



International Society for Plant Pathology

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ICPP2018 – A pageant of progress in plant pathology

Opening remarks by Greg Johnson, President of the ISPP, on 29 July 2018 at the 11th International Congress of Plant Pathology in Boston MA USA

Welcome to the 11th International Congress of Plant Pathology (ICPP2018) and General Assembly of the ISPP. On behalf of the society, I pay tribute to our forebears in plant pathology, to the pioneers of the Massachusetts Bay Colony, and to the elders past and present of the First Nations who lived and live in what is now the Commonwealth of Massachusetts, including present-day Boston. I'm glad that you could join us to celebrate the 50th Anniversary of our foundation on 26 July 1968!

More than 1200 delegates attended the first congress in London. This week, we are expecting more than twice that number (of delegates). A special welcome to those who have travelled from afar, and to ISPP Councillors who represent the societies which make up the ISPP. Together, we have more than 20,000 members worldwide. This week let's also think of our colleagues who aren't here, especially those whose lives have been disrupted by war and conflict.

Speaking on "Plant Pathology and World Food Problems" at the first (International) Congress in 1968, George Harrar, the then President of the Rockefeller Foundation (and plant pathologist), stressed the urgency in solving global problems including overpopulation, war, poverty, and disease, as well as ignorance, and social and cultural deprivation. His talk was remarkably prescient in terms of solutions and the contributions that plant pathology has made since. And, we've also made considerable progress in achieving gender equity in our profession.

The next few days will be a cavalcade of progress in plant pathology and times for celebration. Key progress and plans for ISPP which will be considered by the ISPP Council on Tuesday 30 July have been summarised for all members in the [July issue of the ISPP Newsletter](#). Rather than repeat these here, I want to reflect on the past term and look ahead to the future.

We adopted the theme "Plant Health is Earth's Wealth" for ISPP 2013-2018 recognising that plant pathogens don't just threaten food security and well-being. They also affect, forest and fibre systems, natural ecosystems, biodiversity and environmental harmony, and impede trade and market access. And, phytopathology research has also been a central focus for discovery and development in biotechnology and plant-microbial molecular biology. For our profession – people are the pivotal element, and while in the coming years, the ISPP will maintain a focus on plant disease impacts on food security, it should and will also foster attention to all facets of our profession through our Congresses, subject matter committees and our website, newsletter and Journal. In this light, the ISPP taskforce on global food security which has more than achieved it

objectives will now become a Commission working in the same way as other ISPP Subject Matter Committees.

Looking ahead, we encourage plant pathologists world-wide to be involved in the proposed United Nations International Year of Plant Health in 2020 ([IYPH2020](#)), and I announce here that ISPP has initiated a new Taskforce on Plant Pathology Priorities for 2050, to foresight for, and encourage involvement of the young, in our profession. Watch this space as the new task force emerges and takes forward its mission. In this term we've encouraged more equitable representation within the ISPP, and the society plans to obtain full ownership of our journal ahead of the [next congress](#) in Lyon, France in 2023.

We've also streamlined membership arrangements for associated societies, and strengthened planning for the next congress, to ensure close oversight by ISPP. During the opening today we will present the 2018 Jakob Eriksson Prize to Pierre de Wit. Later in the week we will recognise our 2018 ISPP Fellows, and present the Fran E Fisher Award. The latter honours a life of commitment to connecting plant pathologists around the globe, and the inaugural recipient is the ISPP Historian, Dr Charlie Delp.

The late great champion of science, Stephen Jay Gould, evolutionary biologist and science historian at Harvard University, noted that 'we usually tell the history of a profession as a pageant of changing ideas and their proponents...and he went on to say: Science is, and must be, culturally embedded, what else could the product of human passion be?'

So, my challenge for you in this Congress, and the future, is: Let's work together to better harness knowledge and passion, to improve both the progress of science, and equity of advancement in our Societies and profession. As Stephen Jay Gould said, "Despite the wicked curves, detours, and delays, the rocky road towards scientific truth is a great trip."

Enjoy the Congress!

Greg Johnson, ISPP President

Share your ICPP2018 experience on Instagram

In the September issue of ISPP Newsletter we will feature a "picture of the day" from ICPP2018 in Boston USA from 28 July to 3 August posted on Instagram. To have your picture published here, follow [plant_diseases](#) and snap away each day at ICPP2018. Don't forget to add @plant_diseases and #ICPP2018 for your pics to be considered.



