ISPP INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

PROMOTING WORLD-WIDE PLANT HEALTH AND FOOD SECURITY

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

ISPP NEWSLETTER

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Editor: Daniel Hüberli (**email**)

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IN THIS ISSUE:

NOTICE TO ISPP COUNCILLORS - SELECTION OF HOST SOCIETY FOR ICPP2028

ANDREA MASINO, ISPP BUSINESS MANAGER

One of the objectives of the International Society for Plant Pathology is to "sponsor a series of International Congresses of Plant Pathology", normally at intervals of 5 years. During March-August 2021, ISPP Associated Societies were invited to submit bids for the hosting of the 13th International Congress of Plant Pathology in 2028 (ICPP2028).

Selection of the location and date of each Congress is the responsibility of ISPP's Council, and is undertaken by a ballot on Congress bid proposals. The ISPP Council consists of the ISPP Executive Committee and the ISPP Councilors nominated by the member societies of the ISPP (see http://www.isppweb.org/about_associated_eng.asp).

The call for bids to host ICPP2028 is now complete and 4 bids have been received. During September-November 2021, ISPP Councilors will be asked to consider the submited bid documents and vote on their preferred host for ICPP2028.

In order to ensure the vote is as complete as possible, ISPP member Societies are asked to check and update their ISPP Councilor listings at http://www.isppweb.org/about_committees.asp. During August-September 2021, ISPP will be contacting the ISPP Council to check and confirm the accuracy of their contact details.

Voting will open by 30 September 2021 with first round voting to be completed by 31 October 2021. If a clear winning bid (two thirds of votes received) is not obtained in the first round, a second round of voting may occur in November 2021.

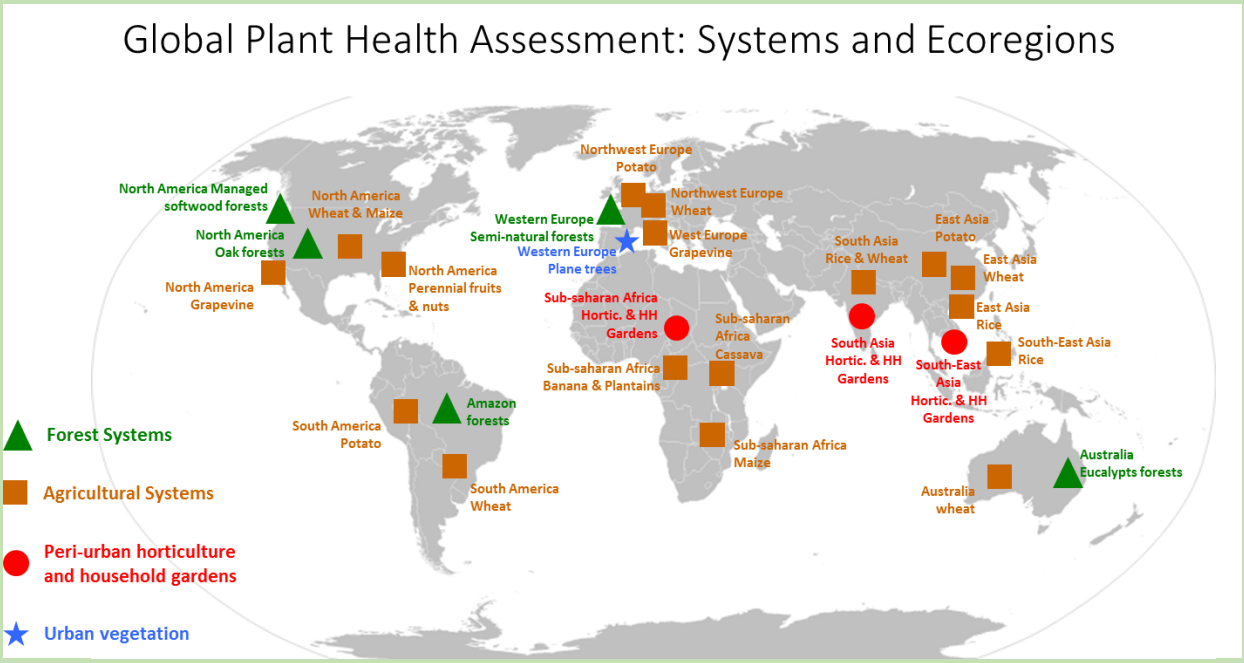
For any questions please write at andrea.masino@unito.it (Copying business.manager@isppweb.org).

