



**ISPP** INTERNATIONAL SOCIETY  
FOR PLANT PATHOLOGY

PROMOTING WORLD-WIDE PLANT HEALTH AND FOOD SECURITY

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

# ISPP NEWSLETTER

ISSUE 52 (2) FEBRUARY 2022

Editor: Daniel Hüberli ([email](#))

Join the ISPP [mail list](#)

## IN THIS ISSUE:

Election of the 2023-2028 Executive Committee of the International Society for Plant Pathology (ISPP)

Revisiting Food Security in 2021

Food Security will publish in 2023 a Supplementary Special Issue on Food Security and IPM: Integrated Plant (Health) Management

The Jakob Eriksson Prize for Plant Pathology - Call for nominations

Viral proteins join forces to lower plants' defense 'shields'

Smart soil bugs offer farmers an ecofriendly route to controlling crop diseases

One gene closer to a sorghum Superman

Interplay between abiotic (drought) and biotic (virus) stresses in tomato plants

Indian Phytopathological Society Platinum Jubilee Celebration at the 8<sup>th</sup> International Conference on Plant Pathology: Retrospect and Prospects

Microbe sneaks past tomato defense system, advances evolutionary battle

Additional Information on the Supplementary Special Issue of Food Security on IPM

Current Vacancies

Acknowledgements

Coming Events



INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY (ISPP)

[WWW.ISPPWEB.ORG](http://WWW.ISPPWEB.ORG)

## ***ELECTION OF THE 2023-2028 EXECUTIVE COMMITTEE OF THE INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY (ISPP)***

---

**You are invited to contribute to the democratic process of election of the 2023-2028 ISPP Executive Committee.**

This important process happens once every 4 or 5 years.

In accordance with the Rules of Procedure of ISPP, the current Executive has formed a Nomination Committee. Its function is to invite, from ISPP's national and other Associated Societies, proposals for nominees for election to the 2023-2028 ISPP Executive Committee. From the nominees received, the Nomination Committee selects two candidates for each office (President, Vice-President, Secretary-General and Treasurer). Election then proceeds by ballot of ISPP Councilors. In addition a second Vice-President nominated by the Society hosting ICPP2028 (Australasian Plant Pathology Society) will serve on the 2023-2028 Executive as Vice President responsible for ICPP2028.

ISPP Statutes place emphasis on geographical diversity in this process. The Executive Committee has therefore appointed the Nomination Committee members to represent different regions of the world. The members of the Nomination Committee have also been chosen as highly respected plant pathologists.

In considering potential nominees, please consult with them, and consider carefully the time commitments and responsibilities involved with the respective positions. Short-listed nominees for the ISPP Executive will be asked to write a short summary of their background and how they might serve in the position for which they have been nominated. Nominees should also be willing and aware of their responsibilities to ISPP and Associated Societies in fulfilling the duties of the positions, including participation at ICPP in 2023 (Lyon, France) and 2028 (Gold Coast, Australia) and being able to commit 50 to 100 h per year for ISPP Executive service. Nominators and potential nominees should view information on the ISPP ([http://www.isppweb.org/about\\_objectives.asp](http://www.isppweb.org/about_objectives.asp)), and consider the duties and responsibilities of the Executive as outlined in the ISPP statutes and rules of procedure: [http://www.isppweb.org/about\\_objectives\\_statutes.asp](http://www.isppweb.org/about_objectives_statutes.asp).

**YOU ARE NOW INVITED TO PROPOSE NOMINEES** for consideration by the Nomination Committee. If you are a representative (for example a current or past ISPP Councilor, Board or Executive member) of an Associated Society of ISPP, please send your proposal to me, Dr Greg Johnson ([greggh4d@gmail.com](mailto:greggh4d@gmail.com)) as Chair of the Nomination Committee. Otherwise, please send your proposal through a representative of an Associated Society (see [https://www.isppweb.org/about\\_committees.asp](https://www.isppweb.org/about_committees.asp)).

**SEND NAMES AND FULL CONTACT DETAILS** (including e-mail addresses). You must also provide evidence of each nominee's willingness to serve if elected. Nominations should be received by **31 March 2022**.

The ISPP (founded in 1968) is the representative international body of plant pathology societies. It is a member of the International Union of Biological Sciences (IUBS), the International Union of Microbiological Sciences (IUMS), and has liaison with the United Nations Food and Agriculture Organization (FAO).



## **FOOD SECURITY WILL PUBLISH IN 2023 A SUPPLEMENTARY SPECIAL ISSUE ON FOOD SECURITY AND IPM: INTEGRATED PLANT (HEALTH) MANAGEMENT**

---

Next year, 2023, the ISPP will be organising its Congress, ICPP-2023-Lyon. *Food Security* will publish a Supplementary Special Issue in 2023, in conjunction with, and shortly before, ICPP-2023-Lyon.

*Food Security* is a multidisciplinary journal, which addresses food security questions from a number of angles: food production, food access, food utilisation, trade, the economics of households, countries, and regions towards food, and food security policies at different scales. *Food Security* addresses all the components of food security in the Global North and the Global South alike.

Broadly, the overall goal of this Supplementary Special Issue is to bridge two sorts of gaps:

- (1) the gaps between disciplinary fields: Plant Health Sciences and the Social Sciences: Economics, Sociology, Behavioural Sciences, and
- (2) the widening gap between the different scales addressed in plant pathology: from the molecular and gene; to the landscape, farm and field scales.