ISPP Fellows 2018

At their 50th Anniversary Meeting, the Council of the International Society for Plant Pathology (ISPP) elected ten new fellows in recognition of their contribution to plant pathology and for their service to, and continued support of, the ISPP.



Dr Gloria Abad



Prof. Thomas Evans



Prof. M. Lodovica Gullino



E. Prof. Michele Heath



Prof. You Liang Peng



Prof. Dov Prusky



Dr Mauritz Ramstedt



Dr Paul Teng



Prof. Shinji Tsuyumu



Dr Peter Williamson

Congratulations to Gloria Abad, Thomas Evans, M. Lodovica Gullino, Michele Heath, You Liang Peng, Dov Prusky, Mauritz Ramstedt, Paul Teng, Shinji Tsuyumu, and Peter Williamson.

ISPP Council

Appointment of Andrea Masino as ISPP Business manager

It is with pleasure we introduce Andrea Masino as the new ISPP Business manager, taking over from Peter Williamson who will retire in this role, but will continue as honorary web manager. Andrea will commence his role after ICPP2018.

Andrea, born in Torino (Italy) in 1991, graduated in Gastronomic Sciences in 2014 at the University of Gastronomic Sciences in Pollenzo, Italy. He then focused his studies in communication in the field of food, agriculture and sustainable development. Since 2015, Andrea has been coordinating the communication, public relations and event organisation at AGROINNOVA, Centre of Competence for the Innovation in the Agro-Environmental Field, directed by Professor M. Lodovica Gullino at the University of Torino.



Since 2015 Andrea has been involved in planning, managing and promoting scientific and media events for AGROINNOVA (a round table at the EXPO 2015, a workshop at the Third World Forum of

Local Economic Development in 2015, and two theatre performances about Plant and Environment Health in 2016 and 2017). He is also responsible for educational activities with students (primary and secondary schools) visiting AGROINNOVA. Additionally Andrea is involved in writing newspapers articles for several press media.

Since 2017 Andrea has been in charge of the communication activities (traditional and new media) and the new website management of the Italian Phytopathological Society (SIPaV).

The World Directory of Plant Pathologists

The World Directory is a searchable database of plant pathologists around the world is made possible through the funding and efforts of the International Society for Plant Pathology with partial support provided from the Dr Fran Fisher Trust which was established posthumously by the founder of the Directory, Fran Fisher. The World Directory is currently hosted on the APS web site with links from the ISPP home page www.isppweb.org.

Many readers of the ISPP newsletter would be aware that the EU General Data Protection Regulation (GDPR) came into effect on 25 May 2018. Because of the complex issues concerning privacy, permissions and individual society data protection policies, the World Directory of Plant Pathologists is currently off-line.

Pending further discussion and liaison with Societies who contribute to the Directory the ISPP is hopeful that it will return sometime in 2019.

Obituary of Jacques Horsten, 1946-2018

It is with regret that the ISPP advises the sad news that Jacques Horsten, former secretary and honorary member of the Netherlands Society of Plant Pathology (KNPV) and former Secretary General of the European Foundation for Plant Pathology (EFPP), died in his sleep on the night of 5 June 2018. Dr Horsten had been a KNPV board member for more than six years, of which five and a half years was as Secretary. He brought a wealth of experience to the position and did not shy away from difficult jobs.

Perhaps his greatest contribution to the KNPV was to write the history of the Society, 'The past of our future', which he wrote for the Society's 125th anniversary in 2016. The book - 431 pages - about the KNPV and plant pathology is a lasting memorial to Jacques, the in depth research and preparation of the volume was both memorable and important for the society and our profession. For his major contributions, on 17 November 2016, during the closing of the 125-year jubilee, Dr Horsten was awarded honorary membership of the KPNV.



Jacques was born in 1946 in Tilburg located in the southern part of The Netherlands in a close family with five brothers and sisters. As he did pretty well at school he went to the Agricultural University in Wageningen (now Wageningen University), to study plant breeding and plant pathology. He

received his PhD degree in 1978 at the department of Phytopathology of Prof. Dekker, in collaboration with the University of Göttingen, Germany.

Dr Horsten left academia and started a career at the Dutch crop protection company Shering in 1978. After merging's of this company, he left in 1983 and took an international position at the crop protection company Belchim. He had several managing positions at Belchim during his career. The position he liked most was international manager in Asia, and he could speak with great enthusiasm about the beautiful years he spent with his wife in that interesting culture. After his retirement in 2011 he specialised in mycology, became member of the board of the Dutch Mycological Society and secretary of the KNPV until the end of 2016.

