ISPP INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

PROMOTING WORLD-WIDE PLANT HEALTH AND FOOD SECURITY

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

ISPP NEWSLETTER

ISSUE 53 (9) SEPTEMBER 2023

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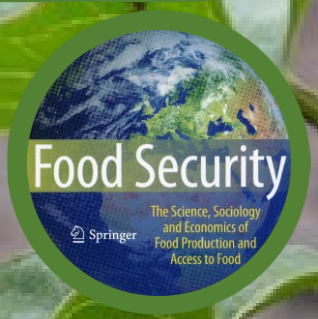


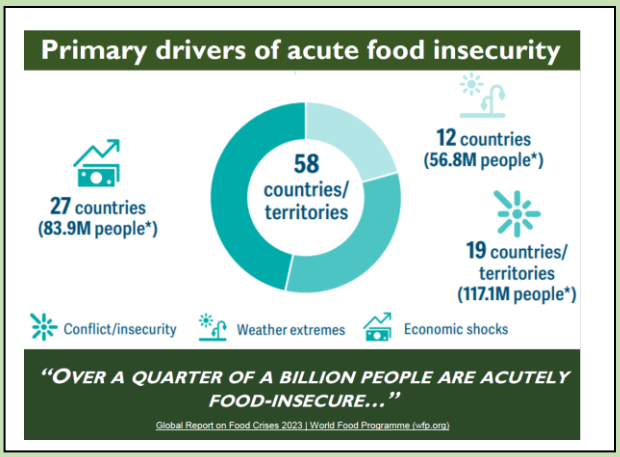
ICPP2023: One Health for All Plants, Crops and Trees: Opening remarks by Jan Leach, President of the ISPP, on 28th August 2023 at the 12th International Congress of Plant Pathology in Lyon, France

On behalf of the International Society for Plant Pathology (ISPP), it is my great pleasure to welcome you to the International Congress of Plant Pathology (ICPP2023)! This exciting event has brought together a remarkable tapestry of expertise, perspectives and cultures from around the world.

To demonstrate the unity in our diversity, I've woven the word "Welcome" using translations from all 101 countries represented at this gathering. Let's engage in a collective celebration of linguistic diversity. On my count of three, shout out 'welcome' in your native language. One, two, three…..WELCOME! Thank you!

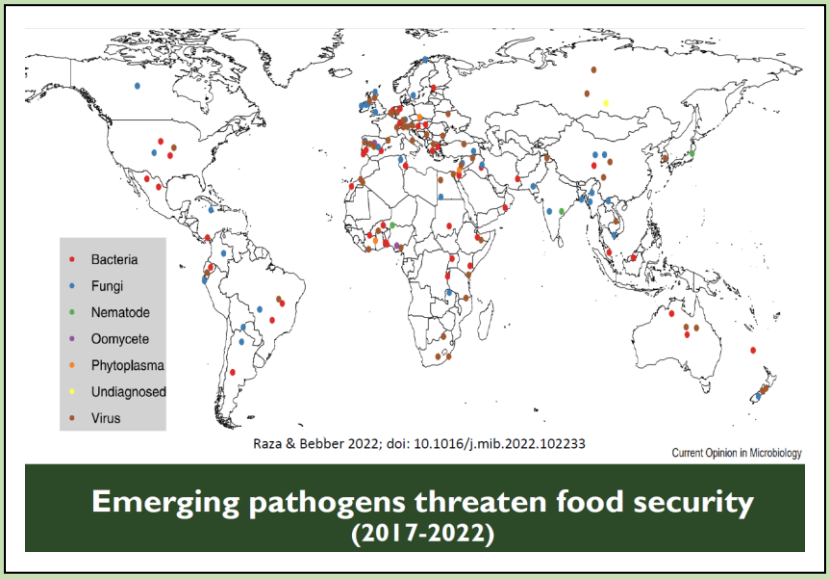
It is so wonderful to see all of you here in Lyon in person! Many of you travelled great distances to join us, underlining your commitment to plant health, environmental sustainability, and the future of our world. I would like to give special recognition to the ZERO bikers, whose eco-conscious journey from Avignon and Montpellier to Lyon serves as a reminder of the environmental impact of our actions. In honor of the many kilometers these bikers pedaled, we invite you to donate to the ISPP Resilience bursary, which supports plant pathologists in emergency and/or refugee situations. Your donations can be made using the handy QR code.

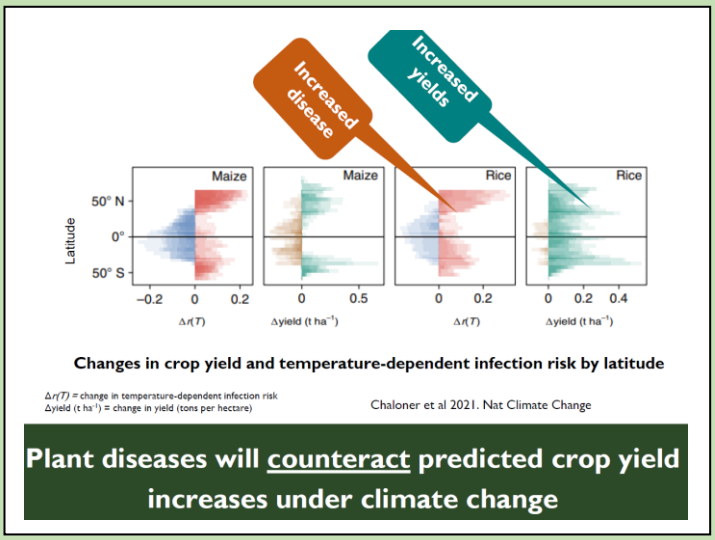
The International Society of Plant Pathology is an umbrella organisation, with about 63 member plant health societies or organisations, that represent more than 26,000 plant pathologists globally. Think about what an amazing network of colleagues and expertise you are part of! One of ISPP's charges is to facilitate connections amongst our members to tackle major global challenges. We do this through the convening of meetings, such as ICPP2023, and through our Worldwide Directory of plant pathologists. I encourage you to register in this directory to expand your reach and your global network.



ISPP's mission is to promote world-wide plant health and food security. Given the challenges facing us globally, this mission is urgent. The recent Global Report on Food Crises (2023) revealed alarming statistics-- over a quarter of a billion people are in dire need of food assistance. This is the highest number in the seven-year history of the Global Report on Food Crisis. The primary drivers are, as you might predict, conflict and insecurity, weather extremes, and economic shocks, all topics that will be addressed in relation to plant health at this meeting.

