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What to Expect in Kyoto

XV International Congress on Molecular Plant-Microbe Interactions Preview



This July 29–August 2, attendees from 48 countries around the world will gather to present their research, network, and discuss the future of molecular genetics and molecular biology at the XV International Congress on Molecular Plant-Microbe Interactions in Kyoto, Japan. IS-MPMI, together with the Local Organizing Committee in Japan, has put together an outstanding program, featuring an impressive list of confirmed speakers, as well as networking opportunities. As the chair of the Local Organizing Committee, I could not be more proud of the program we've put together and I'm excited to invite you to join us in Kyoto.

More than 770 abstracts have been submitted for the XV International Congress, ensuring that there will be something for everyone in the scientific and technical program. The program will also include eight plenary sessions and 21 concurrent sessions on topics related to recognition and signaling, symbiosis, pathogenic pathogens, biocontrol interactions, effector proteins, cell wall modification, plant hormones, crop protection, evolution of susceptibility, plant response, systems biology, biotechnology, and structural biology.

This year's program also includes a special guest lecture on Sunday, July 29. Prof. **Shizuo Akira** will present the opening lecture, "Innate Immunity in Mammals." Akira contributes to a more comprehensive understanding of the dynamics of the immune system by employing not only traditional immunology experiments but also a variety of imaging and bioinformatics technologies.

The program also includes ample time to take part in networking. In these lean economic times, face-to-face meetings with other scientists in the field are more critical than ever and will help ensure that your career is on the right path. There is no better opportunity to meet top-level speakers and researchers within specific areas of interest than at the XV International Congress. Networking opportunities at the meeting include the Welcome Reception on Sunday, the excursion to the World Heritage "Kiyomizu-dera" on Wednesday evening, and the Congress Dinner on Thursday evening. These activities provide an important venue for making personal and professional connections that will last throughout your career.

Finally, Kyoto offers historic charm and an exciting cultural and traditional experience for you and your guests at the meeting. Visit the congress website at <http://mpmi2011.umin.jp/index.html> for complete information on the program, accommodations, travel, registration, and more. We're looking forward to seeing everyone in Kyoto!

Ko Shimamoto
Chair, Local Organizing Committee

Connect for the XV
International Congress!

We are on Facebook, and you can stay connected with peers and colleagues before, during, and after the XV International Congress. Feel free to join in discussions on the latest in MPMI, or start your own. Head to the IS-MPMI Facebook page (www.facebook.com/ISMPMI) and "Like" us today!

IS-MPMI Reporter

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

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AMY HOPE

IS-MPMI REPORTER DEADLINE

The deadline for submitting items for the next issue is August 27, 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:

Editor-in-Chief Jean-Pierre Métraux
University of Fribourg
Biology Dept.
Rue Du Musee 10
Fribourg, 1700
Switzerland
Phone: + 41 26 300 8811
E-mail: jean-pierre.metraux@unifr.ch



Felice Cervone, President

A Letter from the President

The XV International Congress on Molecular Plant-Microbe Interactions (Kyoto, July 29–August 2) is approaching and is expected to be very successful along the tradition of our past meetings. After last year's disaster and tsunami in Japan, the organizers decided to postpone the congress to this year due to a great concern that the participation would be compromised. This year, the number of participants who have already submitted a contribution is above the most optimistic previsions. We expect to meet in Kyoto with around 1,000 colleagues representing the entire scientific community working on plant-microbe interactions. Our community greatly appreciates the efforts of the organizers and responds enthusiastically to their second call. We are all eager to meet in Kyoto to strengthen the tradition of the IS-MPMI meetings. The organizers have selected an impressive list of scientists who, together with several others selected from among the submitted abstracts, will speak on a variety of topics covering different aspects of plant-microbe interactions. Hundreds of poster presentations will also offer a wide view of the most important research in the field. It will be the first time that our meeting is held in Asia, demonstrating that our society has continuously grown in the last two decades to become a global research association. I am very proud to be president of a such lively and vibrant community. See you soon in Kyoto. ■

IS-MPMI to Exhibit at Kyoto Congress



IS-MPMI will be among the exhibitors at the XV International Congress in Kyoto. IS-MPMI staff member **Michelle Bjerkness** will be available to answer questions about the society and to assist members and congress attendees in setting up a personal profile in *MPMI Online*, a customized feature that alerts users when research in their interest area is published in the journal.