ISPP'S GLOBAL PLANT HEALTH ASSESSMENT: A WEBSITE IS OPEN AND AN INTERNATIONAL WORKSHOP+CONFERENCE IS PLANNED

GPHA CONFERENCE SECRETARIAT: SONAM SAH* AND MANJARI SINGH*
* DOCTORAL STUDENT, DEPARTMENT OF AGRO-METEOROLOGY, GB PANT UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, PANTNAGAR, UTTARAKHAND, INDIA

GOALS OF THE GLOBAL PLANT HEALTH ASSESSMENT

The Global Plant Health Assessment is an ISPP initiative involving an international, volunteered, peer-reviewed evaluation of the state of plant health across ecoregions of the world, and of the effects of plant disease on ecosystem services. The initiative has been impulse by the International Year of Plant Health (IYPH, 2020) to which ISPP has contributed in a number of ways.



Much progress has been made in the past months on documenting the health human-made and natural plant systems. Regular meetings have taken place; reports have been circulated and have been or are being peer-reviewed. It is time now to envision reporting. A first reporting stage is a website where some key elements are being made available to ISPP members and the broader public.

The website address is: https://sites.google.com/view/global-plant-health-assessment/home?authuser=0

This website is regularly updated by the GPHA Secretariat as new information is being assembled. The GPHA addresses four broad types of Plant-Systems: forests, agricultural systems, peri-urban horticulture and household gardens, and urban vegetation. Each system in each ecoregion is being addressed by a small team composed of a Lead Scientist and a group of 3-4 Experts. The initiative therefore involves some 100 scientists in the world.

THE INTERNATIONAL WORKSHOP+CONFERENCE ON THE GLOBAL PLANT ASSESSMENT

For the past several months, an International Workshop+Conference on the Global Plant Assessment has been planned. The event will include three days of closed-session workshop on the 26 reports that are being assembled on the various Plant-Systems across the world. It will be followed by a Conference where plant health will be discussed using a series of cross-cutting, over-arching questions. The Conference will be open to the public (the entire ISPP community and beyond) and will include formal lectures and expert-driven panel discussions with the audience. Both components will be conducted in a hybrid way for physically attending and remotely connected participants. The event will take place at the Toulouse School of Economics of the University of Toulouse which has kindly offered the use of its meeting facilities. The Workshop will take place on **5-7 October 2021**, and the public conference will be held on **8 October 2021**.

A tentative programme of the event is listed on the website. The programme depends on the global evolution of COVID-19, and its organisation may evolve. This is supervised by a GPHA Coordination Group (in alphabetic order):

Didier Andrivon[(1)], Paul D. Esker[(2)], Laurent Huber [(3)], Jatinder Kumar [(4)], Neil D. McRoberts [(5)], Andy Nelson [(6)], Sarah J. Pethybridge [(7)], Serge Savary [(8)], Pepijn Schreinemachers[(9)], Laetitia Willocquet [(8)]

(1) Département SPE, IGEPP, INRAE, France

(2) Dept. of Plant Pathology, Penn State University, USA

(3) Dept. Agrosystèmes, INRAE, France

(4) Dept. of Plant Pathology, GB Pant University of Agriculture and Technology, India

