

# IS-MPMI Reporter

International Society for  
Molecular Plant-Microbe Interactions

## IN THIS ISSUE

Speakers Announced for XV International Congress.....	1
Welcome New Members.....	2
Meet IS-MPMI Members.....	3
Coming Events.....	3
Speakers for XV International Congress.....	4
Meetings.....	8
MPMI Call for Papers.....	8
People.....	9
MPMI Journal Articles.....	10

## Important Dates for the XV International Congress on MPMI

### DEADLINES

Abstract Submission:  
**April 17, 2012**

Travel Award Application:  
**April 17, 2012**

Visa Support:  
**April 22, 2012**

Early Registration:  
**May 15, 2012**

XV International Congress  
**July 29–August 2, 2012**

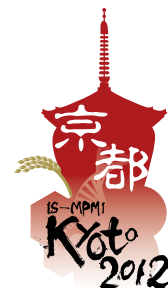
<http://mpmi2011.umin.jp/>



Optional Excursion: Kiyomizu-dera

## Speakers Announced for XV International Congress on MPMI

The Programming Committee for the XV International Congress on Molecular Plant-Microbe Interactions is proud to announce the speakers for this year's congress, to be held in Kyoto, Japan, July 29–August 2. This impressive list of scientists will speak on a variety of topics and includes our esteemed opening lecturer **Shizuo Akira** of Osaka University. Turn to page 4 to find presentation titles and speaker photos.



### Help Fund Your Future; Apply for a IS-MPMI Congress Student Travel Award

Are you a student living in the United States looking for a way to get to the XV International Congress in Kyoto? Look no further. You may now submit an application to be considered for one of 20 travel awards. If you are a graduate student from an accredited university in the United States, then you may submit an application with an abstract to be presented at the XV International Congress. The application must include your congress abstract, a statement indicating how attending the event will impact your research and/or career, and a curriculum vita.

Each award will be up to \$1,000, which may be used to pay for registration and/or travel/lodging expenses. Award selection will be based on the quality of the science reflected in the research abstract and the other submission materials. Ethnic and gender diversity and disabilities will be considered in order to achieve a broad and balanced awardee portfolio. Applicants must also be members of IS-MPMI at the time of the XV International Congress on Molecular Plant-Microbe Interactions.

For more information on whether you qualify and how to apply, visit [http://mpmi2011.umin.jp/travel\\_awards.html](http://mpmi2011.umin.jp/travel_awards.html). Applications must be submitted to **Cindy Scheller** ([cscheller@scisoc.org](mailto:cscheller@scisoc.org)) by April 17, 2012.

### Your Colleagues Can Save on the Congress

If you have colleagues who are planning on attending the XV International Congress on MPMI in Kyoto, Japan, July 29–August 2, help them save on their congress registration by suggesting they become members of IS-MPMI. Members save at least ¥10,000 (\$119) over the nonmember rates. With professional membership at just \$50 (post-doc at \$35 and student at \$20), the savings are substantial. They would receive the savings in addition to many other benefits as an IS-MPMI member. *Plus, if they join now they can get even more*—tell them to visit [www.ismpminet.org/meetings/congress.asp](http://www.ismpminet.org/meetings/congress.asp) for details on how to save. ■

## IS-MPMI Reporter

*Editor-in-Chief:* Jean-Pierre Métraux  
*Managing Editor:* Michelle Bjerkness  
*Editor:* Lauren Bennett  
*Design:* Joel Berg

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### IS-MPMI REPORTER DEADLINE

**The deadline for submitting items for the next issue is April 30, 2012.**

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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## Welcome New Members

The following members joined IS-MPMI between December 1, 2011, and February 1, 2012.  
Please join us in welcoming them to the society!

### Chiharu Akimoto-Tomiyama

Natl Inst of Agrobiological Sciences  
Tsukuba, Japan

### Danas Baniulis

Inst of Horticulture, LRCAF  
Babtai, Kaunas Dist, Lithuania

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### Takuya Ogata

Tokyo Univ of Agriculture & Technology  
Fuchu-shi, Japan

### Kirk L. Overmyer

Univ of Helsinki  
Helsinki, Finland

### Senay Simsek

North Dakota State Univ  
Fargo, ND, U.S.A.

### Penelope M. C. Smith

Univ of Sydney  
Sydney, NSW, Australia

### William Stork

Stanford Univ  
Stanford, CA, U.S.A.

### Nobuyuki Terouchi

Otsu Women's Univ  
Tokyo, Japan

### Jun-Yi Yang

Natl Chung Hsing Univ  
Taichung, Taiwan

## JOBS CALL

### Do you need to fill an open position?

Let IS-MPMI's job placement service help! We accept job submissions from all over the world. Anything from a post-doc position to an industry opening can be filled today! Submissions are free to IS-MPMI members. For more information, or to submit jobs, contact IS-MPMI Headquarters by e-mail at ismpmi@scisoc.org or by phone at +1.651.454.7250.