Individuals who create a profile have the option of designating the specific phrases, words, and subjects that they want to track. They then receive a notice directly in their e-mail in box when anything is published in *Molecular Plant-Microbe Interactions (MPMI)* that relates to their search criteria.

The IS-MPMI exhibit will also include IS-MPMI membership information, and nonmembers will have the opportunity to join the society at a special promotional rate. Everyone benefits when the society grows, so members should encourage their non-member colleagues to join. Nonmembers who join now through the end of the congress will get their second year of membership free. They can join at the congress or online at www.ismpminet.org. ■

PhytoPath—A New Database Integrates Genome-Scale Data from Important Plant Pathogen Species with Literature-Curated Information About the Phenotypes of Host Infection

The number of completely sequenced plant pathogens is rapidly growing, representing the combination of improved, lower cost technologies for genome sequencing with increasing global concerns about food security. PhytoPath (<http://phytopathdb.org>) is a new bioinformatics resource that integrates genome-scale data from important plant-pathogenic species with literature-curated information about the phenotypes of host infection.

A collaborative U.K.-based project between the European Bioinformatics Institute (EBI) located south of Cambridge and Rothamsted Research (RRes) located just north of London, PhytoPath is bringing together the power of the Ensembl software platform for genome analysis and display with the Pathogen-Host Interactions database (PHI-base) (<http://phi-base.org>), which stores information about the role of particular genes in pathogenesis directly curated from the peer-reviewed literature. PhytoPath was launched in January 2012 and already contains the genomes of 12 fungal and 4 oomycete phytopathogens. The resource provides researchers with access to complete-genome assemblies, gene models, supporting alignments, DNA- and protein-sequence alignments (between pathogens themselves, and with other fungal species), inferred evolutionary histories, and genomic polymorphism data. Agriculturally important species already in the resource include *Magnaporthe oryzae* (rice blast), *Mycosphaerella graminicola* (*Septoria tritici* blotch of wheat), *Gibberella zeae* (*Fusarium* head blight), *Puccinia graminis* f. sp. *tritici* (wheat stem rust), and *Phytophthora infestans* (late blight of potato), with *Blumeria graminis* f. sp. *hordei* (barley powdery mildew) scheduled for inclusion in the next release.

The website additionally supports mechanisms that allow users to visualize private high-throughput data (e.g., alignments, variant calls) in the context of the reference annotation simply by putting an appropriate file on a local FTP site. Meanwhile, a query-optimized data warehouse provides access to a set of efficient data-mining tools. Both the browser and the warehouse have already been enhanced to incorporate information from PHI-base, allowing users to identify genes with particular roles in pathogenesis in their genomic contexts. Future developments will further enrich this interface and provide stronger links between the genomes of phytopathogens and those of their hosts (which are also available in the Ensembl interface),



with a particular emphasis on the relationship between pathogen effector proteins and their host targets.

In parallel, a major effort has been undertaken to curate the outstanding literature, and more than 100 new articles have been curated into PHI-base in less than 3 months. But to ensure that the database remains up-to-date and accurate, the best solution is to actively engage the community to curate their own papers as they are published. PHI-base already has a

large number of international experts who contribute to the database. To expand these activities, a new public, web-based curation interface is in development, which will reduce the overhead and increase the complexity of submitting data to the resource. **Kim Hammond-Kosack**, PI at RRes, says “PHI-base is a unique resource, and our new submission tool will allow us to keep pace with the growing scale of experimental research in this area.”

Paul Kersey, EBI PI, says “We’re really keen to engage with the research community and assist them in connecting and submitting their data, to ensure we cover all the most important phytopathogens and to integrate the most important data sets. Please get in touch with us for more information about how we can support you.” A workshop will be held at EBI in the autumn (see the website for details) for those interested in receiving advanced training in the use of the resource, the data it holds, and the interactive and programmatic interfaces that can be used to access it.

PhytoPath is funded by the United Kingdom Biotechnology and Biological Sciences Research Council.