(5) Dept. of Plant Pathology, UC Davis, USA

(6) Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, The Netherlands

(7) Plant Pathology and Plant-Microbe Biology Section, Cornell Agritech, Cornell University, USA

(8) Département Santé des Plantes et Environnement, INRAE, France

(9) WorldVeg Center, Thailand/Taiwan

SPORES, MARIA LODOVICA GULLINO, SPRINGER, 2021, 289 PAGES

STEFANIA ANTRO

Why do plants get sick, and how do they do so? Why is it so important to protect their health? What is the relation between plant health and human health? The person best suited to answer these questions can only be a plant pathologist, someone who has devoted her whole life to plant diseases, and knows very well that their management is not only a pleasure or a professional matter, but a social responsibility, a dutiful goal. Plants are our main source of oxygen and nourishment, and their key role for global health was brought to public attention in 2020 by numerous initiatives promoted worldwide for the celebration of the International Year of Plant Health.

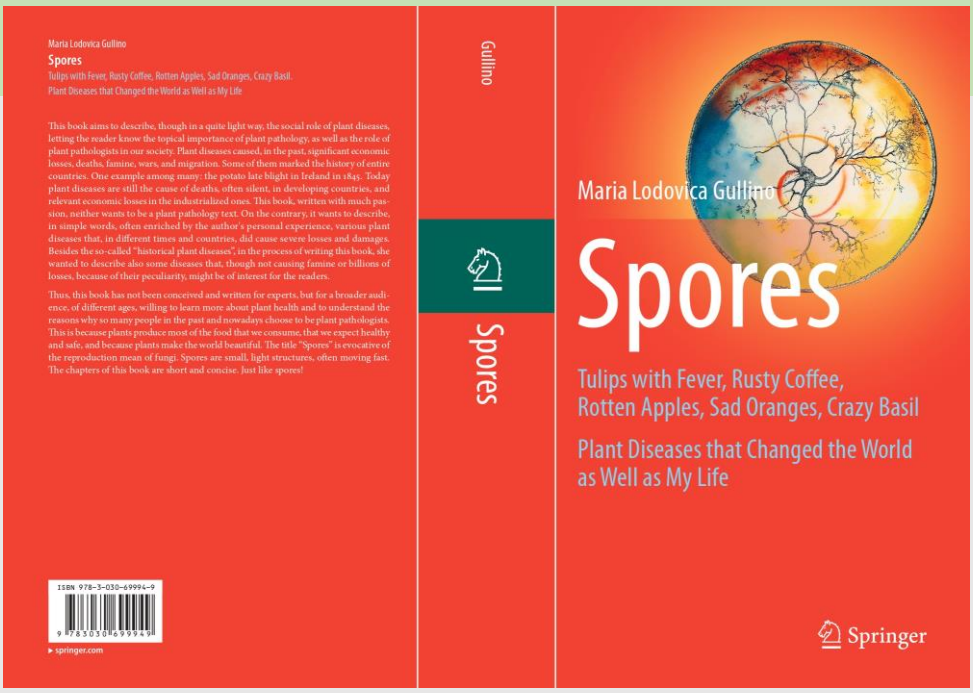
Maria Lodovica Gullino, born in a family of fruit growers from Piedmont, a well established plant pathologist, Director of AGROINNOVA - Center of Competence for the innovation in the agro-environmental field, at the University of Torino, Past-President of the International Society for Plant Pathology, starts from her personal experience to introduce the reader to some "Spores". With this generic but evocative label, she refers to plant pests that throughout history have influenced the fate of many people, and keep on doing so, both in developing countries and in the industrialised ones.

Her keen interest in plant health developed at an early age when, following her father in the family orchards, she had the chance of seeing first-hand their fruit crops damaged by plant pests. This is how she understood that plant diseases are able to compromise harvest and therefore small farms' revenues, and are responsible - as she discovered later – of devastating impacts on the environment, the economy and the livelihoods of entire sections of populations relying on those crops.

