

IS-MPMI Reporter

Issue No. 1, 2014

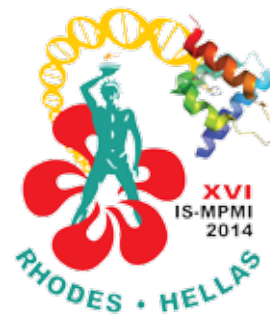
International Society for
Molecular Plant-Microbe Interactions

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Speakers and Chairs Announced for XVI International Congress on MPMI

The Programming Committee for the XVI International Congress on Molecular Plant-Microbe Interactions is proud to announce the speakers for this year's congress, to be held in Rhodes, Greece, July 6–10. This impressive list of scientists will speak on a variety of topics and includes our opening lecturer **Fred Ausubel**, professor of genetics at Harvard Medical School and molecular biologist at Massachusetts General Hospital in Cambridge, Massachusetts, U.S.A. Turn to page 4 to find presentation titles and speaker photos. ■



Welcoming New Changes to IS-MPMI's Online Presence in 2014



Brad Day, IS-MPMI Reporter, *Editor-in-Chief*,
Michigan State University, bday@msu.edu

Happy 2014! I hope your New Year is off to a prosperous start and that the year ahead brings much success!

Over the past several weeks, members of the IS-MPMI Board, including our support system in St. Paul, Minnesota, have been discussing strategies to enhance our outreach and, effectively, our ability to reach members faster. At IS-MPMI, we recognize that most, if not all, of us receive and transmit information using hand-held devices and, moreover, that we rely on our ability to connect to the world around us to receive information quickly.

As a first step in this process, we are working with our staff website design team to integrate our society's journal, *MPMI*, *IS-MPMI Reporter*, and other components of our society into a central web presence. Over the coming months, we will begin to roll out various new features surrounding our social media presence, beginning with additional *IS-MPMI Reporter* content. Among this content, one feature that we are particularly excited about is our plan to use Twitter to announce new publications in *MPMI*, transforming the popular First Look feature to a near real-time dissemination of articles as they become available. Finally, in the second half of the year, you will see an updated and fresh look on our website. As a primer to this, we have recently revamped our IS-MPMI Job Center, integrating postings from around the web for our members through a centralized portal.

Stay tuned for more exciting updates from IS-MPMI and *IS-MPMI Reporter*. If you have suggestions, Tweet them to us...we'll start the New Year and new conversations online...for the world to join in and comment. ■



Recent Tweets

- MPMI Focus Issue is now online - Translational Research <http://apsjournals.apsnet.org/toc/mpmi/27/3>
- Discovery opens up new areas of microbiology, evolutionary biology | Virginia Tech News | Virginia Tech <http://bit.ly/1jSZMXf>
- Jumping Hosts | The Scientist Magazine® <http://shar.es/Qksn7> via @sharethis
- View from my office. Obama on campus to sign farm bill. MSU plant science #bigdeal pic.twitter.com/74JJGHobUA
- Get involved with IS-MPMI - provide content for the Reporter: <http://bit.ly/MqboSX> or MPMI: <http://bit.ly/1bjQgnN> !

Check out
Twitter.com/ISMPMI
for the latest updates!

IS-MPMI Reporter

Editor-in-Chief: Brad Day
Managing Editor: Michelle Bjerkness
Editor: Lauren McGinty
Design: Joel Berg

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IS-MPMI REPORTER DEADLINE

The deadline for submitting items for the next issue is May 9, 2014.

Share your news, accomplishments, and upcoming meeting details with your colleagues. Submit articles, announcements, and any ideas you may have for the next issue. You can send an e-mail (ismpmireportereditor@scisoc.org) or submit your item online (www.ismpminet.org/newsletter/submissionform.asp).

Send items to:

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A Letter from the President



Sophien Kamoun,
President

Gained in Translation

Sophien Kamoun, The Sainsbury Laboratory
sophien.kamoun@tsl.ac.uk

Interactions with the biota are critical to plant life. In nature, every plant is closely associated with a diversity of organisms. How these mutualistic and parasitic organisms interact with plants is the central question addressed by our community. It has proved to be an extremely productive theme to investigate. Plant-microbe interactions are a remarkable source of biological innovation, and their study has yielded far-reaching discoveries in plant biology and beyond. Our community has contributed to advancing the knowledge of hormones, development, receptors, epigenetics, and much more. Recently, the TALEN technology, which stemmed from basic studies of the bacterial plant pathogen *Xanthomonas*, has emerged as a novel genome-editing method with applications in biotechnology and human therapeutics.