We plant pathologists are observing the emergence of new pathogens and pests at alarming rates. A recent publication by Raza and Beber (2022) visually portrays this trend through a map showcasing 142 initial reports of new pathogen arrivals between 2015 and 2022. The increasing threat of disease and pest outbreaks to food security is very real. For example, in China the relative area of cropland affected by damaging pests and diseases has quadrupled in the past half-century, and could easily double again by the end of the 21st century (Wang et al 2021).





Climate change complicates this scenario. Although we might see increased yields with climate change for some crops in some areas, these gains could be negated by elevated risks of pathogen infections (Chaloner et al 2021). The interplay of these challenges will shape our discussions over the coming week at ICPP2023, fostering the exchange of ideas, strategies, and progress that will define our path forward.

I'd like to finish this morning with a brief anecdote. Many years ago, on a flight returning to the US from meetings in the Philippines, I found myself seated next to a doctor from the World Health Organization (WHO). This doctor from WHO was a chatty gentleman, and as the flight went on, he passionately shared stories of the advances the medical world had made in reducing the impacts of malaria and the pioneering release of oral vaccines for cholera. He told me about the Global Polio Eradication Initiative that was led by WHO beginning in 1988. It was the largest international public health initiative in history. He pointed out how many lives were being saved world-wide due to WHO's leadership and efforts. "*Wow*", I was thinking, "*These WHO folks are rock stars!*"

After a while, the doctor from WHO turned to me and asked "*so, what do you do?*" I had to think a moment, because I was so in awe of all he had told me.

Finally, I responded "*I'm an agricultural scientist who specializes in plant diseases. We feed the people that you keep alive*." Think about it. We feed the people that our medical colleagues keep alive. In fact, we feed, clothe and house these people.

So, why am I telling you this story? Because this was an 'Ah-Ha' moment for me, or the moment that I realised just how interconnected and intimately linked plant health is to human health, and of course, to animal and environmental health. This conversation with the doctor from WHO solidified for me just how important plant pathology is in a One Health world. We are a critical players in this wholistic approach. We are part of the solutions. In other words, you plant pathologists are every bit the rockstars that the doctors from WHO are!

Thank you for participating in ICPP2023. I wish you an inspiring and productive meeting. Together, we'll shape the future of plant health and contribute to the betterment of all life on Earth.

Thank you!

FEDERICA BOVE, RICHARD STRANGE TRAVEL BURSARY AWARDEE

Federica Bove is from Nardò, a town of Puglia, in the Southern part of Italy. She graduated from the Università Cattolica del Sacro Cuore in Piacenza in Agricultural Sciences and Technologies, where she also defended her PhD in Plant Pathology in 2019. During her PhD and for the following 3 years, she dealt with topics linked to plant disease epidemiology, model development, and decision support systems. She has co-authored or authored some 15 scientific publications.

Left to right are Gianfranco Romanazzi, Frederica Bove recipient of Richard Strange Travel Bursary, Greg Johnson, and Jan Leach.

Federica recently joined the R&D of Corteva Agriscience, where she is in charge for Italy of research on products for sustainable crop protection against fungal diseases and yield loss prevention. Because of her interest in food security, she joined in 2023 the Food Security task force of the ISPP.

Since 2021 Federica has served as a volunteer member of the Scientific Secretariat of the Global Plant Health Assessment, a project conducted under the aegis of the ISPP (https://sites.google.com/view/global-plant-health-assessment/home?authuser=0). Federica is a member of the Italian Phytopathological Society (SIPaV), of the American Phytopathological Society (APS) and of the Italian Association for Plant Protection (AIPP), where she is acting Secretary and Business Manager since 2018.

ISPP FELLOWS AWARDED AT THE ICPP2023 IN LYON FRANCE

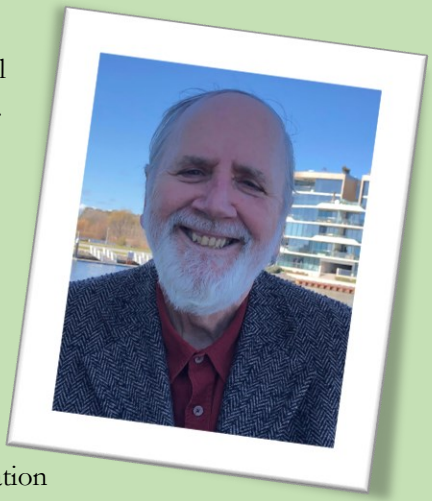
A total of 14 ISPP Fellows were awared during the ICPP2023. The awardees and their biographies appear below

PROFESSOR YIGAL ELAD, ISRAEL

Professor Elad of the Agricultural Research Organization (ARO), Israel, is an internationally renowned expert in the fields of alternative control of plant diseases, biocontrol, and foliar pathogens. He is recognised as a leader in these disciplines and is highly regarded for his ability to combine fundamental and applied research. Prof. Elad has made significant and outstanding contributions to the field of plant pathology, with a particular focus on the physiology of diseased plants, induced resistance, cultural and biological control of plant diseases, as well as integrated disease management approaches.

Prof. Elad has been actively involved in numerous international research collaborations. He has collaborated with groups from the United States, Europe, the Mediterranean region, Colombia, and Palestine, demonstrating his commitment to global cooperation and knowledge exchange. Under his leadership, he has headed major research projects, such as investigating the effects of climate change on plant-pathogen interactions, studying diseases in herbal crops, commercializing induced resistance, and exploring gene editing techniques for disease resistance. Prof. Elad's professional trajectory aligns closely with the goals of the International Society of Plant Pathology (ISPP). His dedication to phytopathology is exemplary, and his work holds immense international value and merit.

DR. GREG I. JOHNSON, AUSTRALIA



Dr. Greg Johnson is a distinguished scientist specialising in tropical and subtropical agriculture research and development, particularly focusing on mango postharvest diseases. Dr. Johnson was formerly the Postharvest Technology Program Manager with the Australian Centre for International Agricultural Research (ACIAR) and in 2006, he founded Horticulture 4 Development to undertake consultancies in horticulture, plant pathology and international development. With nearly 50 years of experience, he has made significant contributions to various fields, including horticultural crops, plant pathology, market access technologies, supply chain management, and development cooperation in Asia and the Pacific.

Dr. Johnson's research has been instrumental in the development of strategies to control and manage plant diseases and reduce postharvest losses. His international collaboration through the ACIAR has also improved the postharvest quality of horticultural crops, ensuring food safety and reducing losses after harvest. Furthermore, he has actively worked to enhance the participation of smallholder farmers in global markets, thereby strengthening the agricultural industry.

