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## Congress Pre-registration Open

Visit [www.mpmi2007.org](http://www.mpmi2007.org) to pre-register for the XIII International Congress on Molecular Plant-Microbe Interactions in Sorrento, Italy (July 21-27, 2007). This indicates your interest in the meeting and includes your name in the mailing list for the next circular.

## IS-MPMI REPORTER DEADLINE

**Deadline for submitting items for the next issue is Dec. 1, 2006.**

Submission of materials as electronic files, either on disk or as e-mail attachments, will speed processing. For information on submitting electronic images, contact Joel Berg at [jberg@scisoc.org](mailto:jberg@scisoc.org).

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## Survey Finds Broad Support for MPMI and Identifies Possibilities for Improvements

Jens Stougaard, Editor-in-Chief of MPMI, [stougaard@mb.au.dk](mailto:stougaard@mb.au.dk)



Jens Stougaard

The International Society for Molecular Plant-Microbe Interactions (IS-MPMI) and The American Phytopathological Society (APS), which together publish *Molecular Plant-Microbe Interactions* (MPMI), have conducted a survey of the editorial policy, research focus, and scope of the journal. The performance of the new electronic submission and review system was also surveyed. *MPMI* publishes articles on the molecular biology and molecular genetics of pathological, symbiotic, and associative interactions of microbes with plants and insects with plants. *MPMI* publishes both fundamental and advanced applied research, and "microbe" encompasses viruses, viroids, prokaryotes, fungi, oomycetes, nematodes, and insects. In 2005, *MPMI* had an acceptance rate of 46% and published 150 papers. The ISI impact factor for 2005 was 3.928.

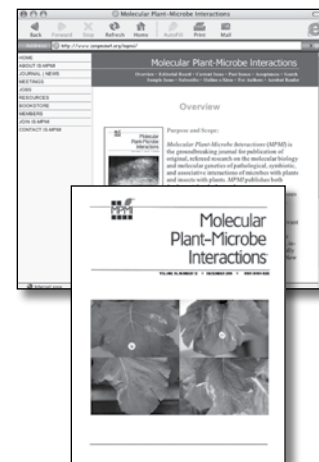
Results of the opinion/satisfaction survey about *MPMI* have now been compiled. The survey was conducted in March 2006. The intent of the survey was to see whether *MPMI* is meeting the needs of researchers in a number of areas and to determine its position compared with those of other leading journals. To complete the survey, *MPMI* staff sent a link to the electronic web-based survey via e-mail to members and former members of the IS-MPMI and APS. The survey link was also sent to nonmember researchers who have published in *MPMI*. More than 6,500 scientists were asked to participate and 779 responses were received (11.8%). The survey questions were developed by **Jens Stougaard**, editor-in-chief of the journal, with input from his editorial board as well as from the chair of the APS Publications Board, **Margaret Daub**.

The satisfaction with *MPMI* is remarkable (Table 1). When asked the question "What is your opinion of *MPMI*," 74% responded that *MPMI* is above average and 96% find *MPMI* average or above average.

**Table 1. What is your opinion of MPMI?**

No.	%	Ranking
204	27.4%	<b>High</b> (ranks with the best journals that I publish in or read)
350	47.0%	<b>Above Average</b> (ranks above many journals I publish in or read)
164	22.0%	<b>Average</b> (on average is as good as most journals I publish in or read)
12	1.6%	<b>Below Average</b> (ranks below many journals I publish in or read)
14	1.9%	<b>Low</b> (ranks below most journals I publish in or read)

Judging from these positive responses, the overall standing of *MPMI* appears very good and the journal appears well supported by the scientific community. This notion is further supported by the fact that 76% were satisfied with the review process and 89% of the respondents read or monitor research in *MPMI* regularly or often.



**Broad Support for MPMI continued on page 2**

## A Message From Your President

Dear Colleagues,



Pierre de Wit

As you all know the weather in 2005 was not very supportive for our society. Two hurricanes hit our venue for the XII IC-MPMI in Cancun and urged us to move to Merida, last December. Although the attendance dropped due to these repeated setbacks the XII IC-MPMI in Merida became a success with excellent science and several breakthroughs. We were all very grateful to Federico Sanchez and his local organizing team who mastered most of the problems. We are happy that IS-MPMI could help most young scientists who encountered financial problems. We are all also very happy that IS-MPMI picked up new momentum and is going strong again.

### What has happened since our last meeting in Merida?

The IS-MPMI Board of Directors has been renewed and extended. New members and a new president-elect Federico Sanchez, were chosen. The new composition of the Board can be seen on page 16.

### The IS-MPMI Reporter

Sophien Kamoun is our very active new editor-in-chief of the *IS-MPMI Reporter*. In the latest issue he introduced his future plans for the *IS-MPMI*

President's Message continued on page 15

### Broad Support for *MPMI* continued from page 1

When asked to weigh 10 criteria used to decide "where to publish," reputation of the journal, subject matter of the journal, and audience type of the journal were the most highly ranked. This was true of *MPMI* authors (Table 2.1) as well as of those who publish, but not yet in *MPMI* (Table 2.2). When measured by the percent that indicate a criterion as important, rankings between the two groups of respondents were similar. The biggest difference was with impact factor ranking, which was more important to those that publish in *MPMI* than to those that do not.

**Table 2.1 Rate the importance of the following criteria when deciding where to submit your research for publication. Response from *MPMI* authors, ranked by percent that rate a criterion as important.**

Criteria	Ranking				
	More Important	Neutral	Less important		
Subject matter of the journal	68.30%	27.20%	4.20%	0.00%	0.30%
Reputation of a journal	61.40%	33.50%	4.50%	0.30%	0.30%
Audience type of the journal (who reads it)	51.70%	33.90%	12.00%	2.10%	0.30%
Impact factor ranking	41.70%	41.70%	12.90%	2.70%	0.90%
Good past experience as an author with a journal	32.50%	44.10%	17.60%	4.90%	0.90%
Speed to publication	27.40%	46.20%	23.10%	2.40%	0.90%
Audience size of the journal (how many read it)	24.00%	41.00%	27.40%	6.10%	1.50%
Electronic subscription access by institutions and individuals	34.10%	30.50%	23.80%	7.90%	3.70%
Immediate open access to the public	21.40%	27.50%	33.60%	10.40%	7.00%
Page charges	14.80%	30.80%	32.30%	16.30%	5.70%

**Table 2.2 Rate the importance of the following criteria when deciding where to submit your research for publication. Response from authors who publish, but not in *MPMI*, ranked by percent that rate a criterion as important.**

Criteria	Ranking				
	More Important	Neutral	Less Important		
Subject matter of the journal	66.10%	30.60%	2.40%	0.60%	0.30%
Reputation of a journal	46.80%	43.50%	9.30%	0.30%	0.00%
Audience type of the journal (who reads it)	42.90%	43.20%	9.60%	3.00%	1.20%
Good past experience as an author with a journal	27.40%	44.80%	18.90%	4.70%	4.10%
Speed to publication	31.40%	38.70%	25.50%	3.50%	0.90%
Impact factor ranking	26.50%	38.40%	26.80%	6.40%	1.80%
Electronic subscription access by institutions and individuals	29.90%	32.10%	24.30%	9.00%	4.70%
Audience size of the journal (how many read it)	15.70%	41.40%	33.20%	7.90%	1.80%
Immediate open access to the public	23.50%	26.60%	32.50%	10.80%	6.50%
Page charges	21.40%	22.00%	31.90%	15.20%	9.60%

For both of the groups in Tables 2.1 and 2.2, the criteria thought to be less important in their decision about "where to publish" were immediate open access and page charges. However, these criteria are of strong significance to some, as indicated by written comments provided by several respondents.