E-mail contact details of the team members:

At EBI

Paul Kersey: pkersey@ebi.ac.uk
Helder Pedro: hpedro@ebi.ac.uk
Uma Maheswari: uma@ebi.ac.uk

At RRes

Kim Hammond-Kosack: kim.hammond-kosack@rothamsted.ac.uk
Martin Urban: martin.urban@rothamsted.ac.uk
Mansoor Saqi: mansoor.saqi@rothamsted.ac.uk
Jacek Grzebyta: jacek.grzebyta@rothamsted.ac.uk ■

XV International Congress on Molecular Plant-Microbe Interactions

Preliminary Program

Speaker listings are preliminary and subject to change.

SUNDAY, JULY 29

- 12:00 – 14:00 **Special Workshop 1**—Imaging Plant-Microbe Interactions
Special Workshop 2—Induced Susceptibility in Plants
Special Workshop 3—Powdery Mildew
- 14:00 – 14:30 **Break**
- 14:30 – 16:30 **Special Workshop 4**—Rice Immunity and Pathogens
Special Workshop 5—Functional Genomics of Plant-Pathogenic Bacteria
Special Workshop 6—Proteomics
- 16:30 – 17:00 **Break**
- 17:00 – 19:00 **Opening Remarks**
Opening Lecture—Shizuo Akira
Award Lecture
- 19:15 – 21:00 **Welcome Reception**

MONDAY, JULY 30

- 08:30 – 10:00 **Plenary 1**—Plant Signaling I
C. Zipfel, F. Takken, K. Shimamoto
- 10:00 – 10:20 **Coffee Break**
- 10:20 – 12:20 **Plenary 2**—Pathogen I
J. Dangl, P. Schulze-Lefert, S. Kamoun, Y.-H. Lee
- 12:20 – 13:30 **Lunch Break**
- 13:30 – 15:30 **Concurrent 1**—Recognition and Signaling I
Concurrent 2—Symbiosis I
Concurrent 3—Pathogenic Fungi
- 15:30 – 15:50 **Coffee Break**
- 15:50 – 17:50 **Concurrent 4**—Plant-Oomycete/Fungal Interactions
Concurrent 5—Biocontrol Interactions
Concurrent 6—Plant-Nematode/Insect Interactions
- 17:50 – 18:00 **Break**
- 18:00 – 20:30 **Poster Session I**—*odd numbers*

TUESDAY, JULY 31

- 08:30 – 10:00 **Plenary 3**—Plant Immunity I
J. Parker, J. Jones, P. Spanu

- 10:00 – 10:20 **Coffee Break**
- 10:20 – 12:20 **Plenary 4**—Plant-Microbe Interactions I
M. Harrison, T. Bisseling, X. Li, N. Shibuya
- 12:20 – 13:30 **Lunch Break**
- 13:30 – 15:30 **Concurrent 7**—Effector Proteins
Concurrent 8—Plant-Virus/Viroid Interactions
Concurrent 9—Cell Wall Modification and Resistance
- 15:30 – 15:50 **Coffee Break**
- 15:50 – 17:50 **Concurrent 10**—Plant Hormones Integrating Defense Response
Concurrent 11—Crop Protection
Concurrent 12—Evolution of Susceptibility and Resistance
- 17:50 – 18:00 **Break**
- 18:00 – 20:30 **Poster Session II**—*even numbers*

WEDNESDAY, AUGUST 1

- 08:30 – 10:00 **Plenary 5**—Plant Signaling II
P. Dodds, J. Sheen, B. Staskawicz
- 10:00 – 10:20 **Coffee Break**
- 10:20 – 12:20 **Plenary 6**—Plant-Microbe Interactions II
J.-M. Zhou, M. B. Mudgett, M. Parniske, G. Oldroyd
- 12:20 – 13:30 **Lunch Break**
- 13:30 – 15:30 **Concurrent 13**—Plant Response
Concurrent 14—Pathogenic Bacteria/Phytoplasma
Concurrent 15—Systems Biology
- 15:30 – 15:40 **Coffee Break**
- 15:40 – 20:00 **Excursion**

THURSDAY, AUGUST 2

- 08:30 – 10:00 **Plenary 7**—Plant-Microbe Interactions III
J.P. Rathjen, R. Kahmann, Sheng Yang
- 10:00 – 10:20 **Coffee Break**
- 10:20 – 12:20 **Concurrent 16**—Recognition and Signaling II
Concurrent 17—Symbiosis II
Concurrent 18—Endophytes and Parasitic Plants