Within the Australasian Plant Pathology Society (APPS), Dr. Johnson has held several leadership positions, including President, Treasurer, Regional Councilor, and Conference Convenor. In his involvement with the International Society for Plant Pathology (ISPP), he has played a crucial role in advancing the society's objectives. Serving as Secretary-General, Co-chair of the ISPP Journal Trust and Journal Purchase Committees, as well as President and Past President, he has contributed significantly to the organization's vitality and progress. Dr. Greg Johnson's dedication, leadership, and expertise have had a substantial impact on the global field of plant pathology.

Dr. Segenet Kelemu, Kenya

Dr. Segenet Kelemu is a highly respected scientist and serves as the Director General and CEO of the International Center of Insect Physiology and Ecology (icipe), Africa's sole institution dedicated to arthropod research. Her early research focused on studying virulence mechanisms in plant pathogenic bacteria, but she later expanded into interdisciplinary research on plant health.

Throughout her career spanning three decades, Dr. Kelemu has led teams addressing agricultural sciences and food security in Africa, Asia, Latin America, and North America. Notably, she held a leadership position at the International Center for Tropical Agriculture (CIAT), where she led efforts in Crop and Agroecosystem Health Management. She then took on the transformative role of elevating Biosciences Eastern and Central Africa (BeCa) into a prominent research resource for African science. In 2021, Dr. Kelemu became a member of the International Basic Science Programme (IBSP), the only international forum within the United Nations that advises the Director-General of UNESCO on the global state of basic sciences.

Her outstanding achievements and inspiring leadership make her an influential role model for scientists worldwide, showcasing the far-reaching impact that a plant pathologist can have across multiple realms. Dr. Segenet Kelemu's dedication and contributions have significantly advanced the understanding of arthropods, plant health, and agricultural sciences, positively impacting food security and scientific development.

Professor Małgorzata Mańka, Poland

Professor Mańka of the Poznań University of Life Sciences, Poland, is a highly respected figure in the field of forest pathology, renowned for her significant contributions and influential leadership. She has held prestigious positions, such as the President of the Polish Phytopathological Society (PPS) and membership in the Polish Academy of Sciences. Additionally, she has served as the Vice-President of the European Foundation for Plant Pathology (EFPP), demonstrating her international reach and influence.

In 2022, Professor Mańka showcased her exceptional leadership and compassionate nature by identifying plant pathologists in need. She played a vital role in establishing and implementing the ISPP Resilience Bursary for Plant Pathologists, utilizing her connections with the International Society for Plant Pathology (ISPP) and plant pathologists from Ukraine. This initiative highlights her commitment to supporting and uplifting fellow professionals in her field.

Professor Mańka has been a dedicated advocate for the advancement of plant pathology research and education in Poland. Her extensive research focuses on shaping the environment to promote the growth of soil fungal communities, which effectively limits the proliferation of plant disease-causing pathogens.

Professor Mańka's unwavering dedication to teaching and education, coupled with her exemplary service to the ISPP, PPS, and EFPP, have had a lasting impact on the field. Her passion for advancing plant pathology, both domestically and internationally, serves as an inspiration to fellow researchers and educators. Professor Mańka's exceptional contributions, leadership, and commitment to the field of forest pathology have solidified her reputation as an influential figure.

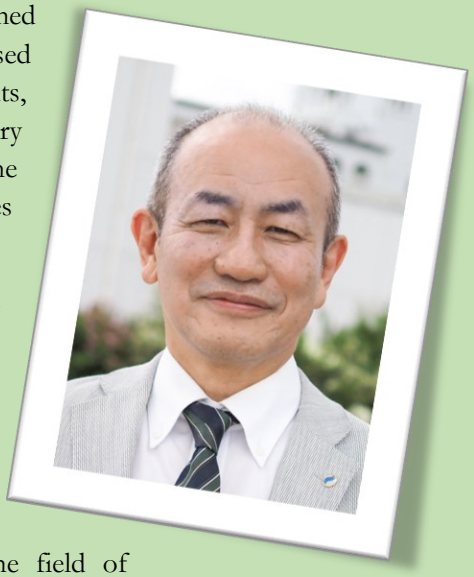
PROFESSOR YOUNG JIN KOH, KOREA

Professor Young Jin Koh, Emeritus Professor of Plant Medicine at Sunchon National University in Korea, is a highly respected figure in the field of plant pathology, well known for his exceptional contributions. His notable work revolves around the development of effective control methods for kiwifruit canker disease, which have been widely implemented. Remarkably, he became the first plant pathologist to hold the position of University President in Korea. Professor Koh's influence extends further through the establishment of the Korean Lichen Research Institute, a prominent global center for lichen research.

In the early 1990s, Professor Koh initiated extension programs at his university, aiming to educate thousands of Korean farmers about plant disease management and effective control measures. This direct engagement with farmers has significantly impacted agriculture not only in Korea but also beyond its borders. His extension programs have played a pivotal role in promoting sustainable agricultural practices and enhancing the livelihoods of farmers.

Professor Koh has held the prestigious position of President of the Korean Society of Plant Pathology, further solidifying his standing in the field. His remarkable contributions have garnered widespread recognition, evident through numerous accolades and awards, including the KSPP Academic (2014) and Achievement (2022) Awards. Additionally, he has received commendations from the Minister of Agriculture, Food and Rural Affairs (2015) and the President of Korea (2018). Professor Young Jin Koh's work continues to inspire and shape the future of plant pathology and agricultural practices globally.

DR. YASUYUKI KUBO, JAPAN

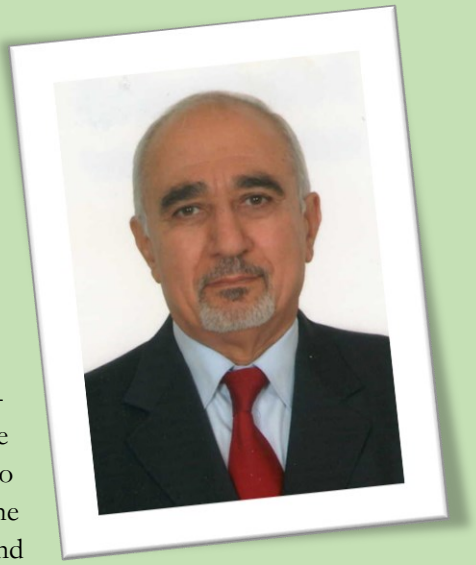


Professor Yasuyuki Kubo, hailing from Setsunan University in Japan, is a distinguished figure in the field of phytopathology. Internationally recognised, his research has focused on understanding the intricate interactions between phytopathogenic fungi and plants, particularly at the molecular level. Kubo's groundbreaking work includes the discovery of the crucial role of fungal melanin in phytopathogenicity. This discovery has led to the widespread utilization of melanin biosynthesis inhibitors as highly effective fungicides against phytopathogenic fungi.

