



**ISPP** INTERNATIONAL SOCIETY  
FOR PLANT PATHOLOGY

PROMOTING WORLD-WIDE PLANT HEALTH AND FOOD SECURITY

INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY

# ISPP NEWSLETTER

ISSUE 56 (4) APRIL 2026

Editor: Daniel Hüberli ([email](#))

Join the ISPP [mail list](#)

## IN THIS ISSUE:

Obituary of David Robert Jones, 1946-2026

Associated Societies of ISPP are invited to present Call for bids to host the 14<sup>th</sup> International Congress of Plant Pathology, ICPP2032

Obituary of J. I. (Ian) Cooper M.A., Ph.D. 1941-2026

Plant Pathology, Farmers and 40 Years in Ag: Dr. Kelly Turkington's Story

New strategy to break resistance-yield trade-off in rice by pathogen-inducible gene expression

New Australian initiative targets soilborne broadacre diseases

Plant diversity suppresses pests and promotes plant performance and crop production

Crop pest responses to global changes in climate and land management

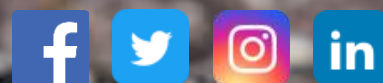
Epigenetic switch strengthens plant immunity against downy mildew

The 2022 Fusarium Head Blight outbreak in Ethiopia: Emerging pathogens, mixed mycotoxins, and interspecies interactions

Current Vacancies

Acknowledgements

Coming Events



INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY (ISPP)

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

## OBITUARY OF DAVID ROBERT JONES, 1946-2026

ADAPTED BY GREG JOHNSON FROM THE OBITUARY PROVIDED BY HIS FAMILY, 12 MARCH 2026

Dr David Robert Jones, 79, former plant pathologist with Plant Pathology Branch of the Queensland Department of Primary Industries (QDPI) Indooroopilly (1977-1992), and late of Callala Beach, New South Wales (NSW), Australia passed away peacefully on Thursday 26<sup>th</sup> February 2026 with his wife and daughter by his side.

David was born to Mary and Frederick Jones in Dudley, England and was their only child.

In 1965, David attended Hull University to study Science and graduated in Botany in 1968. He stayed in Downs Hall and met his close friends Tim, Gwyn, Dave and Jim. David went on to obtain a MSc degree in plant pathology from the University of Exeter in 1970 and a PHD from Keele University in 1973. The topic of his PhD thesis was “Studies on the rust fungi *Uromyces dianthi* (Pers) Niessl and *Puccinia arenariae* (Schum) Wint.”

Shortly after his PhD, David moved to Canada where he became a post-doctorate research fellow at Agriculture Canada's research laboratory in London, Ontario. This is where David met his wife, Esther Jones (nee Zmeko) a lab technician at the University and the two wed in the parish church, Dudley England in 1975.

David and Esther left for their honeymoon in Fiji and Bora Bora enroute to Sydney Australia where David had been awarded a post-doctoral research fellowship to work with Professor Brian Deverall at the University of Sydney.

David and Brian undertook research on the Lr20 resistance gene in wheat against leaf rust (*Puccinia recondita*). Their work focused on the temperature-sensitive expression of this resistance, the resulting hypersensitive response, and its effects on fungal development.

In 1977, David and Esther moved to Brisbane where David worked as quarantine plant pathologist with the Queensland Department of Primary Industries (QDPI). During his time there David worked as part of a programme to prevent the introduction of exotic pathogens into Australia. He was the first pathologist to travel to the Torres Strait region and discovered black leaf streak and freckle diseases on local banana plants. David later formulated guidelines for the safe introduction of *Musa* species into Australia. He subsequently worked on banana leaf diseases and post harvest problems. David would frequently travel outside of Australia on work trips to study banana plantations - such as visits to Papua New Guinea and Southeast Asia.



In 1992, David and the family moved to the south of France where David started work as a crop protection research coordinator at ‘The International Network for the Improvement of Banana and Plantain’ (INIBAP) in Montpellier. The family lived in a small charming village atop a hill called ‘Montferrier-sur-Lez’.

During his time at INIBAP, David undertook banana disease surveys in Thailand and Malaysia. His collections of specimens led to the identification of a banana virus in India and Sri Lanka and the recognition of a new banana leaf spot disease in India.

