PROMOTING WORLD-WIDE PLANT HEALTH AND FOOD SECURITY

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

ISPP NEWSLETTER

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The International Society for Plant Pathology promotes the world-wide development of plant pathology and the dissemination of knowledge about plant diseases and plant health management

IN THIS ISSUE:

ISPP PRESIDENT'S GREETINGS FOR 2020

JAN LEACH, ISPP PRESIDENT

Injera, naan, pita, roti, corn tortilla, frybread, arepas, puri, tunnbröd, chepati, kitcha, lahoh, focaccia, matzoh, lavash, tortillas, fatir, damper, flattbrod, oatcake, po bin, etc. Are you getting hungry? Do you recognise these as just a few of the many forms of delicious, simple flat breads from around the world?

My curiosity about flat breads and their origins started many years ago while enjoying tortillas during a lab dinner with my major professor Luis Sequeira (retired plant pathologist, University of Wisconsin-Madison). Dr. Sequeira observed how amazing it was that some form of flat bread evolved independently in many cultures around the world. The simplest flat breads are comprised of a dough or batter made from flour and water that can be fermented before being baked, fried or steamed.

Surprisingly, despite its importance to so many cultures, the origins of bread are largely unknown. Early evidence, based on finds in Neolithic sites, suggested that bread was invented after the domestication of cereal crops by agricultural communities. However, fairly recent data from a site in Jordan called Shubayqa 1, shows that Stone Age (Natufian) hunter-gatherers used wild ancestors of domesticated cereals and club-rush tubers to produce flat bread-like products 4,000 years before farming of domesticated crops [1]! The researchers sifted through tiny charred food fragments found near fireplaces, and discovered fragments with bread-like porous structures that contained the remains of cereals such as wild barley, einkorn wheat and oats. Another group of researchers actually baked flat bread from flour they had produced by grinding wild grains with ancient conical mortars carved into bedrock at the Shubayqa 1 site [2].

So, what do flat breads and their origins have to do with plant pathology? Bread is unquestionably an important source of nutrition and energy worldwide. It has fascinating symbolic roles in religion and has been the reason for political upheavals. 'Breaking bread' is a colloquialism in English that means more than sharing a meal, it also evokes a sense of connection and comfort, rather like my experience during the meal with Luis Sequeira's group in plant pathology that started me down this path of inquiry. Bread is critical globally. What if emerging or re-emerging diseases impacted the grain crops needed for the production of this delicious staple food? In a recent paper, Carvajal-Yepes et al. [3] asserted that continued efforts to improve our detection and responses to plant diseases are essential to food security, and this, of course, ultimately encompasses the security of our breads.

I wish you all a safe, productive, and bread-filled 2020!

1. Arranz-Otaegui A, Gonzalez Carretero L, Ramsey MN, Fuller DQ, Richter T (2018) Archaeobotanical evidence reveals the origins of bread 14,400 years ago in northeastern Jordan. *Proc Natl Acad Sci USA* **115**, 7925-7930.

2. Eitam D, Kislev M, Karty A, Bar-Yosef O (2015) Experimental barley flour production in 12,500-year-old rock-cut mortars in Southwestern Asia. *PLoS One*, 10:e0133306.

3. Carvajal-Yepes M, Cardwell K, Nelson A, Garrett KA, Giovani B, Saunders DGO, Kamoun S, Legg JP, Verdier V, Lessel J, et al. (2019) A global surveillance system for crop diseases. *Science* **364**, 1237-1239.

ISPP-REPORT FOR 2019

JAN LEACH, ISPP PRESIDENT

EFFORTS UNDERWAY FOR THE INTERNATIONAL YEAR OF PLANT HEALTH (IYPH2020)

ISPP is eager to help promote any events related to the IYPH 2020 in our newsletter, and by providing the information to the FAO for inclusion on their map and events list. We would like to promote sessions, workshops or satellite meetings proposed or organised by members of ISPP. **Please send Andrea Masino (andrea.masino@unito.it) and/or Daniel Hüberli (daniel.huberli@dpird.wa.gov.au) of any IYPH 2020 events that are occurring in your countries or that your societies are hosting or planning.**

As an example, ISPP is collaborating to coordinate meetings that build on a Policy Forum on Food Security paper published in Science that called for the formation of a Global Surveillance System (GSS) (Carvajal-Yepes et al. 2019. Science 364:1237-1239). The GSS is proposed to provide advance awareness globally of where pests and diseases are causing problems, to inform food security assessments, and to enable more coordinated and effective intervention. Following publication the Science paper, a subgroup of the authors convened to discuss strategies on how to socialise the GSS concept, and how to implement the GSS. The group proposed accelerating plans to fit meetings within IYPH 2020. To help progress toward the larger GSS goal, ISPP is collaborating with the GSS planning group to propose sessions for IYPH 2020 meetings or co-organise symposia at national and international congresses.