Despite these undeniable successes of the plant-microbe interactions community, most of the research remains confined to the laboratory and has yet to reach the farm. Only a few among us can point to a crop grown on a farm and claim that the gene, technology, or concept underpinning the variety or agricultural system has originated from their lab. However, there is a sense that the tide is about to turn. Our understanding of plant-microbe interactions has matured and coalesced around robust principles. Technological developments, from marker-assisted and genomics-enabled crop breeding to genome editing, are ushering in a new era of plant breeding. This renewed sense of excitement about the applications of our science is encapsulated in the March 2014 *Molecular Plant-Microbe Interactions (MPMI)* Focus Issue on Translational Research. The issue highlights how fundamental research on plant-microbe interactions is producing a variety of novel and promising applications. I am grateful to Guest Editors **John M. McDowell**, **John Carr**, and **Matteo Lorito** for their efforts and for raising awareness about this important topic. Many thanks also to Editor-in-Chief **Jane Glazebrook** and the *MPMI* Editorial Board for spearheading the effort. You can find out more about Glazebrook's perspective on the topic in a Q&A published in this issue of *IS-MPMI Reporter*.

As Nobel prize winner **Barry Marshall** once said, he did not set out to cure ulcer by studying *Helicobacter pilori*. "You don't know where you'll end up. You don't know what you'll cure..." he quipped. Indeed, in science, we often set out to discover something only to end up solving a different problem. But the opposite holds true too. I hope some of you will be inspired by the *MPMI* Focus Issue to engage in projects with more applied goals or seek collaborators who do so. Who knows what such activities might lead you to? They might end up impacting an important real world issue, or they could enrich your basic knowledge of the system under study. More often than not, such a project would uncover a gap in our knowledge and lead to more research questions.

Surely, we should continue to probe mechanisms and pathways of plant-microbe interactions, but our community needs to engage in a broader spectrum of activities. We have much to offer to help address the issue of food security for the world's growing population. ■

MPMI Survey Results Coming Soon

Thank you to all IS-MPMI members who participated in the *Molecular Plant-Microbe Interactions* journal satisfaction survey. Nearly 25% of the IS-MPMI members responded to the survey. IS-MPMI values your opinions, since they will help guide improvements to *MPMI*. Watch for a report of the survey results from *MPMI* Editor-in-Chief **Jane Glazebrook** in the next issue of *IS-MPMI Reporter*. ■

Q&A on *MPMI*: All About the March 2014 Special Focus Issue

Molecular Plant-Microbe Interactions Editor-in-Chief **Jane Glazebrook** and guest editors **J. P. Carr**, **Matteo Lorito**, and **John McDowell** were recently interviewed about the March 2014 Translational Research issue of *MPMI*. Readers can view it at apsjournals.apsnet.org/toc/mpmi/27/3.

Q: How did the idea for this issue come about?

A: Our mechanistic understanding of plant interactions with pathogenic and beneficial microorganisms as well as with invertebrate pests has been transformed over the last two decades by the insights provided by molecular genetic and cell biology approaches. Indeed, several key discoveries resulting from studies in molecular plant-microbe interactions—notably the elucidation of small RNA-regulated gene expression networks and the utilization of TAL effectors for genome editing—have had transformative effects on many areas of biology and the biomedical sciences. This knowledge has been obtained mainly from model systems among which *Arabidopsis*, *Medicago truncatula*, and *Nicotiana benthamiana* are prominent. The need to translate molecular-level knowledge from models to the improvement of crops is imperative; human populations are projected to increase for several more decades and new pathogens continue to evolve rapidly. The need is particularly strong in developing countries within which food security remains precarious. This is increasingly recognized by governments and other players, as exhibited by the establishment of focused programs, such as the NSF BREAD program in the United States and the SCPRID program in the United Kingdom, as well as by the efforts of organizations such as the Gates Foundation. As the leading journal in molecular and cellular studies of plant interactions with other organisms, we wanted to focus on this important but still nascent area to highlight a selection of current advances as well as to promote interest and encourage further efforts in translational research.

Q: John McDowell, John Carr, and Matteo Lorito are guest editors for this issue. Why did you choose them?