Furthermore, Professor Kubo has made significant strides in unraveling the molecular mechanisms underlying fungal melanin biosynthesis, shedding light on fungal infection-related morphogenesis, pathogen factors that trigger host defense responses, and the sensing mechanisms employed by pathogens to interact with host plants. His recent findings have highlighted the unexpected and sophisticated regulation of a pair of fungal metalloenzymes essential for host penetration.

Beyond his research, Professor Kubo has played a pivotal role in shaping the field of phytopathology. He has served as an editor and on the editorial boards of several influential plant pathology journals, furthering the dissemination of knowledge in the field. Additionally, he has held prominent leadership positions, including the Presidency of the Phytopathological Society of Japan and the Vice Presidency of the Asia Association of Societies for Plant Pathology. Professor Yasuyuki Kubo's contributions have not only advanced our understanding of phytopathology but have also had a lasting impact on the broader scientific community.

Dr. Khaled Makkouk, Lebanon



Dr. Khaled Makkouk, an esteemed figure in the field of plant pathology and virology, and currently serving as the Advisor for Agriculture and Environment at CNRS in Beirut, Lebanon, is widely recognised for his significant contributions. With a wealth of experience, he held the position of senior scientist (virologist) at the International Center for Agricultural Research in the Dry Areas (ICARDA). During his tenure, he led the Genetic Resources Unit and served as the Acting Program Leader in the Germplasm Program.

Dr. Makkouk played a pivotal role in the establishment of the Arab Society for Plant Protection and held various important positions within the society, including Secretary-Treasurer, Vice-President, and President. For more than two decades, he served as the Editor-in-Chief of the Arab Journal of Plant Protection, showcasing his dedication to fostering scientific discourse and knowledge dissemination. Additionally, he held the prestigious position of President of the Mediterranean Phytopathological Union and served as a member of the Editorial Board of the journal Phytopathologia Mediterranea.

His leadership extends to the International Society of Plant Pathology (ISPP), where he served as the Councilor representing the Arab Society for Plant Protection and as a member of the ISPP Special Projects Committee. Most recently, Dr. Makkouk assumed the role of ISPP Vice-President for Subject Matter Committees. Through his expertise and commitment, Dr. Khaled Makkouk has made significant contributions to the fields of plant pathology and virology while promoting collaboration and coordination at an international level.

Dr. Sally Miller, USA

Dr. Sally Miller, a distinguished Professor of Plant Pathology at The Ohio State University, has gained international recognition for her unwavering commitment to the field of plant pathology on a global scale. Renowned as a trailblazer, Miller has made significant advancements in the development and implementation of plant disease diagnostic assays. Her groundbreaking work includes being among the first to utilize monoclonal antibody technology for detecting fungal and oomycete plant pathogens.

Dr. Miller's contributions extend beyond assay development. She has successfully applied immunoassays as decision-making tools in integrated pest management, validating their efficacy and expanding their applications across a wide range of crops. Her expertise in bacterial diseases, their dissemination, and detection is extensive. With a steadfast dedication to addressing global challenges, Dr. Miller focuses on building research capacity and outreach initiatives in lower- and middle-income countries. She actively seeks local solutions for combating devastating diseases that hinder crop yield, quality, and income potential, while identifying commonalities in disease problems across regions and facilitating technology transfer among nations.

Recognised for her leadership, Dr. Miller has served as President of the American Phytopathological Society (APS), an International Society for Plant Pathology (ISPP) Councilor, and the Executive Vice Chair for the 2018 International Congress of Plant Pathology (ICPP). Moreover, she has organised and conducted diagnostics workshops worldwide and contributed to numerous projects and consultancies globally. Dr. Sally Miller's exceptional contributions and dedication have solidified her as a prominent figure in international plant pathology.

Dr. Cindy Morris, France

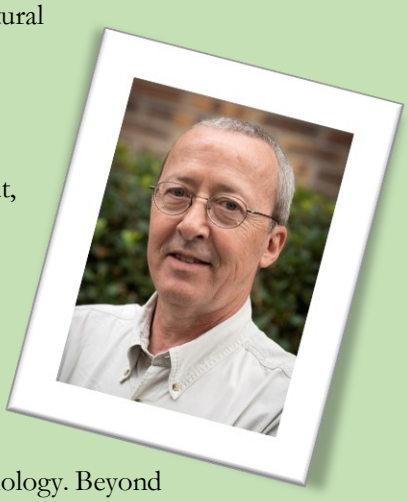
Dr. Cindy Morris is a plant pathologist at the National Research Institute for Agriculture, Food and the Environment (INRAE) in France, where she holds the prestigious position of Director of Research with an Exceptional Distinction. She leads the MISTRAL (MIcrobiology of agroeco-Systems: TRAnslational research from pathogen Life histories) Team, which focuses on the development of sustainable agricultural practices for plant disease management.

Morris has made significant contributions to understanding the complex lifestyles of plant pathogens. Her early work involved the development of tools and models to elucidate the roles of bacterial biofilms on leaf surfaces, providing crucial insights into the survival and persistence structures that have implications beyond plant-based agriculture, extending to animal and human health. Collaborating with physicists, chemists, and plant pathologists, Dr. Morris investigated the environmental transmission strategies of *Pseudomonas syringae*. Her research demonstrated the deep connection between plant pathogens like *P. syringae* and the water cycle, highlighting the importance of biologically-based precipitation through ice nucleation activity.

Morris actively engages in international projects that foster collaboration among interdisciplinary scientists across multiple fields, facilitating enhanced epidemiological surveillance of plant pathogens. She serves as the co-director of a groundbreaking graduate program at the University of Avignon, which integrates education on plant and human health, recognizing their interdependence.

Dr. Morris's expertise, research, and collaborations have significantly advanced our understanding of plant pathogens and their impact on agricultural and human ecosystems. Her leadership and dedication to sustainable practices and interdisciplinary approaches continue to shape the field of plant pathology and agricultural research.

Dr. Serge Savary, France



Dr. Serge Savary has made significant contributions to the areas of epidemiology, management, and crop-loss assessment of plant diseases, as well as global food security. His expertise lies in quantifying and improving food security on a global scale, making him an international authority in crop loss assessment. Dr. Savary's research has deepened our understanding of the complex relationships between crop yield and disease injury profiles in various crops, including rice and peanuts. He has emphasised the importance of adjusting management strategies based on epidemic risk and the specific production system.