Four years later the family left France and moved to Droitwich Spa in England. David's expertise soon sent him to the island of St Vincent in the Caribbean where he took part in a European Union (EU)-funded project to improve the banana industry of the Windward Islands. It is here where David became locally known as the ‘banana doctor’ as a result of broadcasts on the local radio and television.

When David returned to the UK, he became editor for the CAB International publication entitled ‘Diseases of Banana, Abaca and Enset’, which was published in 1999. The following year, David joined the Central Science Laboratory of the Department of the Environment (now known as FERA) at Sand Hutton on the outskirts of York. David worked on pest risk analysis, researching non-native diseases and assessed what risk they might pose to food production if they were to enter the UK. David retired in 2008 after working as a consultant for the European Food Safety Authority (EFSA) in Parma, Italy.

In 2012 David and Mary moved back to Australia, retiring to Callala beach, Jervis Bay, south of Sydney.

In 2017, David published a book ‘The Crimean War Then & Now’ which sets present date photographs of battle sites against original paintings and photographs. David made repeated visits to the Crimea, where with the help of local guides was able to identify and photograph every important location featured in the works of the nineteenth century artists.

After having survived cancer twice in previous years, David unfortunately succumbed to complications from a third bout. He passed quickly and peacefully at around 1:15am on Thursday 26th February in Shoalhaven Memorial Hospital Nowra NSW.

A Service to pay a last tribute for David was held on Monday 16<sup>th</sup> March at Shoalhaven Memorial Gardens and Lawn Cemetery, Worrigeer NSW.

# ASSOCIATED SOCIETIES OF ISPP ARE INVITED TO PRESENT CALL FOR BIDS TO HOST THE 14<sup>TH</sup> INTERNATIONAL CONGRESS OF PLANT PATHOLOGY, ICPP2032

ANDREA MASINO AND TERESA COUTINHO, 1 MARCH 2026

Associated Societies of ISPP are invited to present bids to host the 14<sup>th</sup> International Congress of Plant Pathology in 2032 (ICPP2032). Traditionally the ICPP is held in August. ISPP councillors are urged to consider and discuss this opportunity with their Society.

In calling for bids to host ICPP2032 the Executive recommends that bidding should be restricted to Societies that have been financial members of ISPP for at least three years. ISPP should also give consideration to giving priority in 2032 to a Society that has not previously hosted ICPP.

Attention to options for virtual attendance should also continue, both to broaden participation opportunities and strengthen the financial viability of Congresses and strengthen engagement with ISPP between Congresses.

The deadline for receipt of bids is 31 August, 2026. They should be sent to the Business Manager of ISPP, with c.c. to the Secretary ISPP, as e-mail attachments and/or Web addresses.

If a Society is considering a bid for the 14<sup>th</sup> International Congress of Plant Pathology, 2032, please read the bid and congress guidelines and requirements carefully. They can be accessed [here](#).



**Host for the 14<sup>th</sup> International Congress of Plant Pathology, 2032**

## CALL FOR BIDS

Deadline of 31 August, 2026

The International Congress of Plant Pathology (ICPP), now held every four years, is the premier international convention of plant pathology professionals.

The Congress is convened by the International Society of Plant Pathology under the guidance of the ISPP Executive and Council drawn from ISPP Associated Societies.

More information available at the website [www.isppweb.org](http://www.isppweb.org)

- 2032 - ?
- 2028 - Queensland, Australia
- 2023 - Lyon, France
- 2018 - Boston, USA
- 2013 - Beijing, China
- 2008 - Torino, Italy
- 2003 - Christchurch, New Zealand

### Andrea Masino

Business Manager, International Society for Plant Pathology

[business.manager@isppweb.org](mailto:business.manager@isppweb.org) and  
[andrea.masino@unito.it](mailto:andrea.masino@unito.it)

### Teresa Coutinho

Secretary-General, International Society for Plant Pathology

[ispp.secretary@isppweb.org](mailto:ispp.secretary@isppweb.org) and  
[teresa.coutinho@up.ac.za](mailto:teresa.coutinho@up.ac.za)