A: The guest editors are all senior editors of *MPMI*. John Carr initiated the idea at a meeting of the *MPMI* Editorial Board in December 2012. Matteo Lorito and John McDowell



Jane Glazebrook



John Carr



Matteo Lorito



John McDowell

were also very enthusiastic about the concept and agreed to help as coeditors. The expertise of these scientists made them well qualified to undertake this task. John Carr is one of our experts on plant virology, a field that includes a lot of scientists studying viruses which are threats to agriculture, as well as model systems. Matteo Lorito is an expert in the use of biotechnology to address problems in plant-microbe interactions. John McDowell is our expert on oomycete pathogens and is involved in a translational project aimed at oomycete diseases of soybean.

Q: What are just a couple of the ways the translational research featured in this issue can be applied?

A: Results from ongoing translational research on molecular mechanisms of plant-microbe interactions are likely to be applied mainly to i) genetic improvement of crops in the areas of pathogen detection, inhibition of attacking microbes, or reduction of susceptibility to pathogenicity factors; ii) inhibition of pathogen activity using biological agents such as beneficial microbes, bioactive compounds, or factors that reduce virulence in the pathogen population; and iii) promotion of plant vigor and soil fertility, thus boosting agronomic yield and nutritional quality while reducing the use of synthetic chemicals.

Q: What are just a couple of this Focus Issue's more significant articles, and why are they significant?

A: The review by **Vleeshouwers** and **Oliver** illustrates the use of pathogen effectors as tools for resistance breeding. This is a new and exciting approach that can, in principle, be applied to any disease problem caused by a pathogen or pest that secretes effectors. It is also satisfying to turn a pathogen's most effective weapons against it! The research paper from **Stirnweis** and colleagues is an excellent demonstration that, after two decades of studying the function of plant proteins that specifically recognize pathogens, it is now possible to engineer these proteins to expand the range of pathogen proteins that can be recognized.

Q: Why should individuals read this special issue on translational research?

A: There is a perception that it is extremely difficult to apply advances in molecular-level understanding of plant-microbe interactions to real-world problems. Reading this issue should convince people that real progress is being made. It will also give people a sense of the current themes in translational research and some strategies that have proven effective. Hopefully, scientists reading this issue will be inspired to develop their own translational research projects in plant-microbe interactions. *MPMI* will be glad to publish additional research reports in this area. ■

Encourage
Your Colleagues
to Join
IS-MPMI

There has never been a better time to encourage your colleagues to join IS-MPMI! Members receive opportunities to network with colleagues and keep up-to-date with the latest science at the biennial International Congress on MPMI. Members also stay abreast of society news through *IS-MPMI Reporter* and stay connected with peers through social media.

Tell your colleagues why you are a member of IS-MPMI, and share your society with them today at www.ismpmi.org/members/join.asp!



XVI International Congress on MPMI Plenary Session Chairs/Speakers



Nondas Paplomatas

(Agricultural University of Athens, Athens, Greece)
Molecular insights of the interaction of fungal vascular wilt pathogens with the host plant



Bart Thomma

(University of Wageningen, Wageningen, The Netherlands)
Biological functions of fungal effectors in suppression of plant immunity



Libo Shan

(Texas A&M University, College Station, TX, U.S.A.)
Modulation of PTI signaling by phosphorylation and ubiquitination



Jean-François Laliberté

(INRS, Québec, Canada)
Symplasmic and vascular movement of *Turnip mosaic virus*



Wenbo Ma

(University of California-Riverside, Riverside, CA, U.S.A.)
Phytophthora effectors promote infection by suppressing RNA silencing



Melissa Goellner Mitchum

(University of Missouri, Columbia, MO, U.S.A.)
Signaling in plant-nematode interactions



Ioannis (Yiannis) Stergiopoulos

(University of California-Davis, Davis, CA, U.S.A.)
Biochemical and structural analysis of fungal core effector proteins



Natalia Requena

(Karlsruhe Institute of Technology [KIT], Karlsruhe, Germany)
Fungal words in the arbuscular mycorrhizal (AM) symbiotic dialogue



Antonis Rokas

(Vanderbilt University, Nashville, TN, U.S.A.)
The evolution of fungal chemodiversity



Hailing Jin

(University of California-Riverside, Riverside, CA, U.S.A.)
Fungal small RNAs act as effectors to suppress plant immunity by hijacking host RNAi machinery