A number of aspects could be addressed in this Supplementary Special Issue of *Food Security*: the bases for IPM; the successes (and failures) of IPM implementation; the role of specific technology components in IPM; decision and decision theory; the economics of IPM; the evolution of farm and farmers' advisory systems across the world; as well as: molecular genetics and novel modelling approaches; new technologies to study and understand microbe communities. There are technical, bio-physical aspects to be considered in IPM, but aspects of economics, sociology, psychology, should not be overlooked.

Submissions are expected to be prepared in order to avoid the disconnection of Science from its audience (one of the very problems of IPM), and therefore be accessible to a wide (scientific) audience. Reporting and analysing human experiences, too, would be of great value: *Food Security* does publish excerpts of dialogues, such as statements by farmers, or by any stake-holder, which can be analysed, interpreted, and make very valuable, publishable, articles. Therefore, some submissions may be entirely be "narrative - qualitative", and of great scientific value.

All members of the ISPP are invited to contribute a submission to this Supplementary Special Issue. General information on Food Security can be found at: <https://www.springer.com/journal/12571>.

**Some of the themes of the Supplementary Special Issue can be summarised by the following list of key-words:**

biodiversity; biological control; collective good; collective action; communication; decision making; decision theory; dispersal; diversity (inter- and intra-specific genetic diversity); environment; extension; farmers' attitudes; farmers' perceptions; forecasting; host plant resistance; ICT; landscape; phytobiome; plant growth promoters; policies; public advisory systems; networks; resilience; spread; sustainability; systems analysis

Below are listed a few answers to anticipated questions. Appended are (1) the **time frame** for the preparation of this Supplementary Special Issue, and (2) **Specific Instructions to Authors** in their contributions to it.

With very best wishes,

Serge Savary

Editor-in-Chief, Food Security

**Answers to some (anticipated) FAQs are as follows:**

- **IPM?** IPM is an acronym many of our Plant Pathology colleagues know, as they work in IPM programmes. In the context of this issue, it could be read as IP(h)M: integrated plant health management.
- **Entomology?** Of course. Especially when looking at disease vectors.
- **Non-food crops?** Of course. Much of the agricultural production does not directly concern food. But farm (and forest) incomes mean livelihoods and industries (rural or not), and thus, food security.
- **Stored food crops?** Of course. They are a vital component of value chains, sometimes involving the most high-tech methods.
- **Toxicants?** Of course. They negatively affect nutrition and health. These include mycotoxins and pesticide residues.

# THE JAKOB ERIKSSON PRIZE FOR PLANT PATHOLOGY - CALL FOR NOMINATIONS

---

## JAKOB ERIKSSON PRIZE COMMISSION

The premier award for achievement in plant pathology, the [Jakob Eriksson Prize](#), was established in 1923 to honor the memory of Jakob Eriksson, a prominent Swedish mycologist and plant pathologist who died in 1931. He was also a dedicated internationalist who espoused the cause of international cooperation in plant pathology. The Prize will be awarded at the [International Congress of Plant Pathology](#) held in Lyon, France from 20-23 August 2023. The Royal Swedish Academy of Sciences administers the Jakob Eriksson Prize Fund which provides for a gold medal award at Congresses of the International Society for Plant Pathology.

Nominations are solicited for a candidate of distinction in recognition of research in mycology, in plant pathology, or in virus diseases, or of a particular publication dealing with such subjects, with the understanding that the work being recognised is of a distinct international value and merit.

The following rules apply to those making nominations:

- i. Nominators must provide a short statement (2 pages or 500 words) justifying the selection of the nominee plus a short CV maximum three pages, and a publication list of the most relevant papers/publications or reports – maximum 20 references. Do not send a detailed Curriculum Vitae. More detail than these requirements will be sought by the Commission if required.
- ii. Names of all nominees must be strictly confidential,
- iii. Individuals cannot nominate themselves and nominators should declare any professional affiliation with the nominee.
- iv. No correspondence concerning unsuccessful nominations will be entered into.

All nominations are to be sent to the Chair of the Prize Commission, in an email headed “Jakob Eriksson Prize Nomination 2023”. Send the email to [ErikssonPrize@ISPPweb.org](mailto:ErikssonPrize@ISPPweb.org) with a c.c. to the ISPP Business Manager ([andrea.masino@unito.it](mailto:andrea.masino@unito.it)). The call for nominations will close on 15 March 2022.

### Prize Selection

- i. The Jakob Eriksson Prize Commission, in consultation with the Executive of ISPP, will independently undertake the selection processes to enable a recommendation of the Jakob Eriksson Prize recipient at least one year before each International Congress of Plant Pathology.
- ii. The Chair of the Commission will advise the ISPP President of the Commission’s recommendation, and after appropriate deliberation, the President of the ISPP will invite the successful nominee to accept the award.

- iii. The Prize Ceremony
- iv. The participation of the Jakob Eriksson Prize recipient in the International Congress of Plant Pathology will be facilitated by the ISPP and the Congress Organisers. Normally this will include complementary Congress registration and attendance at Congress social functions, return economy travel to the Congress and some support for accommodation and reasonable expenses for the duration of the Congress.
- v. The Prize Ceremony will be planned by the ISPP in consultation with the Prize recipient, the Commission Chair and the Congress Organisers.
- vi. As part of the Prize Ceremony, the Prize recipient will also be invited to briefly present their work at the Congress as The Jakob Eriksson Oration with scope and coverage in a style suitable for a more general audience.