12:20 – 13:30 **Lunch Break**

13:30 – 15:30 **Concurrent 19**—Biotechnology
Concurrent 20—Genomics and Evolution of Virulence in Pathogenic Fungi and Oomycetes
Concurrent 21—Structural Biology

15:30 – 15:50 **Coffee Break**

15:50 – 17:50 **Plenary 8**—Plant Immunity II
T. Lahaye, J. Stougaard, S-W. Ding, J. Takabayashi

18:00 – 18:30 **Closing Ceremony**

19:00 – 21:00 **Congress Dinner**

Welcome New Members

We have had more than 135 people join IS-MPMI between February 1 and May 31, 2012.
Please join us in welcoming them to the society!

Mohammad Babar Ali
Jonathan P. Anderson
Go Atsumi
James F. Basinger
Shigeyuki Betsuyaku
Rosemary E. Bradshaw
Elizabeth Brauer
Changqing Chang
Jiongjong Chen
Chi-Ping Cheng
Yu-Qin Cheng
Mi Sun Cheong
William R. Chezem
Izumi Chuma
Patrick Cournoyer
Yinyue Deng
Zaifeng Fan
Antonio V. O. Figueira
Damien Fleetwood
Emmanouil Fletmetakis
Koki Fujisaki
Takeshi Fukumoto
Satish Ganji
Derek Goto
Jean Greenberg
Dave Greenshields
Florian M. W. Grundler
Hui-Shan Guo
Chenggui Han
Elizabeth M. Henry
Goetz Hensel
Kazuyuki Hiratsuka
Tzu-Pi Huang
Gang-Su Hyon

Haruko Imaizumi-Anraku
Maki Imamura
Michael Ionescu
Kazuya Ishikawa
Yoko Ishizaki
Shushu Jiang
Oskar N. Johansson
Mike G. K. Jones
Yasuhiro Kadota
Susan G. W. Kaminsky
Hiroyuki Kanzaki
Hiroko Kasai
Takuya Keima
Brian D. Keppler
Lih Ling Kong
Tung Kuan
Hanhui Kuang
Takamitsu Kurusu
Tina Kyndt
Carlos A. Labate
Estibaliz Larrainzar
Stacey A. Lawrence
Dong Yeol Lee
Jung-Youn Lee
Justin Lee
Miin-Huey Lee
Andrea Lenk
Yan Li
Qian Liu
Wende Liu
Yule Liu
Pek Chin Loh
Rohan G. T. Lowe
Hans J. Lyngs Jorgensen

Sidik Marsudi
Francisco Martinez-Granero
Qasim Abdulla Marzani
Akane Meguro
Bolette Lind Mikkelsen
Kana Miyata
Hiroyuki Mizumoto
David H. Moon
Nisa Rachmania Mubarik
Senthil-Kumar Muthappa
Marina Nadal
Tomomi Nakagawa
Thao Nguyen Thi Phuong
Anders K. Nilsson
Yuese Ning
Takahito Nomura
Yoshiteru Noutoshi
Kouhei Ohtani
Kazunori Okada
Elizabeth Ortiz-Vázquez
Shweta Panchal
Preetinanda Panda
Sook-Young Park
You-Liang Peng
Rafael Perl-Treves
Andrew R. Pitman
Shan Qi
Yajuan Qian
Shen Qingtang
Maria Carolina Quecine
Brendan K. Riely
Pernille S. Roelsgaard
Yumiko Sakuragi
Nobumitsu Sasaki

Masa H. Sato
Alon Savidor
William C. Sharpee
Masaki Shimono
Lowela L. Siarot
Shahid Masood Siddique
Brian Staskawicz
Rishi Sumit
Minoru Takeshita
Hans Thordal-Christensen
Nico Tintor
Marcos Trajano
Joy C. Valenta
Harrold A. Van den Burg
Thomas Ve
Xuli Wang
Yuichiro Watanabe
Chih-Hang Wu
Weilong Xie
Yan Xie
Xiufang Xin
Kohji Yamada
Yube Yamaguchi
Hua Yan
Fen Yang
Shu-Yi Yang
Xilan Yu
Jialin Yun
Xuecheng Zhang
Yongliang Zhang
Tao Zhou
Xueping Zhou
Lifang Zou