The survey asked respondents if they rely on the print form of the journal. The results show that we are moving closer to a time when an online-only *MPMI* journal may be feasible but that some still rely on the print version. The survey reveals that 26% "never" read the paper version, while 20% "only" read the paper version. According to the survey, 58% of the respondents answered "yes" when asked "Could *MPMI* serve its purpose if it were available only online," 22% answered "no," and 21% answered "are not sure."

The survey respondents added a number of written comments with recommendations and possible improvements for *MPMI*. A compilation of these comments is provided below:

**Comments about the journal, peer review, and content:**

- Maintain reputation of the editorial board
- Maintain high standards and improve the impact factor
- Establish a permanent and attractive review or mini-review series
- Publish reviews on unresolved problems in pathology/plant disease and the 20 biggest problems
- Attract and publish new creative results and ideas
- Maintain a constructive, helpful, and fair review process
- Implement a faster process for review and editorial decisions
- Indicate the senior editor's name on published papers
- Broaden the range of reviewers
- Use a template for reviewer's reports
- Attract more systems biology, biochemistry, pathology, and ecology papers

**Comments about editing and publication:**

- Reduce page charges, charges for color pictures, and reprints
- Move toward immediate open access
- Ensure complete linkage with PubMed

- Make it possible to download figures and tables in PowerPoint format

Many of the improvements suggested for *MPMI* by the survey's written comments have already begun. *MPMI* has recruited scientists to write mini-reviews for important areas of our science, and we will continue to build on this recent progress. To improve the speed of the review process, *MPMI* moved within the past year to an all-electronic, state-of-the-art review system called Manuscript Central. Partial open access to *MPMI* has been implemented for any article older than 24 months. In addition, *MPMI* is moving to a new electronic platform that will provide cross linking of references to and from articles in our journal with many other journals. The new platform will also provide improved search options, including "saved key-word searches" for researchers interested in monitoring specific research areas. The new platform can even be configured to track the work of individual authors and send an e-mail alert when something new is published by that scientist. Faster inclusion in online databases, such as ISI's Web of Science and PubMed, will also be possible. This new online platform will help *MPMI* stay up-to-date with the new improvements coming in online journals.

IS-MPMI and APS thank everyone who participated in the survey and offered their opinions and suggestions to help make *MPMI* the best it can be.



**XIII International Congress on Molecular Plant-Microbe Interactions**  
July 21 to 27, 2007, Sorrento, Italy • Hilton Sorrento Palace Congress Centre



See you in  
**Sorrento!**

**Join other scientists from around the world** for the XIII International Congress to be held in beautiful Sorrento, Italy.

The Congress includes Plenary Lectures, Concurrent Sessions, and Posters. The Cultural and Social Program of the Congress will include a welcome reception and a half day excursion to the Pompeii ruins.

Main scientific topics covered will be: plant-pathogen recognition, signaling, plant responses, plant interactions with pathogenic fungi and bacteria, plant-virus interactions, symbiotic plant-microbe interactions, plant nematode and insect interactions, plant endophyte interactions, mechanism of resistance to microbes, biocontrol interactions, and microbe-microbe interactions.

Visit [www.mpmi2007.org](http://www.mpmi2007.org) for information.

## Interviews with IS-MPMI Leadership

The *IS-MPMI Reporter* in continuing its effort to better acquaint the membership with the leadership of their Society by publishing interviews with the Board of Directors. In this issue, you will find interviews with Directors Steven Lindow and Michael Djordjevic. Please feel free to contact the leaders of IS-MPMI with any questions or concerns; a list of the Board with their contact information is printed in every issue. You can find the list on page 16.

### Meet IS-MPMI Board of Directors



**Steven Lindow, Director**

Q: Tell us about yourself and your work.

A: I received my Ph.D. in Plant Pathology at the University of Wisconsin-Madison in 1977. A wonderful experience! I was fortunate to have stumbled upon a very interesting biological question—how do plants

freeze?—and discovered bacterial ice nucleation as a graduate student. My studies of ice nucleation active strains of *Pseudomonas syringae* and *Erwinia herbicola* led me to my permanent interest in leaf surface microbiology. After joining the Department of Plant Pathology at UC-Berkeley in 1978 (now disbanded), I continued my studies of the biochemistry of ice nucleation as well as more general studies of phyllosphere microbiology. It was at Berkeley that I was fortunate to have as a colleague Nick Panopoulos, who really opened my eyes to the power of the newly-developing molecular genetic techniques for studying microbial physiology and ecology. It was through interactions with Nick that we produced ice nucleation-deficient strains of *P. syringae* that were the first recombinant microbes to be tested outside of the laboratory. These early adventures in molecular techniques stimulated the continued exploration of such tools in my work. My current program is broad, and we have a number of projects that could be bundled under the heading “molecular microbial ecology.” We address a variety of issues related to the epiphytic fitness of *P. syringae*, including the identification and methods of regulation of plant-inducible genes in this species as well as exploring the role of quorum sensing in the lifestyle of *P. syringae*. This has led to our addressing new strategies of disease control based on pathogen confusion by altering *n*-acyl homoserine lactone levels on and in plants by various means. Also underway are studies of factors of *P. syringae* that contribute to overcoming nutrient-limited growth in the apoplast as well as the interactions of epiphytes that produce IAA with plants. Recently, we have become quite involved in studying Pierce’s Disease of grape caused by *Xylella fastidiosa*. We are exploring a regulatory system that involves the production of a diffusible fatty-acid signal molecule that suppresses the virulence of this pathogen at high cell densities. Our studies include determining the regulon of this global regulatory system, identification of plant-inducible genes, and of altering signal molecule abundance in plants to alter pathogen virulence.

Q: When did you first join the society?

A: Unsure—I have been a member on and off for many years and have served the society as a senior editor of MPMI even when I was not an “official” member.

Q: Which IS-MPMI Congress did you first attend?

A: Bielefeld, Germany 1982. I have attended most of the meetings since then as well. It was very encouraging to see the remarkable discoveries that cutting edge molecular tools made possible in the study of *Agrobacterium* and *Rhizobium*, which was a major focus of the early meetings.

Q: Do you think it is important that Ph.D. post-docs and students in your lab are IS-MPMI members? What can/should IS-MPMI offer young scientists in our field.

A: As my lab is rather broad, some identify more closely with more classical microbial ecology. However, I encourage those who are working more directly on plant-microbe interactions to join the society and especially to participate in the bi-annual meetings. It is through the meetings that they can make valuable contacts needed for future professional development and gain a better appreciation for research directions. This is the most important function that IS-MPMI can provide. With many competing meetings, especially as research becomes more interdisciplinary, it is difficult for students to find the time or money to attend meetings that would prove beneficial to them.

Q: What drew you to plant-microbe interactions?

A: I grew up on a farm and saw first hand the problems associated with plant diseases and frost injury, which led me to a career in plant pathology. For me, the fundamental study of plant-microbe interactions is an ideal way to merge my interests, both in microbiology and plants, with the potential for developing new and better means of plant disease control.

Q: What inspired you most in your career?

A: As a graduate student at the University of Wisconsin, I was fortunate to have had role models such as Arthur Kelman, Luis Sequiera, and Paul Williams, who illustrated how fundamental studies of plant-microbe interactions could lead to a new appreciation for disease control. In addition, there was a tradition of keeping “one foot in the furrow” that held that basic and more applied research could be merged; I have always found the fact that my

work has led to practical disease-control solutions to be very rewarding.

Q: What's the most exciting paper that you read recently?

A: Wright, C. A., and Beattie, G. A. 2004. *Pseudomonas syringae* pv. tomato cells encounter inhibitory levels of water stress during the hypersensitive response of *Arabidopsis thaliana*. Proc. Natl. Acad. Sci. U.S.A. 101:3269-3274.

Q: What is the next "big thing" in plant-microbe interactions?

