2017
- Registration at: www.irchlb.org
- Registration fee: US $650
- Grower Day-only: Free to all citrus growers

Important Dates:

- March 14, 2017: Registration and Welcome Reception
- March 15-17, 2017: IRCHLB V Scientific Program
- March 17, 2017: PM Conference Conclusion and Banquet
- April 21, 2017: Grower Day

Program/Abstract Categories:
Current research on biology, epidemiology, management, and economics of HLB and ACP will be presented.
Topics will include:

- Host
- Vector-host interactions
- Pathogen
- Pathogen-vector interactions
- Vector
- Infection consequences
- Host-pathogen interactions
- Epidemiology and cultural control

Grower Day:
A meeting for growers will be held at the UF-IFAS Citrus Research and Education Center, Lake Alfred, FL on Friday, April 21, 2017, to present salient points conveyed at the IRCHLB V conference.

Letters of Invitation/Financial Assistance:
Requests for letters of Invitation can be sent to IRCHLB@ifas.ufl.edu.
Financial assistance can be provided to a limited number of participants with hardship. Visit http://irchlb.org/hlb/assistance.aspx for details and email instructions.

Hotel Reservations:
The conference venue is the Caribe Royale Orlando All-Suites Hotel and Convention Center.
Link through www.irchlb.org to book a room at the conference rate of US $189/night, standard suite, or the government rate of $115/night for government employees (ID must be presented at check-in).

Meeting Amenities:
Registration fee includes welcome reception, continental breakfasts, lunches, and Friday evening

banquet dinner. Poster session hors d'oeuvres and drinks provided.

The official language of the IRCHLB conference is English.

Please visit www.irchlb.org for additional information and proceedings from prior meetings.

Obituaries

Dr. Hennie le Roux
6 February 1959 – 4 October 2016

Paul Fourie & Colleagues at Citrus Research International

Hennie le Roux

It is with great sadness that the passing of Hennie le Roux is acknowledged, after losing the battle with a brain tumor.

Hennie will be greatly missed and fondly remembered by so many people from all corners of the world. At the recent International Citrus Congress in Brazil, a prominent leader in the citrus world remarked that there is probably no other individual with as many friends in the citrus world as Hennie. Another world renowned scientist referred to Hennie as "the most beloved person in the citrus industry worldwide". Both statements are true from our own experience with Hennie where as a member of the local organizing committee of the 2013 XIX IOCV conference he accompanied several IOCV delegates to an epic post-conference tour around South Africa.

Hennie started his adventure in the citrus industry in South Africa on 1 Dec 1983, when he was awarded a Citrus Exchange bursary to study for an MSc degree in Plant Pathology at the University of Pretoria. The degree was awarded in November 1985 and he took up a post as Research Scientist for soilborne diseases at Outspan Citrus Centre in Nelspruit. He obtained his PhD in 1995 on the control of citrus nematode. Citrus was not a job for Hennie but a high-paced lifetime of discoveries and personalities. The historical background of a farm was often of more interest to Hennie than the citrus trees he was looking at, and he took a genuine interest in everyone he met. Not surprisingly he made a huge impact on the southern African citrus industry. His citrus career overflowed with demonstrations of greatness.

At an early stage of his career he was successful in transforming the citrus nursery industry in South Africa, culminating in a world-class standard of disease-free, quality trees that laid the foundation for a high production, internationally-competitive citrus industry. He proceeded to establish a soilborne disease management framework that supported the superior quality nursery trees to provide sustained profitable production. As a research scientist Hennie attained worldwide acclaim for these achievements within a remarkably short space of time. He would not hesitate to insist that others must never compromise the principles that underpinned these successes.

Hennie had the ability to focus people's minds on what could be achieved, thereby empowering people to do what was good for themselves and the wider community. Hennie was a greatly principled leader and from the South African industry's deregulation, he strived to convince all stakeholders of the need to retain an industry focused on research and technical support capacity and gave others the courage to follow. He inspired many around him to stand by their principles and stay committed to serving the greater citrus industry good through research.