Another accepted proposal is for a Special Session/Facilitated Panel Discussion titled *A Global Surveillance System (GSS) for Crop Diseases and Pests: Networking the Networks* will be held at the **Plant Health 2020** (the American Phytopathological Society annual meeting; 8-12 August, Denver, CO, USA). The session will have the two goals: (1) to socialise the GSS concept more broadly to the plant health community, and (2) to bring together members of international diagnostic networks in a public forum to discuss how they would integrate into the GSS.

ISPP members have submitted a proposal to participate in the **International Plant Health Conference** "*Protecting Plant Health in a changing world*" which will be held 5-8 October 2020, Paasitorni Conference Centre, Helsinki, Finland (International Conference on Plant Health).

Please watch for announcements of these events in the Coming Events or at the IYPH 2020 site.

ICPP2023 TO BE HELD IN LYON, FRANCE FROM 20-25 AUGUST 2023

Planning for the ICPP2023 meeting (20-25 August 2023), hosted in Lyon, France by the Société Française de Phytopathologie (http://www.sfp-asso.org/), is well underway. The overarching theme for the meeting will be "ONE HEALTH for all plants, crops and trees." Co-chairs for the congress, Nathalie Poussereau and Mathias Choquer, are seeking applications for satellite meetings of 1-3 days before/after the congress. **Please contact Nathalie or Mathias, ISPP Vice President Khaled Makkouk, or an ISPP Subject Matter Committee Chair (http://www.isppweb.org/smc_intro.asp), if you are interested in proposing a satellite session, a scientific session or helping in the scientific programming for the meeting.**

PLEASE JOIN US IN ISPP ACTIVITIES!

SUBJECT MATTER COMMITTEES (SMCs). Dr. Khaled Makkouk, the ISPP Vice President serving as a liaison for SMCs, continues to promote active contributions of the ISPP SMCs, especially towards the IYPH2020, the Task Force on Challenges for Plant Pathology 2050, the Commission on Global Food Security, and, of course, the scientific programming for ICPP2023. **If you are interested in helping drive a sub discipline of plant pathology, please consider serving on one of our SMCs (http://www.isppweb.org/smc_intro.asp).**

COMMISSION ON GLOBAL FOOD SECURITY. The goal of the Commission on Global Food Security, chaired by Professor Lise Korsten, is to facilitate linkages between plant pathology and key food security challenges, to promote understanding of the issues, and to facilitate action to sustain global food security (https://www.isppweb.org/foodsecurity_background.asp). **Please contact Lise if you are interested in contributing ideas or becoming active in this effort.**

TASK FORCE ON CHALLENGES FOR PLANT PATHOLOGY 2050. This Task Force, led by co-chairs Lodovica Gullino and Greg Johnson, will be a major focus of ISPP for 2018-2023, particularly as the Task Force goals link to the IYPH2020. The charge of the Task Force is to identify key challenges in plant pathology in 2050, and to foster global focus to address these challenges.

Key activities for the Task Force are to: (1) establish a framework of committees to focus on key subject areas, with input from ISPP Subject Matter Committees, ISPP Associated Societies, and other organisations, (2) develop workshops to review and address the key challenges for plant pathology 2050 and develop pathwUays for progress against them, and (3) develop books for the ISPP series "Plant Pathology in the 21st Century" that cover these key challenges. The Task Force will work to engage young plant pathologists in all of these efforts. **Please contact Lodovica or Greg if you are interested in playing an active role in this effort.**

ISPP JOURNAL OF FOOD SECURITY.