A: I expect that further exploration will show that various forms of intercellular communication, such as quorum sensing, will be found to have large and unexpected effects on interactions between microbes and also between them and plants.

Q: What is your favorite gene?

A: Bacterial genes conferring ice nucleation such as *inaZ* have been of interest to me for along time. The phenomenon is fascinating and ice nucleation genes have proven to be real workhorses for our studies of bacterial gene expression in "dirty" biological systems, such as in and on plants.

Q: What are your favorite activities outside of the lab?

A: Hiking, snowshoeing, downhill skiing. Occasional golf is fun without being habit-forming or frustrating. Woodworking is a real treat; a great weekend is one that I can make a pile of sawdust!

Q: What books are you reading these days?

A: I have enjoyed re-reading a murder mystery by Isaac Asimov entitled "A Whiff of Death." It explores the murder of a graduate student in a chemistry lab and does an excellent job of capturing the stresses of being a grad student, post-doc, assistant professor, and their interactions with each other and with administrators.

Q: What's your favorite vacation?

A: Two recent vacations that stand out were driving/boating around the fjords of Norway and hiking in the four-corners area of the U.S. Southwest with the big red rock country, huge stone arches, etc. Any place with great vistas and interesting flora is good.



**Michael A. Djordjevic,  
Director**

Q: Tell us about yourself and your work?

A: Currently I am a chief investigator in the ARC Centre of Excellence for Integrative Legume Research (CILR), which involves researchers from four Universities in Australia. The Centre's research is focused on legume meristems involved in the formation of roots, shoots, and flowers with the goal of the future adaptation of chosen legumes for the Australian environment. The projects I am most responsible for focus on identifying new signals involved in long distance signaling and control of meristem proliferation, for example, those signals involved in autoregulation of nodulation (in collaboration with the Gresshoff labs at the University of Queensland). Part of this work involves direct examination of components in the xylem stream of soybean grown under conditions in which long-distance signals are known to be conducted between the root and shoot systems. In addition, I am also involved in a collaboration with Chris Parish at the John Curtin School of Medical Research at the ANU. In this research, we have identified a series of bioactive molecules in plants that are also bioactive in mammals. Perhaps one day these molecules will find wide utility in human health with potential outcomes in cancer control and cardiovascular disease.

Q: When did you first join the society?

A: I have been a member for a long time but I can't recall when it was exactly that I first joined.

Q: Which IS-MPMI Congress did you first attend?

A: After consulting my CV, I found that the first IS-MPMI Congress attended was in Ithaca, New York way back in the "dark ages" of the 1980s.

Q: What inspired you most in your career?

A: I have several interests. Plant-microbe interactions at all levels are fascinating—especially those involved in establishing symbiosis. How microbes have an intimate interaction with plants without triggering overt plant defense responses is still mysterious. Another interest is the role that flavonoids have in plant function—I have recently reignited this interest and hope to publish some interesting new findings soon. It is still amazing to me that more seems to be known about the biochemical functions of flavonoids in animal cells than in plant cells! A more recent interest is the control of stem cells in plants and how this influences plant architecture. This has come from my involvement with the CILR. Finally, the possibility of a chance discovery that has wider ramifications than the immediate field of interest is a constant source of motivation and inspiration.

Interviews with IS-MPMI Leadership continued on page 6

Interviews with IS-MPMI Leadership *continued from page 5*

Q: What is the most exciting paper you read recently?

A: The paper by Fiers et al. in *Plant Physiology* that follows on from their publication last year (Fiers et al *Plant Cell*. 17: 2542-2553, 2005) on the biological activity of the C-terminal domain of the Clv3 protein. It's refreshing to know that plants are not controlled solely by metabolite hormones!

Q: What is your favorite gene?

A: I don't have a favorite gene, but I have a favorite protein, NodC. I am still fascinated as to how this particular chitin synthase is able to generate de novo chitin chains without a molecular scaffold and to extend the chain to a limited degree of polymerization to generate Nod factor backbones.

Q: What are your favorite activities outside the lab?

A: I love traveling to foreign countries and sampling all the unique food and marveling at how different cultures look at life differently.

Q: What books are you reading these days?

A: I am halfway through the "Australian Miracle" by Thomas Barlow, which examines how innovation is and was generated in Australia and explores how this applies to the biotechnology industry here.

Q: What's your favorite vacation?

A: Ever since I went to St. Petersburg in the mid-90s, I have become a Russia-ophile. This is a spectacular must-see place where major events in history happened at every turn. Equally favorite destinations are Mexico, South East Asia, Spain, and South America. I also like snorkelling and diving at any coral reef that happens to be in the vicinity.



## Share the Knowledge, Share the Experience

IS-MPMI brings people together through the sharing of research and new ideas.

Invite your colleagues to become a part of the IS-MPMI community. Tell your colleagues to visit [www.ismpminet.org/members/join.asp](http://www.ismpminet.org/members/join.asp) to learn more about the benefits of membership and to download an application.

*Thank you for your continued support!*



## MPMI Provides Updates on Two Developing Research Areas

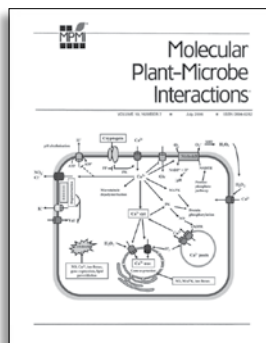
In an effort to provide scientists with a broad understanding of rapidly developing areas of molecular aspects of plant-microbe interactions articles, *MPMI* recently featured two review articles, “Cyclic Lipopeptide Production by Plant-Associated *Pseudomonas spp.*: Diversity, Activity, Biosynthesis, and Regulation,” and “Early Signaling Events Induced by Elicitors of Plant Defenses” in the July issue.

*IS-MPMI Reporter* had the opportunity to speak with the first authors of both review articles. Jos Raaijmakers of Wageningen University wrote about cyclic lipopeptide production, giving an up-to-date overview of the structural diversity and broad-spectrum activity of cyclic lipopeptide surfactants produced by both pathogenic and beneficial *Pseudomonas* species. Raaijmakers explains, “For plant pathogenic *Pseudomonas* species, these compounds are well-known virulence factors. For beneficial *Pseudomonas* species, they have received considerable attention for their role in antimicrobial activity, biological control, swarming, and biofilm formation.” The review also provides a detailed description of genes involved in regulation and biosynthesis of these versatile compounds.

Raaijmakers hopes *MPMI* readers will discover that cyclic lipopeptide surfactants are “functionally very versatile molecules and involved in virulence, antimicrobial activity, motility, biofilm formation, biocontrol of plant pathogens, colonization of plant tissue, but also in degradation of xenobiotic compounds. This makes these molecules very interesting to study, both from a fundamental and applied perspective.”

Raaijmakers currently researches cyclic lipopeptide surfactants (CLP), making his review article a natural fit. “Five years ago, we isolated a CLP-producing *Pseudomonas fluorescens* strain with a remarkable biocontrol activity against Oomycete pathogens. After promising results in the control of *Pythium* root rot in flowerbulb fields, we started looking more in detail to the genes involved in the regulation and biosynthesis of CLPs. Since then two projects were granted to further unravel regulatory networks and biosynthetic pathways and to investigate the potential of these compounds for the control of plant pathogenic Oomycetes,” said Raaijmakers.

Angela Garcia-Brugger, INRA, was the first author on “Early Signaling Events Induced by Elicitors of Plant Defenses.” This review covers some of the early events occurring within plants once they are challenged with potential pathogens or derived products of the pathogens that are elicitors of plant defense reactions. “A lot of the work presented in this review has been done using cell culture and purified elicitors, which are easier to handle. These simplified models also provide a facilitated interpretation at the cellular level, and often, when possible, results and mechanisms have been validated on the whole plants. We



used our laboratory working model to illustrate the early signaling steps, namely tobacco cell suspensions elicited with cryptogein, an elicitor secreted by *Phytophthora cryptogea*. In this model, we were able to show the complex interactions between three second messengers (NO, H<sub>2</sub>O<sub>2</sub>, calcium); their interplay is a key element in understanding the specificity of the plant response.”