Spores, republished by Springer in this updated and expanded edition of the previous Italian one (Spore, Daniela Piazza Editore, 2014), is not a treatise on

plant pathology, but a story showcasing personal events of the Author's life and academic path, and other anecdotes and curiosities about a universe that, though little known to the general public, indeed concerns everyone, since the well-being of man-kind depends on the health of plants.

In a pleasant and easy-going style, Maria Lodovica Gullino enthralls the layman reader to a complex and more than ever relevant subject, offering an overview of the lab researches, the fruitful international collaborations, the many chances offered by new research fields and cutting-edge technologies, the consequences of environmentally disrespectful methods, and the opportunities provided by multi sectorial and transdisciplinary approaches, such as the circular health vision, to the study of plant diseases.



The stories of this book range from the Irish famine caused by the late blight of potato in the middle 1800s, to dangerous mycotoxins that, often boosted by favourable climatic conditions, not only do they affect the agricultural economies of many countries, but also seriously jeopardise the food safety of people and animals.

Particular emphasis is placed on the globalisation of trade and climate change, underlying the risks connected to invasive alien species attacking agricultural crops in geographical areas where they were unknown before, or to the appearance of more virulent strains or new races capable of attacking varieties previously considered resistant. It is the case of the recent devastating bacterial canker of kiwifruits, reported the first time in Japan and then in all leading producers worldwide - from New Zealand to Italy and Chile - and of the new strain of black rust of wheat that from Uganda has rapidly reached the Near East and central-southern Asia.

The overview of historical and more recent epidemics is interspaced by the presentation of possible strategies to address future critical issues, increasingly linked to climate change: from the most advanced diagnostics in the phytosanitary field to soil disinfestation, from biological control to post-harvest treatments, from green biotechnologies aimed at producing stress-resistant plants or at increasing their nutritional content, to edible vaccines, which might open up new perspectives for international agriculture and human health in the future.

An exhaustive immersion in an interdisciplinary and incredibly current field of study, presented without any idealism, but with the scientific rigor and clarity of a researcher, and at the same time the lightness and curiosity of a passionate traveller who has spent years, a suitcase in her hand, exploring distant cultivations and cultures. The author, bringing in the book also many colleagues and friends met around the world, also tells readers how scientists live and work.

More information on the book is available on the Springer website.

PROTEIN DISCOVERY COULD HELP ENABLE ECO-FRIENDLY FUNGICIDES

JULES BERNSTEIN, UNIVERSITY OF CALIFORNIA RIVERSIDE NEWS, 3 MARCH 2021

New research reveals an essential step in scientists' quest to create targeted, more eco-friendly fungicides that protect food crops. Scientists have known for decades that biological cells manufacture tiny, round structures called extracellular vesicles. However, their pivotal roles in communication between invading microorganisms and their hosts were recognised only recently. UC Riverside geneticist Hailing Jin and her team found plants use these vesicles to launch RNA molecules at fungal invaders, suppressing the genes that make the fungi dangerous.

"These vesicles shuttle small RNAs between cells, like tiny Trojan horses with weapons hidden inside," said Jin, a professor of genetics and the Cy Mouradick Chair in the Department of Plant Pathology and Microbiology. "They can silence pathogenic fungal gene expression."

Using extracellular vesicles and small RNAs has several advantages over conventional fungicides. They're more eco-friendly because they are similar to naturally occurring products. Eventually, they degrade and do not leave toxic residues in the soil. Also, Jin explained, this method of fighting fungi is less likely to breed drug-resistant pathogens.

A sticking point for scientists in creating these fungicides has been figuring out how to load their desired small RNAs into the vesicles. Jin's laboratory has identified several proteins that serve as binding agents, helping to select and load small RNAs into the vesicles. The lab's research is detailed in a new *Nature Plants* journal article.