Hennie built on this leadership in the post-deregulation era in South Africa by reinventing an industry-wide technology transfer model to fill the void left by the former extension model. The value of Hennie's achievements in designing, building and driving this critical link between scientific research and practical industry implementation greatly enhanced his already impressive international citrus industry acclaim.

Brazil 1998-Online source Fundecitrus

As if such a full career was not enough, Hennie recently embraced a new major industry challenge: ameliorating the industry's biosecurity vulnerability. If there was one person who could overcome such a huge challenge, it was Hennie and it is a great tragedy that ill health robbed him of being able to make this additional game-changing contribution to his beloved industry.

Hennie inherited his passion for science from his father, who also was a plant pathologist, and his passion for people from his mother. Hennie's door was always open to whoever needed his companionship, irrespective of time or work pressure. He fully understood the art and value of relationships and friendships. This is who he was, a people's person, loved by all who were privileged to know him. Our prayers are with his wife, Mariana, daughter, Hestie, and sons, Meyer and Wilhelm.

Dr. Joseph Marie Bové
5 May 1929 – 2 June 2016

Josy Bové
On line source Fundecitrus

Georgios Vidalakis
Dear Friends,
Friday June 3, 2016 while I was in my car returning home with my family I saw in my email account Dr. Bové's name and on the subject line of an email. I immediately turned off my phone, without opening the email, and I put it away for the whole weekend. I was aware of his recent health problems and I knew at that point that the message was about his death so I did not have the strength to read through...

I finally pushed myself today to go through all your messages, which I summarized below, and to officially announce with this email to the IOCV membership and beyond that Dr. Bové passed June 2, 2016.

This summer was the one year anniversary of the death of my father and I know that as IOCV members you feel, like I do, the same way for Professor Bové, or the "General" as our good friends in Brazil are affectionately calling him. I feel that we lost our academic and scientific father one of our fearless leaders and one of the original members of our organization.

I do not have much to say other than that I am deeply saddened both in a personal and professional level and that we will be in touch with all of you for the development of the appropriate plan for IOCV to honor Dr. Bové.
On behalf of the IOCV Board of Directors,
Georgios

Dear Friends,
I deeply regret to inform you about the passing of Dr. Bové. We are all very sad with that, and IOCV will certainly honor him.
Best regards,
Juliana Freitas-Astúa

Dear Friends,
We from Fundecitrus had a privileged opportunity to work close with Prof. Bove in the last 20 years. He was a great professional and friend.
Gladly, God gave me a special opportunity to spend 2 days with him at the hospital in Bordeaux 4 day before he passed.
While there, he confessed that he was feeling like a lion closed inside a cage.
He was always a strong lion in his life and never had a limit. He wanted to do his best every day and has accomplished things we thought that would be impossible.
Next Monday Fundecitrus will make a special tribute to this great man during the `Citrus Grower Week` at Cordeiropolis (São Paulo-Brazil).
Juliano Ayres

The following message has been posted on the Fundecitrus webpage:
Citrus pathologist Joseph Bové, a Brazilian and worldwide icon of citrus production, dies at 87
Dr. Joseph Marie Bové (87) died of leukemia on Thursday (2) in Bordeaux, France.
The renowned citrus pathology researcher was a member of the science academies of France, Spain and Brazil. Since 1959, he actively contributed to the development of the citrus disease research in Brazil. He has served as the main consultant for Fundecitrus for 20 years. During this time, Dr. Bové played a decisive role in discoveries and advances of control of the major citrus diseases of the Brazilian citrus industry such as citrus variegated chlorosis (CVC), citrus sudden death (CSD) and Huanglongbing (HLB, greening).

"Dr. Bové was the most brilliant and complete citrus pathologist in recent decades. His solid training with basic and applied knowledge and international experience coupled with the ability to lead and defend his ideas turned him into a worldwide icon of citrus production. His contribution to the Brazilian citrus industry is invaluable. Certainly, the current citrus industry would not have overcome its major challenges without his privileged mind and courage. Dr. Bové will always be recognized worldwide for being the one who made possible the successful management of HLB, the most destructive disease of the world's citrus industry", says the general manager of Fundecitrus, Antonio Juliano Ayres.