Dr. Savary is highly regarded for his expertise in mechanistic simulation modeling in plant pathology. Beyond his research, , he also taught simulation-modeling workshops internationally. As the Vice-President of the International Society for Plant Pathology (ISPP), he has played a crucial role in promoting the use of simulation modeling and advancing the understanding of crop losses.

Dr. Savary's dedication to addressing global challenges is evident through his founding of the ISPP committee for Crop Losses. Under his leadership, the committee conducted a groundbreaking global survey of crop losses, providing yield-loss estimates for major food crops across different ecoregions based on pathogens and pests. Additionally, he co-led the creation of the Global Plant Health Assessment, a comprehensive report on plant health across ecoregions and plant systems.

As the Editor-in-Chief of Food Security, ISPP's flagship journal, Dr. Savary ensures that research in nutrition/medicine, sociology, economics, food production, and plant health is disseminated and integrated to address food security challenges worldwide. His multifaceted contributions to plant pathology and global food security make him an influential figure in the field.

PROFESSOR TOMONORI SHIRAISHI, JAPAN

Professor Tomonori Shiraishi, an Emeritus Professor of Okayama University, has made significant contributions to the field of plant pathology, particularly in understanding the mechanisms of host plant specificity using pea Mycosphaerella blight as a model system. His pioneering research unveiled "suppressors of defense" as novel compounds that act as determinants of host specificity by blocking immune responses and inducing local susceptibility. Shiraishi elucidated how these suppressors inhibit the activation of an extracellular NTP/NDPase, a critical enzyme involved in generating superoxides and triggering defense responses. By revealing the importance of the plant cell wall as the site for host plant-fungal parasite specificity, he identified new targets for plant breeders to produce resistant plants.

Shiraishi's exceptional studies have garnered recognition. He is a Fellow of both the Phytopathological Society of Japan (PSJ) and the American Phytopathological Society, and he was awarded the Japan Prize of Agricultural Science. Additionally, he played a vital role in fostering international collaboration by facilitating exchange agreements between the PSJ and the Korean Society of Plant Pathology, as well as the Australasian Plant Pathology Society.

His leadership extends to serving as the President of the PSJ and co-organizing the 5th International Congress of Plant Pathology held in Kyoto, Japan in 1988. Through his groundbreaking research and dedication to advancing the understanding of host specificity and plant defense mechanisms, Professor Shiraishi has significantly influenced the field of plant pathology and paved the way for the development of strategies to enhance plant resistance against fungal pathogens.

DR. VALERIE VERDIER, FRANCE

Dr. Valerie Verdier, the Chairwoman of the Board and Chief Executive Officer of the French National Research Institute for Sustainable Development (IRD-France), has dedicated her career to improving global food security through her research on diseases affecting cassava and rice. With over three decades of work in this field, Dr. Verdier's contributions have had a profound impact. Through extensive surveys during outbreaks, she identified novel strains of pathogens, discovered disease-resistant germplasm, and developed innovative technologies for bacterial type screening. Notably, she identified the first virulence effectors in *X. axonopodis* pv. manihotis and the first disease resistance gene from cassava.

Dr. Verdier's collaborative efforts have established strong networks among plant bacteriologists worldwide, focusing on addressing the needs of developing regions. Her involvement in sequencing the cassava genome and advancing knowledge of cassava pathogens has laid the foundation for improvement projects in this critical crop. As a co-founder of the French National Xanthomonas network, along with colleagues from INRA and CIRAD, Dr. Verdier has played a pivotal role in enhancing the visibility and securing financing for *Xanthomonas* genomics, post-genomics, host specificity, epidemiology, and ecology research.

Dr. Verdier serves as a valued advisor to international organizations such as the Gates Foundation, FAO, CGIAR, European Plant Science Organization, and Agropolis International. Her expertise and dedication have positioned her as a key figure in global efforts to address plant diseases and promote sustainable agriculture, making her an influential leader in the field of plant pathology and food security.

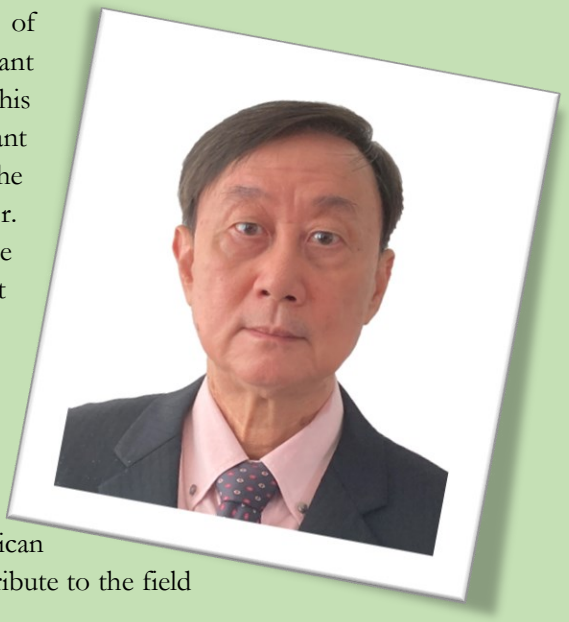
PROFESSOR MIKE WINGFIELD, SOUTH AFRICA

Professor Mike Wingfield, the founding director of the Forestry and Agricultural Biotechnology Institute (FABI) at the University of Pretoria in South Africa, has made substantial contributions to the field of plant pathology. His research interests encompass various disciplines, including mycology, plant pathology, and entomology, with a focus on forest tree health and the impact of fungi and insects. Wingfield is particularly recognized for his expertise in studying fungi associated with insects and their presence on trees and wood.

His research efforts have spanned the globe, collaborating on projects related to tree health and the identification of disease-causing agents and their pathways. Professor Wingfield strongly advocates for a comprehensive understanding of the biology and genetics of pathogens and pests to effectively mitigate their impact. To achieve this, he has conducted rigorous basic research programs utilizing cutting-edge biotechnological tools, all while emphasizing the importance of science education and research excellence.

In addition to his research, Wingfield has held significant leadership roles. He served as the President of the International Union of Forestry Research Organizations and the President of the Southern African Society for Plant Pathology, as well as being a Vice President of the International Society for Plant Pathology. His outstanding research contributions have been recognized with inclusion on the Clarivate list of highly cited scientists and prestigious awards, such as the Kwame Nkrumah Science Award from the African Union, and honorary doctorates from renowned institutions.