Jonathan D. G. Jones

(Sainsbury Laboratory, Norwich, U.K.)
How the RPS4/RRS1 TIR-NB-LRR/TIR-NB-LRR-WRKY protein complex recognizes effectors AvrRps4 and PopP2, and then activates defence



Silke Robatzek

(Sainsbury Laboratory, Norwich, U.K.)
Looking inside cells: Connecting membrane trafficking and immunity



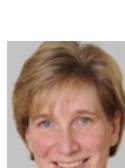
Andrew Bent

(University of Wisconsin, Madison, WI, U.S.A.)
Cyst nematode resistance: A major plant disease resistance trait operates via novel mechanisms



Detlef Weigel

(Max Planck Institute, Tübingen, Germany)
Insights into the plant immune system from the study of autoimmunity in hybrids



Tina Romeis

(Free University of Berlin, Berlin, Germany)
CDPK signaling in plant immune responses



Cyril Zipfel

(Sainsbury Laboratory, Norwich, U.K.)
Early surface immune signalling



Jeff Dangl

(University of North Carolina, Chapel Hill, NC, U.S.A.)
The plant immune system and root microbiome



Julia Vorholt

(ETH Zürich, Zürich, Switzerland)
The phyllosphere microbiome: Responses to and impacts on plants

**Dingzhong Tang**

(Institute of Genetics and Developmental Biology, Beijing, China)
The role of exocyst in plant immunity

**Gary Stacey**

(University of Missouri, Columbia, MO, U.S.A.)
Elucidation of novel signaling pathways that mediate plant-pathogen and plant-symbiont interactions

**Georg Felix**

(University of Tübingen, Tübingen, Germany)
Ligand-specificity of plant pattern recognition receptors

**Roger Innes**

(University of Indiana, Bloomington, IN, U.S.A.)
Regulation of endomembrane trafficking following activation of plant defense responses

**Francis Martin**

(INRA Nancy, Champenoux, France)
Exploring the diversity of mycorrhizal symbiosis molecular toolboxes throughout the fungal tree of life

**Brian J. Staskawicz**

(University of California-Berkeley, Berkeley, CA, U.S.A.)
Role of pathogen effectors in plant innate immunity: Recognition and induced susceptibility

**Nick Panopoulos**

(Institute of Molecular Biology and Biotechnology [IMBB], Crete, Greece)
Phyto-bacterial effectors—Yet more effects

**Mary Beth Mudgett**

(University of Stanford, Stanford, CA, U.S.A.)
Xanthomonas core effectors: Host targets and immune signaling

**Seogchan Kang**

(Penn State University, University Park, PA, U.S.A.)
Microbial volatile organic compounds: Ancient signals that mediate inter- and intra-kingdom communications

**Erh-Min Lai**

(Institute of Plant and Microbial Biology [IPMB], Taipei, Taiwan)
Type VI secretion system in *Agrobacterium tumefaciens*: Mechanisms and biology

**Peter Waterhouse**

(The University of Sydney, Sydney, Australia)
Nicotiana benthamiana—Inbred lab rat or elegant survivor?

**Valerie Geffroy**

(IBP, INRA, Université Paris Sud, Orsay Cedex, France)
Subtelomeric disease resistance gene clusters in common bean

**David Baulcombe**

(University of Cambridge, Cambridge, U.K.)
Transgenerational epigenetic effects in plants—New mechanisms

**Xinnian Dong**

(Duke University, Durham, NC, U.S.A.)
Dynamic regulation of plant immune response

Concurrent Session Chairs

1. Microbial Pathogenesis

**James R. Alfano**

(University of Nebraska, Lincoln, NE, U.S.A.)
Pseudomonas syringae type III effectors, their targets, and suppression of plant immunity

**Jian-Min Zhou**

(Center for Genome Biology, Beijing, China)
Stomatal movement as a battleground for *Arabidopsis*-*Pseudomonas syringae* interaction

2. Cell Biology

**Patrick Schäfer**

(University of Warwick, Wellesbourne, U.K.)
Root colonisation patterns of the mutualist *Piriformospora indica*

**Savithamma Dinesh-Kumar**

(University of California-Davis Genome Center, Davis, CA, U.S.A.)
Inter-organellar communication during plant immunity

Concurrent session chairs continued on page 6

3. Evolution and Ecology



Jean-Michel Ane
(University of Wisconsin, Madison, WI, U.S.A.)
Evolution and engineering of signaling pathways controlling plant-microbe symbioses