## OBITUARY OF J. I. (IAN) COOPER M.A., PH.D. 1941-2026

ROGER JONES, 30 MARCH 2026

Sadly, Ian Cooper passed away at the end of February 2026. He was a distinguished UK plant virologist with a long-standing career. He authored many publications on viruses infecting natural plant ecosystems, amenity plants and crops. Ian obtained a BSc in Botany from Newcastle University and was awarded a Botany MSc from Imperial College London University. His St. Andrews University PhD study under the supervision of Bryan Harrison was on the soilborne potato disease caused by tobacco rattle virus. This was undertaken in 1966-1969 at the Scottish Horticultural Research Institute (which later became the Scottish Crop Research Institute and then James Hutton Institute). After completing his PhD, Ian was offered a postdoctoral position working on soilborne potato viruses at this same Institute. In 1972, he joined the Unit of Invertebrate Pathology, Commonwealth Forestry Institute, Oxford University. Subsequently, this Unit evolved into the Natural Environment Research Council (NERC) Institute of Virology, then the Institute of Virology and Environmental Microbiology, and finally the UK Centre for Ecology and Hydrology (CEH). He rose to the position of Principal Scientific Officer in Oxford making major contributions to all four of these organisations, including helping maintain them as centres of excellence in virology. Following his retirement in 2002 he was appointed a CEH Fellow (2002-2010) where he continued mentoring research and supporting students and staff.



After he established his Plant Virology research group in Oxford 1972, Ian led this group successfully right through to his retirement in 2002. He made many significant contributions to the study of the viruses of trees, shrubs and natural ecosystems, and was a pioneer in identifying and characterising viruses affecting forest and amenity trees and shrubs. His research fundamentally shifted the focus of plant virology from only dealing with crops and pastures to the broader natural environment. He authored the definitive textbook "Virus Diseases of Trees and Shrubs" (1983, 2nd Edn.), which became the standard reference in this field. He also authored the important book "Viruses and the Environment" (1993, 2<sup>nd</sup> Edn.) and co-edited the book "Virus Diseases and Crop Biosecurity" (2007). Influential reviews he co-authored included "Responses of Plants to Viruses: Proposals for the Use of terms" (1983) which provided standardised definitions for terms like immunity, resistance, and tolerance, and helped bridge the nomenclature gap between virologists and plant breeders. His reviews also included "Wild Plants and Viruses: Under-Investigated Ecosystems" (2006) which, amongst other things, emphasised the role of viruses in diminishing wild plant "fitness", i.e. their ability to survive, grow, and reproduce. Another example of a critical

achievement arising from his research included moving beyond purely agricultural contexts over how viruses are transmitted through seeds, pollen, and soilborne vectors to include natural environments. He also demonstrated that viruses move in both directions between managed crops and natural vegetation. He then explored how external factors like global warming and atmospheric pollution interact with viral diseases, potentially exacerbating their effects on trees and shrubs. Later in his career, he investigated whether transgene-derived virus resistance might provide wild plants with a selective advantage, potentially increasing their weediness or invasiveness, and developed a phased approach for the environmental risk assessment of transgenic plants to identify potential hazards to the natural environment. He also undertook research exploring the broader relationship between microbial diversity and the stability of ecosystem functions.

In 1986-1993, Ian served as Honorary Programme Secretary for the UK Association of Applied Biologists. He was responsible for overseeing the planning and scientific content of the Association's many scientific meetings and symposia, liaising with its diverse specialist groups and ensuring the high standard of research presented at all its events. His work as Programme Secretary was also instrumental in the Association's successful centenary commemoration, and the continued success of its journal, the *Annals of Applied Biology*.

Ian is remembered with gratitude by the many coworkers, colleagues, PhD students and others who were lucky enough to have known him over the years. He set high standards and rigour to the research he led, and inspired others to achieve and flourish. He was both nationally and internationally respected for his many contributions to the advancement of plant virology. He was a regular contributor at scientific meetings across the world and amongst many visits to other collaborating institutions in Europe and North America, enjoyed two sabbaticals in Western Australia in the 1990's. His international contributions were always much appreciated.

Ian was also a model father fondly remembered by his family, wife Audrey and daughters, Wendy and Elaine.

## **PLANT PATHOLOGY, FARMERS AND 40 YEARS IN AG: DR. KELLY TURKINGTON'S STORY**

---

MARC ZIENKIEWICZ, SEED WORLD CANADA SENIOR EDITOR, MARCH 26, 2026

Dr. Kelly Turkington has spent more than four decades studying the diseases that shape Western Canadian crops, but ask him about his career, and he'll tell you it's really about people.