People



Jonathan Jones

Jonathan D. G. Jones, senior scientist and rotating head of the Sainsbury Laboratory, Norwich, United Kingdom, has been selected as the recipient of the 2012 E. C. Stakman Award. This award is granted annually to an individual of any country or nationality for outstanding achievements in plant pathology. The award was presented to Jones at a ceremony at the University of Minnesota in May 2012. Jones completed his Ph.D. degree in plant genetics at Peterhouse,

Cambridge University, in 1980. After completing his doctorate, he accepted a post-doctoral research fellowship working on symbiotic nitrogen fixation with **Fred Ausubel** at Harvard University. He then worked at Advanced Genetic Sciences (AGS), a startup agbiotech company, and in 1988, he joined the Sainsbury Laboratory in Norwich. Jones has made numerous and sustained contributions to the science of plant pathology. His group was among the first to isolate and characterize a plant disease resistance gene. By cloning the *Cf-9* gene in 1994, he was the first to demonstrate that resistance induced in plants toward pathogens is based on specific classes of innate immune receptors. His work preceded the 1996 discovery of innate immune receptors in animal systems, which was recognized by the 2011 Nobel Prize in Medicine and Physiology. In essence, Jones's discovery that an R gene codes for a receptor-like protein was a validation of the concept of gene-for-gene and elicitor-receptor interactions that originated from the work **E. C. Stakman**, **Harold Flor**, and other pioneers of plant pathology. His current research is focused on the effector complements of the *Arabidopsis* oomycete pathogens *Hyaloperonospora arabidopsidis* and *Albugo candida* using next-generation sequencing methods. Jones was elected a member of the European Molecular Biology Organization in 1998 and fellow of the Royal Society in 2003.

Recent Graduate

Luis Miguel Roderiguez recently graduated from the University of Montpellier II, France. In August 2011, Roderiguez started a Ph.D. project in the Kostas Lab at the Georgia Institute of Technology. The project discusses the use of polymorphic loci and tools for the detection and comparison of the various loci. ■

Meetings

ICG Americas 2012—International Conference on Genomics, September 27–28, 2012

Sponsored by BGI Americas and Children's Hospital of Philadelphia (CHOP), ICG Americas 2012 will hold the inaugural International Conference on Genomics, to be held in the United States. ICG Americas will gather global thought leaders devoted to the latest developments in human, plant, and animal genome sciences. The conference will present a powerful platform to share research in basic and applied genomics and advance new approaches to sequencing and bioinformatics.

Frontiers in Legume Symbiosis—Gif-sur-Yvette, Paris, France, December 13–14, 2012



Adam Kondorosi

The Frontiers in Legume Symbiosis is in memory of **Adam Kondorosi**. Kondorosi has been one of the worldwide leading scientists in the field of plant-microbe interactions and, more particularly, in the field of *Rhizobium*-legume symbiosis for about three decades. Kondorosi died on January 21, 2011. The symposium will give tribute to him by bringing together leading actors in the field to create a scientific event that is at the forefront of *Rhizobium*-legume research. Visit the symposium website (www.isv.cnrs-gif.fr/colloque-AK2012/home.html) for the program and inscription. ■

COMING EVENTS

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

September 27–28, 2012

ICG Americas 2012—International Conference on Genomics

Philadelphia, Pennsylvania, U.S.A.
www.icgamericas.org

October 16–19, 2012

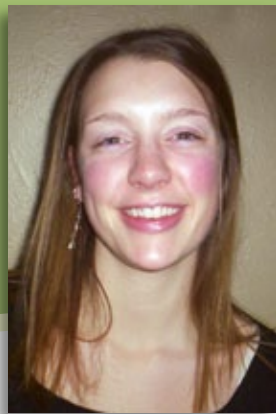
International Conference on Plant Resistance Sustainability