The Royal Swedish Academy of Sciences will provide the Jakob Eriksson gold medal.

Information about the selection process is available [here](#).

### **Jacob Eriksson Prize - 1993-2018**

Past recipients of the Prize have included:

- 1993. 7<sup>th</sup> Recipient - Prof Dr Ir Ariena H.C. van Bruggen, Professor Biological Farming Systems at Wageningen University, at the 6<sup>th</sup> International Congress of Plant Pathology.
- 1998. 8<sup>th</sup> Recipient - Dr Richard Frederiksen, Professor of Plant Pathology at Texas A&M University, at the 7<sup>th</sup> International Congress of Plant Pathology in Edinburgh.
- 2003. 9<sup>th</sup> Recipient - Dr. Jaccov Katan of the Hebrew University, Jerusalem, at the 8<sup>th</sup> International Congress of Plant Pathology in Christchurch, New Zealand.
- 2008. 10<sup>th</sup> Recipient - Dr. Laurence V. Madden of the Ohio State University, at the 9<sup>th</sup> International Congress of Plant Pathology in Torino, Italy.
- 2013. 11<sup>th</sup> Recipient - Professor Jeffrey B. Jones of the University of Florida at the 10<sup>th</sup> International Congress of Plant Pathology in Beijing, China.
- 2018. 12<sup>th</sup> Recipient – Emeritus Professor Pierre JGM de Wit of the Laboratory of Phytopathology, Wageningen University, the Netherlands, at the 11<sup>th</sup> International Congress of Plant Pathology in Boston, USA.

## VIRAL PROTEINS JOIN FORCES TO LOWER PLANTS' DEFENSE 'SHIELDS'

WSU INSIDER, 25 JANUARY 2022

Research led by Washington State University scientists into how viral proteins interact and can be disabled holds promise to help plants defend themselves against viruses—and ultimately prevent crop losses. The study published in [Frontiers in Plant Science](#) found that viral proteins interact with each other to help a virus hijack its host plant and complete its life cycle. When some of these viral proteins were disabled, the researchers found that the virus could not move from cell to cell. These proteins are also doing double duty, inducing disease as well.

“These silencing suppressor proteins are interacting with each other in a seamless, highly coordinated lockstep dance to help the virus in overcoming the host defense,” said WSU virologist Hanu Pappu, the senior author on the paper. Insights into the dynamics of these interactions could provide clues for blocking them, Pappu added. “We are using genome editing approaches to do exactly that,” he said. “The more we understand about how these viruses bring down defensive ‘shields’ and cause disease, the better chance we have of saving plants from viral invaders.”

A silent, behind-the-scenes arms race between plants and the viruses that prey on them has been going on for millions of years. Viral diseases cost more than a billion dollars in losses annually to food, feed, and fiber crops worldwide, according to the Food and Agriculture Organization (FAO) of the United Nations.

Plants have developed a sophisticated defense system to protect themselves from infection, involving highly choreographed cellular events that are triggered by viral attack, Pappu said. Plants use a molecular defense called RNA interference, RNAi for short, that chops incoming viral nucleic acid, preventing the virus from commandeering host cells. Viruses in turn evolved, producing molecules called ‘silencing suppressor proteins’ that can disable their hosts’ RNAi defenses.

Lead author Ying Zhai, a WSU research associate, set out to identify which viral proteins are suppressing defenses and understand how these molecules interact with other viral proteins upon infection. Working with Anirban Roy and his team at the Indian Agricultural Research Institute, she examined a specific, damaging geminivirus, the Croton yellow vein mosaic virus. Ying and Roy learned where the viral silencing suppressor is located within cells, how it interacts with cells and brings on symptoms, and how it helps the virus move from cell to cell.

While most viruses make one protein with a specific function to defeat their host, Zhai and Roy found that this geminivirus contained not just one but four different proteins that take part in bringing down plant defenses. Using highly sensitive molecular and microscopic methods, they found that these viral proteins were interacting to help the virus. When some were disabled, the virus could not spread in the plant.



WSU research scientist Ying Zhai examines a tobacco plant inoculated with a geminivirus. The pathogen stunts growth and can eventually kill infected plants. Zhai and colleagues study how the geminiviruses evade plant defenses (Photo credit: WSU).

## SMART SOIL BUGS OFFER FARMERS AN ECOFRIENDLY ROUTE TO CONTROLLING CROP DISEASES

JOHN INNES CENTRE NEWS, 18 JANUARY 2022

An innovative method of controlling a range of damaging crop diseases using native, beneficial soil bacteria has emerged from a research-industry collaboration. The agri-tech innovation hopes to give farmers a way to reduce the cost and environmental damage caused by the chemical treatments currently in use to control crop diseases.

The John Innes Centre team isolated and tested hundreds of strains of *Pseudomonas* bacteria from the soil of a commercial potato field, and then sequenced the genomes of 69 of these strains. By comparing the genomes of those strains shown to suppress pathogen activity with those that did not, the team were able to identify a key mechanism in some of the strains that protected the potato crop from harmful disease-causing bacteria.