Dr. Serge Savary, Editor in Chief, and the Editorial Board have a bold vision for the ***Journal of Food Security***. During a planning meeting held in Washington DC, the Editorial Board proposed several series of articles, including a series related to 'pathogens that threaten food security' (see ISPP Newsletter https://www.isppweb.org/newsletters/pdf/49_8.pdf). Also, look for a special issue on Gene Banks and Food Security. **Please contact Serge if you have questions about the journal or are interested in serving as a reviewer.**

ISPP NEWSLETTER.

Dr. Daniel Hüberli continues to produce an excellent ISPP Newsletter every month. ISPP views the Newsletter as an invaluable outreach resource and educational tool for the society, so **please contact Daniel with news items, exciting research advances, or publications related to plant pathology!**

WORLD DIRECTORY OF PLANT PATHOLOGISTS.

Income from the endowment of Francenia Fisher (The Francenia Fisher Trust) has funded the ongoing publication of an online resource, the World Directory of Plant Pathologists (http://www.isppweb.org/world_directory.asp). Unfortunately, since mid-2018 the Directory has been off-line because of data protection issues imposed by the European Union general data protection regulation (GDPR). However, our Business Manager, Andrea Masino (Business.Manager@ispp.web.org) has negotiated an agreement with the American Phytopathological Society (APS) to collaborate in the development of an opt-in version of the Directory that will include only individuals that wish to be listed in the directory. This World Directory of Plant Pathologists will be compliant with the European Union General Data Protection Regulation. **Thanks to Andrea and APS for finding solutions to revitalise this valuable resource!**

ADVANCED CROP IMPROVEMENT SHORT COURSE: FROM PLANTING IN THE PADDIES TO GENOME EDITING IN 2 WEEKS

JAN LEACH

"WHAT IS THE EFFECT OF ELEVATED CARBON DIOXIDE ON CROP YIELD?" "WHAT IS GENOME EDITING?" "WHY DO RICE PLANTS HAVE PANICLES WHEREAS OTHER CEREALS, LIKE WHEAT, HAVE HEADS OR SPIKELETS?" "HOW ARE GENOME EDITED PLANTS REGULATED IN DIFFERENT AFRICAN COUNTRIES?" "WHAT ARE THE MOST IMPORTANT PROBLEMS FACING SMALL SCALE FARMERS IN AFRICA?"

Twenty-three participants discussed these questions and much more during the "*Advanced Crop Improvement (ACI): Meeting Challenges for Food Security*," held from 27 October to 9 November 2019 at the AfricaRice Regional Training Center in St. Louis, Senegal.

The Advanced Crop Improvement 2019 short course brought participants from 13 countries together to discuss solutions to food security challenges.

The international cohort was made up of participants from Benin, Cameroon, Colombia, Côte d'Ivoire, Ethiopia, France, Mali, Morocco, Nigeria, Senegal, Uganda, USA and Zimbabwe. Of the 23, 12 were women. Participants, included MS and PhD students and post doctoral fellows, and spanned diverse disciplines, such as plant pathology, plant breeding, entomology, agricultural economics, biotechnology, agronomy, and plant biology.

Participants in ACI 2019 experienced different aspects of rice production, including transplanting.

The course offered opportunities for the participants to have a better understanding of the complexity of adopting new technologies in the developed and developing worlds and described how the science of crop improvement intimately links to food security, the national and international politics of food and agriculture, and science communication.

Theoretical and practical learning was enhanced by discussions on how advanced technologies can be incorporated into crop improvement, and the sociological and economic issues for their acceptance by farmers and consumers. The lectures, field experiences, and discussions were facilitated by 16 instructors from AfricaRice, Colorado State University, Cornell University, IRD, ISRA, and the University of Düsseldorf.

Dr. Karim Traore (AfricaRice) describes the architecture of rice plants.

Participants interviewed farmers to develop podcasts.

As part of a team project that was guided by a reporter/communications expert, participants interviewed consumers, growers, millers, marketers and scientists on issues related to crop production, nutrition and the adoption of new technologies. These interviews were used for the production of podcasts.

Participants isolate protoplasts for a genome editing experiment.

The workshop was co-organised by Jan Leach (Colorado State University, USA), Nani Khadi Drame (AfricaRice, Senegal), Adam Bogdanove (Cornell University, USA), Boris Szurek (IRD France), and was supported by funding from the USA (National Science Foundation and The Griffin Foundation), France [Agroplis Foundation, Institut de recherché pour le développement (IRD), and the Montpellier University of Excellence (MUSE)], and the CGIAR RICE Research Program.