La Colle sur Loup, France
<https://colloque4.inra.fr/prs2012>

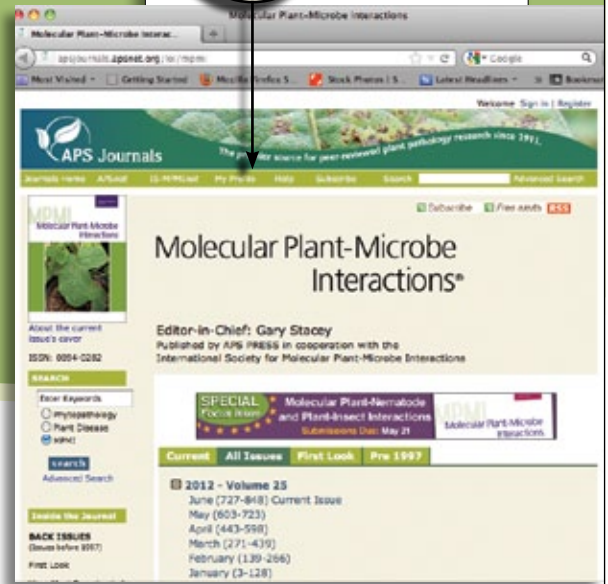
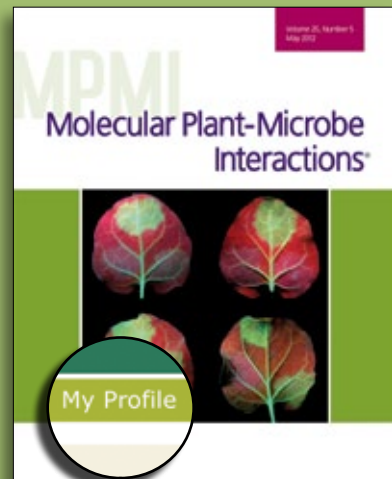
Include your meeting in IS-MPMI's printed and online event calendar. Submit online at
www.ismpminet.org/meetings/calsubmit.asp

WHAT'S YOUR MPMI PROFILE?

Save valuable time and receive research alerts directly in your in-box when you create a custom profile in *MPMI* Online. It's fast, easy and free.



Jillian Lang added molecular diagnostics, *Xanthomonas oryzae*, and *Pythium ultimum* to her saved-searches and is notified when new content is published in *MPMI Online* that relates to these terms.



Receive a **FREE** 2GB FLASH DRIVE!

Visit the IS-MPMI exhibit during the congress and we'll assist you in setting up your *MPMI* custom profile. It takes less than five minutes and the flash drive is our gift to you.



(Limit one per person, while supplies last.)



International Society of Molecular Plant-Microbe Interactions
3340 Pilot Knob Road, St. Paul, MN 55121 U.S.A.

#M8650REV-5/2012

Employment

Post-Doctoral Position in Plant-Microbe Symbiotic Interactions

A post-doctoral position is available in the Department of Agronomy at the University of Wisconsin–Madison. A Ph.D. degree in plant molecular and cellular biology, plant genetics, or related fields is required. An experienced post-doctoral plant biologist is needed to study and improve symbiotic associations between microbes and bioenergy crops. The successful candidate will have coauthored one or more peer-reviewed publications in reputable international journals and will be familiar with plant-microbe interactions. Candidates with prior experience in signaling pathways or nitrogen fixation are especially encouraged to apply. Excellent oral and written communication skills and the ability to work well in a collaborative research environment are essential. Job Duties: Availability of nutrients is a major constraint for crop productivity and sustainable agriculture. Over the last decades, there has been an excessive dependence on nitrogen fertilizers with major economic and ecological consequences. Taking better advantages of symbiotic associations is an exciting alternative to improve bioenergy crop yields and the sustainability of these agricultural systems. The post-doctoral research associate will study microbial signals produced by symbiotic microbes and the corresponding pathways activated in monocots in order to improve nitrogen-fixing associations. This is a two-year position (with possible extension) starting August 15, 2012. Salary will be in the \$39,000–41,000 range, depending on experience. This is a full-time position. Contact: Jean-Michel Ané, Department of Agronomy, 348 Moore Hall, 1575 Linden Drive, Madison, WI 53726, U.S.A. E-mail: jane@wisc.edu. Applications will be accepted until a suitable candidate is identified.