DR. SEK-MAN WONG, SINGAPORE



Dr. Sek Man Wong, an Emeritus Professor from the National University of Singapore (NUS), has made exceptional contributions to the field of plant pathology and was recipient the NUS Outstanding Researcher Award for his exceptional contributions to the detection and molecular characterization of plant viruses. As the founding President of the Plant Protection Society (Singapore), he has been instrumental in advancing plant health in Singapore and globally. Dr. Wong's expertise lies in the study of viruses that infect ornamental and vegetable plants, and his lab team's discovery and characterization of the Hibiscus latent Singapore virus has greatly enhanced our understanding of tobamoviruses.

Dr. Wong has served as a representative of the Plant Protection Society (Singapore) on the ISPP Council and the House of Delegates of the Asian Association of Societies for Plant Pathology (ASPP) for over two decades. He also held leadership positions within ASPP, serving as Vice President and President. Furthermore, Dr. Wong has been a dedicated member of the American Phytopathological Society (APS) for more than 40 years and continues to contribute to the field of plant pathology through his research and participation in conferences.

Dr. Wong's remarkable contributions in teaching, research, and service align with the goals of the International Society for Plant Pathology, making him a deserving nominee for recognition and fellowship within the society.

ICPP2023 – Images from Lyon, France

Executive Committee Meeting

ISPP ISPP Executive Committee Meeting, held August 19-20, 2023 in the Lyon, France with, L to R front row: Laura Mugnai (incoming Vice President – SMC's), Teresa Coutinho (incoming Secretary General), Yong-Hwan Lee (incoming ISPP President), Jan Leach (ISPP President), Andrew Gearing (incoming Vice President - Congress), Mathews L. Paret (Treasurer). L to R back row: Greg Johnson (Past President), Nathalie Poussereau (Vice-President – Congress), Khaled Makkouk (Vice-President – SMC's), Brenda Wingfield (Secretary General), Andrea Masino (Business Manager), and Mathias Choquer (Co-chair ICPP2023).

ISPP Council Dinner held at Brasserie L'Est in Lyon. L to R: Mathias Choquer, Nathalie Poussereau, Laura Mugnai, Yong-Hwan Lee, Serge Savary, Greg Johnson, Andrew Geering, Jan Leach, Aman Makkouk, Khaled Makkouk, Teresa Coutinho, Brenda Wingfield, Mathews L. Paret, and Laetitia Willocquet.

ISPP Council Meeting held on 22nd August 2023 in conjunction with the 12th International Congress for Plant Pathology (ICPP2023).

Celebrating ISPP's purchase of the journal, *Food Security* – Greg Johnson (Past President and chair of the Journal Trust Committee), Serge Savary (Editor in Chief *Food Security*), Jan Leach (ISPP President), and Melania Ruiz (Springer representative).

CLOSING CEREMONY

Handing over the flag then and now: ISPP President Jan Leach with incoming President Yong-Hwan Lee, and in the background, incoming President, Jan with President Greg Johnson.

Andrew Geering, Chair of ICPP2028 Organising Committee, giving an overview of the conference in Queensland, Australia in 2028.

Nathalie Poussereau, ICPP2023 Chair of Organising Committee, and Mathias Choquer, Co-chair, thanking the ICP2023 Organising Committee for the huge efforts and time putting together a successful conference in Lyon, France.

ACTIVITIES OF ISPP SEED PATHOLOGY COMMITTEE WITHIN ICPP2023

GIANFRANCO ROMANAZZI, ISPP SEED PATHOLOGY COMMITTEE CHAIR

The ISPP Seed Pathology Committee contributed to ICPP2023 congress with two concurrent sessions: 'Mind the Gap: Innovations and Opportunities in Seed Health Testing' (Moderators: Gerbert Hiddink and Lisa Rothmann) and 'The Potential of Seed Microbiomes' (Moderators: Lindsey Du Toit and Marie-Agnes Jacques). The first session was planned on 21 August 2023, with six presentations from Rose Souza-Richards, Lisa Rothmann, Fiona Constable, Marwa Moumni, Harrie Koenraadt, and Cecilia Panzetti. These presentation highlighted the importance of new developments for detection and evaluation of seed health in Seed Industries, reported prevalent fungal pathogens associated with South African soybean seed to inform management decisions, summarised the regulatory seed testing requirements for Australia, showed the main seedborne disease of Cucurbits and their management strategies, presented the current method used to detect Tobamoviruses on tomato and pepper seeds, and showed the multiplex qPCR protocol to detect and quantify loose smut (*Ustilago nuda*) of barley (*Hordeum vulgare*).

The second concurrent session, planned on 24 August, had five presentations by Matthieu Barret, Jonathan Jacobs, Iva Franic, Zachary Noel, and Tim Sawbridge. These speakers showed how seed transmission pathway is different between plant species (bean vs. radish) and how metagenomics could help selecting bacterial strains to construct synthetic communities with the aim to interact with seed transmission of pathogens, explained how metagenomics can help for plan pathogen identification, presented some harmful fungi that can be moved to the new areas via tree seed, reported development of an efficient strategy to collect spermosphere soils around imbibing soybean and cotton in non-sterile soil and investigate changes in microbial communities, and reported how the prevalence of viruses in plants in their environments may provide clues to their ecological functions. In addition, nine posters dealing with seedborne pathogens were presented in the two sessions, reporting the importance of detection and management of seedborne pathogens and potential of seed microbiome to stimulate seed germination under abiotic and biotic stress conditions.

In the meantime, a couple of review dealing with seedborne pathogens were published, the first dealing with management of seedborne pathogens by Marwa Moumni, Guro Brodal and Gianfranco Romanazzi (Recent innovative seed treatment methods in the management of seedborne pathogens, https://link.springer.com/article/10.1007/s12571-023-01384-2) and the second by Gerrit A. Hiddink, Roland Willmann, Joyce H.C. Woudenberg and Rose Souza-Richards (Seed health testing: doing things right, https://apsjournals.apsnet.org/doi/10.1094/PHYTOFR-03-22-0029-FI). Further info on ISPP Seed Pathology Committee can be found on our social media, listed at the page https://www.isppweb.org/smc_18.asp.

Moderators (M), speakers (S) and some of the ISPP Seed Pathology Committee members (C) of the first session. From the left to the right, Harrie Koenraadt (S), Lisa Rothmann (M,S), Fiona Constable (S), Gerbert Hiddink (M,C), Marwa Moumni (S,C), Gianfranco Romanazzi (C), Lindsey Du Toit (C), Cecilia Panzetti (S), Rose Souza-Richards (S), Valerie Grimault (C), Shuxian Li (C).