The Jin laboratory has been working for several years on the development of gene-silencing RNA fungicides. Work toward this goal led to the team's landmark discovery in 2013 that gene-silencing RNA messages can be sent from the fungal pathogen to the plant host to suppress host immunity. Later, the team learned small RNAs can move both ways — from plants into pathogenic invader cells as well.

In 2018, the team worked out that extracellular vesicles were the major delivery system for these small RNAs. They observed that *Arabidopsis* plants secrete extracellular vesicles into *Botrytis cinerea*, a fungus that causes grey mold disease and destroys millions of crops every year. Now, she and her colleagues have identified several RNA-binding proteins in *Arabidopsis* that bind to specific small RNA molecules and load them into extracellular vesicles. This suggests the proteins play an important role in loading and stabilising small RNAs in the vesicles. The finding can help increase the payload of gene-silencing RNAs that make it into vesicles and enhance the efficiency of disease control.

Some scientists have taken inspiration from the RNA communication in plant vesicles to design human therapies. For example, some are attempting to load anti-cancer RNAs and drugs into extracellular vesicles in fruits or vegetables, so people can eat or drink them. Jin is hopeful that her lab's discovery can aid these efforts.

ONE HEALTH CONCEPTS AND CHALLENGES FOR SURVEILLANCE, FORECASTING, AND MITIGATION OF PLANT DISEASE

A review by Cindy E. Morris *et al.* titled "One Health concepts and challenges for surveillance, forecasting, and mitigation of plant disease beyond the traditional scope of crop production" was published on 5 August 2021 by *Plant Pathology* (early view). The abstract is as follows:-

The One Health approach to understanding disease epidemiology and achieving surveillance and prevention is holistic, while focusing on zoonotic diseases. Many of its principles are similar to those espoused in agroecology, begetting the question of what One Health can contribute—in practice—to preventing plant disease. Here we describe four knowledge challenges for plant health management that have arisen from the One Health experience for zoonotic diseases that could boost prospects for novel approaches to plant disease surveillance, prediction, and prevention. The challenges are to (a) uncover reservoirs and revise pathogen life histories, (b) elucidate drivers of virulence beyond the context of direct host–pathogen interactions, (c) account for the natural highways of long-distance dissemination (i.e., surface water and air mass movement), and (d) update disease forecasts in the face of changing land use, cultivation practices, and climate. Furthermore, we note that implementation of a One Health approach to disease surveillance and prevention will require mobilization of tools to deal with the representation and accessibility of massive and heterogeneous data and knowledge; with knowledge inference, data science, modelling, and pattern recognition; and multi-actor approaches that unite different sectors of society as well as different scientific disciplines. The infrastructure to build and the obstacles to overcome for a bona fide One Health approach to disease surveillance and prevention are key commonalities where actors in the efforts to prevent zoonotic diseases and plant disease can work together for the management of biodiversity and consequently human, animal, and plant health.

Read paper.

PLANT PATHOGEN INFECTION RISK TRACKS GLOBAL CROP YIELDS UNDER CLIMATE CHANGE

A paper by Thomas M. Chaloner *et al.* titled "Plant pathogen infection risk tracks global crop yields under climate change" was published on 5 August 2021 by *Nature Climate Change* (vol. 11, pp. 710–715). The abstract is as follows:-

Global food security is strongly determined by crop production. Climate change-induced losses to production can occur directly or indirectly, including via the distributions and impacts of plant pathogens. However, the likely changes in pathogen pressure in relation to global crop production are poorly understood. Here we show that temperature-dependent infection risk, r(T), for 80 fungal and oomycete crop pathogens will track projected yield changes in 12 crops over the twenty-first century. For most crops, both yields and r(T) are likely to increase at high latitudes. In contrast, the tropics will see little or no productivity gains, and r(T) is likely to decline. In addition, the United States, Europe and China may experience major changes in pathogen assemblages. The benefits of yield gains may therefore be tempered by the greater burden of crop protection due to increased disease and unfamiliar pathogens.