Garcia-Brugger and the other authors chose to present the early events, which are of major importance in signal transduction and have been extensively studied by many international teams. Says Garcia-Brugger, “We had a lot of material to compare the signal transduction pathways, and we tried to raise general conclusions, but at the same time, it was interesting to point out the particularities observed with some elicitors or plants. We focused our attention on protein kinases and phosphorylation, ion fluxes, NO, and AOS production in relation with plant defense. In addition, these signaling steps are also closely intricated and could be discussed in relation with each other.”

Garcia-Brugger wanted to share the great advancement that has been made in plant signaling. “New areas [are] under investigation, like NO signaling, analysis of intracellular calcium concentration variations, and implications of MAPKs. We are just beginning to size the complexity of plant signaling,” states Garcia-Brugger.

Garcia-Brugger and the other authors of the review are “intimately implicated in one or more of the fields developed in the review (calcium, NO, PK, AOS).” Says Garcia Brugger, “We are working on three different plants (Tobacco, *Arabidopsis thaliana*, *Vitis vinifera*) and consider at least two of the upstream signaling steps in each model. Comparisons of the pathways between the plants provide interesting clues to push on studies on one model. In addition, our studies can partly be extended to the analysis of abiotic stresses.”

Both reviews cover important current issues; the overview of the genes in biosynthesis and regulation makes Raaijmakers’ review timely, and the main model discussed in “Early Signaling Events Induced by Elicitors of Plant Defenses” will be helpful to researchers beginning in plant defense reactions and should be of interest to experienced researchers.

Authors of the articles found some challenges in writing their reviews. States Garcia-Brugger, “The difficulty was to present the studies at the right place with the proper emphasis depending on the sub-chapter and considering that each signaling step is not independent from the whole scheme. It was difficult to eliminate all the redundancies.” Raaijmakers felt the literature on cyclic lipopeptide surfactants was “very diverse, ranging from bioinformatics, organic chemistry, biochemistry, and molecular biology to

Two Developing Research Areas continued on page 8

microbial ecology, plant pathology, and biological control. Therefore it was a challenge to put the review together.”

The authors have big plans for their future research. Raaijmakers will be exploring new lines of research, thanks to the comparative analysis of whole genome sequences of multiple bacterial genera, leading to the identification of other related but previously unknown biosynthetic pathways in both pathogenic and beneficial bacterial species. “Furthermore, the use of microarrays to unravel signal perception and the transduction pathway involved in CLP synthesis has started recently and will hopefully give a better insight into the complexity of this system,” says Raaijmakers.

Garcia-Brugger will be working to identify the molecular targets of NO and calcium, which drive the plant defense signaling, and will try to have a better understanding of how many types of post-translational modifications acted to switch plant defense signaling on and off. Garcia-Brugger adds, “We are also willing to bring an alternative or

complementary approach to crop treatments by pesticides, by elaborating crop protection based on plant defense elicitors or plant defense signaling.”

These reviews can be found in the July issue of *MPMI*. Additional authors on these articles are: “Cyclic Lipopeptide Production by Plant-Associated *Pseudomonas* spp.,” — I. de Bruijn, and M. J. D. de Kock; “Early Signaling Events Induced by Elicitors of Plant Defenses” — O. Lamotte, E. Vandelle, S. Bourque, D. Lecourieux, B. Poinssot, D. Wendehehenne, and A. Pugin.

Review articles are welcome for *MPMI* and should consist of four to five pages that focus on a rapidly developing area of the molecular aspects of plant-microbe interactions. These may be solicited by the *MPMI* Editor-in-Chief or a Senior Editor or may be submitted by authors to be peer-reviewed.

To access *MPMI* online, go to [www.ismpminet.org](http://www.ismpminet.org) and click on Journals/News.

## Nominations Due November 1 for Noel T. Keen Award for Research Excellence in Molecular Plant Pathology

The American Phytopathological Society (APS) is now accepting nominations for the Noel T. Keen Award for Research Excellence in Molecular Plant Pathology. Dr. Keen was a former board member of the IS-MPMI and was a prolific scholar who made many major contributions to the field of molecular plant-microbe interactions on very diverse systems. This award, established in his honor in 2002, recognizes research excellence in molecular plant pathology for outstanding contributions and demonstrated sustained excellence and leadership in research that significantly advances the understanding of molecular aspects of host-pathogen interactions, plant pathogens or plant-associated microbes, or molecular biology of disease development or defense mechanisms. Recipients of the Noel T. Keen Award receive a certificate and a cash prize derived from a fund established through the APS Foundation. Recent recipients include: A. Collmer (2003), B. Staskawicz (2004) and T. Wolpert (2005). For nomination instructions visit [www.apsnet.org/members/awards/closing.asp](http://www.apsnet.org/members/awards/closing.asp). Nominees need to be APS members. Nomination packages should be submitted **by November 1, 2006** as specified in the directions for consideration. Additional inquiries can be directed to APS Awards & Honors Committee Chair Carol Windels, [cwindels@umn.edu](mailto:cwindels@umn.edu) or +1.218.281.8608.

### Refunds from the XII International Congress, Cancun/Merida, 2005

It has come to our attention that there might still be people who are expecting refunds of their registration fees from the recent Congress in Cancun/Merida. If you are one of them, please contact Jonathan Walton at [walton@msu.edu](mailto:walton@msu.edu).

## IS-MPMI Congress Proceedings to Be Published in November

The 12th International Congress on Molecular Plant-Microbe Interactions was held December 14–19, 2005, in spite of two major hurricanes in the Caribbean that required it to be rescheduled twice. A total of 538 scientists from all over the world came to Merida in Yucatan, Mexico, where approximately 160 oral presentations were made and 450 posters were presented.

One hundred and eight of these presentations are included in *Biology of Plant-Microbe Interactions, Volume 5*, to be published by IS-MPMI in November. This book of roughly 700 pages is organized around 17 themes, entitled Recognition of Pathogens by Plants; Down-Stream Signalling Events in Plant-Microbe Recognition; Plant Cellular and Physiological Responses in Plant-Microbe Interactions; Plant Molecular Mechanisms of Resistance to Microbes; The Innate Immune Response in Plant-Microbe and Animal-Microbe Interactions; Post-Transcriptional Regulation and Gene Silencing; Cell-Cell Communication: Ecology and Evolution in the Interactions between Plant and Microbes; Biocontrol and Quorum Sensing; Virulence Effectors and Molecular Mimicry; Interactions between Plants and Virus; Interactions of Plants and Symbiotic Bacteria; Interactions between Plants and Mycorrhizal Fungi; Interactions between Pathogenic Fungi and Plants; Interactions between Plants and Nematodes, and Plants and Insects. It contains 115 illustrations, 13 tables, and an extensive index.

Editors Federico Sánchez, Carmen Quinto, Isabel M. López-Lara, and Otto Geiger, from Universidad Nacional Autónoma de México in Cuernavaca, describe the congress as “a feast of great science, exploring the cutting edge aspects of plant-microbe interactions.” Readers, too, will find a feast of information in this book. If you were a paid registrant of this congress, a copy of this book will be mailed to you when it is published.