Then using a combination of chemistry, genetics and plant infection experiments they showed that the production of small molecules called cyclic lipopeptides is important to the control of potato scab, a bacterial disease that causes major losses to potato harvests. These small molecules have an antibacterial effect on the pathogenic bacteria that cause potato scab, and they help the protective *Pseudomonas* move around and colonise the plant roots. The experiments also showed that irrigation causes substantial changes to the genetically diverse *Pseudomonas* population in the soil.

First author of the study Dr Alba Pacheco-Moreno said, “By identifying and validating mechanisms of potato pathogen suppression we hope that our study will accelerate the development of biological control agents to reduce the application of chemical treatments which are ecologically damaging. “The approach we describe should be applicable to a wide range of plant diseases because it is based on understanding the mechanisms of action that are important for biological control agents,” she added.

The study, which appears in eLife, proposes a method by which researchers can screen the microbiome of virtually any crop site, and take into account varying soil, agronomic and environmental conditions. By exploiting advances in high-speed genetic sequencing, the method can screen the soil microbiome for therapeutic bacteria and work out which molecules are being produced to suppress pathogenic bacteria. They can also show how these beneficial bugs are affected by agronomic factors such as soil type and irrigation.

The next step for the new approach is to put the beneficial bugs back into the same field in greater numbers or in cocktails of mixed strains as a soil microbiome boosting treatment. Dr Jacob Malone, Group Leader at the John Innes centre and co-corresponding author of the study explains the benefits, “The massive advantage of this approach is that we are using bacterial strains that are taken from the environment and put back in the same specific biological context in larger numbers so there is no ecological damage”. Potential methods to apply the microbiome boosters include applying the bacterial cocktails as seed coatings, as a spray or via drip irrigation.

[Read more.](#)

## ONE GENE CLOSER TO A SORGHUM SUPERMAN

PURDUE UNIVERSITY AGRICULTURE NEWS, 12 JANUARY 2022

Scientists are honing the traits of speed, strength and near invulnerability in an important food crop that, much like a superhero, will help protect the vulnerable. Achieving a milestone in their pursuit of the Superman of sorghum plants, scientists identified a single gene that confers broad protection from the fungal diseases anthracnose, rust and target spot.

Looking closer at the plant's genome, they also discovered what might have been kryptonite to this super power and unusual snips of mobile DNA involved in the disease resistance. The newly discovered gene, named Anthracnose Resistance Gene1, or ARG1, is unusual in several ways, Tesfaye Mengiste, a professor and interim head of Purdue's Department of Botany and Plant Pathology said. "Although some natural resistance to fungal disease was known in sorghum, genes that confer such widespread resistance had not been identified," he said. "It is remarkable that a single gene leads to resistance across a broad spectrum of fungi and multiple strains of the anthracnose fungus."



Tesfaye Mengiste, professor of botany and plant pathology at Purdue University, looks at sorghum infected with anthracnose. Mengiste led a team of researchers that identified a single gene that confers broad resistance to the fungal disease (Photo credit: Purdue University)

A team of Purdue University researchers, including 2009 World Food Prize laureate Gebisa Ejeta, made the discoveries through a project supported by the U.S. Agency for International Development (USAID) Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet.

Climate change is predicted to increase the number and severity of plant diseases, said Mengiste, who led the research. "We need more robust disease control to sustain the world food supply, and these remarkable plants are one step ahead of us," Mengiste said. "Different varieties of sorghum have evolved with different strengths and resistance to disease. Through genetics and plant science we are trying to help them along in this process of adapting to a changing environment."

By finding the gene responsible for a desired trait, scientists can create biomarker tags that allow breeders to test for its presence quickly and incorporate it into a sorghum cultivar that has other beneficial traits. The team's work is detailed in a paper in the journal *The Plant Cell*. "The importance of this work cannot be overestimated," said Ejeta, a distinguished professor of agronomy at Purdue and executive director of the Purdue Center for Global Food Security. "This is a significant scientific breakthrough and a culmination of decades of collaborative sorghum improvement research at Purdue along with partners in developing countries."

Sorghum is a key cereal crop for food security around the world, said Mengiste, who is part of Purdue's Next Moves in plant sciences and Purdue's Center for Plant Biology. "It is a very resilient plant in many ways, but fungal diseases can wipe it out," he said. "Anthracnose is one of the most significant of these pathogens and attacks all parts of the plant: leaves, stalk and head. It leaves nothing that can be used for food, its primary use in Africa; or biofuels and animal feed, its uses in the United States."

## **INTERPLAY BETWEEN ABIOTIC (DROUGHT) AND BIOTIC (VIRUS) STRESSES IN TOMATO PLANTS**

A paper by Ritesh Mishra *et al.* titled “Interplay between abiotic (drought) and biotic (virus) stresses in tomato plants” was published on 30 December 2021 by *Molecular Plant Pathology* (early view). The abstract is as follows:-

With climate warming, drought becomes a vital challenge for agriculture. Extended drought periods affect plant–pathogen interactions. We demonstrate an interplay in tomato between drought and infection with tomato yellow leaf curl virus (TYLCV). Infected plants became more tolerant to drought, showing plant readiness to water scarcity by reducing metabolic activity in leaves and increasing it in roots. Reallocation of osmolytes, such as carbohydrates and amino acids, from shoots to roots suggested a role of roots in protecting infected tomatoes

against drought. To avoid an acute response possibly lethal for the host organism, TYLCV down-regulated the drought-induced activation of stress response proteins and metabolites. Simultaneously, TYLCV promoted the stabilization of osmoprotectants' patterns and water balance parameters, resulting in the development of buffering conditions in infected plants subjected to prolonged stress. Drought-dependent decline of TYLCV amounts was correlated with HSF1-controlled activation of autophagy, mostly in the roots. The tomato response to combined drought and TYLCV infection points to a mutual interaction between the plant host and its viral pathogen.