## Meet IS-MPMI Members

IS-MPMI's diverse membership spans the globe and includes professionals who have been in their field for decades, as well as those who are just starting out. To help members learn more about their colleagues, the *IS-MPMI Reporter* includes profiles of randomly chosen members at different career stages.

### Post-Doctoral/Early Career Member



Edgar Huitema

#### Edgar Huitema

James Hutton Institute  
Dundee, Scotland

I became familiar with the field of molecular plant-microbe interactions when I embarked on my first undergraduate research project in the lab of **Pierre de Wit** in the Department of Phytopathology (Wageningen Agricultural University). While there, I tried to identify genes that encode

extracellular proteins (ECPs) from the tomato pathogen *Cladosporium fulvum*. PCR-based gene identification strategies were used to identify proteins that were found in apoplastic fluids from *C. fulvum*-infected leaf tissue. During my internship, I met **Sophien Kamoun**, who was about to start his own group in the Department of Plant Pathology at Ohio State University, focusing on *Phytophthora infestans*-(non)host interactions. Sophien invited me to work in his lab for 10 months as an intern, which ultimately resulted in an exciting 7-year stay at his lab. I started work as an intern (10 months), became a technician for one year, and finally completed my Ph.D. studies in Ohio. During this time, I explored (non)host interactions between *P. infestans* and *Arabidopsis thaliana*, as well as tomato and *Nicotiana benthamiana*. I employed microarrays, real-time PCR, and virus-induced gene-silencing (VIGS) (all considered new technologies at that time!) to study these interactions in relative detail.

After I received my Ph.D. degree, I felt it was time for something different. I decided to join the lab of **Patrick Viollier** at Case Western Reserve University to study polarity and differentiation in the prokaryote model *Caulobacter crescentus*. The rapid advances in (prokaryote) cell and developmental biology,

combined with my perceived lack of understanding of these processes during plant-microbe interactions, made this adventure very appealing. During the two years of my stay, I used a combination of genetic, pharmacological, and cell biological approaches to demonstrate that protein localization and mobility are subject to temporal and spatial cues. In the end, my work resulted in the identification of mechanisms that ensure correct organization of prokaryote subcellular compartments.

After my first post-doc, I felt it was time to return to plant-microbe interactions research. Sophien happened to move to The Sainsbury Laboratory at the time and invited me to come along and help set up the lab (again). Considering that I had been in the United States for some time and wanted to return to the MPMI field, I thought it would be sensible to join and explore career opportunities in Europe. During my stay at The Sainsbury Laboratory, I investigated the fate of CRN proteins during *Phytophthora capsici* transformation and implicated the CRN protein family as a large, novel class of cytoplasmic effectors in *Phytophthora*. In 2009, I received a Royal Society of Edinburgh/Scottish Government personal research fellowship and became a principle investigator in the Division of Plant Sciences at the University of Dundee. In my lab, we now study mechanisms of CRN translocation as well as the roles of effectors in *P. capsici* infection. (To learn more about my current work, please visit [www.lifesci.dundee.ac.uk/groups/edgar\\_huitema](http://www.lifesci.dundee.ac.uk/groups/edgar_huitema).)

A vibrant and strong IS-MPMI has played an important part in my career. The vast network, combined with the great atmosphere at meetings, has not only attracted me to the field initially, but also allowed me to reconnect really quickly after a two-and-a-half-year absence. IS-MPMI continues to impact my work greatly and I am therefore excited to continue my engagement with the society in the years to come. I hope to see everyone in Kyoto and learn about the latest advances in MPMI research! ■

## COMING EVENTS

March 20–22, 2012

### Joint Meeting of the 58th Annual Conference on Soil-borne Plant Pathogens & the 44th Annual California Nematology Workshop

Huntington Botanical Gardens, San Marino, CA, U.S.A.  
<http://soilfungus.ars.usda.gov>

May 21–25, 2012

### 4th International Workshop on Oomycetes: *Phytophthora*, *Pythium*, and *Phytophthium*

University of Maryland, College Park, MD, U.S.A.  
[www.psla.umd.edu/faculty/Balci/workshop2011/index.cfm](http://www.psla.umd.edu/faculty/Balci/workshop2011/index.cfm)

July 29–August 2, 2012

### XV International Congress on Molecular Plant-Microbe Interactions

Kyoto, Japan  
<http://mpmi2011.umin.jp>

August 4–8, 2012

### 2012 APS Annual Meeting

Providence, Rhode Island, U.S.A.  
[www.apsnet.org/meetings/annual/Pages/default.aspx](http://www.apsnet.org/meetings/annual/Pages/default.aspx)

Include your meeting in IS-MPMI's printed and online event calendar. Submit online at  
[www.ismpminet.org/meetings/calsubmit.asp](http://www.ismpminet.org/meetings/calsubmit.asp).