Ricardo Flores
(Instituto de Biología Molecular y Celular de Plantas Campus Universidad Politécnica, CPI, Valencia, Spain)
Evolution in time and space of pathogenic and non-pathogenic variants of a chloroplast-replicating viroid

4. Effector Biology



Jean Greenberg
(University of Chicago, Chicago, IL, U.S.A.)
Can't we just work together? Lessons from effectoromics



Sophien Kamoun
(Sainsbury Laboratory, Norwich, U.K.)
Effector biology in plant-oomycete pathosystems

5. Large-Scale (Omics) Approaches



Michael Udvardi
(Samuel Roberts Noble Foundation, Ardmore, OK, U.S.A.)
Fast forward and reverse genetics of *Medicago* genes involved in symbiotic nitrogen fixation



Ryohei Terauchi
(Iwate Biotechnology Research Centre Narita, Kitakami, Japan)
Whole genome analysis of rice-*Magnaporthe* interactions

6. Epigenetics



Lionel Navarro
(Institut de Biologie de l'Ecole Normale Supérieure [IBENS], Paris, France)
Small RNA-directed epigenetic control of the plant innate immune response



Jurriaan Ton
(University of Sheffield, Sheffield, U.K.)
Primed plants do not forget

7. Local/Systemic Resistance



Jurgen Zeier
(Heinrich Heine University, Düsseldorf, Germany)
Amino acid metabolism in inducible plant resistance: Picecolic acid mediates systemic acquired resistance and defense priming



Dan Klessig
(Boyce Thompson Institute, Ithaca, NY, U.S.A.)
The CRT1 subfamily of the MORC superfamily participates in multiple levels of immunity against a broad spectrum of pathogens in both dicots and monocots

8. Diagnostics



María M. López
(IVIA, Valencia, Spain)
Challenges of the diagnostics of plant-pathogenic bacteria in the omics era



Rick Mumford
(Food and Environment Research Agency [FERA], York, U.K.)
Next-generation plant diagnostics: Advances in laboratory and field testing for pests and pathogens

9. Toxins



Richard Oliver
(Curtin University, Perth, Australia)
Discovery and exploitation of effectors from necrotrophic Pleosporales pathogens



Renier A. L. van der Hoorn
(Max Planck Institute for Plant Breeding, Köln, Germany)

10. Neglected Systems



Saskia A. Hogenhout
(John Innes Centre, Norwich, U.K.)
Insect vectors and vector-borne disease agents of plants—The surprising dynamics of interactions among three unrelated organisms



Barbara Howlett
(The University of Melbourne, Australia)
Noticed and neglected fungal diseases of *Brassica napus* (canola)

11. Plant Immunity



Doil Choi
(Seoul National University, Korea)



Jeffrey G. Ellis
(CSIRO Australia)
Flax and wheat stem rust effectors studies

12. Plant Microbiome



Paul Schulze-Lefert
(Max Planck Institute for Plant Breeding Research, Köln, Germany)
From structure to functions of the *Arabidopsis* root microbiota



Gerald A. Tuskan
(Oak Ridge National Laboratory, Oak Ridge, TN, U.S.A.)
Dissecting the *Populus* microbiome

13. Plant Hormones



Corne Pieterse
(Utrecht University, Utrecht, The Netherlands)
Hormonal modulation of plant immunity



Jean-Pierre Metraux
(University of Fribourg, Fribourg, Switzerland)
Sensing by the plant surface

14. Programmed Cell Death



Morten Petersen
(University of Copenhagen, Copenhagen, Denmark)
What negative regulators of cell death do



Frank Van Breusegem
(VIB Department of Plant Systems Biology UGent, Gent, Belgium)
Arabidopsis metacaspase degradomics

15. Recognition of Microbes I



Guo-Liang Wang
(The Ohio State University, Columbus, OH, U.S.A.)
Molecular dissection of rice immunity to *Magnaporthe oryzae*



Bostjan Kobe
(The University of Queensland, Brisbane, Australia)
Structural basis of TIR domain function in R protein signaling

16. Secondary Metabolism



Pierre de Wit
(Wageningen University, Wageningen, The Netherlands)
Various roles for secondary metabolism genes and their products in biotrophic and necrotrophic fungal plant pathogens



Nicole Clay
(Yale University, New Haven, CT, U.S.A.)
Conservation and diversity of MAMP-induced indole and phenylpropanoid genes and metabolites

17. Signaling



Giulia De Lorenzo
(Sapienza Università di Roma, Roma, Italy)
Signaling by cell wall-derived damage-associated molecular patterns (DAMPs)



Makoto Hayashi
(National Institute of Agrobiological Sciences, Ibaraki, Japan)
Transcriptional activator NIN controls nodule organogenesis

18. Biocontrol



Matteo Lorito
(Università di Napoli "Federico II", Portici Napoli, Italy)
Disease biocontrol agents are moving from niche to full-scale applications: Are we technologically ready?