## Preliminary Genome Assemblies of Two Oomycetes Released

### *Phytophthora infestans*

Chad Nusbaum and Michael Zody, (Broad Institute, MIT)

On behalf of: Bill Fry (Cornell University), Howard Judelson (University of California), Sophien Kamoun (The Ohio State University), Jean Ristaino (North Carolina State University)

We are very pleased to make available the first assembly (version 0.5) of the *Phytophthora infestans* genome. This preliminary assembly is based on only ~5× sequence coverage, slightly more than half of our total target coverage. Although we expect to replace this assembly with full coverage assembly within a few months, we feel that this preliminary version may be of significant use to the community until the full coverage assembly is ready.

The data are now available from our web site, [www.broad.mit.edu](http://www.broad.mit.edu). You can use the navigation bar from the main page to go to “Data” then “Genome Sequence” or navigate directly to [www.broad.mit.edu/annotation/genome/phytophthora\\_infestans/](http://www.broad.mit.edu/annotation/genome/phytophthora_infestans/). You can download the assembled sequence as either contigs or supercontigs. You can also blast your own sequences and browse the data using our Argo sequence browser applet. We have not generated gene predictions on this assembly version, but we have aligned the ESTs from the Syngenta *Phytophthora* Consortium (Randall et al. 2005) to the assembly so that they are visible on the browser.

As this is a preliminary release, we do not plan to submit this assembly to GenBank, so it will not receive an accession number. Our next assembly will be submitted and accessioned. Please note that, although we think this is a valuable intermediate product, we expect our next release to be much better. Because the whole genome assembly process is performed *de novo* each time, contig and supercontig numbers, coordinates, and sometimes even sequence ordering (in the infrequent case of misassemblies) will change from assembly to assembly. Users of the preliminary release should expect to repeat analyses on the next version rather than being able to map across.

We welcome and encourage feedback from users about the sequence as well as any questions you might have. Please let us know if you find a potential problem in the assembly. Since the primary goal of the project is to enable the community, we are also interested in hearing about what you are able learn from the data. However, please be aware that this is a preliminary assembly. It is not our intent to fix specific issues with this assembly; rather, your comments will be used to improve our next assembly.

Basic assembly facts and some terminology are included with this article, and are also available on the web site.

We are very excited about this major milestone in *Phytophthora infestans* genomics. We hope this is a useful tool for the community and look forward to more great *Phytophthora* work to come.

We particularly want to thank the NSF and USDA for generously funding this project.

### *Hyaloperonospora parasitica*

A provisional assembly of the *Hyaloperonospora parasitica* draft genome sequence (8× depth) has been released by the Washington University Genome Sequencing Center. The sequence may be downloaded from

#### Some facts about the *Phytophthora infestans* assembly:

Reads used: 1.9 M  
Fraction assembled: 54%  
Length of assembled sequence: 142 Mb  
Length of assembled supercontigs (including gaps): 170 Mb  
Estimated genome size: 240 to 245 Mb  
Contig N50: 26 kb  
Supercontig N50: 555 kb  
ESTs aligned: 69 k out of 80 k

#### Assembly details:

Although the assembly only covers 142 Mb of the genome, we believe that the remainder is mostly high similarity, high copy repeat. Our next assembly version (which will have greater depth in long linking fragments and better tuning of the assembler) is likely to incorporate more of this sequence. Despite having only about 60% of the genome assembled, we are able to place 85% of the ESTs. At least half of the remainder are host transcripts or high copy genes such as ribosomal DNA, which generally assembles very poorly by whole genome shotgun. We estimate this release contains ~95% of the unique transcriptome of *P. infestans*. We note with some relief that the size of the genome we have estimated from the sequence data is effectively indistinguishable from the previously estimated size of 237Mb.

#### Glossary of terms:

**contig:** a single block of assembled sequence

**supercontig:** also known as a scaffold, a grouping of contigs with gaps between them which can be linked in known order and orientation by the presence of paired end reads. Note that at low coverage supercontigs may “interweave” on the genome, so that one may fall in one or more gaps of another.

**paired end reads:** sequences generated from both ends of a cloned fragment of approximately known size. They may be used to infer relative position of reads that are not connected by assembled sequence.

**N50:** a weighted median measure of sequence contiguity, which represents the size of the contig (or supercontig) in which the median base is found. If all the contigs (or supercontigs) are ordered from largest to smallest, the N50 size is the size of the contig (or supercontig) for which 50% or more of the bases in the assembly are in contigs of that size or larger.

Preliminary Genome Assemblies continued on page 14

Recently published research in *Molecular Plant-Microbe Interactions*Find complete abstracts online with links to full-text articles at [www.ismpminet.org/mpmi/search.asp](http://www.ismpminet.org/mpmi/search.asp)**July 2006, Vol. 19, Issue 7**

REVIEW ARTICLE - Cyclic Lipopeptide Production by Plant-Associated *Pseudomonas* spp.: Diversity, Activity, Biosynthesis, and Regulation

REVIEW ARTICLE - Early Signaling Events Induced by Elicitors of Plant Defenses

*FSR1* Is Essential for Virulence and Female Fertility in *Fusarium verticillioides* and *F. graminearum*

Potential Involvement of a Cucumber Homolog of Phloem Protein 1 in the Long-Distance Movement of *Cucumber mosaic virus* Particles

*NtLRP1*, a Tobacco Leucine-Rich Repeat Gene with a Possible Role as a Modulator of the Hypersensitive Response

The Arginine-Rich Motif of *Bamboo mosaic virus* Satellite RNA-Encoded P20 Mediates Self-Interaction, Intracellular Targeting, and Cell-to-Cell Movement

CorR Regulates Multiple Components of Virulence in *Pseudomonas syringae* pv. *tomato* DC3000

A Novel Fix<sup>-</sup> Symbiotic Mutant of *Lotus japonicus*, *LjSYM105*, Shows Impaired Development and Premature Deterioration of Nodule Infected Cells and Symbiosomes

The *Arabidopsis thaliana* *JASMONATE INSENSITIVE 1* Gene Is Required for Suppression of Salicylic Acid-Dependent Defenses During Infection by *Pseudomonas syringae*

New Nodulation Mutants Responsible for Infection Thread Development in *Lotus japonicus*

The *ntrPR* Operon of *Sinorhizobium meliloti* Is Organized and Functions as a Toxin-Antitoxin Module

**August 2006, Vol. 19, Issue 8**

REVIEW ARTICLE - Bacterial Endophytes and Their Interactions with Hosts

Sm1, a Proteinaceous Elicitor Secreted by the Biocontrol Fungus *Trichoderma virens* Induces Plant Defense Responses and Systemic Resistance

Synergistic Interactions of the Plant Cell Death Pathways Induced by *Phytophthora infestans* Nep1-Like Protein PiNPP1.1 and INF1 Elicitor

The *Tobacco mosaic virus* Replicase Protein Disrupts the Localization and Function of Interacting Aux/IAA Proteins

At-4/1, an Interactor of the *Tomato spotted wilt virus* Movement Protein, Belongs to a New Family of Plant Proteins Capable of Directed Intra- and Intercellular Trafficking

Mutations in the *lrpE* Gene of *Ralstonia solanacearum* Affects Hrp Pili Production and Virulence Overexpression of BetS, a *Sinorhizobium meliloti* High-Affinity Betaine Trans-



porter, in Bacteroids from *Medicago sativa* Nodules Sustains Nitrogen Fixation During Early Salt Stress Adaptation

Characterization of the Recombinant Forms Arising from a *Potato virus X* Chimeric Virus Infection under RNA Silencing Pressure

Analysis of Nod-Factor-Induced Calcium Signaling in Root Hairs of Symbiotically Defective Mutants of *Lotus japonicus*

GacS-Dependent Production of 2R, 3R-Butanediol by *Pseudomonas chlororaphis* O6 Is a Major Determinant for Eliciting Systemic Resistance Against *Erwinia carotovora* but not Against *Pseudomonas syringae* pv. *tabaci* in Tobacco

Antisense Expression of the *Arabidopsis thaliana* *AtPGIP1* Gene Reduces Polygalacturonase-Inhibiting Protein Accumulation and Enhances Susceptibility to *Botrytis cinerea*

**September 2006, Vol. 19, Issue 9**

Stage-Specific Suppression of Basal Defense Discriminates Barley Plants Containing Fast- and Delayed-Acting *Mla* Powdery Mildew Resistance Alleles

*Hibiscus chlorotic ringspot virus* p27 and Its Isoforms Affect Symptom Expression and Potentiate Virus Movement in Kenaf (*Hibiscus cannabinus* L.)