[Read paper.](#)

# **INDIAN PHYTOPATHOLOGICAL SOCIETY PLATINUM JUBILEE CELEBRATION AT THE 8<sup>TH</sup> INTERNATIONAL CONFERENCE ON PLANT PATHOLOGY: RETROSPECT AND PROSPECTS**

---

Greetings from the Indian Phytopathological Society (IPS).

We feel immense pleasure in announcing that the Society is completing its 74<sup>th</sup> year and entering its 75<sup>th</sup> year of establishment, which is the celebration year for all of us. To mark 75 years of its establishment and service to the science and Society in India and also at the international level, the Society is organising a Platinum Jubilee Celebration and [International Conference \(hybrid mode\) on “Plant Pathology: Retrospect and Prospects”](#) at SKN Agricultural University, Jobner-Jaipur, Rajasthan, India during 23-26 March 2022.

The primary aim of the conference is to have a flashback of the journey of Plant Pathology in India till the platinum jubilee year and to look forward to its future in a global perspective. The conference would provide a platform to retrospect upon the milestones achieved and to explore the future scope of tackling diseases in crop plants. The four-day-long deliberations will cover the evolution and advancements in teaching, research, and extension activities amidst researchers, academia, entrepreneurs, farmers, and policy-makers. The detailed deliberations on four major themes of plant pathology would certainly pave the way to ensure better plant health vis-a-vis human health and food security.

The conference aims to be a special feast of science for all involved in the field of Plant Pathology. The conference will provide a world-class platform for the industry to come together and network amongst the galaxy of scientists. Delegates from across the country and abroad will converge at Jobner-Jaipur to participate in this important conference. There will be more than 600 delegates expected to attend the event (virtually as well as physically).

### **Important Dates:**

Abstract Submission (open): 1 January – 28 February 2022

Payment of Registration fee : 1 January – 15 March 2022

On behalf of the Organising Committee, I cordially invite you to grace the occasion with your presence at the conference. We look forward to your whole-hearted support in making IPS 8<sup>th</sup> International Conference 2022, a huge success and an event to cherish.

Thanking you

Dr. Robin Gogoi, Secretary, IPS

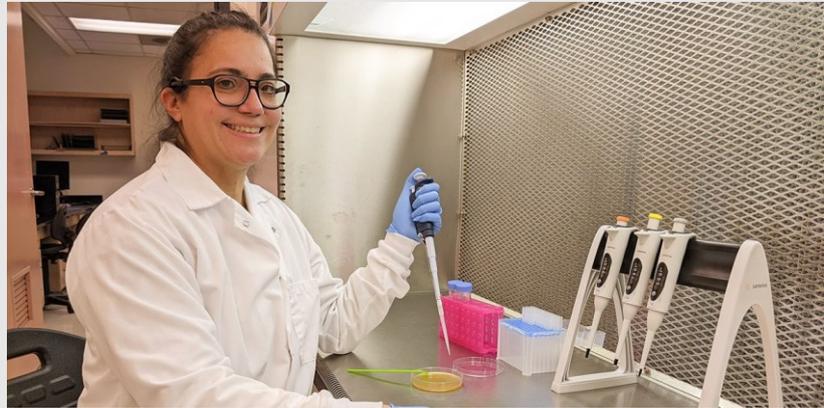
Dr. M.L. Jakhar, Organising Secretary, IPSCONF2022

Dr. Pratibha Sharma, President, IPS and Chairperson, IPSCONF2022

## MICROBE SNEAKS PAST TOMATO DEFENSE SYSTEM, ADVANCES EVOLUTIONARY BATTLE

ACES NEWS, UNIVERSITY OF ILLINOIS, 20 DECEMBER 2021

*Xanthomonas*, the organism that causes bacterial leaf spot disease in tomato and pepper plants, like many microbes with short generation times, can evolve at lightning speed to acquire beneficial traits, such as the ability to elude its host's defense system. New research from the University of Illinois shows one *Xanthomonas* species, *X. euvesicatoria* (Xe), has evolved to avoid detection by the immune system of tomato plants.



Maria Malvino (pictured) and others discovered why tomato defenses aren't keeping up with infection by evolved bacterial pathogens (Photo credit: Sarah Hind, University of Illinois).

“It’s part of the evolutionary warfare between plants and pathogens, where the plant has some defense trait and then some portion of the pathogen population

evolves to escape it. The plant has to develop or acquire a new defense trait, but the process is much slower in plants compared to microbes. This study is a great example of that ongoing battle in progress. It tells us we can’t completely rely on this trait to combat bacterial spot disease caused by Xe,” says Sarah Hind, assistant professor in the Department of Crop Sciences at Illinois and co-author on a pair of recent studies published in *Molecular Plant-Microbe Interactions* and *Physiological and Molecular Plant Pathology*.

The tomato defense system keeps tabs on *Xanthomonas* and other bacteria with immune receptors that chemically detect flagella. Hind and her colleagues used laboratory and genomic modeling techniques to show one of tomato’s receptors, FLS3, no longer works to detect flagellin proteins in Xe. Their work shows Xe’s flagellin proteins have changed by just one amino acid, but it’s enough to escape detection by tomato’s FLS3 receptors.