M, S and C of the second session. From the left to the right, Shuxian Li (C), Jonathan Jacobs (S), Gerbert Hiddink (C), Zachary Noel (S), Gianfranco Romanazzi (C), Matthieu Barret (S), Iva Franic (S), Lindsey Du Toit (M,C), Tim Sawbridge (S), José da Cruz Machado (C), Marie-Agnes Jacques (M,C), Marwa Moumni (C).

SEVENTEENTH UPDATE ON ISPP RESILIENCE BURSARY FOR PLANT PATHOLOGISTS

ANNA ALEKSIEIEVA, MAŁGORZATA, JĘDRYCZKA, MAŁGORZATA MAŃKA, MATHEWS PARET, AND GREG JOHNSON

This Bursary Update is being finalised just a few days after some of us have returned from the 12th International Congress of Plant Pathology (ICPP2023) in Lyon France. Elsewhere in this edition of the ISPP Newsletter you will read about the Congress, and we will holdover the report on the Congress Session on "The Impacts of War and Conflicts in Plant Pathology research and food safety of countries' and the Bursary fund raising through #ICPP_by_Bike until the October Issue.

Currently, the Fund is focussed on support for scientists from Ukraine, Türkiye and Syria and the ISPP Council Meeting at ICPP2023 endorsed the continued support for the initiative with options for expanding the initiative to other emergent conflicts and calamities. Perhaps as you read this you or your society may also wish to contribute to the fund (or organise a fundraiser) since the need remains urgent, while our funds are dwindling. Enquiries can be directed to resilience@isppweb.org.

The PayPal Button and QR code donation links provides donors with the opportunity to choose the destination of their donation as for (a) Any emerging need, (b) Türkiye, (c) Syria, or (d) Ukraine.

This month we hear from Dr Anna Aleksieieva of the Research Institute of Biology at Oles Honchar Dnipro National University in Dnipro, Ukraine.

ANNA ALEKSIEIEVA'S STORY

When asked about my greatest fear in life, my answer has always been violence and war. Little did I know that my worst nightmare would become a reality at 5:40 a.m. on 24th February 2022, when the Russian Federation invaded Ukraine with weapons and military equipment, leaving devastation in its wake. That day will forever be etched in my memory, as it marked a distinct divide in the lives of Ukrainians – before and after. Sadly, I was not exempt from its impact. Fleeing the horrors of war, I found refuge in Poland alongside my ten-year-old daughter. It was here, in the magnificent city of Krakow, that I began anew, starting a new chapter in my life.

My scientific path began at Oles Honchar Dnipro National University in Ukraine, where I pursued full-time post-graduate studies. In 2018, I reached a significant milestone by successfully defending my PhD thesis titled "Resistance of the genus *Tilia* L. plants in natural and technogenic ecotopes of the Steppe Dnieper ," and I am proud to hold a PhD in biology. After completing my doctoral studies, I joined a research institute where I delved into various research avenues. During this period, my primary focus revolved around studying indigenous and introduced plant species in the steppe region of Ukraine. Actively participating in numerous expeditions, I collaborated with a team of scientists on various projects aimed at comprehending plant adaptation processes in the face of anthropogenic impact and climate change. Another crucial aspect of my work involved evaluating and predicting the invasiveness of non-native plant species in the context of climate change.

Prior to the outbreak of the war, I held the position of Senior Researcher at the SRL of Land Ecology, Forest Soil Science, and Land Reclamation within the Research Institute of Biology at Oles Honchar Dnipro National University in Dnipro, Ukraine. I also gained valuable work experience at the Department of Plant Physiology and Introduction within the Faculty of Biology and Ecology of the same University. During my time there, I taught various courses including "Anatomy, Physiology, and Biochemistry of Plants," "Ontogeny of Plants and Mechanisms of Regulation," "Biological Basics of Floriculture and Lawn Cultivation," "Phytodesign and Green Architecture," "Ornamental Gardening with the Basics of Phytopathology," and "Theoretical Foundations of Park Construction and Urban Greening."

Over the past two years, my research interests have primarily focused on investigating the impact of invasive insect species and phytopathogens on photosynthetic processes in woody plants. This line of research is significant due to the increasing susceptibility of plants to diseases and pests under the pressures of anthropogenic activities and climate change. However, when the war broke out and I relocated to Poland, my scientific endeavors took on a predominantly theoretical nature. I found myself limited to reading scientific articles authored by other researchers and analyzing data gathered by my colleagues from my home research institute in Ukraine.

Thanks to the information I received from my Ukrainian fellow scientists regarding the opportunities to apply for short-term scholarships offered by The International Society for Plant Pathology in collaboration with the Polish Phytopathological Society, I reached out to Professor Małgorzata Jędryczka from the Institute of Plant Genetics, Polish Academy of Sciences in Poznań, Poland, for assistance. Professor Jędryczka directed me to the Franciszek Górski Institute of Plant Physiology, Polish Academy of Sciences in Kraków, Poland and inquired about the possibility of joining the research team for a short-term internship. After my candidacy was accepted, I submitted the required documents for the Resilience Bursary, which provides support for refugee plant pathologists in need. My documents were positively reviewed by the committee led by Professor Małgorzata Mańka from Department of Forest Phytopathology, University of Life Sciences in Poznań, who is also the Chair of the Polish Phytopathological Society. Thanks to this, I have gained funding (internship No 18/2022) for a monthly scientific stay at the Franciszek Górski Institute of Plant Physiology, PAS in Kraków.

I joined the Department of Stress Biology under the supervision of dr. hab. Marta Libik-Konieczny. There, I was introduced to her research focusing on the model plant Mesembryanthemum crystallinum, commonly known as the ice plant. Her research specifically explored the plant's unique strategy to combat salinity stress by switching its metabolism from C3 to Crassulacean Acid Metabolism (CAM). This metabolic change in the ice plant requires significant restructuring of gene expression and signaling pathways. As a result, CAM-performing ice plants exhibit remarkable adaptation to fluctuating CO_2 and water availability. Through

various studies conducted on M. crystallinum's adaptation to different abiotic stress factors, it has been demonstrated that CAM plants show greater tolerance compared to C3 plants. Furthermore, it is hypothesised that the CAM metabolism in ice plants may also influence their resistance to biotic stresses. This is due to the creation of microenvironmental conditions within the leaf tissue of CAM plants, which could potentially play a crucial role in preventing disease development caused by pathogens.