Early responses in the *Arabidopsis-Vorticillium longisporum* Pathosystem Are Dependent on *NDR1*, JA- and ET-Associated Signals via Cytosolic NPR1 and *RFO1*

Nitric Oxide Is Formed in *Medicago truncatula*-*Sinorhizobium meliloti* Functional Nodules

Genome-Wide Gene Expression Analysis of *Pseudomonas syringae* pv. *tomato* DC3000 Reveals Overlapping and Distinct Pathways Regulated by *brpL* and *brpRSg*

Mutations in *DMI3* and *SUNN* Modify the Appressorium-Responsive Root Proteome in Arbuscular Mycorrhiza

Metabolite Profiles of Nodulated Alfalfa Plants Indicate That Distinct Stages of Nodule Organogenesis Are Accompanied by Global Physiological Adaptations

Nonhost Resistance of Barley Is Successfully Manifested Against *Magnaporthe grisea* and a Closely Related *Pennisetum*-Infecting Lineage but Is Overcome by *Magnaporthe oryzae*

Gene-for-Gene Defense of Wheat Against the Hessian Fly Lacks a Classical Oxidative Burst

*RMo1* Confers Blast Resistance in Barley and Is Located within the Complex of Resistance Genes Containing *Mla*, a Powdery Mildew Resistance Gene

A Class III Histidine Kinase Acts as a Novel Virulence Factor In *Botrytis cinerea*

## COMING EVENTS

### 2006

September 23-27, 2006  
**International Symposium on Plasmid Biology.**  
South Lake Tahoe, CA.  
<http://conferences.ucdavis.edu/plasmidbiology>

September 29-October 1, 2006  
**Trans-kingdom Innate Immunity Workshop.**  
Asilomar Conference Grounds, Pacific Grove, California.  
<http://phylogenomics.berkeley.edu/TKII>

October 2-4, 2006  
**24th Stadler Symposium "Genomics of Disease."** University of Missouri, Columbia, MO. [Muconf.missouri.edu/stadler/](mailto:Muconf.missouri.edu/stadler/) (StrotherS@missouri.edu)

November 8-10, 2006  
**Third Brazilian Meeting on Induced Resistance in Plants to Pathogens.** Viosa, Brazil.  
[www.ufv.br/dfp/ir2006](http://www.ufv.br/dfp/ir2006)

November 9-12, 2006  
**7th Australasian Plant Virology Workshop.** Rottneest Island, Perth, Western Australia.  
([M.Jones@murdoch.edu.au](mailto:M.Jones@murdoch.edu.au))

November 12-16, 2006  
**7th International Conference on Pseudomonas syringae Pathovars and Related Pathogens.** Agadir, Morocco.  
[www.iavcha.ac.ma/p.syringae2006](http://www.iavcha.ac.ma/p.syringae2006)

### 2007

April 16-18, 2007  
**Resistance 2007.** Harpenden, Hertfordshire, U.K.  
[www.rothamsted.ac.uk/Research/Resistance2007.html](http://www.rothamsted.ac.uk/Research/Resistance2007.html)

May 20-26, 2007  
**5th International Geminivirus Symposium & 3rd International ssDNA Comparative Virology Workshop.** Ouro Preto, Minas Gerais, Brazil.  
[www.ufv.br/dfp/virologia/OP2007](http://www.ufv.br/dfp/virologia/OP2007)

July 2-6, 2007  
**The downy mildews – 2<sup>nd</sup> International Symposium.** Olomouc, Czech Republic.  
[www.downymildews.upol.cz](http://www.downymildews.upol.cz)

July 21-27, 2007  
**13th Congress on Molecular Plant-Microbe Interactions.** Sorrento, Italy.  
[www.mpmi2007.org](http://www.mpmi2007.org)

July 28-August 1, 2007  
**APS Annual Meeting.** San Diego, CA (Joint with SON)

October 8-12, 2007  
**ISHS Second International Symposium on Tomato Diseases.** Kusadasi, Turkey. [www.2istd.ege.edu.tr/](http://www.2istd.ege.edu.tr/)

October 21-26, 2007  
**XIVth International Botrytis Symposium.** Cape Town, South Africa. <http://academic.sun.ac.za/botrytis2007>

### 2008

August 24-29, 2007  
**9th International Congress of Plant Pathology.** Torino, Italy. [www.icpp2008.org](http://www.icpp2008.org)

## EMPLOYMENT

The following open positions are listed on **IS-MPMInet**.

**Faculty Positions,** Boyce Thompson Institute for Plant Research at Cornell University

**Post-doctoral Position in Signal Transduction in Plant Disease Resistance,** Cornell University/ Boyce Thompson Institute

**Research Scientist,** Wilmington, DE

**Post-doctoral Position,** Department of Plant Biology, University of Vermont

**Post-doctoral Position in Plant Biochemistry and Molecular Biology,** Kansas State University

**Bioorganic/Biological Chemistry Post-doctoral Positions,** University of Saskatchewan

Please visit [www.ismpminet.org/career/](http://www.ismpminet.org/career/) to get more information and learn how to apply for these positions.

## 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.

### Student



#### Gillian Higgins

Department of Biology  
The University of York, England

I am in the third year of my Ph.D. in plant science at The University of York. I work in Michael Schultze's group with the legume *Medicago truncatula*. The group studies the genetic basis of the arbuscular mycorrhiza development. My project is jointly supervised by

Christine Henry of the Department for Environment, Food and Rural Affairs Central Science Laboratory, Sand Hutton, near York and the University of York.

It is twenty years since I was last a student. I studied biochemistry, specializing in microbiology at The University of Liverpool from 1983-1986. After graduation I worked for 7 years in the Health Protection Agency Laboratory of Enteric Pathogens, London. I was involved in all aspects of the laboratory's work, providing a national reference service for the biochemical, serological and phage typing identification, and surveillance of Enterobacteriaceae and Vibrionaceae. During this time, I studied part time to become a fellow of the Institute of Medical Laboratory Science and had maternity leave.

In 1993 I had to leave London to move to Glasgow with my partner's job (he was a postdoctoral researcher at that time). I had a second child and obtained a post in a bacteriology laboratory of a hospital. The laboratory received specimens from patients for microscopy and culture. Pathogens isolated were identified and antibiotic sensitivity tests performed on them. After 2 years, I had to leave Glasgow and lived for short periods in Berkshire and Oxford before moving to York in 1998. (My partner was still a post doctoral researcher and so we were a peripatetic family.)

At the Department of Biology in York I found part-time employment, using my aseptic technique skills, as a research technician responsible for plant transformation in Dianna Bowles' group. During this time, I developed molecular biology skills and enjoyed the research environment and organizing my own work. Although I very much enjoyed being part of the Bowles group I wanted to be more fully involved in a research project and so applied to have my own Ph.D. project.

In my Ph.D. project, I am investigating how plants can raise a successful defense against pathogens but at the same time allow access to symbiotic microbes such as arbuscular mycorrhizal fungi (AMF) and nitrogen-fixing rhizobia. I aim to assess the impact of strategies to engineer

broad-spectrum disease resistance in *Medicago truncatula* on colonization by AMF and rhizobia. I have produced transgenic *Medicago* overexpressing *Medicago* Nonexpressor of PR (NPR1) homologs, *Arabidopsis* NPR1, and Isoflavone methyl transferase (IOMT) genes and am currently in the process of characterizing their responses to pathogens. I am also testing the ability of pathogens to infect reduced mycorrhizal colonization mutants produced by the Schultze group.