In the latest episode of the Seed World Canada podcast, Turkington — longtime plant pathologist with Agriculture and Agri-Food Canada in Lacombe, Alta. — reflects on a career that helped farmers better understand and manage crop disease, often saving them thousands of dollars.

From his early days as a University of Saskatchewan student inspired by a single plant pathology class, Turkington's story is one of curiosity, humility and connection. Along the way, he built a reputation not just as a scientist, but as someone who listens — whether to farmers, agronomists or colleagues.

In this conversation, Turkington opens up about the realities of a life in agricultural research — the importance of mentorship and the camaraderie that makes the work meaningful.

Listen to the full conversation with Dr. Kelly Turkington on the [Seed World Canada podcast](#).

## NEW STRATEGY TO BREAK RESISTANCE-YIELD TRADE-OFF IN RICE BY PATHOGEN-INDUCIBLE GENE EXPRESSION

KEAI COMMUNICATIONS CO. LTD., [EUREK ALERT](#), 6 APRIL 2026

A research team led by Dr. Xuewei Chen from Sichuan Agricultural University has developed a genetic strategy to enhance broad-spectrum disease resistance in rice without compromising plant growth and yield, a major challenge in crop breeding. The findings are published in [The Crop Journal](#).

Rice, a staple food for half of the global population, is constantly threatened by diseases such as rice blast, bacterial blight, and sheath blight. While lesion mimic mutant (LMM) genes are known to confer broad-spectrum disease resistance, their constitutive activation often triggers autoimmunity that stunts plant growth and reduces yield. Additionally, traditional resistance genes (e.g., NLRs) provide only race-specific protection that is overcome by rapidly evolving pathogens, and many defense regulators exhibit pleiotropic effects on growth.

To address these issues, the research team targeted the AAA-type ATPase gene LRD6-6, a rice LMM gene that suppresses plant immunity via the multivesicular body (MVB)-mediated vesicle trafficking pathway. They first identified a dominant-negative (DN) variant of this gene, LRD6-6E315Q, whose constitutive expression strongly enhanced resistance to multiple rice pathogens but significantly impaired agronomic trait.

The main finding was the identification of a rare pathogen-inducible promoter, MIG6P, through a genome-wide expression screen of early-stage rice-blast fungus interactions. MIG6P exhibits three properties: extremely low basal activity under normal growing conditions, rapid and specific activation within 6 hours of pathogen infection, and no induction by abiotic stresses (high temperature, drought, salt) — an advantage over previously reported inducible promoters that are either pathogen-specific or responsive to environmental stress.

The team then constructed a gene expression cassette, MIG6P:LRD6-6E315Q, by driving the DN variant LRD6-6E315Q with the MIG6P promoter, and introduced it into the rice cultivar Taipei 309 (TP309). The engineered rice lines carrying this cassette showed no abnormal growth or yield loss under pathogen-free conditions, matching the agronomic performance of wild-type TP309. When challenged by pathogens, however, MIG6P was rapidly activated, driving the expression of LRD6-6E315Q to trigger an immune response.

Further tests confirmed that the engineered rice lines exhibited enhanced broad-spectrum resistance to rice blast (caused by *Magnaporthe oryzae*), bacterial blight (*Xanthomonas oryzae* pv. *oryzae*), and sheath blight (*Rhizoctonia solani*). Notably, in natural rice blast nurseries over two consecutive years, the transgenic lines had significantly lower panicle blast rates and higher grain yields compared to wild-type TP309, effectively breaking the resistance-yield trade-off.

“Our work provides a novel approach to utilise LMM genes for crop disease resistance without yield penalties,” said first author Dr. Xiaobo Zhu. “By coupling a pathogen-specific inducible promoter with a DN LMM variant, we ensure that the immune response is only activated when needed, at the early stage of pathogen invasion, and shuts down once the pathogen threat is contained, allowing normal plant growth and maximum yield potential.”