Link to podcasts.

Krista Kafer, communications expert and reporter, demonstrates interviewing techniques with a Senegalese farmer and translator.

Participant Moses Okello demonstrates dancing Uganda style during an ACI 2019 outing.

Dr. Nani Drame, AfricaRice, translates during the interviews with millers.

Dr. Matthew Willman, Cornell University USA, lectures on genome editing in crop plants.

Dr. Jan Leach, Colorado State University, USA, prepares materials for hands-on LAMP diagnostic assay training.

APPS BIENNIAL CONFERENCE, MELBOURNE, 2019

HELEN HAYDEN, SECRETARY OF THE APPS CONFERENCE 2019 ORGANISING COMMITTEE

Left to right: President Address Brett Summerell, Opening keynote Lois Ransom, and EMBO keynote speaker Sophien Kamoun; Plenary session 2 Roger Innes and Plenary session 3 Hailing Jin; Plenary session 4 keynote address Thierry Candresse and Eileen Scott Daniel McAlpine lecture; Plenary session 5 Jan Leach; Below left: Plenary session 6 George Sundin, Program Chair Jacky Edwards and Plenary session 7 Carolee Bull; Below right: Plenary session 8 Neena Mitter (Photo credits: APPS).

The 22nd Australasian Plant Pathology Society (APPS) Biennial Conference was held at the Melbourne Convention and Exhibition Centre, Melbourne, Australia from 26-28 November 2019. The conference also marked the celebration of the 50th anniversary of the founding of the APPS. Three of the founding members, Prof Lester Burgess, Dr Bob Dodman and Dr Gordon MacNish, were in attendance for the conference. The conference attracted 491 delegates (55% female, 45% male) from 30 countries. This gender balance was reflected in the presentations (174 oral and 192 poster presentations).

The conference featured ten plenary speakers whose presentations were extremely well received. The speakers were Prof. Carolee T. Bull, Dr Thierry Candresse, Prof. Roger Innes, Prof. Hailing Jin, Prof. Sophien Kamoun, Prof. Jan E. Leach, Prof. Neena Mitter, Mrs Lois Ransom PSM, Prof. George Sundin and Prof. Eileen Scott, who delivered the Daniel McAlpine Lecture.

The three-day conference program covered all aspects of plant pathology from the applied with Disease Surveys and Monitoring, Community & Industry Engagement, and Surveillance and Incursion Response sessions as well as more molecular studies with Taxonomy and Phylogeny, Pathogenomics, Plant-Microbe Interactions and other topics. Agricultural Microbiomes also featured as a new session in the APPS program.

APPS foundation members Lester Burgess, Gordon MacNish and Bob Dodman (Photo credit: APPS).

Workshops and Field Tours, held on the days either side of the main conference, provided a great opportunity for focussed topic sessions, training, networking, and seeing agricultural and horticultural production regions in Victoria, Australia. Some of the workshops included: dsRNA Applications for Disease Control; Grapevine Viruses: Identification, Symptoms and Management; the 4th Australian Pathogen Bioinformatic Symposium (APBS) 2019; Molecular Plant-Microbe Interactions (a joint session with the Australian Society of Plant Scientists) and more. The Field Tours visited potato production at Toolangi and the Grampians region of Western Victoria for grains pathology.

Soil Microbiome Workshop coordinators Linda Kinkel, JP Dundore-Arias and Helen Hayden (Photo credit: APPS).

The conference provided new opportunities for students and early career researchers besides presenting their research. All oral sessions had two chairpersons, with a PhD student or ECR given the opportunity to be a co-chair and introduce speakers, time talks, manage questions and in some cases even assist in abstract selection. All students were also invited to the APPS-RAID (Researchers in Agriculture for International Development) lunch on the first day of the conference, where they had speed meeting sessions with "gurus" in plant pathology (including many of the plenary speakers) to ask questions about career paths, working abroad and the future of plant pathology.

RAID-APPS student lunch (Photo credit: APPS).