## Speakers for XV International Congress on MPMI

Please note: some speakers did not have photos and/or presentation titles available at the time of publication.

\*More talks will be selected from the abstracts

### OPENING LECTURE

#### Innate immunity in mammals



**Shizuo Akira**  
Professor, Research  
Institute for Microbial  
Diseases, Osaka University  
Center Director, Osaka  
University Immunology  
Frontier Research Center



**Frank Takken**  
(Netherland)  
The role of pathogen  
effectors in NLR-mediated  
plant innate immunity



**John Rathjen** (Australia)  
Roles for effectors in  
pathogen biology



**Cyril Zipfel** (U.K.)



**Ko Shimamoto** (Japan)

### PLENARY SESSIONS



**Jeff Dangl** (U.S.A.)  
The plant immune system:  
Regulating response and  
maintaining microbiome  
homeostasis



**Naoto Shibuya** (Japan)  
Chitin receptors in plant  
immunity



**Jen Sheen** (U.S.A.)  
Signaling network in plant  
innate immunity



**Paul Schulze-Lefert**  
(Germany)  
Structure and colonization  
cues for the *Arabidopsis*  
root-inhabiting bacterial  
microflora



**Maria Harrison** (U.S.A.)



**Regine Kahmann**  
(Germany)  
Effectors in smut fungi and  
how they affect virulence



**Sophien Kamoun** (U.K.)  
Oomycete effector biology



**Ton Bisseling**  
(Netherlands)  
Endosymbiosis: How it is  
established, where it comes  
from



**Brian J. Staskawicz**  
(U.S.A.)



**Yong-Hwan Lee**  
(South Korea)  
Systems biology initiatives  
for the rice blast fungus



**Xin Li** (Canada)  
What did we learn from  
the MOSes?



**Sheng Yang He** (U.S.A.)  
Bacterial manipulation of  
jasmonate receptor and  
immunity in *Arabidopsis*



**Jonathan Jones** (U.K.)



**Junji Takabayashi** (Japan)  
Plant volatiles drive  
ecological interaction  
networks



**Jian-Min Zhou** (China)  
Biochemical functions of  
bacterial effectors and plant  
immunity



**Jane Parker** (Germany)  
Partitioning of effector-  
triggered immune outputs  
within plant cells



**Peter N. Dodds** (Australia)



**Mary Beth Mudgett**  
(U.S.A.)



**Martin Parniske**  
(Germany)  
Signal transduction in root  
endosymbiosis



**Giles Oldroyd** (U.K.)  
Signaling pathways  
that establish symbiotic  
associations in legumes



**Thomas Lahaye**  
(Germany)  
Isolation of a TAL  
effector resistance gene by  
transcriptome profiling



**Jens Stougaard** (Denmark)  
The role of LysM type  
receptors in Nod factor  
perception



**Shou-Wei Ding** (U.S.A.)



**Eva Kondorosi** (France)

## CONCURRENT SESSIONS

### Recognition and Signaling I



**Pamela C. Ronald**  
(U.S.A.)  
The rice XA21 receptor  
recognizes a conserved  
bacterial signaling  
molecule



**Thorsten Nürnberger**  
(Germany)  
Patterns and receptors  
in *Arabidopsis* innate  
immunity

### Recognition and Signaling II



**Peter Moffett** (Canada)  
Involvement of a novel class  
of NB-LRR proteins in  
disease resistance



**Gitta Coaker** (U.S.A.)  
Proteomic and genetic  
analyses of plant immune  
complexes

### Symbiosis I



**Masayoshi Kawaguchi**  
(Japan)  
Long-distance control  
of nodulation via CLE  
peptides and HAR1/  
KLAVER receptor kinases

### Symbiosis II



**Makoto Hayashi** (Japan)  
Transcriptional regulation  
for nodulation in legumes

### Plant-Oomycete/Fungal Interactions



**Barbara Valent** (U.S.A.)  
*Magnaporthe oryzae*  
effectors in rice blast disease



**Yoshitaka Takano** (Japan)  
Nonhost interactions  
between *Arabidopsis* and  
*Anthraco* fungi

### Plant-Nematode/Insect Interactions



**Derek Goto** (Japan)  
Interaction between root-  
knot nematodes and plant  
signaling networks during  
parasitic invasion