“The MIG6P promoter is a valuable genetic tool for driving the expression of defense-related genes, and the conserved DN effect of LRD6-6 homologs means this approach can be adapted to improve disease resistance of diverse crops to different fungus and bacterial pathogens, reducing reliance on chemical pesticides and securing global food production,” adds corresponding author Dr. Xuewei Chen.

# **NEW AUSTRALIAN INITIATIVE TARGETS SOILBORNE BROADACRE DISEASES**

---

## **GRDC MEDIA RELEASE, FEBRUARY 2026**

A 5-year Grains Research and Development Corporation (GRDC) initiative has made recouping losses from soilborne diseases a high priority, with the initiative launching 5 major RD&E programs.

Soilborne diseases reduce yields across all grain crops by more than \$1.71 billion every year, although wheat bears the heaviest toll with yield losses estimated at \$1.23 billion. Management strategies rely on limited information on genetic resistance, chemical control options and crop rotation constraints. In response, GRDC has invested in the Soilborne Disease Initiative (SBDI). This is a \$34 million investment in which GRDC contributes \$20 million with the remainder contributed by research partners.

The SBDI aims to build on knowledge of integrated disease management strategies to reduce the economic impact of soil-borne diseases. To achieve that, the initiative is bringing together existing investments and expertise into a single, collaborative effort across regions and diseases.

Delivery is via a network of participating organisations:

- the NSW Department of Primary Industries and Regional Development (NSW DPIRD), led by Kurt Lindbeck and Steve Simpfendorfer
- WA DPIRD, led by Daniel Huberli
- the Department of Energy, Environment and Climate Action (DEECA), led by Josh Fanning
- the South Australian Research and Development Institute at Adelaide University, led by Blake Gontar
- the University of Southern Queensland, led by Kirsty Owen
- Curtin University, led by Adam Sparks
- the University of Queensland, led by Chris Brosnan.

Coordinating the initiative is Grant Hollaway at Astute Ag.

In addition to R&D activities, the SBDI will roll out an extension and communications network designed to assist growers and consultants with adoption and implementation. These will be delivered as part of the newly launched Disease Management Extension Network, led by AgCommunicators.

## **RESEARCH FOCUS**

Research efforts that target soil-borne diseases will operate around 5 major programs. These involve:

1. assessing the economic impact of soilborne disease
2. mapping disease presence at the paddock scale
3. developing integrated management approaches
4. trialling novel control strategies
5. ensuring effective national coordination.

## **DISEASES TARGETED**

One of the initiative's core operational strategies was the establishment of six research hubs located across Western Australia, South Australia, Victoria and Queensland, and 2 located in NSW. These hubs bring together pathologists and researchers to focus on key soil-borne diseases affecting major crops.

Among the included soilborne diseases are:

- Fusarium crown rot
- Rhizoctonia bare patch
- Sclerotinia stem rot
- nematodes
- other fungal and oomycete pathogens.

The hubs will continue work already underway and will launch new projects that combine scientific, economic and practical knowledge to help growers reduce losses and better manage disease pressure.

For example, Node 2 is led by the NSW DPIRD. This node is active across several key areas. It has a focus on Fusarium crown rot in winter cereals – a disease estimated to cost Australian growers around \$404 million annually. This node will also support and build capacity in soilborne disease research in NSW. Another focus is to build plant pathology capability within the northern region of NSW. This is considered critical in ensuring there is available expertise to respond to sporadic issues with endemic diseases. This facet also has a role to play in regional biosecurity in the event of exotic incursions.

Similarly, WA DPIRD will focus on Sclerotinia, Rhizoctonia root rot, Fusarium crown rot and root lesion nematodes.

Having completed the initial set-up phase in 2025, the SDBI will launch in 2026 and growers particularly affected by soilborne diseases are encouraged to keep an eye out for announcements and activities.

“Through this initiative, we aim to equip Australian grain growers with practical, economic and innovative soil-borne disease management strategies that reduce the financial impact of these diseases on their farming businesses,” says Sharon Starick, GRDC Board Chair and South Australian grain grower.