Graduate student and study co-author Maria Malvino says, “It was surprising to see that only one amino acid change was making all the difference. It made us wonder how binding between flagellin and FLS3 could be so dramatically altered.” The fact that Xe can sneak past tomato’s defenses means farmers can rely even less on inherent disease resistance. Instead, they’ll have to combat the disease in other ways, such as spraying copper-based pesticides.

In some locations, including the Midwest region and in Illinois specifically, Xe isn’t as much of a problem as two other *Xanthomonas* species, *X. perforans* and *X. gardneri* (Xp and Xg). Tomato can still hold its own against these species for the time being, but Hind is concerned Xe will share its evasion strategy. “*X. euvesicatoria* [Xe] had been the predominant strain for a long time, but within the last decade or two, it’s become less prominent and has been overtaken by another species, Xp,” she says. “Xp and Xe are really genetically close, and it’s been shown that they can share their genetic material with each other. So it wouldn’t be out of the realm of possibility that that Xe’s evasion strategy could make its way into Xp and provide the same advantage against tomato.”

Hind says the tendency of these bacteria to defeat host defenses through rapid evolution makes breeding for disease resistance difficult in tomato.

# ADDITIONAL INFORMATION ON THE SUPPLEMENTARY SPECIAL ISSUE OF FOOD SECURITY ON IPM

SERGE SAVARY, EDITOR-IN-CHIEF, FOOD SECURITY

## 1. Time frame

The time-frame below is designed in such way that the Special Issue would be published before the ICPP in Lyon. This has two implications: (1) Authors are requested to prepare their submission rapidly (see specific instructions below, and the website of the journal for general information at: <https://www.springer.com/journal/12571>; and (2) **The review process will be simplified**: each submission will be reviewed by at least two, preferably three Reviewers. Review outcomes can be of four types: (1) "reject"; (2) "accept pending Major revisions"; (3) "accept pending minor revisions"; or "accept". Because there may be **very little time for Authors to revise their submission**, decision of category (2), which implies much additional work from Authors, may mean that the submission will not be published in the Special Issue, because **there will be enough time for only two rounds of revisions**.

In order to maximise the chance for inclusion in the Special Issue, Authors are requested to please follow these advices:

- Follow the Specific Instructions for this Issue and the General Instructions of Food Security. Being familiar with the journal, i.e., having read a few recent articles in Food Security is strongly recommended.
- As soon as the manuscript is ready for submission, Authors are requested to please not delay its submission, and to not wait for the deadline. Submissions that reach the journal early will be processed first; they will be more rapidly reviewed; and an early feedback on a submission enables addressing revisions, even if the outcome is in category 2.

2022	Jan	Finalising Scope - Keyword - Authors'info - Formats
	Feb	Announcement
	Mar	development of manuscripts
	Apr	development of manuscripts
	May	development of manuscripts - submission at any time
	Jun	development of manuscripts - submission at any time
	Jul	development of manuscripts - submission at any time
	Aug	development of manuscripts - submission at any time
	Sep	31 September: deadline for last submission
	Oct	Assignments of submissions to Reviewers (and Food Security Senior Editors if needed)
	Nov	Review of submissions
	Dec	Review of submissions
2023	Jan	31 January: deadline of last 1 <sup>st</sup> decision on submissions; Revisions of submissions
	Feb	27 February: deadlines for last, revised and final submissions and for final decisions on submissions
	Mar	Production
	Apr	Production
	May	Proofing (Authors; Editor(s))
	Jun	Accepted articles published online
	Jul	Publication of the Special Issue

## 2. Scope of the Supplementary Special Issue of *Food Security on Integrated Plant (health) Management*

This Special Issue is meant to bring together the best available science to address plant health management in sustainable and environment-friendly ways. Sustainability is considered here at the field, farm, regional and global scales, with the environmental, social, economic, and cultural dimensions. Environment friendliness refers to methods, or group of methods that do not negatively impact the environment or the health of humans and animals.

This Special Issue will contain contributions in three distinct formats (see next section): Opinion, Research, or Review.

Submissions pertaining to Research are most welcome, as long as a clear path towards applications that contribute (1) to sustainable and environment-friendly technologies, in the perspective of (2) improving food security are clearly outlined, using published evidence of the existence of such path.

Submissions dealing with case-studies, such as, e.g., field studies on IP(h)M implementation are welcome as well, as long as these demonstrate (1) an explicit pluri-disciplinary effort, and (2) having relevance towards food security. Indirect relevance to food security needs to be supported, preferably through verifiable, published, evidence.

## 3. Specific Instructions to the Supplementary Special Issue of *Food Security on IPM*

*Food Security* is a wide audience, interdisciplinary, international journal dedicated to the procurement, access (economic and physical), and quality (in all its dimensions) of food. Scales range from the individual to communities, and to the world food system.

*Food Security* is a Society journal. It is strictly based on the volunteered contributions of its Editors and Reviewers.

We strive to publish high-quality articles, where quality includes, but is not limited to, the quality and clarity of text, and the validity of methods and approaches. We especially value submissions that exhibit a true attempt to inter-disciplinary research and science.