**Pierre Abad** (France)

### Pathogenic Fungi



**Yasuyuki Kubo** (Japan)  
Pathogenesis and infection-  
related morphogenesis of  
*Colletotrichum orbiculare*



**You Liang Peng** (China)

### Genomics and Evolution of Virulence in Pathogenic Fungi and Oomycetes



**Brett M. Tyler** (U.S.A.)



**Christiana A. Cuomo**  
(U.S.A.)  
Genomic evolution and  
specialization of wheat rust  
fungi

### Pathogenic Bacteria/Phytoplasma



**Saskia A. Hogenhout**  
(U.K.)  
Pathogen effectors that  
modulate plant-insect  
interactions and plant  
development



**Adam Bogdanove**  
(U.S.A.)  
Harnessing TAL effector-  
DNA targeting to  
understand and prevent  
plant diseases caused by  
*Xanthomonas*

Speakers continued on page 6

Speakers continued from page 5

### Endophytes and Parasitic Plants



**Kiwamu Minamisawa** (Japan)  
What does community analysis of plant-associated microbes tell us?



**Ken Shirasu** (Japan)  
Genomic studies of parasitic plants

### Effector Proteins



**Ryohei Terauchi** (Japan)



**Jean T. Greenberg** (U.S.A.)

### Plant-Virus/Viroid Interactions



**Na-Sheng Lin** (Taiwan)  
Escaping gene silencing in transgenic plants expressing a replicating *Bamboo mosaic virus*



**Masayuki Ishikawa** (Japan)  
Interactions between *Tomato mosaic virus* and plants

### Cell Wall Modification and Resistance



**Giulia De Lorenzo** (Italy)



**Antonio Molina** (Spain)  
Uncoupling resistance to pathogens from tradeoffs by remodeling *Arabidopsis* cell wall

### Plant Response



**Gary J. Loake** (U.K.)  
Plant immu/NO/logy: Cracking the redox code



**Hirofumi Yoshioka** (Japan)  
MAPK and CDPK control NO and ROS bursts in plant immune response

### Evolution of Susceptibility and Resistance



**Gary Stacey** (U.S.A.)  
Plant recognition of chitin and lipo-chitin signaling molecules

### Biocontrol Interactions



**Barry Scott** (New Zealand)



**Hideo Nakashita** (Japan)  
Practical use of endophytic bacteria in rice fields

### Systems Biology



**Fumiaki Katagiri** (U.S.A.)  
Properties and structure of the plant immune signaling network



**Roger Wise** (U.S.A.)

### Plant Hormones Integrating Defense Response



**Xinnian Dong** (U.S.A.)



**Jane Glazebrook** (U.S.A.)  
Roles of CBP60 proteins in the plant defense network

### Biotechnology



**Zhongmin Wei** (U.S.A.)  
Harpin, elicitor of hypersensitive response for new era agricultural application— Opportunities and challenges



**Eric Ward** (U.K.)  
Toward durable disease resistance

### Structural Biology



**Jijie Chai** (China)  
Structural basis for BAK1 inhibition by the bacterial effector protein AvrptoB



**Bostjan Kobe** (Australia)  
Structural insights into TIR domain function in effector-triggered immunity in flax and *Arabidopsis*

## Crop Protection



**Pierre J. G. M. de Wit**  
(Netherlands)



**Tina Jordan** (Switzerland)  
The wheat *Mla* homolog *TmMla1* exhibits an evolutionary conserved function against powdery mildew in both wheat and barley

## WORKSHOPS

### Imaging Plant-Microbe Interactions Organizers and Speakers:

**Daigo Takemoto** (Japan)



*Organizer and Speaker*  
Imaging powdery mildew-plant interaction; Manipulation of host cells by powdery mildew



**Noriko Inada** (Japan)  
*Organizer and Speaker*  
Imaging powdery mildew-plant interaction; Manipulation of host cells by powdery mildew



**Li-Qing Chen** (U.S.A.)  
*Speaker*  
Pathogen-induced sugar transporters identified with the help of optical sensors

### Induced Susceptibility in Plants

**Organizers and Speakers:**



**Kazuya Akimitsu** (Japan)  
*Organizer and Speaker*



**Kazuhiro Toyoda** (Japan)  
*Speaker*  
Fungal suppressors and induced susceptibility in pea-*Mycosphaerella pinodes* interaction



**Peter Solomon** (Australia)  
*Speaker*  
Functional characterization of effector proteins from the necrotrophic pathogen *Stagonospora nodorum*

(Not Pictured) **Pawel Bednarek** (Germany)  
*Speaker*

### Powdery Mildew

**Organizer:**



**Pietro Spanu** (U.K.)

(Not Pictured)

**Hans Thordal-Christensen** (Denmark)

### Rice Immunity and Pathogens

**Organizers and Speakers:**



**Guo-Liang Wang** (U.S.A.)  
*Organizer and Speaker*  
*Magnaporthe oryzae* effector *AvrPiz-t* targets the ubiquitin-proteasome system for its avirulence and virulence in rice