For the ISPP as an association of many national and regional Societies of Plant Pathology, our links with the KNPV and the EFPP have been much richer because of Jacques's diligent and prompt responses – in what sometimes is an increasingly fragmented world, we need more people like Jacques and he will be much missed.

(Piet M. Boonekamp and Greg Johnson)

The launch of a new journal: *Phytopathology Research*

Phytopathology Research, sponsored by the Chinese Society for Plant Pathology (CSPP) and China Agricultural University (CAU), is a new open access international scientific journal dedicated to the advancement of our understanding of plant diseases and to the development of effective environment-friendly measures for disease control.

The journal publishes original, high-quality, peer-reviewed research papers and review articles on fundamental, advanced applied research in plant pathology. Topics include but are not limited to genetics and molecular biology of plant disease resistance or susceptibility, molecular analysis of relevant traits in agriculturally important phytopathogens, the ecology of pathogens and plant-associated beneficial micro-organisms, disease etiology, epidemiology and disease management, and technical innovations that advance the phytopathology research. Manuscripts are selected for publication based on novelty, importance, scientific validity, and interest to the readers.

The journal aims to provide a powerful vehicle in which to exchange novel research ideas and significant practical results on broad aspects of plant pathology. We hope this new journal will further stimulate the development of plant pathology and its rapidly growing interdisciplinary field and help train our next generation of plant pathologists.

The official website of *Phytopathology Research* is <https://phytopatholres.biomedcentral.com>.

The journal is now open for submissions and authors don't pay APCs during 2018-2020 upon acceptance.

Your contributions are greatly appreciated!

From Prof. You-Liang Peng, Editor-in-Chief of *Phytopathology Research*



Conventional farming impairs *Rhizoctonia solani* disease suppression

A paper by Giuliano Bonanomi *et al.* titled "Conventional farming impairs *Rhizoctonia solani* disease suppression by disrupting soil food web" was published in June 2018 by the *Journal of Phytopathology* (vol. 107 pp. 1284-1297). The abstract is as follows:-

Intensive farming in agriculture raises questions in relation to environmental sustainability and the widespread use of agrochemicals. In the present work, we compare the impact of organic and intensive farming, in connection to the soil suppressiveness against the soilborne pathogen *Rhizoctonia solani*. Three farms were considered in the study: two practicing organic cultivation (for 10 and 20 years, respectively), and one applying conventional cultivation. Soil suppressiveness was assessed in a greenhouse bioassay with lettuce (*Lactuca sativa*). Soil microbiome was characterized by combining BIOLOG EcoPlates™ with high-throughput sequencing of bacterial and eukaryotic rRNA gene markers. Suppressiveness towards *R. solani* was higher in organic than in conventional farming soil, but this property was lost after soil sterilization. Functional biodiversity was significantly higher in the two organic soils, and this parameter was predictive of the suppressiveness towards *R. solani*. According to our analyses, the overall microbial taxonomic diversity was unlinked to suppressiveness. A correlation analysis, carried out at the genus level for the most abundant bacterial and eukaryotic microbial taxa, showed that 58.7% of the genera had a statistically significant correlation with suppressiveness. In particular, the genera *Flavisolibacter*, *Massilia*, *Pseudomonas*, *Ramlibacter*, *Rhizopus* and the oligochaete worms belonging to the Enchytraeidae family positively correlated with the disease suppression.

[Read paper.](#)

Virus inhibits immune response of caterpillars and plants

It is well known that certain wasps suppress the immune systems of their caterpillar hosts so they can successfully raise their young within those hosts. Now researchers at Penn State show that, in addition to suppressing caterpillar immune systems, wasps also suppress the defense mechanisms of the plants on which the caterpillars feed, which ensures that the caterpillars will continue to provide a suitable environment for the wasps' offspring.

According to Gary Felton, professor and head of entomology, a type of virus, called a polydnavirus, resides within the ovaries of the female wasps and, when injected into caterpillar hosts, is responsible for suppressing both the caterpillar immune response and the plant defense mechanism.

The team placed parasitised and non-parasitised caterpillars onto tomato plants. After allowing the caterpillars to feed on the plants for 10 hours, the researchers harvested the remaining leaves and examined them for enzyme and gene expression activity associated with a defense response.

The results appear online in the [Proceedings of the National Academy of Sciences](#).

([EurekAlert](#), 1 May 2018)

Linnean Medal awarded to Professor Sophien Kamoun

The ground-breaking work of Professor Sophien Kamoun at The Sainsbury Laboratory, Norwich, has been recognised with the award of The Linnean Medal at a ceremony of the Linnean Society of London. Established in 1888, the award is made annually to alternately a botanist or a zoologist or to one of each in the same year.

