

**2ND INTERNATIONAL WORKSHOP FOR THE MORPHOLOGICAL AND
MOLECULAR IDENTIFICATION OF THE STRAMINIPILES:
PHYTOPHTHORA AND PYTHIUM.
21-26 MAY 2006-RALEIGH, NORTH CAROLINA. USA**

Meeting Highlights

Thirty six scientists from ten countries including Brazil, Canada, Guatemala, Italy, Japan, Poland, Scotland, Spain, United Kingdom, and United States participated in the "Second International Workshop for the Morphological and Molecular Identification of the Straminipiles: *Phytophthora* and *Pythium*" from May 21-26, 2006. This very successful event was organized by **Gloria Abad** and co-organizers **Jennifer Phillips** and **Jane Dove Long** at the Plant Pathogen Identification Laboratory (PPIL), Department of Plant Pathology, North Carolina State University.

The evening before the meeting, there was a reception at the Café Luna to greet participants. The five-day workshop was an opportunity for leading plant pathologists from around the world to learn advanced techniques from eight instructors who are world authorities. During the week, the instructors led 29 hands-on, molecular and morphological laboratory sessions. Instructors from North Carolina State University included **Gloria Abad, Michael Benson, and Tom Creswell**. Instructors from other institutions included **Michael Coffey**, University of California; **David Cooke**, Scottish Crop Research Institute, Scotland; **Frank Martin**, United States Department of Agriculture (USDA), Salinas, California; **Paul Tooley**, USDA, Beltsville, Maryland and **Motoaki Tojo** from Osaka Prefecture University, Japan. Co-Instructors were **Ronald French-Monar** from University of Florida, **María Luciana Rosso** from University of Arkansas, and **Grazyna Szkuta** from State Plant Health and Seed Inspection Service, Poland. The instructors and co-instructors were very pleased that we were able to gather an outstanding group of participants who shared common interests and goals. Some of the participants indicated that they were also pleased in being able to receive instruction from colleagues with a vast amount of research and practical experience.

Participants from the USA were: **Jacqueline Mullen** and **James Jacobi** from Auburn University, Plant Diagnostic Lab., Auburn, AL; **Monica Blanco-Meneses, Susan J. Colucci, Courtney Gallup,** and **Brantlee Spakes Richter** from North Carolina State University, Dept. of Plant Pathology, Raleigh, NC; **Greene Matt** from North Carolina State University, Dept. of Plant Pathology, MHREC Fletcher, NC; **Montgomery Botschner** from North Dakota State University, Plant Diagnostic Laboratory, Fargo, ND; **Rajya Shukla** from Ohio State University, Wayne C. Ellet Plant and Pest Diagnostic Clinic, Columbus, OH; **Margaret T. Mmbaga** from Tennessee State University, Institute of Agric. & Env. Research, McMinnville, TN; **Sherrie Smith** from University of Arkansas, Plant Disease Clinic, AR; **Helen Violi** from University of Florida, Tropical Research and Education Center, Homestead, FL; **Richard E. Cullen** from University of Florida, Plant Disease Clinic, Gainesville, FL; **Rosa M. Muchovej** from University of Florida, SWFREC, Immokalee, FL; **Patricia de Sa** from University of Kentucky, Dept. of Plant Pathology, KY; **Cheryl Smith** and **Deborah Schneider** from University of New

Hampshire, Durham, NH; **Hon Ho** from State University of New York, Dept. of Biology, New Paltz, NY; **Amy Gibbs** from University of Wisconsin; **Elizabeth Bush** from Virginia Tech, Dept. of Plant Pathology, Blacksburg, VA; **Erin Rosskopf** from USDA/ARS, Fort Pierce, FL; **Mary Palm** and **John McKemy** from USDA/APHIS Systematic Botany and Mycology, Beltsville, MD; **Marsha Browning**, **Timothy Widmer** and **G. Curtis Colburn** from USDA-FDWSR, Fort Detrick, MD.

Participants from other countries were from: **Brazil: Ailton Reiss** from Embrapa Hortaliças, Brasília-DF; **Canada: Sandra Cooke** from University of Guelph. Pest Diagnostic Clinic, Guelph; **Joshi Vippen** from Ministry of Agriculture & Lands, Plant Diagnostic Lab., British Columbia; **Guillaume Bilodeau** from Canada & University Laval, Canadian Forest Service, Quebec; **Guatemala: Edil Rodríguez** from Ministry of Agriculture, **Gustavo Alvarez** from San Carlos University, **Amilcar Celada** from Ministry of Agriculture, Quetzaltenango; **Italy: Andrea Tantardini** from Laboratorio Fitopatologico di Minoprio, Coro; **Spain: Paloma Abad-Campos** from Universidad Politécnica de Valencia, Dpto. Ecosistemas Agroforestales, Valencia.