Post-Doctoral Positions in Molecular Genetics of Disease Resistance

Two positions are available in the Two Blades group at the Sainsbury Laboratory to join ongoing projects using state-of-the-art techniques to identify novel resistance genes effective against major diseases of crops. The successful candidates will have significant responsibility for carrying out the projects with opportunities to develop into leadership positions. The main goals of the projects are identification of novel disease resistance genes using genetic mapping and next-generation sequencing and functional analysis of candidate genes using transient and stable expression systems. We seek individuals with outstanding talent and abilities in molecular biology and genetics, a demonstrated record of achievement in academia or industry, and an eagerness to work as part of a collaborative, multifunctional, international team. The successful candidates should have an interest in plant disease resistance and a desire to see research outcomes reach practical application. An understanding of bioinformatics, including high-throughput genomic analysis, next-generation sequencing, and familiarity with widely used genomic databases and methods would be advantageous. Salary will be within the UEA Research and Analogous staff Grade 7 scale, between £29,972 and £35,788 pa; however, the appointment level will reflect qualifications, skills, knowledge, and achievements. The positions are available for two years in the first instance from July 1, 2012. The Sainsbury Laboratory (TSL) is a world leader in plant and microbial science that is dedicated to making fundamental discoveries in the science

of plant-microbe interactions. TSL has expanded its scientific mission not only to continue providing fundamental biological insights into plant-pathogen interactions but also to deliver novel, genomics-based solutions that will significantly reduce losses from major crop diseases, especially in developing countries. For more information, please visit www.tsl.ac.uk. Applicants should provide a CV, including the names and contact details of two or more referees, and a covering letter addressing the selection criteria. Please send formal applications, quoting the reference number below, either by e-mail to HR@tsl.ac.uk or by post to Kim Blanchflower, HR Manager, The Sainsbury Laboratory, Norwich Research Park, Colney, Norwich, NR4 7UH, United Kingdom. Ref:2BL05

Senior Research Associate

Pioneer Hi-Bred, a DuPont business, is currently seeking a senior research associate in Wilmington, Delaware, U.S.A. The senior research associate will be part of a team involved in the discovery and transgenic testing of genes for efficacy against soybean plant pests and pathogens. The successful candidate will contribute to bioassay screens as well as molecular analysis of plants to correlate resistance/tolerance phenotypes with gene expression. This individual will be responsible for contributing to the identification of genes that confer disease resistance and for testing such genes for in planta efficacy. This will be accomplished by supporting infection bioassays to evaluate plant disease resistance/tolerance; extracting DNA, RNA, protein, and metabolites from plant samples; generating plant expression constructs of identified candidate genes; supporting the generation of transiently and stably transformed plants; and performing molecular analyses to confirm and correlate gene expression with observed resistance phenotypes. The successful candidate must adhere to safety practices and established procedures for handling and disposal of regulated plant material and pathogens. Attention to detail and close adherence to experimental protocols is mandatory. Must be able to work both independently and as part of a collaborative, interactive work team. This position requires a master's degree or equivalent in biological sciences, preferably specializing in molecular biology, plant biology, plant pathology, or a related scientific field with 2–5 years of industry/academic-related experience. A bachelor's degree in biological sciences with a minimum of 5–10 years of industry/academic-related experience is required. Experience with basic molecular biology techniques is essential: DNA and RNA extraction and manipulation; PCR, RT-PCR; agarose and polyacrylamide gel electrophoresis; Northern, Southern, Western blots; gene cloning and construct generation. Experience with transient and stable transgenic plant generation and molecular analysis is desirable. Practical knowledge of plant pathology is preferred with hands-on experience highly beneficial. Proficiency with a wide array of computer software, including MSOffice and VectorNTi; sequence analysis and assembly software, such as Sequencher; image analysis; and databases is required, as well as the ability to quickly master new software. Also required are excellent communication and organization skills; the ability to analyze, summarize, and present data to other team members; the exhibition of self-motivation and adaptability to change; and a demonstrated skill to work effectively on multiple projects simultaneously and meet deadlines. Apply online at www.pioneer.com/careers. Submit to job 16908BR. ■