In a long and distinguished career, Professor Kamoun has pioneered genomics and molecular biology methods to reveal fundamental insights into the biology and evolution of plant pathogens. His inventive work in plant pathology has resulted in new approaches to mitigate some of the world's most serious crop diseases.

On receiving the award, Professor Kamoun said: "I'm deeply honoured to receive the Linnean Medal. I grew up being curious about nature, and dreaming about becoming a scientist. I feel extraordinarily fortunate to have been able to pursue my passion and engage in biological research on a broad range of topics. The thrill of learning something new every day is addictive."



The Linnean Society of London is the world's oldest active biological society. Founded in 1788 by Sir James Edward Smith (1759–1828), who was its first President, the society takes its name from the Swedish naturalist Carl Linnaeus (1707–1778) whose botanical, zoological and library collections have been in its keeping since 1829.

The Linnean Medal is the latest honour in the career of Professor Kamoun. Earlier in May he was elected as a Fellow of the Royal Society – an honour reserved for the most eminent scientists, engineers and technologists working in the UK and Commonwealth.

([The Sainsbury Laboratory News](#), 31 May 2018)

Gene editing approach aims for broad disease resistance in staple food crops

Dr. Junqi Song, AgriLife Research plant pathologist at Texas A&M University, explores how a "knock-in" gene editing approach might achieve better disease resistance in a wide range of crop plants. His team places special focus on addressing late blight disease in tomato and potato caused by *Phytophthora infestans*. The Texas grown crops are part of a nearly \$6 billion national production value, according to U.S. Department of Agriculture data.

As an alternative to switching genes off, Song's team, using an emerging technology known as the CRISPR/Cas9 system, will introduce, or knock in, a specific set of genetic regulators. He believes the regulators discovered by his team will allow disease resistance to increase without harming the subject plant. The introduced systems would work by helping the plant's existing disease resistance genes to express more hardily against attacking pathogens.

He added any discoveries made through his research would carry disease-resistance implications for a number of food crops including wheat, rice, cotton, strawberry, carrot and citrus. "There is a growing demand for agricultural production as global populations continue to grow," he said. "We

will need to develop increasingly efficient systems to meet this demand and hopefully our work is a step in the right direction."

[Read more.](#)

(Gabe Saldana, Texas A&M University, 3 July 2018)

A global atlas of the dominant bacteria found in soil

An international team of researchers, including European Research Council grantee Fernando T. Maestre from Universidad Rey Juan Carlos, pieced together a global atlas of soil bacteria. The study, published in [Science](#), identifies some five hundred species of dominant bacteria living in soils worldwide. The findings, based on EU-funded research, could open new paths to improve soil fertility and increase agricultural production.

To carry out this study, the researchers collected soils in 237 different locations in six continents, from desert areas to tropical forests or polar regions. Physical and chemical analyses, combined with DNA sequencing techniques, revealed the dominant species and their preference for certain soil and climate characteristics. "Our results indicate that we can predict groups of dominant bacteria in the soil using environmental information, which is a fundamental advance in order to prepare distribution maps of these organisms globally" says Prof. Maestre.

The new study helps to better understand the identity of these bacteria and more importantly, their role in the functionality of our ecosystems. The research findings show that 2% of the global species of bacteria - some 500 species - comprise about half of the bacterial populations in any soil on our planet. Some of these microbes appear to be extremely dominant and common in our soils. By studying their functioning, future research could shed light on the microbial communities of agricultural soils, helping to preserve their health and increase the food productivity.

([European Research Council Stories](#), 18 January 2018)

Structure of a plant geminivirus revealed using cryo-electron microscopy

One of the world's most lethal families of plant viruses has been revealed in unprecedented detail in a new study that may provide clues to preventing the global spread of the pathogen. The complex 3D structure of the geminivirus is revealed in the joint study carried out by researchers at the University of Leeds and the John Innes Centre. Geminiviruses are responsible for diseases affecting crops such as cassava and maize in Africa, cotton in the Indian subcontinent and tomatoes across Europe.

Researchers used cryo-electron microscopy techniques to study geminivirus structure at unprecedented resolution, and in the process have begun to untangle its assembly mechanisms. Published in [Nature Communications](#), the study reveals how the capsid of the geminivirus is built and how its single-stranded DNA genome is packaged.