The APPS Biennial conference is also the occasion where we announce our Society awards. New Fellows of the APPS include Prof. Elizabeth Aitken, Dr Angus Carnegie, Prof. André Drenth, Prof. Robert Park, Prof Terry Price, Assoc. Prof. John Thomas, and Mr John Walker. The Lester Burgess Award for Research Communication was bestowed upon Dr Gordon Murray. Recipients of the Lester Burgess Award for Diagnostics and Extension were Dr Nerida Donovan, Ms Kathy Grice and Mr Mark Whattam. The Allen Kerr Post Graduate Prize was awarded jointly for 2019 to Dr Rebecca Roach and Dr Nga Thi Tran.

Thanks to many generous exhibitors and sponsors (https://www.apps2019.org/sponsorship-and-exhibition.php) we were able to bring speakers and delegates from around the world to present their research. Thanks to all who attended and shared their research and experiences with us. We also thank the APPS2019 Secretariat, ICMS Australasia, for their smooth running of the conference including the successful social events. Please join us in Hobart, Tasmania in 2021 for the 23rd APPS Biennial Conference.

APPS award winners at Gala Dinner at the Mural Hall (Photo credit: APPS).

NEW DISCOVERY TO FIGHT CITRUS EXOCORTIS VIROID

PHYS.ORG BIOLOGY NEWS, 9 DECEMBER 2019

What's a viroid like you doing in a ribosome like this? This is the question set out by a team from the Institute for Plant Molecular and Cellular Biology (IBMCP, in Spanish), a joint center of the Universitat Politècnica de València and the Spanish National Research Council (CSIC, in Spanish). The answer opens a door, unknown until now, to fight viroids. These pathogens have great infectious power in plants, and they are one of the biggest enemies of crops, especially citrus crops.

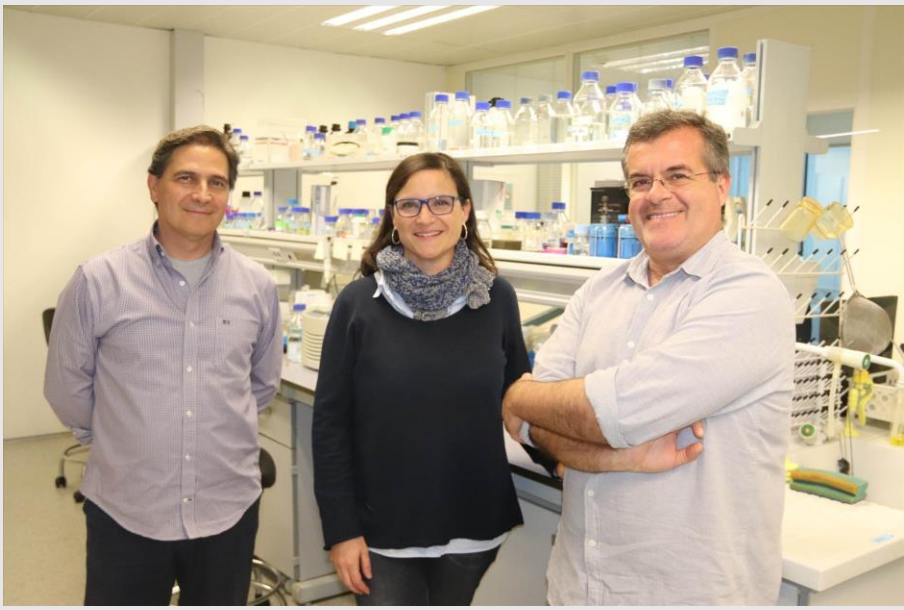

Photo credit: Universitat Politècnica de València

From their laboratories, scientists have described for the first time how the citrus exocortis viroid can cause ribosomal stress in plants, which directly affects their physiological state. The study, whose conclusions have been published in the journal *Nucleic Acids Research*, also includes the participation of researchers from the Université de Sherbrooke (Québec, Canada) and the Goethe University (Frankfurt, Germany).

"This study opens a new dimension in viroid pathogenesis. This is the first time that viroids, plant pathogens, have been proven to cause a failure in ribosome assembly, which is needed for protein biosynthesis," explains Purificación Lisón, researcher at the IBMCP and lecturer at School of Agricultural Engineering and Environment (ETSIAMN), UPV.

In the protein synthesis process, known as "translation," the ribosome is the molecular machinery responsible for reading and decoding the messenger RNA sequence and turning it into a protein sequence. In the study, the team of Spanish, Canadian and German researchers has proved how the viroid is capable of modifying this process, and "the bigger this alteration is, the sicker the plant becomes," explains Purificación Lisón.