Fundecitrus deeply regrets the irreparable loss of Dr. Bové and wish the most sincere condolences to his family and friends.

Great words for a great man.
Eduardo Stuchi

Dear Georgios,
With great sadness, I pass this news on to you.
I have forwarded this to a number of IOCV members.
Sadness hangs over me today with his passing.

Bové 1992

Bové taking pictures of citrus

Dear friends,
It is with the deepest sadness and shock that I pass on this news received today from Pedro Moreno.
A Giant in our IOCV has left us!
It will take time to assimilate the impact of his loss on all of us who have known him and of his many contributions to citrus pathology and especially to our organization.
He will be missed and honored by all of us!
Chet Roistacher

Dear friends,
With deep sadness I want to inform you that today our colleague and good friend Josy Bové has passed away. In the last few months his illness had progressively debilitated him and in the last three weeks he had to stay at the hospital. His physical vigor had been reduced, but his mind was clear and brilliant as it always was. He was a keystone of the citrus pathology, but more than this, he was a collaborative colleague and a good friend. Many of us will never forget him. Rest in peace.
Pedro Moreno

All,
Many of you have known Dr. Bove for much longer that I have but I would like to tell you a story if you will allow me.
I met Josy many years ago as I attended a few IOCV meetings as a young scientist, but had little interaction with him until HLB was found in Florida. I knew of his reputation, I knew his stature, I knew that he was a world renowned scientist that set the standards for professionalism and vision. What I would like to recount is one interaction that really let me know what kind of a man he was. HLB was found in Florida in 2005 and I was a new scientist with ARS and had worked on HLB for a little under 1 year when I presented a presentation at a meeting in Brazil. We had a spirited, somewhat public disagreement and discussion about the interpretation of what I had just presented. We both stood our ground and reluctantly agreed to disagree. Afterwards, I was feeling that maybe I should have deferred and really felt bad about how things had transpired. The next day at a social at the meeting, I saw Josy come across the crowd directly to me and I was concerned. After working his way across the crowd and before I could get a word out, he put his arm around me and said “Don’t worry, you are my friend and I respect you (although he still didn’t agree)!” I can’t tell you how much that meant to me. It was an experience that I will have etched in my mind forever and made me appreciate the kind of man that he was. He was a good man, a good mentor, a good teacher, a good scientist, and he earned and deserved every bit of respect that the scientific community gives him. I am honored that he considered me a friend.

The world and scientific community has lost a good man.
Mike Irey

Dear Friends,
There is a Talmudic saying, when one of the club passes away, the whole club should worry.
Indeed with the passing of our beloved friend Josy Bove, we members of IOCV lost probably the last surviving person of the original Club gathered at UCR by JM Wallace to establish an organization of brotherhood and care for a common cause, turning the citrus world into a disease free enterprise.

The scientific progress that turned their dream into reality was built on the shoulders of a few eminent scientists that revolutionized citrus pathology, from its early practical problem of dealing with budwood transmitted diseases to a whole new range of pathogens, where the promise of healthy budwood is far from being sufficient to see the grove producing a commercial crop.

Josy was for all these years the corner stone and the pillar of this effort and he will be missed by all of us.

My first encounter with Josy and Collete was in 1969 during a course on citrus virus diseases that he organized at Wersailes and Bastia Corsica, he turned an excellent teacher and he kept this energy until our last meeting when invited to deliver the Monselize-Bar-Akiva lecture at Bet Dagan.

Our condolences to the three Bove sons and their families and to the entire IOCV community.
Hanna and Moshe Bar-Joseph

Thanks for letting me know. He has been a friend for many years. Some men are pillars that support a portion of the world and when gone, we realize we are all somehow less without them. He was such a man. As many others, I will grieve for the loss of him for some time.
Tim Gottwald

Dear Georgios and All,
This is really sad news. I first heard of it via Chet last Fri. when I was in Beijing for a training course set by MOE. I replied to Chet soon after, could not believe it immediately.