Being able to see its structure in great detail is vital as it could help virologists and molecular biologists better understand the virus lifecycle, and develop new ways to stop the spread of these viruses and the diseases they cause.

[Read more.](#)

(John Innes Centre News, 18 June 2018)

Proceedings of 8th IUFRO *Phytophthora* in Forests and Natural Ecosystems now published

The Book of Abstracts of the *Phytophthora* in Forests and Natural Ecosystems conference held in Vietnam during 18-25 March 2017 has been published on the International Union of Forestry Research Organisations (IUFRO) Working Party S07-02-09 webpage. The PDF can be downloaded [here](#).



Current vacancies

There are two positions listed on the ISPP webpage including Assistant Professor Plant Virology at Clemson University and Assistant Professor of Plant Pathology at the University of California, Davis. For more details on these positions visit the [current vacancies](#) page.

Acknowledgements

Thanks to Piet M. Boonekamp, Grahame Jackson, Greg Johnson, Andrea Masino and Peter Williamson for contributions.

Coming Events

Satellite Meeting: The International Agricultural Microbiome Research Coordination Network (in conjunction with ICPP2018)

28 July, 2018

Boston, USA

Website: apsnet.confex.com/apsnet/ICPP2018/meetingapp.cgi/Session/2114

6th International Oomycetes Workshop: *Phytophthora*, *Pythium*, Downy Mildews and related genera (in conjunction with ICPP2018)

28 July, 2018

Boston, USA

Website: apsnet.confex.com/apsnet/ICPP2018/meetingapp.cgi/Session/2089

11th International Congress of Plant Pathology (ICPP2018)
29 July - 3 August, 2018
Boston, Massachusetts, USA
Website: www.icpp2018.org

6th International Workshop on the Genetics of Tree-Parasite Interactions: Tree Resistance to Insects and Diseases
5 August - 10 August, 2018
Mount Sterling, Ohio, USA
Website: treeresistance2018.ca.uky.edu

8th ISTA Seed Health Symposium and 6th International Seed Health Conference
4 September - 7 September, 2018
Poznań, Poland
Website: www.seedtest.org/en/event-detail---0--0--0--92.html

10th Australasian Soilborne Diseases Symposium – Paddock to Plates
4 September - 7 September, 2018
Adelaide, South Australia
Website: www.asds2018.com.au

XXIV Congress of the Italian Phytopathological Society (SIPaV)
5 September - 7 September, 2018
Ancona, Italy
Website: www.d3a.univpm.it/en/SIPAV2018

IX International Symposium on Soil and Substrate Disinfestation
9 September - 13 September, 2018
Heraklion, Crete, Greece
Website: www.sd2018crete.com

State of the World's Fungi Symposium
13 September - 14 September, 2018
Royal Botanic Gardens, Kew, UK
Website: www.kew.org/fungi-symposium

15th International Cereal Rusts and Powdery Mildews Conference
23 September - 26 September, 2018
Kruger National Park, South Africa
Website: www.eiseverywhere.com/ehome/268483

1st International Conference on Tropical Fruit Pests and Diseases
25 September - 27 September, 2018
Sabah, Malaysia
Website: itfnet.org/troped2018

International Conference on Sentinel Plantings
9 October - 12 October, 2018
Sursee, Switzerland
Website: www.ibles.pl/en/web/cost/final-action-meeting

8th International Agriculture Congress 2018 and 6th International Symposium for Food & Agriculture 2018 (IAC-ISFA 2018)

13 November - 15 November, 2018

Universiti Putra Malaysia

Website: conference.upm.edu.my/IAC18

14th International Plant Virus Epidemiology Symposium

14 May - 17 May, 2019

Seoul, Korea

Website: www.ipve2019.com

4th International Symposium on Biological Control of Bacterial Plant Diseases (BIOCONTROL2019)

9 July - 11 July, 2019

Viterbo, Italy

Website: www.biocontrol2019.com

XVIII International Society for Molecular Plant-Microbe Interactions Congress

14 July -18 July, 2019

Glasgow, Scotland

Website: www.ismpmi.org/Congress/2019

1st International Wheat Congress

21 July -26 July, 2019

Saskatoon, Saskatchewan, Canada

Website: <http://2019iwc.ca/>

16th Congress of the Mediterranean Phytopathological Union

23 March - 27 March, 2020

Limassol, Cyprus

Website: cyprusconferences.org/mpu2020

12th International Congress of Plant Pathology (ICPP2023)

20 August - 25 August, 2023

Lyon, France

Website: www.icpp2023.inviteo.fr