**Shiping Wang** (China)  
*Speaker*  
Dissection of the interaction of rice and *Xanthomonas oryzae*



**Naweed Naqvi** (Singapore)  
*Speaker*  
Spatio-temporal regulation of cell signaling during *Magnaporthe* pathogenesis



**Akira Takahashi** (Japan)  
*Speaker*  
Genetic studies of signaling pathways for innate immunity of rice

### Functional Genomics of Plant-Pathogenic Bacteria

**Organizers and Speakers:**



**Alan Collmer** (U.S.A.)  
*Organizer and Speaker*  
Minimal functional repertoires of *Pseudomonas syringae* type III effectors: New tools and lessons



**Shinji Tsuyumu** (Japan)  
*Organizer and Speaker*  
Usefulness of genomic data for education of regulatory mechanisms involved in bacterial plant pathology



**Ian Toth** (U.K.)  
*Speaker*  
Genomic approaches provide new insights into the biology of the bacterial plant pathogens *Pectobacterium* and *Dickeya*



**Shigetou Namba** (Japan)  
*Speaker*



**Stephane Genin** (France)  
*Speaker*  
Pathogenomics of *Ralstonia solanacearum*



**David Baltrus** (U.S.A.)  
*Speaker*  
Insights into convergent host range evolution in *P. syringae* pv. *pisii*

### Proteomics

**Organizers and Speakers:**



**Alex Jones** (U.K.)  
Targeted quantification of phosphorylation sites

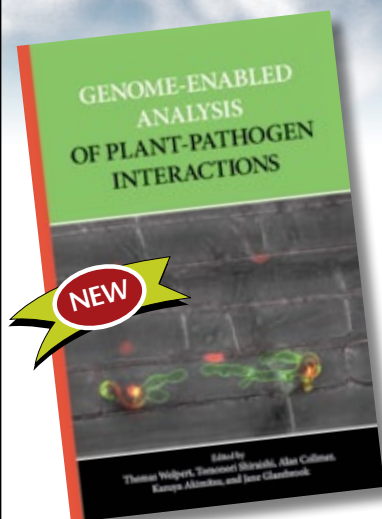


**Hirofumi Nakagami** (Japan)  
Phosphoproteomics approaches for signaling dissection



**Jesús Jorrín Novo** (Spain)  
Proteomics in the study of plant-pathogen interactions: From resistance genes to signaling and global responses ■

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## MPMI Calls for Papers for Special 2012 Nematodes/Insects Focus Issue

A call for papers for a special *Molecular Plant-Microbe Interactions* (MPMI) focus issue that will contain research on **Molecular Plant-Nematode and Plant-Insect Interactions** has been announced by **Gary Stacey**, MPMI editor-in-chief. For the issue, MPMI invites original research manuscripts on the molecular biology and molecular genetics/genomics of parasitic interactions of nematodes and insects with plants. This special issue will bring added attention to critically important research that has shown significant progress in recent years. Three mini-reviews written by key scientists in the field will cover nematode salivary proteins/ effectors, aphid salivary proteins/ effectors, and nematode-induced feeding structures.

Guest editors for this special issue are **Geert Smant** [Geert.Smant@wur.nl], professor of nematology at Wageningen University, Netherlands, and **Saskia Hogenhout** of the John Innes Centre in Norwich, United Kingdom.

A focus issue offers authors multiple benefits. A single-topic collection gives scientists an opportunity to publish their results alongside the related work of peers to highlight and bring special attention to the progress being made.

The nematodes/insects focus issue will be widely promoted and is expected to be highly cited, giving authors maximum exposure. Articles will be submitted to CrossRef, allowing citation tracking and connectivity as this research area moves forward in MPMI and other scientific journals. Articles will also be indexed by ISI Web of Science, PubMed, and other important access portals. Submitted papers will be reviewed by an outstanding Editorial Board and edited by a caring, professional editorial staff dedicated to publishing at the highest standard of quality.

If you are working on research of this type, submit your papers to MPMI and note that you would like to be considered for the Special Nematodes/Insects Focus Issue. Please submit your paper online at <http://mc.manuscriptcentral.com/mpmi> by **May 21, 2012**. For more information about the scope of this issue, please contact Smant at Geert.Smant@wur.nl. ■

## Meetings

### Molecular Biology of Plant Pathogens Meeting, Reading, Berkshire, U.K., April 16–17, 2012

The 2012 Molecular Biology of Plant Pathogens meeting will be held at the University of Reading, United Kingdom, on April 16–17. This meeting is open to all scientists in the field. Three linchpin talks will be given by group leaders, but the main sessions will be composed of talks given by Ph.D. graduate students and post-doctoral scientists. This is an excellent opportunity for younger scientists to present their work to an international audience and for networking with a wide range of peers and group leaders. Registration opens soon, keep an eye on <http://mbpp.scri.ac.uk/welcome!>