Joyce Loper
(Oregon State University, Corvallis, OR, U.S.A.)
Genomics-guided discovery of factors mediating bacterial-fungal interactions

19. Commonalities Path/Symbionts



Simona Radutoiu
(Aarhus University, Aarhus, Denmark)
Perception and accommodation of microbes:
Insights from the model legume *Lotus japonicus*



Ton Bisseling
(Wageningen University, Wageningen,
The Netherlands)
Intracellular infection, from symbiont to pathogens

20. Apoplastic Defenses



Darrell Desveaux
(University of Toronto, Toronto, Ontario, Canada)
Type III effectors and the plant immune response



Gunther Doehlemann
(Max Planck Institute for Terrestrial Microbiology,
Marburg, Germany)
Suppression of host immunity by *Ustilago maydis*

21. Biotechnology—Breakthrough Techs



Karin Posthuma
(Utrecht University, Utrecht, The Netherlands)
Molecular plant pathogen knowledge as a plant
breeding tool



Richard Michelmore
(The Genome Center, Genome and Biomedical
Sciences Facility, University of California, Davis,
CA, U.S.A.)
Comparative genomics of downy mildews and
strategies for durable disease resistance

22. Symbiosis



Giles Oldroyd
(John Innes Centre, Norwich, U.K.)
Discriminating between mycorrhizal fungi and
rhizobial bacteria during symbiosis signalling



Rene Geurts
(Wageningen University, Wageningen,
The Netherlands)
Parasponia provides a genetic blueprint for
rhizobium symbiosis

23. Recognition of Microbes II



Frank L. W. Takken
(University of Amsterdam, Amsterdam,
The Netherlands)
The tomato-*Fusarium* pathosystem: A game of hide
and seek



Dennis Halterman
(USDA/ARS, Madison, WI, U.S.A.)
Molecular determinants of late blight resistance
mediated by the gene RB

24. Novel Approaches to Disease Control



Mick Ayliffe
(CSIRO, Australia)
Nonhost resistance as a potential source of wheat
rust disease resistance



Sheng Yang He
(Michigan State University, East Lansing, MI,
U.S.A.)
Bacterial pathogenesis: Insights from a model
system and practical implications

25. Induced Resistance/Priming (in memory of Joseph Kuc)



Uwe Conrath
(RWTH Aachen University, Aachen, Germany)
Epigenetics of defense priming



Eris Tjamos
(Agricultural University of Athens, Athens, Greece)
Novel surfactants in priming of plant innate
immunity ■

Remember to Register for the XVI International Congress on MPMI

Early bird registration rates end
31 March, and low registration rates
are 1 April to 31 May.

Register today at
www.triaenatours.gr/ismpmi.php



Welcome New Members

We have had 79 people join IS-MPMI between October 1, 2013, and January 31, 2014.
Please join us in welcoming them to the society!

Islam A. Abd El-Daim
Swedish University of Agriculture
Sciences (SLU)