I joined IS-MPMI in my first year as a student and will continue my membership. This allows me to keep in touch with important information in my research area, including online access to the *MPMI* journal. This journal is one of the most relevant journals for my work.



### Post-doctoral/Early Career

#### Yan Zhang

The Samuel Roberts Noble  
Foundation  
Ardmore, OK, U.S.A.

The goal of my research is to develop improved cultivars and germplasms by integrating molecular breeding, genetics, and genomics. My primary interest is identifying genes/QTLs that can be used in improving forage and turf quality and yield using marker-assisted breeding or gene transformation.

I received my Ph.D. in plant science from Oklahoma State University in 2002. My research objective was to produce turf-type bermudagrass cultivars with improved Spring Dead Spot fungal tolerance. Gene transformation and functional genomics approaches were applied in the study. Seven elite lines for the breeding program were evaluated on several tissue-culture media for callus induction and plant regeneration potential. Two genotypes were selected for transformation, using the Biolistics bombardment, with gene construct containing GFP gene. I also studied molecular mechanisms of bermudagrass resistance to the fungus. In this study, more than 800 gene transcripts were isolated from two subtraction libraries. A cDNA microarray was generated and used in monitoring the expression profiles of bermudagrass response to fungal pathogen infection. A panel of putative fungal-tolerance gene transcripts was identified. Expression study by microarray confirmed that these genes had higher expression in the fungal-tolerant cultivar than the susceptible cultivar, and greater tolerance might be the result of enhanced signal transduction that leads to improved defense responses. This study provided targets for generating genetically improved bermudagrass with enhanced resistance to Spring Dead Spot fungus, and

the cDNA microarray can be used to screen bermudagrass cultivars to identify the different level of tolerance to this fungal pathogen.

After completion of my Ph.D., I joined The Samuel Roberts Noble Foundation, Inc., Forage Improvement Division as a post-doctoral research associate. I conducted research on improving heat tolerance of fescues while working in the Forage Grass Genomic Laboratory. More than 10,000 ESTs were generated from cDNA libraries, revealing groups of gene responses to heat stress. I also conducted a more detailed study on heat-induced differential gene expression in the comparison of heat-tolerant and heat-sensitive fescue genotypes exposed to gradually increasing high temperatures. Consecutively, I headed the project on establishing the *Festuca* Gene Index (FaGI) in collaboration with TIGR. The tall fescue EST database containing 41,834 tall fescue ESTs was developed. In silico gene-expression analysis identified numbers of stress-induced gene transcripts.

My current study is focused on the molecular breeding of white clover. A high-density genetic linkage map of white clover was established, using high-throughput genotyping strategy. Macro-colinearity between three forage legume species was revealed by markers originating from white clover, red clover, and alfalfa. The first genetic linkage map of white clover cultivated in the U.S. will soon be released and used for new cultivar development. Recently, I have started a project assessing genetic relationships among 304 *Medicago truncatula* accessions in collaboration with USDA, ARS National Temperate Forage Legume Genetic Resources Unit. EST-SSR markers were used in the phylogenetic analysis. Integrated genotyping, morphological, and geographic data were used to clarify the diversity of these accessions in the world-wide core collection of *M. truncatula*.

Although my current study does not involve plant-microbe interactions directly, several aspects of plant growth are significantly related to symbiosis in forage grasses or legumes, and therefore, have drawn my attention. For example, the effect of rhizobia on nodulation and nitrogen fixation of forage legumes (white clover and alfalfa) and the association of *Epichloë/Neotyphodium* endophytes with grass hosts, which may cause problems in livestock, such as ryegrass staggers and fescue toxicosis, but give higher biotic and abiotic stress resistance for the plants. Understanding host-microbe interactions can help us to apply these special symbionts to improve growth of forage species.

I became a member of IS-MPMI while attending the society congress meeting in 2001, at Madison, WI, where I presented my study on expression profiling of fungal-resistant in bermudagrass. Since then, I have been a continuous member and my interest in molecular plant-microbe interactions keeps increasing. Reading high-quality research papers published in *MPMI* always brings me up-to-date with new ideas and significantly broadens my knowledge in this highly motivated area.

## Distinguished Member



### Dr. Abul Ekramoddoullah

Canadian Forest Service  
Natural Resources Canada  
Victoria, British Columbia, Canada

I obtained my B.Sc. and M.Sc. degrees from the University of Dhaka in Bangladesh and then came to Canada in 1963 on a Colombo Plan scholarship to study at McGill University in Montréal, Quebec, where I obtained my

Ph.D. in immunochemistry in 1968. During my graduate studies and thereafter I have worked in pollen allergy for almost 20 years.

Currently, I work as a Natural Resources Canada senior research scientist at the Canadian Forest Service's Pacific Forestry Centre in Victoria, British Columbia and as an adjunct professor at the University of Victoria.

My main research interest is the molecular analysis of the host-pathogen interaction of white pine blister rust fungus, with the purpose of identifying genes that are potential targets for improving the resistance of white pine to this rust fungus.

To date, I've discovered and reported on conifer PR (pathogenesis-related) proteins and AMP (antimicrobial peptide) that are associated with resistance expression of white pine to the blister rust fungus *Cronartium ribicola*. I've also discovered a fungal protein that is associated with pathogenesis of the blister rust disease in white pine. I have isolated and characterized pathogen-inducible conifer gene promoters for the purpose of engineering antifungal genes in white pine. I have also developed RAPD marker linked to *R* gene in Western white pine.

Other highlights in my career so far include being the first to produce monoclonal antibodies to the mycelium of *C. ribicola* and to use them as probes in Western immunoblot to distinguish resistant and susceptible white pine seedlings inoculated with the rust fungus. I've also genetically engineered a functional anti-blister rust, single-chain antibody gene for incorporation into white pines to confer antibody-mediated resistance to the rust fungus.

In 2004, I received the Canadian Phytopathological Society's Outstanding Research Award.

In addition to being a member of the International Society for Molecular Plant Microbe Interactions, I also belong to the Allergen Nomenclature Subcommittee (an umbrella organization of the International Union of Immunological Societies) and am a participant of the Biotechnology Grant Selection Committee, Science Council of British Columbia, as well as a member of the New York Academy of Sciences; American Association of Immunologists; American Electrophoresis Society; Canadian Society for Immunology;

Meet IS-MPMI Members continued on page 14

## Welcome New Members

The following members joined IS-MPMI between  
April 16, 2006 and August 31, 2006.

Please join us in welcoming them to the Society!

**Peter A. H. M. Bakker**

Utrecht Univ  
Utrecht, The Netherlands

**Stephane J. Bieri**

Univ of Zurich  
Zurich, Switzerland

**Robin K. Cameron**

McMaster Univ  
Hamilton, ON, Canada

**Kegui Chen**

Univ of Missouri  
Columbia, MO, U.S.A.

**Lourdes Girard**

UNAM, Centro de Ciencias  
Genomicas  
Cuernavaca, Mor., Mexico

**Sofie Goormachtig**

Univ of Gent  
Gent, Belgium

**Gabor Jakab**

Univ of Pecs  
Pecs, Hungary

**Beat Keller**

Univ of Zurich  
Zurich, Switzerland

**Joseph Kuc**

Torrance, CA, U.S.A.

**Benoit Lacroix**

State Univ of New York  
Stony Brook, NY, U.S.A.

**Maeli Melotto**

Michigan State Univ  
East Lansing, MI, U.S.A.

**Damien F. Meyer**

INRA  
Beaucouze, Cedex, France

**Sizolwenkosi Mlotshwa**

Univ of South Carolina  
Columbia, SC, U.S.A.