Read paper.

MEASURING ELECTRIC CURRENT IN SOIL COULD PROVIDE ANSWERS ON SOIL HEALTH

TINA HILDING, WASHINGTON STATE UNIVERSITY INSIDER, 19 AUGUST 2021

Washington State University researchers have developed a way to assess soil health by measuring the electric current produced by microbes. The team used a probe originally developed to measure the electrochemical signal of microbes in aquatic environments and tested it on healthy and unhealthy soil samples to measure microbial metabolism and other indicators of soil health. This proof-of-concept research, published in *Journal of Electrochemical Society*, could someday lead to a simple, real-time test for farmers to determine whether soil is productive.

"Soil underpins all the food we eat, and most of it is degraded worldwide," said Maren Friesen, an associate professor in the Departments of Plant Pathology and Crop and Soil Sciences and a co-author on the study. "One of the biggest barriers to improving soils is not being able to have rapid, real-time measurement to develop appropriate management strategies for them. This sensor has the potential to be able to do real-time measurements not just of the structure of the soil, but how it's actually functioning. It would be a huge advance in the field."

Soil health is critically important to agriculture and crop success worldwide, but measuring it is not straightforward. Farmers and researchers use soil chemistry, nutrient analysis, texture and pH measurements to gain understanding of soil's physical and chemical properties. While that information can be valuable, it doesn't always reflect how productive the soil actually is.

That's because a key to soil productivity is how microbes function, said Friesen. Billions of bacteria, fungi and other organisms play critical roles in nutrient mobilisation and provisioning, defense against pathogens and plant growth. But, until now, there has been no simple, real-time way to measure the microbial activity.

"What makes a soil beneficial for a plant is that it is alive and contains all these bacteria and fungi," she said.

In the new paper, the WSU research team was able to measure current through the soil to determine microbial activity and distinguish healthy and unhealthy soils. The researchers used a probe that they developed a few years ago to measure the electrochemical signal of microbes in aquatic environments. Similar to how humans eat and breathe, microorganisms take in food and then use electrons liberated during metabolism for their energy. Finally, microbes give these electrons to an acceptor molecule such as oxygen. The probe the team developed replaces these acceptor molecules with an electrode. Using this electrode, they can then measure the electric current and get an idea of the magnitude of microbial activity.

Read more.

DROUGHT CHANGES ROOT MICROBIOME OF RICE

ANDY FELL, UC DAVIS COLLEGE OF BIOLOGICAL SCIENCES NEWS, 29 JULY 2021

Drought can have a lasting impact on the community of microbes that live in and around roots of rice plants, a team led by University of California, Davis, researchers has found. Root-associated microbes help plants take up nutrients from the soil, so the finding could help in understanding how rice responds to dry spells and how it can be made more resilient to drought. The U.S. National Science Foundation-funded work was published in *Nature Plants*.

Christian Santos-Medellín and Zach Liechty, graduate students in the Sundaresan lab and lead authors of the recent paper in *Nature Plants*, found that prolonged drought permanently changes the root microbiome of rice plants (Photo credit: UC Davis).

The root microbiome of irrigated rice plants goes through a sequence of changes as the plants grow and stabilises when they flower. The sequence of changes in the root microbiome is consistent for a particular rice strain and geographic location. Previous work has shown that when a growing rice plant is deprived of water, it hits pause on the succession of changes in the root microbiome.

Venkatesan Sundaresan, a distinguished professor in the Department of Plant Biology and colleagues looked at changes in rice root microbes over time when plants were deprived of water for 11, 21 or 33 days. This kind of intermittent drought condition is more common in rain-fed crops than terminal drought, Sundaresan said.

As expected, the microbe community changes when water is taken away. More surprising is that the changes persisted for weeks after plants were watered again.

"Rice plants carry a 'memory' of the drought episode in their root microbiota, so that plants that have experienced drought can be distinguished solely on the basis of their microbiomes," Sundaresan said.