I first met Josy in the mid 1980s', when he gave a training course at Beibei. In the past thirty years, we have kept in touch for some work issues, especially on HLB. I was deeply impressed of his hard endeavor for the control of HLB, especially helping the Brazilian Citrus Industry with a strong work spirit. No wonder they called him General. His is leaving for God's palace and this is a huge loss for both IOCV and ISC. Wish him peace and rest.

Best.
Changyong

Dear Georgios,
Thanks a lot for the e-mail, even it brings such a sad news. Joseph was a giant not only as a scientist but as a person. He was our leader and a friend. He helped us in our beginnings. Please, let me know about anything that IOCV may plan to honor Dr. Bové.

All the best
Vicente Conejero

Dear friends,
This news was a very bad surprise for me! I did not know that He was ill.

Since yesterday I could not take Josy off my mind…
I wrote some notes about Bové…
I have great memories with him and I am deeply grateful to have met him!

I couldn't translate my feelings…Sorry!

Warm regards.
Jacquie

In memoriam
"Josy" Bové
(05/05/29 – 02/06/16)
Directo, frontal, enérgico, explosivo, apasionado…
Sin animarme a acercarme por la gran distancia científica que nos separaba, en el año 2005 conocí a Joseph-Marie Bové. Tenía la seguridad del que sabe lo que sabe. Esa autoridad que sólo la da, haber recorrido el camino de la ciencia sin intermediarios.

Tucumán, Argentina, Mayo, 2008

Desafiante. Tuve el privilegio de presenciar más de un debate protagonizado por él, frente a un auditorio repleto de científicos de renombre. Nunca aprendí más: el disenso es la esencia del pensamiento y aplica a la investigación y a la vida.
La suerte (y las amenazas) dan oportunidades nunca imaginadas. Un par de años después, el riesgo del HLB, lo trajo desde Bordeaux hasta Tucuman. Desde ahí, nunca perdimos contacto.
Generoso. Entendía que el conocimiento se multiplica si se comparte. Que enseñar es la mejor forma de trascender…y Sí que lo hizo!!!
Cálido y sensible. Cualidades que poco demuestran los científicos sobresalientes, las combinaba de manera equilibrada y oportuna.
Agradecido, con sus maestros, pero también con sus discípulos, ya ausentes.
Con un sentido del humor incomparable, mezclaba el inglés y su francés, con un acento único…
"Surviving..." era su respuesta preferida, mezclada de picardía y verdad.
Fue muy bueno compartir su espacio, cargado de sabiduría!
Vamos a extrañarte, MAESTRO!

Jacquie Ramallo, Junio, 2016.

Dear Georgios,
I agree with you on the debt we, as IOCV organization, have to Professor Bové and would like to be informed of any initiative in which we can contribute. Please, handle our message of condolences to the family.
Regards
Antonio

Tribute to the memory of Professor Joseph Bové
The news of Professor Bové depart leaves a feeling of sadness in the community of Citrus virologists of Sicily which knew him personally or by its scientific papers. Old local friends remember that Josy Bové has contributed a lot and in a most generous way to the development of citrus virus research in Italy and in the Mediterranean basin. With a clear vision he understood that old unsolved problems of citriculture were to combat from the fundaments by the direct knowledge in the field before to engage sophisticated technologies of investigation. He managed this approach masterly and passionately by supervising personally memorable IOCV conferences and post conferences stimulating local people to make an effort to put real problems, technologies and solutions together, contributing himself with the quality of his research and the smartness of its intuitions. Those of us who had the privilege of a longtime reciprocal knowledge remember Bové also as a kind and a loyal gentleman, and generous person. His depart is indeed a great loss for the IOCV and for the Science. We will be glad to contribute to any adequate initiative to honor him.
Antonino Catara
Mario Davino
Rosalba La Rosa
Giuliana Albanese
Matilde Tessitori
Walter Davino
Serena Rizza
Grazia Licciardello
Angelo Caruso
Vittoria Catara

Dr. Bové contribution to the advancement of the Brazilian citriculture.