Yana Aizenberg-Gershtein
University of Haifa

Elleuch Amine
Faculty of Science

Andrew D. Armitage
East Malling Research

Susann Auer
Technische University Dresden

Lesly Augustine
Rajiv Gandhi Centre for
Biotechnology

Kyaw Aung
Michigan State University

Raquel Azevedo
University of Copenhagen

Con Baker
USDA

Laura K. Boyden
University of the West of England

Susan Breen
The Australian National University

Helen C. Brewer
Rothamsted Research

Alyssa K. Burkhardt
Michigan State University

Eloy Caballo Ponce
University of Malaga

Ruth Campe
RWTH Aachen University

Kylie Chambers
University of Melbourne

Viswanathan Chandran
Karpagam University

Xi Chen

Eui-Hwan Chung
University of North Carolina

Yigal Cohen
Bar-Ilan University

Carola De La Torre Cuba
University of Missouri

Pierre-Marc Delaux
University of Wisconsin

Mark C. Derbyshire
Rothamsted Research

Lida Derevnina
University of California

C. Sylvestre Gerbert Dossa
International Rice Research Institute

Claire L. Drurey
John Innes Centre

Sebastian Eves-van den Akker
University of Leeds

Lesley Ann Foster
Warwick University

Artemis Giannakopoulou
The Sainsbury Laboratory

Juliana Gil-Loaiza
University of Arizona

Anil Madhusoodana
Girija Centre for Cellular &
Molecular Biology

Chooi Hua Goh
The Australian National University

Celia Guiu Aragones
Center for Research in Agricultural
Genomics

Wei Yih Hee
The Australian National University

Mariana Herrera Corzo
University Nacional de Colombia

Michelle Holtappels
Hasselt University

Grace Anna Hoysted
University of Leeds

Thais Huaranca Reyes
Hokkaido University

Michelle Hulin
East Malling Research

Lin Jin
The Ohio State University

Mohammad Haneef Khan
Defiance Research Laboratory

Christine Maria Kraus
Cornell University

Joanna Helena Kud
University of Idaho

Jillian M. Lang
Colorado State University

Ningxiao Li
Pennsylvania State University

Xiaokun Liu
ZMBP

Lay-Sun Ma

Ka-Wai Ma
University of California

Chidambareswaren Mahadevan
Rajiv Gandhi Centre for
Biotechnology

Sheri McClerklin
Washington University

Muhammad Asyraf Md Hatta
The Sainsbury Laboratory

Mukesh K. Meghvansi
Defiance Research Laboratory

Inga Miliute Lithuanian
Research Center for Agriculture &
Forestry

Ilaria Moscetti
University of Tuscia

Stephen L. Mosher
University of Wisconsin

Jason B. Noon
Iowa State University

Helen G. Pennington
Imperial College London

Sambasivam Periyannan
CSIRO

Stefano Pessina
Fondazione Edmund Mach

Amey G. Redkar
Max Planck Institute for Terrestrial
Microbiology

Mitja NP Remus-Emsermann
ETH Zurich

Thomas R. Rey
Sainsbury Laboratory Cambridge
University

Philippe Reymond
University of Lausanne

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November 2013, Volume 26, Number 11

Specific In Planta Recognition of Two GKLR Proteins of the Downy Mildew *Bremia lactucae* Revealed in a Large Effector Screen in Lettuce.

The Immunity Regulator *BAK1* Contributes to Resistance Against Diverse RNA Viruses.

Functional Diversification of Cerato-Platanins in *Moniliophthora perniciosa* as Seen by Differential Expression and Protein Function Specialization.

A Nonribosomal Peptide Synthase Containing a Stand-Alone Condensation Domain Is Essential for Phytotoxin Zeamine Biosynthesis.

Arabidopsis YELLOW STRIPE-LIKE7 (YSL7) and YSL8 Transporters Mediate Uptake of *Pseudomonas* Virulence Factor Syringolin A into Plant Cells.

The Cpc1 Regulator of the Cross-Pathway Control of Amino Acid Biosynthesis Is Required for Pathogenicity of the Vascular Pathogen *Verticillium longisporum*.

Proteomics Analysis of *Psychotria* Leaf Nodule Symbiosis: Improved Genome Annotation and Metabolic Predictions.

Fine Tuning of Reactive Oxygen Species Homeostasis Regulates Primed Immune Responses in *Arabidopsis*.

Global Aspects of pacC Regulation of Pathogenicity Genes in *Colletotrichum gloeosporioides* as Revealed by Transcriptome Analysis.

Biological Activity of the *tzs* Gene of Nopaline *Agrobacterium tumefaciens* GV3101 in Plant Regeneration and Genetic Transformation.

December 2013, Volume 26, Number 12

miR172 Regulates Soybean Nodulation.

The ATF/CREB Transcription Factor Atf1 Is Essential for Full Virulence, Deoxynivalenol Production, and Stress Tolerance in the Cereal Pathogen *Fusarium graminearum*.

A Salicylic Acid-Induced Lectin-Like Protein Plays a Positive Role in the Effector-Triggered Immunity Response of *Arabidopsis thaliana* to *Pseudomonas syringae* Avr-Rpm1.