The team was able to culture and sequence the most abundant of these persistent microbes. It was a species of Streptomyces that promotes growth of plant roots, a classic response to drought. The bacteria's DNA includes genetic code similar to plant genes for the growth hormone auxin.

As extreme climate events become more common, crops are likely to experience more intermittent droughts, the authors note. Understanding what makes plants more resilient to drought conditions could help reduce crop losses.

NEW ENZYME IDENTIFIED THAT INFECTS PLANTS – PAVING THE WAY FOR POTENTIAL DISEASE PREVENTION

UNIVERSITY OF YORK NEWS, 12 AUGUST 2021

Scientists have identified an unusual enzyme that plays a major role in the infection of plants - and have shown that disabling this enzyme effectively stops plant disease in its tracks. By discovering previously unexplored ways in which crop pathogens break through plant cell walls, the scientists have opened up opportunities for developing effective disease control technologies. The new research, published in *Science*, describes a family of enzymes found in a microorganism called *Phytophthora infestans*. The enzymes enable crop pathogens to degrade pectin - a key component of plant cell walls - thereby enabling the pathogens to break through the plant's defences to infect the plant.

Led by biologists and chemists from the University of York, the international team of researchers discovered the new class of enzymes that attack pectin called LPMOs. The team also showed that disabling the gene that encodes this enzyme rendered the pathogen incapable of infecting the host.

P. infestans is known to cause potato late blight, a devastating plant disease that led to widespread starvation in Europe and more than a million deaths in Ireland in the 1840s, in what became known as 'The Great Famine'. Plant infection continues to cause billions of dollars' worth of damage to global crop production each year and continues to threaten world food security. The identification of this new gene could open up new ways of protecting crops from this important group of pathogens.

Lead author on the report, Dr Federico Sabbadin, from the Biology Department's Centre for Novel Agricultural Products (CNAP), at the University of York said: "These new enzymes appear to be important in all plant pathogenic oomycetes, and this discovery opens the way for potentially powerful strategies in crop protection".

Professor Simon McQueen-Mason, also from CNAP, remarked that the work was "the result of interdisciplinary collaborations between biologists and chemists at York along with plant pathologists at the James Hutton Institute, and genomicists at CNRS, with invaluable molecular insights from Professor Neil Bruce (CNAP) and Professors Gideon Davies and Paul Walton in the Department of Chemistry at York." The research is part of the project New Enzymatic Virulence Factors in Phytophthora infestans, running from 2021 to 2025, and is supported with a £1m grant from the Biotechnology and Biological Sciences Research Council, part of UK Research and Innovation (UKRI).

PLANT HEALTH WORKSHOPS

Plant Health Workshops are interactive, learning experiences that span several hours. Originally held on-site at the American Phytopathological Society (APS) annual meetings, these workshops have become virtual so that anyone can attend Live or On Demand. APS is offering the first of the six upcoming workshops to both members and nonmembers for free so that everyone has the opportunity to experience these interactive, educational experiences for themselves!

Workshop: APS Journals – Reviewing a Manuscript 101

Broadcast Date: Tuesday, October 5, 2021 | 2:00 - 4:00 PM Central

Description: Peer-review of scientific research articles is the cornerstone of science. Participating as a reviewer is an important way to stay current in your research area and to pay back the scientific community. Unfortunately, many reviewers learn peer-review only through experiences with reviews of their own papers and are not formally trained to act as reviewers. This workshop, presented by editors-in-chief of the APS journals, will explain the reviewer's role and responsibilities in the peer-review process and share best practices to help reviewers (and authors) arrive at the best possible outcomes. This workshop will provide the knowledge to improve the peer-review experience both as a reviewer and as an author.