Juliano Ayres
The passion and the involvement of Dr. Joseph Marie Bové to the Brazilian citriculture began when he was still young, soon after completion of his doctorate at the University of California, Berkeley. His first trip to Brazil was by ship, in 1959, after an invitation of Dr. Veridiana Victoria Rosseti. In his first contact, the São Paulo State citriculture was reemerging from the devastating effect of the Tristeza disease which, in the decades of 40 and 50, had caused the death of 90% of all orange trees grafted on the 'Azeda' orange rootstock. On that occasion, he visited the Sete Lagoas farm located in Mogi Mirim municipality in São Paulo State, owned by Edmund Van Parrys. New citrus orchards were being planted which would make that farm later be recognized worldwide for its technology and modernity. Dr. Bové returned to Brazil in 1963, invited by Dr. J. Bittencourt, director of the Instituto Biológico of São Paulo, to teach a six-month course in Advancements in Microbiology.
These two stays in Brazil allowed Dr. Bové to establish a solid collaboration and friendship with Dr. Rosseti and Dr. Bittencourt, in addition to other icons of the Brazilian citriculture in those days, such as Dr. Álvaro Santos Costa, Dr. Sylvio Moreira e Dr. Ody Rodriguez.

However, a more effective involvement of Dr. Bové with the Brazilian citriculture would occur from 1989, when, in collaboration with Dr. Monique Garnier and Dr. Rosseti, discovered the presence of Xylella fastidiosa in the xylem of leaf samples of sweet orange trees affected by Citrus Variegated Chlorosis (CVC),

a new disease that, after its first report in 1987, rapidly disseminated to orchards in the north and northwest regions of the State of São Paulo. Because of the strong symptom severity and great damages caused to the infected trees, CVC was causing great fear to the citrus sector in those days. In 1993, Dr. Bové and his staff at INRA (Institut National de la Recherche Agronomique) would confirm that Xylella fastidiosa was the causal agent of the disease.

Bové would return to Brazil in 1992, after an invitation of Dr. Rosseti and the citrus grower Miklos Naday (Director of Sete Lagoas farm) with the mission to lead a team composed by the renowned international researchers Monique Garnier (INRA), Alexander Purcell (UC Berkeley), Tim Gottwald (UDSA), Heinz Wustcher (USDA) and C. J. Chang (Georgia University), with the goals of making a technical visit to check in loco the CVC situation, to coordinate an international workshop on the disease at Fundecitrus, and to draw a strategic research plan on CVC to try to elucidate the problem and establish control strategies.
From 1997 to 2016, Dr. Bove had a permanent and decisive involvement in support to the advancement and maintenance of competitiveness of the Brazilian citriculture. By accepting an invitation made by Fundecitrus manager Juliano Ayres, Bové assumed the role of a senior consultant in plant pathology of Fundecitrus, with the central mission to support and give direction to research activities. In these two decades, at the invitation of Fundecitrus, Dr. Bové made more than 50 trips to Brazil, having a fundamental role in staff training, infrastructure updating, and sharing his rich experience with citrus growers.

The Brazilian citrus growers owe much to this man and scientist way ahead of his time. His solid training and international experience combined with the ability to lead and defend his ideas made him an icon. His contribution to the Brazilian citriculture is invaluable, which would not have its main challenges overcome without his scientific mind and courage, a researcher recognized worldwide for being the one who made possible the management of HLB a success.

Bove's role was vital for the development of the CVC management, which is based on the use of healthy citrus trees from protected nurseries, removal of sources of inoculum, and control of the sharpshooter vectors. The adoption of these measures by most citrus growers allowed the incidence of CVC affected trees to fall from as much as 40% in 2010 to only 3% in 2016. This considerably reduced the impact of the disease and, with the use of new technologies, provided an increase in productivity.

Bové also made a difference with his arguments at the Council of FAPESP (Fundação de Amparo à Pesquisa do Estado de São Paulo) in the decision to choose X. fastidiosa as the first organism to have the entire genome sequenced by the Brazilian Genome Program. X. fastidiosa happened to be the first phytopathogen in the world to have the genome sequenced. The resulting article published in the journal Nature made the Brazilian science to be recognized worldwide.