### 2012 APS Annual Meeting, Providence, Rhode Island, U.S.A., August 4–8, 2012

The American Phytopathological Society will hold its 2012 Annual Meeting in historic Providence, Rhode Island, on August 4–8. Plant pathologists from across the globe are encouraged to attend, share their latest research, participate in scientific sessions, and network with some of the top-tier plant pathologists in the world. Field trips and workshops, scheduled before and during the meeting, offer attendees an even more in-depth look at local plant pathology topics and issues. The APS annual meeting is known as an event where plant pathologists of all ages and career levels can come together for serious science and some less serious socializing. Abstract submission is already open, so go to [www.apsnet.org/meetings/annual/Pages/default.aspx](http://www.apsnet.org/meetings/annual/Pages/default.aspx) and start making your travel plans! ■



## People

### Grant Awards



Ton Bisseling

The European Research Council (ERC) has awarded 2.5 million euros to **Ton Bisseling** from Wageningen University, the Netherlands, for research into the mechanism by which the nonleguminous plant, *Parasponia*, extracts nitrogen from the air to grow. *Parasponia* works in cooperation with *Rhizobium* bacteria to fix nitrogen from the air into ammonia. Bisseling and his research group aim at unraveling the mechanisms involved and want to find ways to build this mechanism into crops, such as potatoes and wheat. The ERC Advanced Grant (<http://erc.europa.eu/advanced-grants>) funding targets researchers who have already established themselves as independent research leaders in their own right. The grants allow exceptional established research leaders to pursue frontier research of their choice.

### New Appointment

**Maryam Rafiqi** was recently appointed as the junior group leader at the Institute of Phytopathology and Applied Zoology at the Justus-Liebig University of Giessen in Germany.

### Students

In 2011, 13 students associated with the Netherlands Graduate School Experimental Plant Sciences (EPS), and participating in research on interactions between plants and biotic agents, defended their Ph.D. theses. The EPS Graduate School is a collaborative research and teaching institution of Wageningen University (WU), Radboud University in Nijmegen (RU), Free University in Amsterdam (VU), Leiden University (LU), University of Amsterdam (UvA), University of Groningen (RUG), and Utrecht University (UU).

**K. Makarova.** New approach to analyse spin probe and spin trap ESR. H. van Amerongen (promoter); H. Van As (copromoter); WU, Wageningen, 19 January 2011.

**A. Seifi Abdolabad.** Characterization of tomato genes for resistance to *Oidium neolyopersici*. R. G. F. Visser (promoter); Y. Bai (copromoter); WU, Wageningen, 18 March 2011.

**S. Tabib Ghaffary.** Efficacy and mapping of resistance to *Mycosphaerella graminicola* in wheat. R. G. F. Visser (promoter); G. H. J. Kema (copromoter); WU, Wageningen, 6 June 2011.

**H. Rietman.** Putting the *Phytophthora infestans* genome sequence at work; Multiple novel avirulence and potato resistance gene candidates revealed. R. G. F. Visser (promoter); V. G. A. A. Vleeshouwers (copromoter); WU, Wageningen, 20 June 2011.

**C. Geerts-Dimitriadou.** Genome transcription/translation of segmented, negative-strand RNA viruses. J. M. Vlak (promoter); R. J. M. Kormelink (copromoter); WU, Wageningen, 28 June 2011.

**A. Verhage.** Rewiring of the jasmonic acid signaling pathway during insect herbivory on *Arabidopsis*. C. M. J. Pieterse (promoter); S. C. M. van Wees (copromoter); UU, Utrecht, 26 August 2010.

**A. Finkers-Tomczak.** Co-evolution between *Globodera rostochiensis* and potato driving sequence diversity of NB-LRR resistance loci and nematode suppressors of plant immunity. J. Bakker (promoter); A. Goverse (copromoter); WU, Wageningen, 6 September 2011.

**R. Berendsen.** Dry bubble disease of the white button mushroom. C. M. J. Pieterse (promoter); P. A. H. M. Bakker (copromoter); UU, Utrecht, 14 September 2011.

**E. Fradin.** Functional analysis of the tomato Ve resistance locus against *Verticillium* wilt. P. J. G. M. de Wit (promoter); B. P. H. J. Thomma (copromoter); WU, Wageningen, 19 September 2011.

**S. Ben M'Barek.** Genome structure and pathogenicity of the fungal wheat pathogen *Mycosphaerella graminicola*. P. J. G. M. de Wit (promoter); G. H. J. Kema (copromoter); WU, Wageningen, 17 October 2011.

**S. Pavan.** Exploring recessive resistance to the powdery mildew disease. R. G. F. Visser (promoter); Y. Bai (copromoter); WU, Wageningen, 12 December 2011.