## PLANT DIVERSITY SUPPRESSES PESTS AND PROMOTES PLANT PERFORMANCE AND CROP PRODUCTION

A paper by Nian-Feng Wan *et al.* titled “Global evidence that plant diversity suppresses pests and promotes plant performance and crop production” was published on 20 January 2026 by *Nature Ecology and Evolution* (Vol. 10, pp. 293-307). The abstract is as follows:-

The diversity–productivity relationship suggests that increasing plant species could increase primary productivity, with this effect being explained in part by the suppression of plant antagonists. We conducted a global synthesis of 609 studies to investigate how plant diversity affects plants and their antagonists. Here we show that increasing plant species consistently promotes plant performance and suppresses antagonist performance in agro-ecosystems, grasslands and forests, for herbaceous and woody plants, across tropical and temperate zones, and for replacement series and additive experimental design studies. Crop diversification (for example, intercropping and cover cropping) indirectly promotes crop production through the suppression of pests. This shows that diversifying planting systems can increase productivity while reducing reliance on synthetic pesticides, offering a sustainable pathway for agriculture from subsistence to large-scale agriculture. Overall, these results suggest that crop diversification has considerable potential to support sustainable agro-ecosystems that benefit productivity while reducing reliance on synthetic pesticides.

[Read paper.](#)

## CROP PEST RESPONSES TO GLOBAL CHANGES IN CLIMATE AND LAND MANAGEMENT

A review by Chun-Sen Ma *et al.* titled “Crop pest responses to global changes in climate and land management” was published on 8 April 2025 by *Nature Reviews Earth and Environment* (Vol. 6, pp. 264–283). The abstract is as follows:-

The prevalence of crop insect pests, which damage crops and reduce their yield, is increasing globally owing to changes in climate and land use, posing a threat to food security. In this Review, we synthesize evidence on how tropical, temperate, migratory and soil crop pests respond to changes in climate, land use and agricultural practices. In general, crop pests are responding to warming with expanded geographic ranges, advanced phenological events and increased number of reproductive generations per year. Increased pest damage under warming is projected to exacerbate yield losses of 46%, 19% and 31% under 2 °C warming for wheat, rice and maize, respectively. Pests at mid–high latitudes respond more positively to warming than those in the tropics. Moderate drought can increase pest damage to crops owing to enhanced feeding on plants as a water source and decreased resilience of plants and natural enemies of pests. Increased precipitation reduces small pests through washing them away, but favours pests in general through buffering thermal-hydro stresses. Land use change, such as deforestation and conversion to cropland, enhances warming and reduces biodiversity, leading to enhanced crop damage. Agricultural intensification, particularly fertilization and irrigation, increases the quality and quantity of host plants and buffers pests from environmental extremes, favouring proliferation. Globalization of trade networks increases pest invasions, with associated damage exceeding US \$423 billion in 2019. Future research should examine the mechanisms underlying changes in pest status and develop monitoring and prediction systems to inform management approaches.

[Read paper.](#)

## EPIGENETIC SWITCH STRENGTHENS PLANT IMMUNITY AGAINST DOWNY MILDEW

NANJING AGRICULTURAL UNIVERSITY THE ACADEMY OF SCIENCE, [EUREK ALERT](#), 23  
JANUARY 2026

Downy mildew is a destructive disease that severely limits the yield and quality of many vegetable crops. This study uncovers a previously unknown epigenetic mechanism that enhances plant resistance to this pathogen. The research reveals that a histone deacetylase not only modifies chromatin but also directly targets a nonhistone protein involved in hormone metabolism. By reducing the acetylation level of a sulfotransferase enzyme, the pathway boosts salicylic acid accumulation during infection, thereby strengthening immune responses. These findings highlight how epigenetic regulation extends beyond gene transcription to fine-tune enzyme activity and hormone signaling, providing a new molecular framework for understanding disease resistance in plants.

Downy mildew is a major constraint on *Brassica* crop production worldwide, especially during early developmental stages when plants are highly vulnerable to infection. Effective plant immunity relies on tightly regulated defense signaling networks, among which salicylic acid plays a central role in resistance to biotrophic pathogens. Epigenetic regulators such as histone deacetylases are known to influence plant stress responses by altering chromatin structure and gene expression. However, most previous studies have focused on histone modification, leaving the role of nonhistone protein deacetylation largely unexplored in plant–pathogen interactions. These gaps highlight the need for deeper investigation into unconventional epigenetic mechanisms that fine-tune plant immune responses.