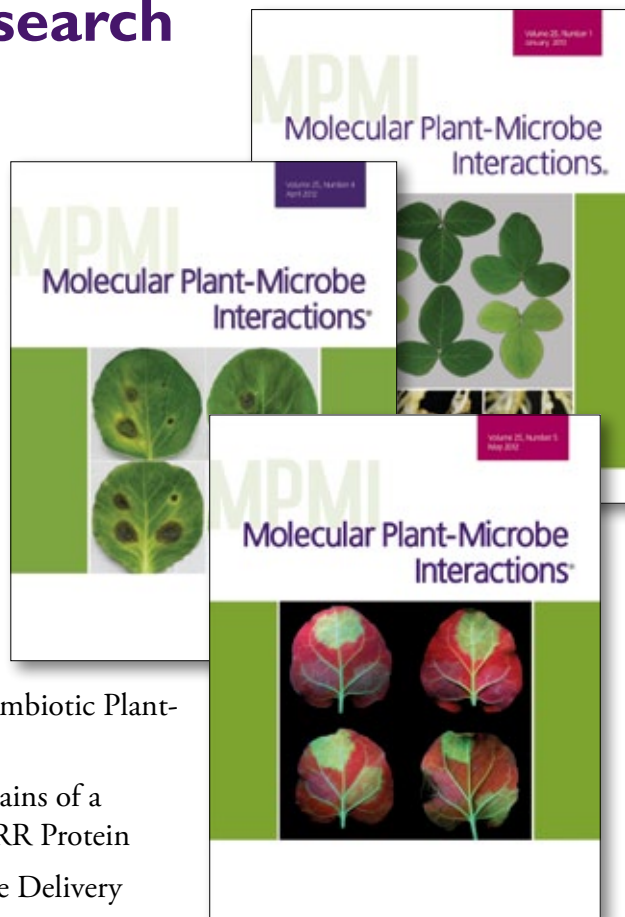
Ground-Breaking Research for More than a Quarter Century

Top 10 MPMI Articles

May 1, 2011–April 30, 2012*

- Modulation of Host Immunity by Beneficial Microbes
- Functional Characteristics of an Endophyte Community Colonizing Rice Roots as Revealed by Metagenomic Analysis
- Invasion by Invitation: Rhizobial Infection in Legumes
- Lipo-chitooligosaccharide Signaling in Endosymbiotic Plant-Microbe Interactions
- Cell Death Mediated by the N-Terminal Domains of a Unique and Highly Conserved Class of NB-LRR Protein
- The Type VI Secretion System: A Multipurpose Delivery System with a Phage-Like Machinery
- Nonhost Resistance of Rice to Rust Pathogens
- *Medicago truncatula* *IPD3* Is a Member of the Common Symbiotic Signaling Pathway Required for Rhizobial and Mycorrhizal Symbioses
- Ethylene-Responsive Element-Binding Factor 5, ERF5, Is Involved in Chitin-Induced Innate Immunity Response
- Auxin Signaling and Transport Promote Susceptibility to the Root-Infecting Fungal Pathogen *Fusarium oxysporum* in *Arabidopsis*

*COUNTER 3-compliant statistical report.



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March 2012, Volume 25, Number 3

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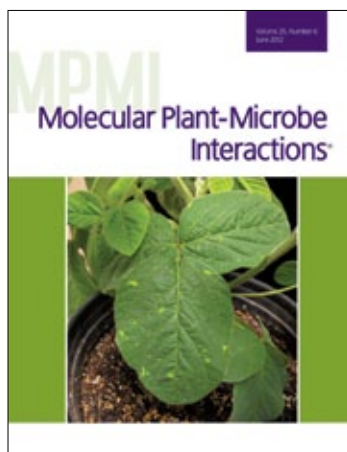
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AbVf19, Is Required for the Induction of
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Contribution of *rpfB* to Cell-to-Cell Signal
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Sugarwin: A Sugarcane Insect-Induced Gene with Antipathogenic Activity.

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pFiD188, the Linear Virulence Plasmid of *Rhodococcus fascians* D188.

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June 2012, Volume 25, Number 6

CURRENT REVIEW—*Opprimo ergo sum*—Evasion and Suppression in the Root Endophytic Fungus *Piriformospora indica*.

TECHNICAL ADVANCE—A High-Throughput Virus-Induced Gene-Silencing Vector for Screening Transcription Factors in Virus-Induced Plant Defense Response in Orchid.

TECHNICAL ADVANCE—Evaluation of *Arabidopsis thaliana* as a Model Host for *Xylella fastidiosa*.

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A *Penicillium expansum* Glucose Oxidase-Encoding Gene, *GOX2*, Is Essential for Gluconic Acid Production and Acidification During Colonization of Deciduous Fruit.

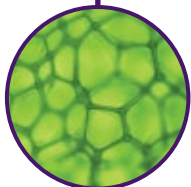
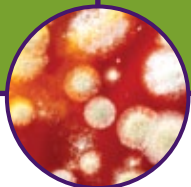
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