PAF104, a Synthetic Peptide to Control Rice Blast Disease by Blocking Appressorium Formation in *Magnaporthe oryzae*.

Cytological and Molecular Characterization of Quantitative Trait Locus *qRfg1*, Which Confers Resistance to Gibberella Stalk Rot in Maize.

The *Bdfl* Gene in *Alternaria brassicicola* Is Important in Detoxifying Brassinin and Maintaining Virulence on *Brassica* Species.

Xanthomonas Filamentous Hemagglutinin-Like Protein Fha1 Interacts with Pepper Hypersensitive-Induced Reaction Protein CaHIR1 and Functions as a Virulence Factor in Host Plants.

A Recessive Resistance to *Rice yellow mottle virus* Is Associated with a Rice Homolog of the *CPR5* Gene, a Regulator of Active Defense Mechanisms.

Constitutive Expression of the Xylanase Inhibitor TAXI-III Delays Fusarium Head Blight Symptoms in Durum Wheat Transgenic Plants.

Iron, Oxidative Stress, and Virulence: Roles of Iron-Sensitive Transcription Factor Sre1 and the Redox Sensor ChAp1 in the Maize Pathogen *Cochliobolus heterostrophus*.

Salicylic Acid Determines Differential Senescence Produced by Two *Turnip mosaic virus* Strains Involving Reactive Oxygen Species and Early Transcriptomic Changes.

January 2014, Volume 27, Number 1

TECHNICAL ADVANCE—The Tomato Kinome and the Tomato Kinase Library ORFeome: Novel Resources for the Study of Kinases and Signal Transduction in Tomato and *Solanaceae* Species.

Nodulin 22, a Novel Small Heat-Shock Protein of the Endoplasmic Reticulum, Is Linked to the Unfolded Protein Response in Common Bean.

Mp10 and Mp42 from the Aphid Species *Myzus persicae* Trigger Plant Defenses in *Nicotiana benthamiana* Through Different Activities.

Novel Secretory Protein Ss-Caf1 of the Plant-Pathogenic Fungus *Sclerotinia sclerotiorum* Is Required for Host Penetration and Normal Sclerotial Development.

Functional Analysis of a Tannic-Acid-Inducible and Hypoviral-Regulated Small Heat-Shock Protein Hsp24 from the Chestnut Blight Fungus *Cryphonectria parasitica*.

Accumulation of the Mycotoxin Patulin in the Presence of Gluconic Acid Contributes to Pathogenicity of *Penicillium expansum*.

February 2014, Volume 27, Number 2

Plant Defense Stimulation by Natural Isolates of *Bacillus* Depends on Efficient Surfactin Production.

The Periplasmic PDZ Domain-Containing Protein Prc Modulates Full Virulence, Envelops Stress Responses, and Directly Interacts with Dipeptidyl Peptidase of *Xanthomonas oryzae* pv. *oryzae*.

Two Distinct EF-Tu Epitopes Induce Immune Responses in Rice and *Arabidopsis*.

Membrane-Targeted HrpN_{Ea} Can Modulate Apple Defense Gene Expression.

Single Amino Acid Changes in the 6K1-CI Region Can Promote the Alternative Adaptation of *Prunus*- and *Nicotiana*-Propagated *Plum pox virus* C Isolates to Either Host.

The C-terminus of *Wheat streak mosaic virus* Coat Protein Is Involved in Differential Infection of Wheat and Maize through Host-Specific Long-Distance Transport.

The Complete Genome Sequence of '*Candidatus Liberibacter americanus*', Associated with Citrus Huanglongbing.

The Abscisic Acid Pathway Has Multifaceted Effects on the Accumulation of *Bamboo mosaic virus*. ■

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9. Isolation of Whole Esophageal Gland Cells from Plant-Parasitic Nematodes for Transcriptome Analyses and Effector Identification

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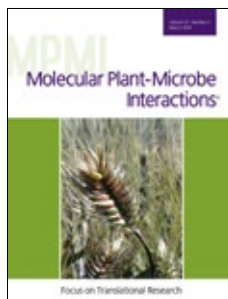
10. Synergistic Interaction of CLAVATA1, CLAVATA2, and RECEPTOR-LIKE PROTEIN KINASE 2 in Cyst Nematode Parasitism of *Arabidopsis*

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www.grc.org/programs.aspx?year=2014&program=plantmolec

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