**C. Le.** Diversity and biological control of *Sclerotium rolfsii*, causal agent of stem rot of groundnut. F. Govers (promoter); J. M. Raaijmakers (copromoter); WU, Wageningen, 16 December 2011.

**E. Lukasik.** Nucleotide binding, inter- and intra-molecular interactions of plant disease resistance proteins. B. J. C. Cornelissen (promoter); F. L. W. Takken (copromoter); UvA, Amsterdam, 19 December 2011. ■

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### November 2011, Volume 24, Number 11

FOCUS on Symbiosis: "Where Two Are Better Than One"

A Eulogy to Adam Kondorosi

CURRENT REVIEW—Legume-Nodulating Betaproteobacteria: Diversity, Host Range, and Future Prospects.

CURRENT REVIEW—Phylogenetic Perspectives on the Origins of Nodulation.

CURRENT REVIEW—Phosphate Import at the Arbuscule: Just a Nutrient?

CURRENT REVIEW—Bacteroid Development in Legume Nodules: Evolution of Mutual Benefit or of Sacrificial Victims?

CURRENT REVIEW—The Biology of *Frankia* sp. Strains in the Post-Genome Era.

TECHNICAL ADVANCE—Transformed Hairy Roots of *Discaria trinervis*: A Valuable Tool for Studying Actinorhizal Symbiosis in the Context of Intercellular Infection.

Exploring the Function of Alcohol Dehydrogenases During the Endophytic Life of *Azoarcus* Sp. Strain BH72.

IPD3 Controls the Formation of Nitrogen-Fixing Symbiosomes in Pea and *Medicago* Spp.

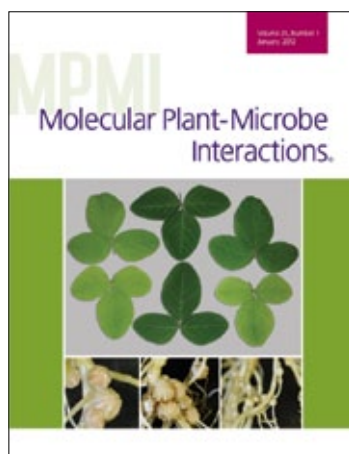
*Medicago truncatula* IPD3 Is a Member of the Common Symbiotic Signaling Pathway Required for Rhizobial and Mycorrhizal Symbioses.

Nodulation of *Aeschynomene afra* and *A. indica* by Photosynthetic *Bradyrhizobium* Sp. Strain ORS285: The Nod-Dependent Versus the Nod-Independent Symbiotic Interaction.

Pseudonodule Formation by Wild-Type and Symbiotic Mutant *Medicago truncatula* in Response to Auxin Transport Inhibitors.

Cytokinin Induction of Root Nodule Primordia in *Lotus japonicus* Is Regulated by a Mechanism Operating in the Root Cortex.

Natural Variation in Host-Specific Nodulation of Pea Is Associated with a Haplotype of the SYM37 LysM-Type Receptor-Like Kinase.



### December 2011, Volume 24, Number 12

EBR1, a Novel Zn<sub>2</sub>Cys<sub>6</sub> Transcription Factor, Affects Virulence and Apical Dominance of the Hyphal Tip in *Fusarium graminearum*.

Variable Expression of the *Stagonospora nodorum* Effector SnToxA Among Isolates Is Correlated with Levels of Disease in Wheat.

Barley Leaf Transcriptome and Metabolite Analysis Reveals New Aspects of Compatibility and *Piriformospora indica*-Mediated Systemic Induced Resistance to Powdery Mildew.

Photosynthetic *Bradyrhizobium* Sp. Strain ORS285 Synthesizes 2-*O*-Methylfucosylated

Lipochitooligosaccharides for *nod* Gene-Dependent Interaction with *Aeschynomene* Plants.

Exopolysaccharide Production Is Required for Biofilm Formation and Plant Colonization by the Nitrogen-Fixing Endophyte *Gluconacetobacter diazotrophicus*.

Role of the 4-Phosphopantetheinyl Transferase of *Trichoderma virens* in Secondary Metabolism and Induction of Plant Defense Responses.

Whole-Genome Expression Profiling of *Bradyrhizobium japonicum* in Response to Hydrogen Peroxide.

Characterization of the Gene Encoding Pisatin Demethylase (*FoPDA1*) in *Fusarium oxysporum*.

Large-Scale Data Integration Reveals Colocalization of Gene Functional Groups with Meta-QTL for Multiple Disease Resistance in Barley.

Phytoplasma-Induced Floral Abnormalities in *Catharanthus roseus* Are Associated with Phytoplasma Accumulation and Transcript Repression of Floral Organ Identity Genes.