Researchers are now studying whether the discovery obtained in viroids could also occur in other plant pathogens. Moreover, they point out that their study could open other ways for research by applying their findings in human ribosomopathies.

Read more.

COLOMBIA REPORTS ON TR4 PROGRESS

MAURA MAXWELL, EUROFRUIT, 10 DECEMBER 2019

Efforts to contain the outbreak of Fusarium TR4 fungus in Colombia appear to have succeeded in halting the spread of the disease to date. The Colombian Agricultural Institute (ICA) says no further outbreaks have been detected since the disease was discovered in July.

In an interview with El Universo, Jaime Cárdenas, assistant manager of plant protection at the ICA, said almost 200 ha of banana plantations had been destroyed since the discovery of TR4 in July in two farms in La Guajira. "Coordinated actions between the state and private sector have contained the fungus in farms in the municipalities of Dibulla and Riohacha in La Guajira," Cárdenas said. "Although the area of the outbreak is less than 25 ha, as of 4 December 185 ha have been eradicated." As soon as the fungus was discovered, all plants within a 100 metre radius out the outbreak were immediately destroyed, with biosecurity measures implemented in seven quarantined farms and 13 plantations certified for export in the region.

Cárdenas revealed that investigations by ICA revealed that contaminated soil was the most likely route of entry of the disease, although other means of dispersal had not been ruled out. ICA said it would continue to cooperate with plant health authorities in other Latin American producing countries in order to reinforce quarantine actions and strengthen diagnostic protocols to facilitate early warning of the presence of the disease.

EARLY WARNING SYSTEM FOR CITRUS PLANT DISEASE

IMARI SCARBROUGH, OLIVE OIL TIMES, 20 DECEMBER 2019

A possible early detection method for citrus greening, which is also known as citrus huanglongbing (HLB), was announced earlier this year by Sheo Shankar Pandey, a postdoctoral research associate in plant pathology, and Nian Wang, a professor of microbiology and cell science, both at the University of Florida.

The new method detects salivary sheafs left by the infecting vectors, *Candidatus* Liberibacter asiaticus, on the plant, which then allows farmers to determine whether the trees have been infected before they begin to show symptoms of the citrus greening disease.

This new possible early detection method will likely help small growers, but be less useful for commercial groves, according to Tim Gottwald, a plant epidemiologist at the U.S. Department of Agriculture's horticultural research laboratory in Florida.

The paper has been published in *Phytopathology* recently.

Read more.

NOVEL WAY TO ID DISEASE-RESISTANCE GENES IN CHOCOLATE-PRODUCING TREES FOUND

PENN STATE NEWS, 15 DECEMBER 2019

Chocolate-producing cacao trees that are resistant to a major pathogen were identified by an international team of plant geneticists. The findings point the way for plant breeders to develop trees that are tolerant of the disease.

A pod rot called black pod, caused by the oomycete *Phytophthora*, spreads rapidly on cacao bean pods under conditions of excessive rain and humidity, insufficient sunshine, and low temperatures. It is a major disease limiting cacao production (Photo credit: Andrew Fister).

The method researchers used to rapidly identify resistance genes could be used for any trait that has a genetic link in any plant, according to the team's leader, Mark Guiltinan, professor of plant molecular biology, Penn State College of Agricultural Sciences. He contends that the strategy represents a major step forward in the quest to develop disease resistance in long generational plants such as trees.

The focus of the study was the tropical tree *Theobroma cacao*, the source of chocolate. Its seeds are a major export from many producing countries in Central and South America, Africa, and Asia — but every year, 30-40% of preharvest yield is lost to diseases. For a long time, scientists have been trying to devise ways to reduce those losses, Guiltinan pointed out, adding that bolstering cacao's resistance to disease is the most efficient and environmentally friendly approach for disease management.

The researchers set out to measure the susceptibility of 60 genetically diverse genotypes of cacao to *Phytophthora palmivora* — a major cacao pathogen with global importance — by first collecting leaf samples from cacao trees at the International Cocoa Collection (CATIE), in Turrialba, Costa Rica. They focused on trees from four genetic groups — Guiana, Iquitos, Marañon and Nanay, isolated from remote regions of the Amazon, which give them their names. Researchers also collected leaves from trees representing four genotypes of interest outside of these genetic groups.