### A - Format of submissions to *Food Security*

*Food Security* publishes three formats of contributions. All have in common a number of features: (1) an Abstract; (2) an abbreviated (running) title; (3) key words; (4) references; (5) a short bio of Author(s) in 100-150 words; (6) a photo of each Author. All these elements will be required upon submission. Authors may opt to not submit their photo.

#### 1. *Opinion*

Opinion articles are short, usually 1500-2000 words. They may include 1 Figure or 1 (small) table (a table or figure is equivalent to 200 words). References are not compulsory but strongly advised. The number of references should be small: less than, approximately, 10.

Opinions are quite flexible in terms of style. They must, however, convey to the reader a clear message, accessible to the widest possible audience. This message and the reasoning leading to it must be grounded on scientific, published facts or data.

Opinion articles are usually single-authored. Multiple authorship is acceptable as long as the number of contributors is small, and commensurate with the nature of the message conveyed.



## 2. Research

Research articles must contain the following elements in addition to the above ones: Introduction, (Materials and) Methods, Results, Discussion, Conclusion. Conclusion and Discussion may be merged, but Results and Discussion must be different sections.

The acceptable length of Research articles in Food Security is quite flexible and may be quite large (up to 8000 words). However, the length of the submission must be commensurate with the importance of the topic or its implications. In the context of this Special Issue, submission length will also be related with the level and diversity of inter-disciplinary inputs.

Submissions that truly involve inter-disciplinary efforts are strongly encouraged. This may include, for example, an ex-ante evaluation of a novel approach to describe and analyse processes at the molecular, gene, or populational level in their efficiency to control plant disease. Such ex-ante evaluation will justify the use of proven methods for projection at higher integration scales and may involve inter-disciplinary insight. Other inter-disciplinary efforts may involve different discipline-based approaches to assess the merit of an IPM component, or of an overall IPM strategy, or again, of a given (set of) policy(ies).

Very large tables are discouraged and should be, as much as feasible, replaced by figures.

## 3. Reviews

Reviews in Food Security may be of similar length as Research. Repeats and wordiness however will be ground for rejection. Reviews must provide new insights or new standpoints, and attempt to do so in as short an article as possible. Reviews-of-reviews will be declined. A Review must provide the reader with a documented overview of a given topic, leading to clear conclusions. Tables summarising efficiently the literature are welcome, and so are graphics. However, general graphics conveying already published concepts or not providing significant insight on the subject matter will be grounds for rejection. Reference number may be as high as 100, as long as such number is warranted.

### **B - Criteria that determine whether a submission will undergo a full review (i.e., will be submitted to Reviewers) of Food Security include the following:**

1. Submissions must address one or several dimensions of food security: the production, access, and quality of **food**.
2. Submissions must follow the **Instructions to Authors** (this present document, complemented by the general instructions found at: <https://www.springer.com/journal/12571>).
3. **Novelty**. This Special Issue will strive to report new results, new approaches providing better understanding, or assessment of IPM efficiency, or of improved or novel ways to understand IPM - food security relations.
4. **Quality of science**. The Special Issue is focused on IPM-related sciences. The journal will not publish project reports.
5. **Scales**. Integrated Plant (health) Management integrates all levels of living organisms, from molecules to genes to landscapes. Irrespective of the scale considered, however, a link must be clearly shown with management and food security (directly or indirectly).

6. **Scientific methods.** Food Security is also especially stringent on the scientific methods involved in data collection, the quality of data collected, and data analysis. **Paradigms and approaches** of the **Social Sciences**, especially Anthropology, Sociology, and Psychology will be respected.
7. **Science-based contributions.** Food Security seeks scientific submissions. General statements should be minimised, whereas scientific insights, analyses, and facts should constitute the core of any submission.
8. **Topic of the manuscript:** Submissions should not dwell into narrow, technological questions. If such is the case, submissions should demonstrate the relevance of technological advances towards the achievement of food security.
9. Specifically, *Food Security* is **not a food technology journal**. Food Security is not a nutrition-related, or nutrition-based, medicine journal.
10. Case Studies – The Special Issue will welcome analyses of case studies, if they: (1) bring about questions and issues that have a broad, generic value; or (2) involve analytical methods of broad and generic value (i.e., that can be applied in a range of other cases).
11. Style and English. Submissions must be accessible to a wide-audience readership. They should be carefully crafted in scientific English.
12. Material. Tables and figures of submissions must be carefully prepared according to the Instructions to Authors.
13. References. References used in a Food Security submission must be accessible (1) to the reviewers and (2) to the readers of Food Security. Except under exceptional circumstances are references to non-refereed sources acceptable.
14. Overall quality of submissions. We shall consider carefully crafted scientific manuscripts. These will (except Opinion articles and Reviews) typically include **Introduction, (Materials and) Methods, Results, and Discussion**. Authors must pay specific attention to their **Abstract** and **Title**, since these must appeal to the wide audience of the Journal.

## CURRENT VACANCIES

---

**The Department of Plant Pathology at the University of Nebraska-Lincoln** is seeking a Quantitative Fungal Ecologist at the rank of Assistant Professor. This tenure-leading appointment will lead an integrated research and teaching program that meets the needs of agricultural producers in Nebraska and connects with regional and national crop pathology programs and colleagues with an emphasis on quantitative fungal ecology including population genetics and/or applied epidemiology. The apportionment for this position, located in Lincoln, Nebraska, is 60% research and 40% teaching. To ensure consideration, please submit all application materials before the review date of **7 March 2022**. Further details about the position and how to apply are available in the [PDF](#).