**Rachel J. Morphew**

Univ of Minnesota  
St. Paul, MN, U.S.A.

**Aniruddha Raychaudhuri**

Univ of Missouri  
Columbia, MO, U.S.A.

**Margaret G. Redinbaugh**

Ohio State Univ  
Wooster, OH, U.S.A.

**Timmy D. Samuels**

Oklahoma State Univ  
Stillwater, OK, U.S.A.

**Katja Schlink**

Technische Univ  
Munich, Freising, Germany

**Elisabeth Maria Stes**

Univ of Gent  
Gent, Belgium

**Bart P. H. J. Thomma**

Wageningen Univ  
Wageningen, The Netherlands

**Shamil Z. Validov**

Leiden Univ  
Leiden, The Netherlands

**Els J. M. van Damme**

Univ of Gent  
Gent, Belgium

**Keiko Yoshioka**

Univ of Toronto  
Toronto, ON, Canada

**Weiqing Zeng**

Michigan State Univ  
East Lansing, MI, U.S.A.

**Meet IS-MPMI Members continued on page 14**

American Phytopathological Society and Canadian Phytopathological Society, and Global Network of Bangladeshi Biotechnologists.

I have enjoyed delivering numerous seminars at universities and government laboratories in Canada, the U.S.A., Europe, and Asia and, as an adjunct professor of the University of Victoria, continue to spend time supervising graduate students, post-doctoral fellows, and visiting scientists. I also serve as reviewer for several international journals and have published 77 papers in peer reviewed scientific journals, 15 papers in conference proceedings, and four patents.

I joined IS-MPMI about 15 years ago and, since then, have attended annual meetings in Seattle, Madison, St. Petersburg, and Merida. Participation has helped steer my own research in Forestry, where very little molecular level information is available.

**Preliminary Genome Assemblies continued from page 9**

[http://genome.wustl.edu/pub/organism/Fungi/Hyaloperonospora\\_parasitica/assembly/draft/Hyaloperonospora\\_parasitica-2.0/](http://genome.wustl.edu/pub/organism/Fungi/Hyaloperonospora_parasitica/assembly/draft/Hyaloperonospora_parasitica-2.0/). Blast searches of the sequence can be conducted at the VBI Microbial Database at <http://phytophthora.vbi.vt.edu/develop/blast.php>

**Notes:**

1. This is only a provisional assembly and is expected to contain many errors. An improved assembly will likely be released in January 2007.
2. No gene predictions have been made.
3. Use of the sequence is governed by WUGSCs data policy ([http://genome.wustl.edu/pub/organism/DATA\\_POLICY](http://genome.wustl.edu/pub/organism/DATA_POLICY)). In addition, the investigators responsible for creating the sequence (Brett Tyler, John McDowell, Jim Beynon and Sandra Clifton) reserve the right to publish the first genome-wide analysis of the sequence. Please contact Brett Tyler ([bmt Tyler@vt.edu](mailto:bmt Tyler@vt.edu)) if you have questions about this.

For updates on these and other oomycete genomes, visit the website of the Oomycete Molecular Genetics Research Collaboration Network at <http://pmgn.vbi.vt.edu/> and subscribe to the Mailing List.



Three students from the microbiology department of Leiden University, The Netherlands, have successfully defended their Ph.D. thesis. **Genevieve Girard** defended her thesis, "Genetic regulation of phenazine-1-carboxamide synthesis by *Pseudomonas chlororaphis* PCL 1391," June 6, 2006. **Jean-Frederic Dubern** defended his thesis, "Regulation of the biosynthesis of novel cyclic lipopeptides from *Pseudomonas putida* strain PCL1445," on June 19, 2006. Tjeerd van Rij defended a thesis entitled, "Environmental and molecular regulation of phenazine-1-carboxamide biosynthesis in *Pseudomonas chlororaphis* PCL1391." The promoters for all three students were **Ben Lugtenberg** with co-promotor **Guido Bloemberg**.



Sophien Kamoun

The Sainsbury Laboratory (SL) announces the appointment of **Sophien Kamoun**, an expert in the fungus-like plant pathogen that causes potato late blight, the disease that was responsible for the Irish potato famine. "Sophien will be a wonderful colleague at the SL. He is a leader in the research community that studies the potato late blight pathogen, *Phytophthora infestans*, and also other *Phytophthora* diseases" says Jonathan

Jones, head of the Sainsbury Lab, "With Sophien's recruitment, the U.K. will have unparalleled expertise in studying

oomycetes, a unique and fascinating class of plant pathogen that also causes downy mildews and white rusts."

Sophien is expected to start moving his lab from the U.S. in January 2007 and is excited by the prospect of moving to Norwich to work at the Sainsbury Laboratory. "I am thrilled about joining the Sainsbury Laboratory, which has a longstanding tradition as a hub for cutting edge plant research. My objective is to build on and contribute to this tradition." He says, "I feel the timing is perfect. The availability of multiple genome sequences for *Phytophthora* and related species enables us to explore new research questions in ways that were unthinkable just a few years ago. I am also very much looking forward to strengthening my current collaborations with European colleagues as well as developing new ones."

Kamoun's appointment is part of the planned growth of the Sainsbury Laboratory research portfolio, which aims to recruit a further two project leaders to do research into new areas of plant biology based on plant-pathogen interactions. The institute was recently awarded a five-year funding package of £17M by the Gatsby Charitable Foundation as part of its continued support for the laboratory.

**Have news you want to share with the Society? Submit it online at [www.ismpminet.org/newsletter/submissionform.asp](http://www.ismpminet.org/newsletter/submissionform.asp).**

#### President's Message continued from page 2

*Reporter*. I all invite you to contribute with articles and interviews to the *Reporter*. The coming *Reporters* will feature interviews with all members of the IS-MPMI board of directors and many others.

#### The MPMI journal

In January 2007 Jens Stougaard will step down as editor-in-chief of the *MPMI*. We thank Jens for his efforts to keep the journal at a high standard. As you can see from the survey in this issue, *MPMI* is still very much appreciated by its community. Recently, Jonathan Walton was chosen as the new editor-in-chief of *MPMI*. He will also install a new board of senior editors. In upcoming issues of the *IS-MPMI Reporter* Jonathan Walton will introduce the new editorial board of *MPMI*. We wish Jonathan Walton and his editorial board much success in the coming three years.

#### Become a Member of IS-MPMI

As I stated before in an interview published in the *Reporter*, I think it is important that professors, Ph.D.s and post-docs active in the field of molecular plant-microbe interactions are members of IS-MPMI for which I see several good reasons:

1. IS-MPMI sponsors the journal *MPMI*.
2. The *IS-MPMI Reporter* is an informal platform where young scientists can meet their colleagues and interna-

tional role models through interviews, laboratory websites, Ph.D. courses and seminars (video conferencing), and vacant positions.

3. IS-MPMI organizes excellent biennial congresses. These are the real highlights for all members and registration are considerably reduced for IS-MPMI members.

Thus encourage others to join IS-MPMI and pre-register for the XIII IC-MPMI in Sorrento.

#### XIII International Congress in Sorrento; July 21-27, 2007

The Chairman of the local organizing committee, Matteo Lorito and his team are very busy with preparing for this Congress. In collaboration with the international scientific advisory board they are preparing the scientific program. Please pre-register for this congress so you are guaranteed you will be on the mailing list for any updates. For more information, contact the local committee at [committee@mpmi2007.org](mailto:committee@mpmi2007.org), Matteo Lorito at [lorito@mpmi2007.org](mailto:lorito@mpmi2007.org), [info@mpmi2007.org](mailto:info@mpmi2007.org), or visit Congress website: [www.mpmi2007.org](http://www.mpmi2007.org).

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