Over the nine-month sampling period, researchers inoculated 1,250 cacao leaves with the pathogen *Phytophthora palmivora* and then analysed and measured resulting lesions to assess disease resistance. They identified 16 genotypes showing the strongest disease tolerance and another 16 that they judged to be susceptible. Then they deep-sequenced the genomes of most of those trees to see how they differed.

Read more.

CURRENT VACANCIES

No current vacancies.

ACKNOWLEDGEMENTS

Thanks to Candace Elliott, Helen Hayden, Grahame Jackson, Greg Johnson, Jan Leach, and Kim Plummer for contributions.

COMING EVENTS

Indian Phytopathological Society 7th International Conference on "Phytopathology in Achieving UN Sustainable Development Goals"
16 January - 20 January, 2020
New Delhi, India
Website: ipsdis.org

45th Annual Conference of the Nigerian Society for Plant Protection
15 March - 19 March, 2020
University of Uyo, Main campus, Akwa Ibom, Nigeria
Website: nsppnigeria.org

6th International Symposium on Head Blight
23 March - 26 March, 2020
Banff, Alberta, Canada
Website: www.isfhb.com

16th Congress of the Mediterranean Phytopathological Union
23 March - 27 March, 2020
Limassol, Cyprus
Website: cyprusconferences.org/mpu2020

7th International Bacterial Wilt Symposium
29 March - 3 April, 2020
Montevideo, Uruguay
Website: 7ibws2020.fq.edu.uy

7th International Congress of Nematology
3 May - 8 May, 2020
Antibes Juan-les-Pins, France
Website: www.alphavisa.com/icn/2020/index.php

14th International Conference on Plant Pathogenic Bacteria
7 June - 12 June, 2020
Assisi, Italy
Website: www.icppb2020.com

Joint 18th International *Botrytis* Symposium & 17th International *Sclerotinia* Workshop
8 June - 12 June, 2020
Avignon, France
Website: colloque.inra.fr/botrytis-sclerotinia-2020

4th International Conference on Global Food Security
16 June - 19 June, 2020
Montpellier, France
Website: www.globalfoodsecurityconference.com

Plant Health 2020 – APS Annual Meeting
8 August - 12 August, 2020
Denver, Colorado, USA
Website: www.apsnet.org/meetings/annual/planthealth2020/Pages/default.aspx

Asian Conference on Plant Pathology: Importance and Impact of Global Plant Health
15 September - 18 September, 2020
Tsukuba International Congress Center, Ibaraki, Japan
Website: iapps2010.me/2019/02/05/asian-conference-on-plant-pathology-2020/

International Plant Health Conference "Protecting Plant Health in a changing world
5 October - 8 October, 2020
Paasitorni Conference Centre, Helsinki, Finland
Website: https://www.ippc.int/en/iyph/chronology/international-conference-on-plant-health/

13th Arab Congress of Plant Protection
1 November - 6 November, 2020
Le Royal Hotel, Hammamat, Tunisia
Contact: Dr. Asma Jajar, Chairperson of Organising Committee info@acpp-aspp.com
Website: acpp-aspp.com

IX International Postharvest Symposium
9 November - 13 November, 2020
Rotorua, New Zealand
Website: scienceevents.co.nz/postharvest2020

11th Australasian Soilborne Diseases Symposium
24 November - 27 November, 2020
Cairns, Queensland, Australia
Website: asds2020.w.yrd.currinda.com

12th International Congress of Plant Pathology (ICPP2023)
20 August - 25 August, 2023
Lyon, France
Website: www.icpp2023.org

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY (ISPP)

WWW.ISPPWEB.ORG

The ISPP List is an e-mail list server which broadcasts messages and announcements to its subscribers. Its goal is to facilitate communication among members of the International Society for Plant Pathology and its Associated Societies. Advertised vacancies in plant pathology and ISPP Newsletter alerts are also sent to members of the ISPP List.

In accordance with the guidelines and recommendations established by the new EU General Data Protection Regulation 679/2016 (GDPR), the International Society for Plant Pathology has created a Privacy Information Notice containing all the information you need to know about how we collect, use and protect your personal data.

This policy explains when and why we collect personal information about our users, how we use it, the conditions under which we may disclose it to third parties, how we keep it safe and secure and your rights and choices in relation to your personal information.

Should you need further information please contact business.manager@issppweb.org

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