It is evident that a one-month scientific internship was not sufficient to conduct a full experiment and obtain reliable results that would lead to a scientific publication. However, this short internship allowed for the exchange of ideas and expertise, ultimately contributing to the advancement of performed research. I had a unique opportunity to familiarize myself with the techniques used in physiological studies at the institute and engage in joint discussions regarding the creation of a platform for mutual learning and cooperation, where both parties can benefit from each other's ideas. As a result, I applied for a 3-month fellowship offered as part of the scientific collaboration between the Polish Academy of Sciences (PAN) and the National Academy of Sciences of Ukraine (NANU). My project was accepted, and therefore, I hope to conduct joint experiments in the future.

Despite the challenges posed by war, we must remember that science continues to bridge divides and remind us that our shared pursuit of knowledge knows no boundaries, reaffirming the universal nature of human curiosity and progress.

At this point, I would like to express my immense gratitude to all who helped me in Poland: Professor Mańka and Professor Jędryczka for their tremendous commitment in assisting scientists from Ukraine, dr hab. Marta Libik-Konieczny for her scientific support and Professor Franciszek Janowiak - the Head of Franciszek Górski Institute of Plant Physiology PAN for hospitality.

"SCIENCE HAS NO HOMELAND, AS HUMAN KNOWLEDGE ENCOMPASSES THE WHOLE WORLD." [LOUIS PASTEUR].

THE CONTRIBUTION OF FUNGI TO THE GLOBAL ECONOMY

A review by Allen Grace T. Niego *et al.* titled "The contribution of fungi to the global economy" was published on 12 July 2023 by *Fungal Diversity* (vol. 121, pp 95-137). The abstract is as follows:-

Fungi provide ecological and environmental services to humans, as well as health and nutritional benefits, and are vital to numerous industries. Fermented food and beverage products from fungi are circulating in the market, generating billions of USD. However, the highest potential monetary value of fungi is their role in blue carbon trading because of their ability to sequester large amounts of carbon in the soil. There are no conclusive estimates available on the global monetary value of fungi, primarily because there are limited data for extrapolation. This study outlines the contribution of fungi to the global economy and provides a first attempt at quantifying the global monetary value of fungi. Our estimate of USD 54.57 trillion provides a starting point that can be analysed and improved, highlighting the significance of fungi and providing an appreciation of their value. This paper identifies the different economically valuable products and services provided by fungi. By giving a monetary value to all important fungal products, services, and industrial applications underscores their significance in biodiversity and conservation. Furthermore, if the value of fungi is well established, they will be considered in future policies for effective ecosystem management.

Read paper.

POTATO CYST NEMATODES: A PERSISTENT AND FEARSOME FOE

A paper by Valeria Orlando and Eric Boa titled "Potato cyst nematodes: A persistent and fearsome foe" was published on 1 August 2023 by *Plant Pathology* (early view). The abstract is as follows:-

Nematodes, commonly called roundworms, represent one of the largest phyla of animals. Plant-parasitic nematodes cause significant economic losses in major crops worldwide, and cyst nematodes (*Heterodera* spp. and *Globodera* spp.) are among the most damaging species. This review focuses on three main species, *Globodera pallida*, *Globodera rostochiensis* and *Globodera ellingtonae*, collectively known as potato cyst nematodes (PCNs). *G. rostochiensis* and *G. pallida* are the most commonly occurring species in potato-growing areas and are considered to have originated from the Andes region in South America and introduced then to Europe in the 1850s and now occur globally in more than 75 countries. PCNs feed entirely inside the root and produce distinctive cysts containing eggs. PCNs reduce root development, stunt the growth of potato plants and ultimately lead to the production of fewer and smaller tubers. PCNs are feared because of their ability to survive for up to 40 years in the soil in the absence of potatoes, and once established they are incredibly difficult to eradicate. Five case studies in this review provide an historical overview of how scientists and potato experts have responded to PCN pandemics and the effectiveness of management strategies.

Read paper.

CURRENT VACANCIES

Assistant Professor of Plant Pathology - University of California, Davis

The Department of Plant Pathology at the University of California, Davis is recruiting a tenure track, Assistant Professor with an emphasis in disease ecology. Applicants should have a strong quantitative background and broad training in plant pathology, ecology, epidemiology, and/or population biology to focus on current or newly emerging plant diseases. The candidate is expected to develop an independent, productive and competitively funded research program on diseases in orchard, vegetable, field and/or native plant communities. The appointee will be responsible for teaching at the undergraduate level in courses supporting the Global Disease Biology major and the graduate program in Plant Pathology. More info about the position and further instructions in the PDF.

Applications should be submitted by 23 October 2023 at https://apptrkr.com/4526762 (full position announcement at this site).

ACKNOWLEDGEMENTS

Thanks to Anna Aleksieieva, Grahame Jackson, Małgorzata Jędryczka, Greg Johnson, Jan Leach, Małgorzata Mańka, Andrea Masino, Mathews Paret, and Gianfranco Romanazzi for contributions.

COMING EVENTS

Innovative Agriculture for Food Security (IAFS-2023)
4 September - 7 September, 2023
Amman, Jordan
Contact Name: Khalil Al-Mughrabi
Contact Email: iafs.agriconference@bau.edu.jo
Website: bau.edu.jo/conference/IAFS/iafs_Home.aspx

Plant Pathology 2023
5 September - 8 September, 2023
Birmingham, UK
Website: www.bspp.org.uk/conferences/plant-pathology-2023/

X International Conference "Bioresources and Viruses"
11 September - 13 September, 2023
Kyiv, Ukraine
Website: icbv.knu.ua

7th International Conference on Bacterial Blight of Rice
16 October - 19 October, 2023
Manila, Philippines
Website: irc2023.irri.org/international-conference-on-bacterial-blight-of-rice

24th Australasian Plant Pathology Society Conference
20 November - 24 November, 2023
Adelaide, South Australia
Website: eventstudio.eventsair.com/apps2023/

International Plant and Animal Genome (PAG 31)
12 January - 17 January, 2024
SanDiego, California, USA
Website: intlpag.org/31/

XX International Plant Protection Congress
1 July - 5 July, 2024
Athens, Greece
Website: www.ippcathens2024.gr

International Conference on Plant Pathogenic Bacteria & Biocontrol 2024
7 July - 12 July, 2024
Virginia Tech, Blacksburg, VA, USA
Website: icppbbiocontrol2024.org

Plant Health 2024
27 July – 31 July, 2024
Memphis, Tennessee, USA
Website:
www.apsnet.org/meetings/annual/Pages/default.aspx

Asian Conference on Plant Pathology 2024
3 August – 7 August, 2024
Changchun, Jilin, China
Website: tba

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

International Congress of Plant Pathology 2028
19 August – 25 August, 2028
Gold Coast, Queensland, Australia
Website: www.icpp2028.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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