Synthesis of the Flavonoid-Induced Lipopolysaccharide of *Rhizobium* sp. Strain NGR234 Requires Rhamnosyl Transferases Encoded by Genes *rgpF* and *wbgA*.

Elevated Activity of Dolichyl Phosphate Mannose Synthase Enhances Biocontrol Abilities of *Trichoderma atroviride*.

Digital Gene Expression Profiling of the *Phytophthora sojae* Transcriptome.

The Iturin-like Lipopeptides Are Essential Components in the Biological Control Arsenal of *Bacillus subtilis* Against Bacterial Diseases of Cucurbits.

A Comparative Transcriptome Analysis of *Rhizobium etli* Bacteroids: Specific Gene Expression During Symbiotic Nongrowth.

Arbuscular Mycorrhizal Symbiosis Limits Foliar Transcriptional Responses to Viral Infection and Favors Long-Term Virus Accumulation.

EMSY-Like Genes Are Required for Full *RPP7*-Mediated Race-Specific Immunity and Basal Defense in *Arabidopsis*.

The *Arabidopsis thaliana* DNA-Binding Protein AHL19 Mediates Verticillium Wilt Resistance.

### January 2012, Volume 25, Number 1

Genome-Wide Identification of Genes Regulated by the Rcs Phosphorelay System in *Erwinia amylovora*.

Infection Dynamics in Viral Spread and Interference Under the Synergism Between *Cucumber mosaic virus* and *Turnip mosaic virus*.

Functional Characteristics of an Endophyte Community Colonizing Rice Roots as Revealed by Metagenomic Analysis.

Cell Individuality: The Bistable Gene Expression of the Type III Secretion System in *Dickeya dadantii* 3937.

Ethylene-Responsive Element-Binding Factor 5, ERF5, Is Involved in Chitin-Induced Innate Immunity Response.

Inducible Maize Defense Mechanisms Against the Corn Borer *Sesamia nonagrioides*: A Transcriptome and Biochemical Approach.

High-Throughput Screening and Analysis of Genes of *Xanthomonas citri* subsp. *citri* Involved in Citrus Canker Symptom Development.

Ammonium Secretion During *Colletotrichum coccodes* Infection Modulates Salicylic and Jasmonic Acid Pathways of Ripe and Unripe Tomato Fruit.

Mutations in the Antiviral RNAi Defense Pathway Modify *Brome mosaic virus* RNA Recombinant Profiles.

Microarray Analysis Shows That Recessive Resistance to *Watermelon mosaic virus* in Melon Is Associated with the Induction of Defense Response Genes.

A Role for *Bradyrhizobium japonicum* ECF16 Sigma Factor EcfS in the Formation of a Functional Symbiosis with Soybean.

### February 2012, Volume 25, Number 2

CURRENT REVIEW—Modulation of Host Immunity by Beneficial Microbes.

The *Cucumber vein yellowing virus* Silencing Suppressor P1b Can Functionally Replace HCPro in *Plum pox virus* Infection in a Host-Specific Manner.

Diffusible Signal Factor-Mediated Quorum Sensing Plays a Central Role in Coordinating Gene Expression of *Xanthomonas citri* subsp. *citri*.

A Highly Conserved Effector in *Fusarium oxysporum* Is Required for Full Virulence on *Arabidopsis*.

Flagella Mediate Endophytic Competence Rather Than Act as MAMPS in Rice–*Azoarcus* sp. Strain BH72 Interactions.

Silencing and Heterologous Expression of *ppo-2* Indicate a Specific Function of a Single Polyphenol Oxidase Isoform in Resistance of Dandelion (*Taraxacum officinale*) Against *Pseudomonas syringae* pv. *tomato*.

Photorespiratory Metabolism and Nodule Function: Behavior of *Lotus japonicus* Mutants Deficient in Plastid Glutamine Synthetase.

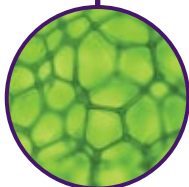
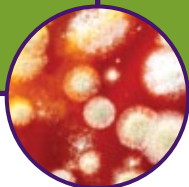
Congruent Genetic Structure in the Lichen-Forming Fungus *Lobaria pulmonaria* and Its Green-Algal Photobiont.

The Type III Effector HsvG of the Gall-Forming *Pantoea agglomerans* Mediates Expression of the Host Gene *HSVGT*.

*Burkholderia phytofirmans* PsJN Primes *Vitis vinifera* L. and Confers a Better Tolerance to Low Nonfreezing Temperatures.

A Plant Arabinogalactan-Like Glycoprotein Promotes a Novel Type of Polar Surface Attachment by *Rhizobium leguminosarum*.

The Aquaporin *TcAQP1* of the Desert Truffle *Terfezia claveryi* Is a Membrane Pore for Water and CO<sub>2</sub> Transport. ■



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