**The Department of Plant Pathology and Environmental Microbiology at Penn State** is seeking an Assistant Professor in Global Change Pathology. This is a full-time 12-month, tenure-track position with 70% research and 30% teaching appointment, focused on plant diseases in the context of global change. The successful applicant is expected to develop an externally funded, high impact research program on modeling, adaptation, and mitigation of diseases altered by large-scale changes including and in the context of global climate change. We will begin reviewing applications on **14 February 2022**. Apply online at [https://psu.wd1.myworkdayjobs.com/en-US/PSU\\_Academic/job/University-Park-Campus/Assistant-Professor-of-Global-Change-Pathology\\_REQ\\_0000023792-1](https://psu.wd1.myworkdayjobs.com/en-US/PSU_Academic/job/University-Park-Campus/Assistant-Professor-of-Global-Change-Pathology_REQ_0000023792-1) and see more from the [PDF](#).

**The Department of Plant Pathology and Crop Physiology, Baton Rouge, Louisiana State University** is seeking an Assistant/Associate Professor in Plant Pathology. This is a full-time 12-month, tenure-track position with 80% research and 20% teaching appointment, focused on etiology and management of sweetpotato diseases. The successful candidate is expected to develop a strong and innovative research program of applied research related to managing sweetpotato diseases. The application deadline is **15 February 2022** or until a suitable candidate is identified. Apply online by attaching cover letter with resume, research and teaching statements, university transcripts, and three letters of reference. More details about the position is available in the [PDF](#).

## ACKNOWLEDGEMENTS

---

Thanks to Grahame Jackson, Greg Johnson, Jan Leach, and Serge Savary for contributions.



## COMING EVENTS

### 10<sup>th</sup> International IPM Symposium

28 February - 3 March, 2022

Denver, Colorado, USA

Website: [ipmsymposium.org/2021](http://ipmsymposium.org/2021)

### 67<sup>th</sup> Annual Conference on Soilborne Plant Pathogens

23 March - 24 March, 2022

Now a virtual Meeting on Zoom

Website: [soilfungus.wsu.edu](http://soilfungus.wsu.edu)

### 8<sup>th</sup> Indian Phytopathological Society International Conference

23 March - 26 March, 2022

SKN Agricultural University, Jobner-Jaipur, Rajasthan, India

Website: [conference.ipstdis.org/international](http://conference.ipstdis.org/international)

### 16<sup>th</sup> Congress of the Mediterranean Phytopathological Union

4 April - 8 April, 2022

Limassol, Cyprus

Website: [cyprusconferences.org/mpu2022](http://cyprusconferences.org/mpu2022)

### 7<sup>th</sup> International Congress of Nematology

1 May - 6 May, 2022

Antibes Juan-les-Pins, France

Website: [www.alphavisa.com/icn/2020/index.php](http://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](http://www.fao.org/plant-health-2020/events/events-detail/en/c/1250609)

### 4<sup>th</sup> International *Erwinia* Workshop

2 July - 3 July, 2022

Assisi, Italy

Website: [www.icppb2020.com](http://www.icppb2020.com)

### 14<sup>th</sup> International Conference on Plant Pathogenic Bacteria

3 July - 8 July, 2022

Assisi, Italy

Website: [www.icppb2020.com](http://www.icppb2020.com)

### 12<sup>th</sup> International Workshop on Grapevine Trunk Diseases (ICGTD12)

11 July - 15 July, 2022

Mikulov, Czech Republic

Website: [ucanr.edu/sites/ICGTD/Workshops\\_559/](http://ucanr.edu/sites/ICGTD/Workshops_559/)

### 11<sup>th</sup> Australasian Soilborne Diseases Symposium

2 August - 5 August, 2022

Cairns, Queensland, Australia

Website: [asds2022.w.yrd.currinda.com](http://asds2022.w.yrd.currinda.com)

### International Phytobiomes Conference 2022

13 September - 15 September, 2022

Denver, Colorado, USA

Website: [phytobiomesconference.org](http://phytobiomesconference.org)

### 13<sup>th</sup> 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](mailto:info@acpp-aspp.com)

Website: [acpp-aspp.com](http://acpp-aspp.com)

### XX International Plant Protection Congress

10 June - 15 June, 2023

Athens, Greece

Website: [www.ippcathens2023.gr](http://www.ippcathens2023.gr)

### 13<sup>th</sup> International Congress on Plant Biotechnology and Agriculture

12 June - 16 June, 2023

Cayo Guillermo, Cuba

Website: [bioveg.bioplantas.cu](http://bioveg.bioplantas.cu)

**12<sup>th</sup> International Congress of Plant Pathology  
(ICPP2023)**

20 August - 25 August, 2023

Lyon, France

Website: [www.icpp2023.org](http://www.icpp2023.org)

**9<sup>th</sup> ISHS International Postharvest Symposium**

11 November – 15 November, 2024

Rotorua, New Zealand

Website: [scienceevents.co.nz/postharvest2024](http://scienceevents.co.nz/postharvest2024)





# ICPP 2023

**ONE HEALTH**  
for all plants,  
crops and trees



**20-25 August, France**



[www.icpp2023.org](http://www.icpp2023.org)



## INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY (ISPP)

[WWW.ISPPWEB.ORG](http://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](mailto:business.manager@issppweb.org)

**SUBSCRIBE  
OUR NEWSLETTER**