Researchers from the Beijing Academy of Agriculture and Forestry Science and collaborating institutions report new insights into plant immune regulation in a study published in [Horticulture Research](#). By combining genetic, biochemical, and multi-omics approaches, the team investigated how epigenetic regulators influence resistance to downy mildew in *Brassica rapa*. The study identifies BrHDA6 as a positive regulator of disease resistance and demonstrates that it enhances immunity by modifying a key enzyme in salicylic acid metabolism rather than acting solely through chromatin remodeling.

The study first showed that chemical inhibition of histone deacetylases increased susceptibility to downy mildew, indicating that deacetylation is essential for basal resistance. Transcriptome profiling of resistant and susceptible lines then identified BrHDA6 as a candidate gene strongly associated with disease resistance. Functional analyses using transgenic plants confirmed that overexpression of BrHDA6 enhanced resistance, while gene silencing led to severe disease symptoms.

Beyond histone regulation, the researchers discovered that BrHDA6 directly interacts with the sulfotransferase BrSOT12. Proteomic and acetylome analyses revealed that BrHDA6 reduces the acetylation level of BrSOT12, particularly at a key lysine residue. This deacetylation is associated with increased sulfotransferase activity, which in turn promotes early accumulation of salicylic acid following pathogen infection. Elevated salicylic acid levels were accompanied by rapid activation of defense-related genes, reinforcing immune responses.



Together, these results define a previously unrecognised epigenetic pathway in which a histone deacetylase regulates plant immunity through nonhistone protein modification, linking epigenetic control directly to hormone-mediated defense signaling.

“This work changes how we think about epigenetic regulation in plant immunity,” said the study's senior author. “Instead of acting only at the level of chromatin, BrHDA6 directly modifies a metabolic enzyme that controls salicylic acid signaling. This dual role allows plants to respond rapidly and precisely to pathogen attack. Understanding such mechanisms opens new opportunities to improve disease resistance without compromising growth, which is a long-standing challenge in crop breeding.”

The identification of the BrHDA6–BrSOT12 regulatory module provides a promising molecular target for breeding disease-resistant *Brassica* crops. By enhancing salicylic acid-mediated immunity through epigenetic fine-tuning rather than broad transcriptional changes, this pathway may allow more durable resistance with fewer trade-offs in plant development. The findings also suggest that nonhistone deacetylation is an underexplored layer of immune regulation in plants. Beyond *Brassica*, similar mechanisms may operate in other crops, offering new strategies for improving resilience against pathogens in sustainable agriculture.

## **THE 2022 FUSARIUM HEAD BLIGHT OUTBREAK IN ETHIOPIA: EMERGING PATHOGENS, MIXED MYCOTOXINS, AND INTERSPECIES INTERACTIONS**

A paper by Liza M. DeGenring *et al.* titled “The 2022 Fusarium Head Blight Outbreak in Ethiopia: Emerging pathogens, mixed mycotoxins, and interspecies interactions” was published on 5 March 2026 by *Plant Disease* (Vol. 110, No. 3, pp. 890-902). The abstract is as follows:-

As Ethiopia pushes toward self-sufficiency in wheat production, it has escaped large outbreaks of Fusarium head blight (FHB), a disease that threatens wheat production globally. However, in 2022, FHB incidences in Ethiopia rose to 80%, with some areas experiencing 100% disease severity. Here we provide insights into the etiology of this disease outbreak and point toward future directions to mitigate the emerging threat of FHB on a global scale. Although most wheat samples from 2022 exhibited low trichothecene levels, 26% exceeded recommended thresholds and several contained multiple trichothecene variants. We obtained 64 isolates from the outbreak and identified diverse members of the *Fusarium graminearum* species complex (FGSC) and many *Epicoccum* species. The FGSC species contributing to the outbreak are rare on a global scale. Genomic analyses reveal that *Fusarium aethiopicum* has persisted in Ethiopia for decades and shares ancient ancestry with a newly emerged novel species in the FGSC that we formally described as *Fusarium kistleri*. Single-nucleotide polymorphism-based analyses suggest high clonal fraction among FGSC isolates in Ethiopia, raising questions about a recent population expansion. Our findings reveal that although *Epicoccum* alone causes minimal disease on wheat, its presence can have a small but synergistic impact on disease symptoms when *F. graminearum* has already infected. The unique diversity and species composition of the 2022 Ethiopian outbreak underscores the importance of addressing emerging threats in a globalized agricultural economy to secure food safety, food security, and global food equity.