In 2001 his expertise helped again, this time to solve the problem and to develop a strategy to control the Citrus Sudden Death (CSD), a disease of unknown etiology that led to death, in the north of the State of São Paulo and southern Triângulo Mineiro region of Minas Gerais State, thousands of adult orange trees grafted on the rootstocks 'Cravo' Rangpur lime and 'Volkamerian' lemon.

The most relevant contribution to the Brazilian citriculture came, for sure, after the detection of Huanglongbing (HLB) in the State of São Paulo in 2004. He was the main

During the 2010 XVIII IOCV Conference in Brazil

proponent of the research and HLB control strategies that were developed by Fundecitrus researchers and partner research institutions in Brazil.

During his academic life Bové published over 300 scientific articles in high impact journals. In 51 of them he counted with the participation of Fundecitrus researchers.

It is worth mentioning that in the world the control of HLB had never been effective on a large scale as it is in Brazil. And this has been possible mainly because of the actions taken by Fundecitrus, which based them on the directions of the leader and strategist Dr. Bove, 'The Big General'. In consideration to the invaluable services rendered to the world and Brazilian citricultures, the deliberative Council of Fundecitrus decided to make a tribute to this brilliant mind and honor Dr. Joseph Marie Bové by placing his name on the institution research center, a facility that was created by his encouragement, who used to say that the largest citriculture in the world should have a research facility appropriate to its grandeur.

Short Bio In memoriam Dr. Joseph Marie Bové
From the Website of the 2016 International Citrus Congress

University of Bordeaux - France / Fundecitrus – Brazil
He was born in 1929. Higher education: School of Agronomy and University, Paris, France (1950-1955), University of California, Berkley (1955-1957). Doctorate on in vitro synthesis of plant viral RNA (1967). Researcher at the French Institute for Citrus and Tropical Fruit Research (1959-1970) at Versailles, France. Director of research at INRA campus of Bordeaux, France (1971-1975) and Professor of Microbiology at University of Bordeaux (1976-1997). Head of Laboratory for Cellular and Molecular Plant Biology (1974-1994). President of INRA-Bordeaux (1984-1994). FAO consultant for citrus diseases (1981-1993). Consultant at Fundecitrus, São Paulo, Brazil, for graft-transmissible diseases of citrus (1998-2015). Research field: photosynthetic phosphorylation; replication of plant virus RNA, discovery and study of pathogenic, phloem-restricted bacteria of citrus: **Spiroplasma citri, Candidatus** Liberibacter spp, **Candidatus** Phytoplasma aurantifolia, **Candidatus** Phytoplasma Group Sr-IX, as well as xylem-restrited bacteria: **Xyllela fastidiosa**, etiology and management of citrus diseases in Brazil: Citrus variegated chlorosis, Citrus Sudden Death and Huanglongbing. Published 290 articles in scientific journals, 5 chapters and 3 conference papers. Member of the French Academy of Agriculture (1992), the French Academy of Science (1993), Brazilian Academy of Science (2002), Fellow of the American Phytopathology Society (1994) and the International Organization of Citrus Virologists (2004).

On line Source – 2016 International Citrus Congress:
http://www.icc2016.com/program/speakers/workshops/66-joseph-marie-bove

2016-2019 Membership Application in the

INTERNATIONAL ORGANIZATION OF CITRUS VIROLOGISTS

The International Organization of Citrus Virologists (IOCV) is an independent, non-profit association for the promotion of excellence and advancement of research with virus and virus-like diseases of citrus. Membership is open to anyone who is interested in the exchange of information on diseases of citrus.

A membership fee of $60.00 US, payable to IOCV is required for the three-year period (2016-2019) between the 20th and 21th Conference of the IOCV. Student fee is $30.00. Optional donations to the Schwartz Award for the support of young scientists participation to the IOCV Conferences are encouraged and welcomed.

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