Organisers:

- Alexander Karasev, University of Idaho (Plant Disease Editor-in-Chief)
- Chandrasekar Kousik, USDA Agricultural Research Service (Plant Health Progress Editor-in-Chief)
- Nian Wang, University of Florida (Phytopathology Editor-in-Chief)

Register now.

CURRENT VACANCIES

The Division of Agriculture and Natural Resources at the University of California, seeks to fill a position at the rank of Plant Pathology Advisor. The Plant Pathology Advisor will implement an extension education and applied problem-solving research program in plant pathology for the agricultural clientele of Monterey, Santa Cruz and San Benito counties. To assure full consideration, complete application packets must be received by **18 October 2021**, or open until filled.. Further details about the position and how to apply are available in the PDF.

ACKNOWLEDGEMENTS

Thanks to Stefania Antro, Grahame Jackson, Greg Johnson, Jan Leach, Andrea Masino, Sonam Sah, and Manjari Singh for contributions.

COMING EVENTS

Association of Applied Biologists Virtual Conference - Thinking differently about soilborne disease management
10 November, 2021
Website: web.cvent.com/event/adc5a4f6-0657-496b-bb81-a1bed45e7d7c/summary

7th International Conference of Pakistan Phytopathological Society
21 November - 23 November, 2021
University of Agriculture Faisalabad and Ayub Agricultural Research Institute, Faisalabad, Pakistan
Website: 7icpps.pakps.com

Australasian Plant Pathology Society Conference – Staying Connected for Plant Health
23 November - 26 November, 2021
Online conference
Website: appsconference.com.au/home

International Plant & Animal Genome XXIX
8 January -12 January, 2022
San Diego, California, USA
Website: www.intlpag.org/2021/

10th International IPM Symposium
28 February - 3 March, 2022
Denver, Colorado, USA
Website: ipmsymposium.org/2021

16th Congress of the Mediterranean Phytopathological Union
4 April - 8 April, 2022
Limassol, Cyprus
Website: https://cyprusconferences.org/mpu2022/

7th International Congress of Nematology
1 May - 6 May, 2022
Antibes Juan-les-Pins, France
Website: www.alphavisa.com/icn/2020/index.php

International Plant Health Conference "Protecting Plant Health in a Changing World"
Week of 12 May 2022
Location to be advised
Website: www.fao.org/plant-health-2020/events/events-detail/en/c/1250609/

4th International *Erwinia* Workshop
2 July - 3 July, 2022
Assisi, Italy
Website: www.icppb2020.com

14th International Conference on Plant Pathogenic Bacteria
3 July - 8 July, 2022
Assisi, Italy
Website: www.icppb2020.com

12th International Workshop on Grapevine Trunk Diseases (ICGTD12)
11 July - 15 July, 2022
Mikulov, Czech Republic
Website: ucanr.edu/sites/ICGTD/Workshops_559/

International Phytobiomes Conference 2022
13 September - 15 September, 2022
Denver, Colorado, USA
Website: phytobiomesconference.org/

13th Arab Congress of Plant Protection
16 October - 21 October, 2022
Le Royal Hotel, Hammamat, Tunisia
Contact: Dr. Asma Jajar, Chairperson of Organising Committee info@acpp-aspp.com
Website: acpp-aspp.com

11th Australasian Soilborne Diseases Symposium
Mid-late 2022
Cairns, Queensland, Australia

XX International Plant Protection Congress
10 June - 15 June, 2023
Athens, Greece
Website: www.ippcathens2023.gr

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

9th ISHS International Postharvest Symposium
11 November – 15 November, 2024
Rotorua, New Zealand
Website: scienceevents.co.nz/postharvest2024

12th INTERNATIONAL CONGRESS ON PLANT PATHOLOGY

ICPP 2023

ONE HEALTH for all plants, crops and trees

LYON

20-25 August, France

ISPP INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

www.icpp2023.org

SFP Société Française de Phytopathologie

The International Society for Plant Pathology & the French Phytopathological Society

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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