[Read paper.](#)

## ***CURRENT VACANCIES***

---

There are no current vacancies.

## ***ACKNOWLEDGEMENTS***

---

Thanks to Grahame Jackson, Greg Johnson, and Roger Jones for contributions.

## COMING EVENTS

### **21<sup>st</sup> Reinhardsbrunn Symposium 2026 – Modern Fungicides and Antifungal Compounds**

19 April – 23 April, 2026

Friedrichroda, Germany

Website: <https://reinhardsbrunn-symposium.de/de/>

### **VIII International Symposium on Postharvest Pathology**

18 May – 22 May, 2026

Ullensvang, Norway

Website:

<https://nibio.pameldingssystem.no/isphpp2026#/contact-2228>

### **36<sup>th</sup> Symposium of the European Society of Nematologists**

1 June – 5 June, 2026

Egmond aan Zee, The Netherlands

Website: [www.esn2026.nl/home](http://www.esn2026.nl/home)

### **25<sup>th</sup> Annual Fusarium Laboratory Workshop**

21 June – 26 June, 2026

Manhattan, Kansas, USA

Contact: John Leslie [jfl@ksu.edu](mailto:jfl@ksu.edu)

### **Plant Health 2026**

1 August – 4 August, 2026

Providence, Rhode Island, USA

Website:

[www.apsnet.org/meetings/annual/PH2026/Pages/default.aspx](http://www.apsnet.org/meetings/annual/PH2026/Pages/default.aspx)

### **Plant Pathology 2026**

8 September – 10 September, 2026

John Innes Centre Conference Centre, Norwich, UK

Website: Not yet available

### **13<sup>th</sup> Australasian Soilborne Diseases Symposium**

14 September – 18 September, 2026

Melbourne, Australia

Website: [www.asds-apps.com](http://www.asds-apps.com)

### **20<sup>th</sup> IOBC – WPRS Working Group meeting on: “Integrated Control in Oilseed Crops”**

29 September – 1 October, 2026

Swedish University of Agricultural Sciences (SLU),

Campus Alnarp, Lomma, Sweden

Website: [www.slu.se/ICOC20](http://www.slu.se/ICOC20)

### **7<sup>th</sup> International Symposium on Fusarium Head Blight**

5 October – 8 October, 2026

Department of Agricultural, Food and Environmental

Sciences, University of Perugia

Perugia, Italy

Website: [www.7isfhb.org](http://www.7isfhb.org)

### **International Phytobiomes Conference 2026**

3 November – 5 November, 2026

Niagara-on-the-Lake, Ontario, Canada

Website: <https://phytobiomesconference.org/>

### **XXI International Plant Protection Congress (IPPC) 2027 in conjunction with 26<sup>th</sup> Australasian Plant Pathology Conference (APPC)**

1 November – 5 November, 2027

Te Pae Christchurch Convention Centre, Christchurch, New Zealand

Website: [www.ippc2027.com](http://www.ippc2027.com)

### **13<sup>th</sup> International Congress of Plant Pathology 2028**

19 August – 25 August, 2028

Gold Coast, Queensland, Australia

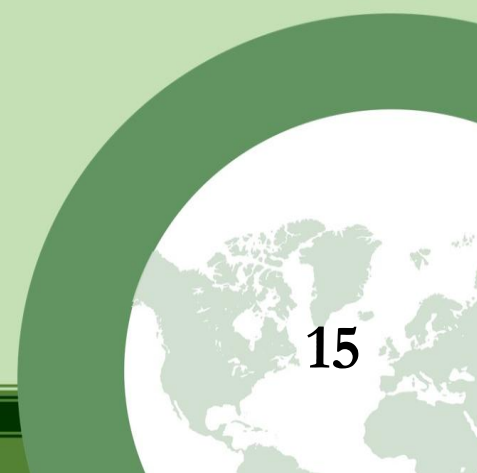
Website: [www.icpp2028.org](http://www.icpp2028.org)



# ICPP 2028

13th  
International  
Congress of  
Plant Pathology

19-25 August, Gold Coast Convention & Exhibition Centre, Queensland, Australia



## 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**