The opening session of the workshop began at 9:30 a.m., Monday, May 22, 2006, in the Bostian Hall Auditorium with the Welcome Introduction by Dr. **Larry Nelson**, Assistant Dean for [International Programs](#), [College of Agriculture and Life Sciences](#), NCSU, and Dr. James Moyer, Head, Department of Plant Pathology, NCSU. Following sessions were conducted in Bostian Hall and other locations including the David Clark Auditorium, and various classrooms in the Marye Ann Fox Building.

The Second International *Phytophthora* and *Pythium* workshop 2006 was conducted integrating morphological and state-of-the-art molecular laboratories (DNA extraction, PCR amplification, RFLP's with ITS and mtDNA, and sequencing analysis). Lectures covered aspects on the taxonomy, ecology, diseases, isolation, storage, pathogenicity, morphological features, identification keys, molecular tools for identification of species, phylogeny, and the use of commercial identification kits. Additionally, computer-assisted molecular identification sessions were run in three state-of-the-art computer laboratories. Morphological laboratories were enhanced with a set of selected specimens that included over sixty *Phytophthora* and over 100 *Pythium* species from collections at the Centraalbureau Voor Schimmelcultures, Osaka Prefecture University (**Motoaki Tojo**), Plant Pathogen Identification Laboratory, NCSU (**Gloria Abad**), The Scottish Crop Research Institute, United Kingdom (**David Cooke**), Université de Bourgogne, France (**Bernard Paul**), University of Arkansas (**Luciana Rosso**), West Virginia University (**Manon Gallegly**), and the World *Phytophthora* Collection (**Mike Coffey**). Another highlight of the workshop was the introduction of the *Phytophthora* database project, an integrated community resource for detecting, monitoring and managing *Phytophthora* diseases funded by the USDA National Research Initiative by **Seogchan Kang** and **Kelly Ivors**.

In an additional activity associated to the workshop scientists **Ailton Reiss** (Brazil), **Vippen Joshi** (Canada), **Gustavo Alvarez**, **Amilcar Celada**, **Edil Rodriguez** (Guatemala), **Andrea Tantardini** (Italy), **Motoaki Tojo** (Japan), **Paloma Abad-**

Campos (Spain), **David Cooke** (United Kingdom), **Gloria Abad**, **Jorge Abad**, **Patricia de Sá**, **Ronald French-Monar**, **Kelly Ivors**, **Betsy Randal-Shadell** (USDA/APHIS), **Luciana Rosso** and **Helen Violi** (United States) participated at the 2nd minisymposium “Strengthening the basis for a survey of Oomycetes in the Americas and Beyond” <http://www.cals.ncsu.edu/plantpath/activities/societies/stramen/minisymp.html> on Saturday, May 27th. This event was organized by **Gloria Abad** and **Ronald French**. Presentations and discussions on aspects related to the status of the identification and the occurrence of *Phytophthora* and *Pythium* in different countries and the progress for an international survey for *Phytophthora*, *Pythium* and related genera in the Americas and beyond were the topics of the 2nd Minisymposium.

The PPIL is very grateful to the group of instructors, co-instructors, participants, sponsors (Eppendorf, Fisher Scientific, Gentra, Leica Microsystems, QIAGEN, USA Scientific and the Inter-American Development Bank), workshop coordinators, faculty of the Department of Plant Pathology, and personnel from the Department of Plant Pathology specially those at the main office and accounting office. Our special acknowledgement is for **Dr. Jorge Abad** as Scientific Consultant of the PPIL and the workshop, and workshop collaborators **Josh McIntyre**, **Shawn Buttler**, **Susan Colucci**, **James Kerns**, **Charles Eckerd**, **Rick Johnson**, **Lawrence Schaer**, **Jeri Curtis** at the Dept. of Plant Pathology - NCSU, **Mark B. Dearmon** and personnel at the Agricultural Communications Office at NCSU, and **Courtney Allen** (Ink Divas). Our utmost appreciation and gratitude is given to **Dr. James Moyer**, Head of the Department of Plant Pathology, for his support and encouragement of the achievement of this workshop.

We express our special acknowledgement to US Executive Director **Mr. Hector Morales** and to **Mrs. Patrice Williams** at the Inter-American Development Bank for the sponsorship of participants from Brazil and Guatemala to participate at the 2nd International Workshop and 2nd Minisymposium.

The Plant Pathogen Identification Laboratory is closing after providing more than five years of service in identifying plant pathogens, collaborating internationally and leading workshops. We extend our sincere thanks to all our clients and colleagues who helped make the PPIL a success. Gloria and Jorge Abad will be moving on to new challenges working for USDA-APHIS-PPQ in Beltsville, MD starting on September 15th 2006.

The 3rd International Workshop "Integration of Traditional and Modern Approaches for Taxonomy and Evolution of *Phytophthora*, *Pythium* and related genera" will be presented during August 23-24, 2008 in association with the 9th International Congress of Plant Pathology in Turin - Italy August 24-29, 2008. <http://www.icpp2008.org/> For more information on the 3rd International *Phytophthora* and *Pythium* workshop contact Chairman **Gloria Abad** and Co-chairman **David Cooke** and **Frank Martin**