

American Phytopathological Society
Potomac Division
Program

Carousel Resort Hotel, Ocean City, MD
March 16th-18th, 2005

Meeting Notes:

1. Speaker or Presenter name is in **Bold**.
2. Slide Preparation Wednesday evening and Thursday morning (Pennsylvania Room)
3. Posters: set up Thursday morning, take down Friday morning (Pennsylvania Room)
4. **Thank you for TURNING OFF your cell phone during the meeting.**

Wednesday, March 16, 2005

11:00 AM -- 5:00 PM **Registration** (Atrium)

1:30 PM -- 3:45 PM **EcoTour of Assateague Island** (meet at registration desk, car-pool to the Assateague Island National Seashore Visitor's Center)

4:15 PM -- 5:30 PM **Industry-Extension-Emerging Problems Update** (New exotic diseases; industry highlights) (Delaware Room) Chair: **Arv Grybauskas**

5:30 PM -- 7:00 PM **Social** (Hors d'oeuvres and cash bar). (Pennsylvania Room).

7:00 PM -- 9:00 PM **Symposium I** (Delaware Room). **Sudden Oak Death: East Coast Perspective.** Chair, **Nina Shishkoff**, USDA-ARS, Fort Detrick, MD.

7:00 PM Introduction. **Nina Shishkoff**, USDA-ARS, Fort Detrick, MD

7:10 PM The History of *Phytophthora cinnamomi* on the east coast. **Sandra Anagnostakis**, Connecticut Agricultural Experiment Station, New Haven, CT

7:35 PM The *Phytophthora ramorum* risk map. **William D. Smith**, USDA Forest Service, Research Triangle Park, NC

8:00 PM Phytophthoras in central and eastern US oak ecosystems, and interspecific hybridization of Phytophthoras and their potential threat to forest ecosystems. **Yilmaz Balci**, West Virginia University, Morgantown, WV

8:25 PM *Phytophthora ramorum* 2004 nursery outbreak and response. **Jonathon M. Jones**, National *Phytophthora ramorum* Program Manager, USDA-APHIS-PPQ, Riverdale, MD

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## **Thursday morning**

7:30 AM -- 9:00 AM **Continental Breakfast** (Atrium)

7:30 AM -- 3:30 PM **Registration** (Atrium)

8:30 AM **Welcome** (Delaware Room). **Robert E. Davis**, President, Potomac Division.

8:35 AM **John Andrews**, President-Elect, The American Phytopathological Society.

8:45 AM -- 9:45 AM **Session I** (Delaware Room). **Contributed Papers, Oral.**  
**Chair, Lev Nemchinov**, USDA-ARS, Beltsville, MD

8:45 AM Development of plant-derived subunit vaccine candidate against Newcastle Disease Virus. **A. Natilla**, R.W. Hammond, Y. Zhao, and L.G. Nemchinov. USDA-ARS, Beltsville, MD

9:00 AM Evidence for a new phytoplasma taxon in diseased strawberry, *Fragraria x ananassa*. **D. Valiunas**, R. Jomantiene, J. Staniulis, and R. E. Davis. Institute of Botany, Vilnius, Lithuania and USDA-ARS, Beltsville, MD

9:15 AM Comparative analysis of repeated regions in the genomes of clover phyllody and Onion Yellows phytoplasmas. **R. Jomantiene** and R.E. Davis. Institute of Botany, Vilnius, Lithuania and USDA-ARS, Beltsville, MD

9:30 AM Dutch Elm Disease in Lithuania. **R. Abraitis**. Lithuanian Forest Research Institute, Kaunas, Lithuania

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9:45 AM -- 10:00 AM **Break**

10:00 AM – 12:00 PM **Symposium II** (Delaware Room). **Durable Resistance.**
Co-Chairs, Shunyuan Xiao, University of Maryland, College Park, MD, and **Talo Pastor-Corrales**, USDA-ARS, Beltsville, MD

10:00 AM Introduction. **Talo Pastor-Corrales**. USDA-ARS, Beltsville

10:05 AM Cloning and application of a broad-spectrum late blight resistance gene from a wild potato species. **Jiming Jiang**. University of Wisconsin, Madison, WI

10:45 AM Durable rust resistance research at CIMMYT: Thirty years of progress. **H. Jesse Dubin**. USDA-ARS, Ft. Detrick, MD (Formerly: International Maize and Wheat Improvement Center [CIMMYT])

11:25 AM Assessing the role of host-encoded inhibitor proteins in durable resistance. **Richard W. Jones**. USDA-ARS, Beltsville, MD

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## **Thursday afternoon**

12:00 PM -- 1:00 PM **Lunch** (buffet, included with registration) **and Business Meeting** (Season's Restaurant, ocean front)

1:00 PM – 2:00 PM **Symposium II (con't)** (Delaware Room). **Durable Resistance**. **Co-Chairs, Shunyuan Xiao**, University of Maryland, College Park, MD, and **Talo Pastor-Corrales**, USDA-ARS, Beltsville, MD

1:00 PM RPW8, a broad-spectrum and durable disease resistance gene from *Arabidopsis*. **Shunyuan Xiao**. University of Maryland Biotechnology Institute, College Park, MD

1:20 PM Laser capture microdissection (LCM) and expression analyses of *Glycine max* (soybean) syncytia formed by the plant pathogen *Heterodera glycines* (soybean cyst nematode). **Vincent P. Klink**. USDA-ARS, Beltsville, MD

1:40 PM The diversity of rust pathogen guides development of common beans with durable resistance. **Talo Pastor-Corrales**, USDA-ARS, Beltsville, MD

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2:00 PM -- 3:00 PM **Session II** (Delaware Room). **Graduate Student Competition**. **Chair, Jay Norelli**, Vice-President, Potomac Division

2:00 – 2:05 Introduction. **Jay Norelli**.

2:05 PM Characterization and efficacy testing of novel antifungal peptides in transgenic rice. **R. Hermann**, A. L. Lu, J. L. Weaver, H. Frick, and T. A. Evans. Du Pont Crop Genetics Research and Development, Newark, DE and University of Delaware, Newark, DE

2:20 PM Propamocarb resistance of *Phytophthora nicotianae* populations at ornamental plant nurseries in Virginia. **J. Hu**, E. L. Stromberg, G. W. Moorman, and C. Hong. Virginia Polytechnic Institute and State University, Blacksburg, VA and Pennsylvania State University, University Park, PA

2:35 PM Impact of cover cropping systems on fruit rots of pumpkin. **A. A. Collins** and K. L. Everts. University of Delaware, Newark, DE and University of Maryland, Salisbury, MD

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2:50 PM -- 3:15 PM **Break**

## **Thursday afternoon, cont'd**

3:15 PM -- 4:15 PM **Session III** (Delaware Room). **Contributed Papers, Oral.**  
**Chair, Paul Tooley**, USDA-ARS, Ft. Detrick, MD

3:15 PM Genetic diversity among strains of pectolytic *Erwinia* in potato in Russia. S.V. Tsygankova, E. V. Matveeva, E. Sh. Pekhtereva, **A. N. Ignatov**, and N.W. Schaad. Russian Research Institute of Phytopathology, Moscow, Russia and USDA-ARS, Ft. Detrick, MD

3:30 PM *Erwinia amylovora* populations on apple leaves are associated with warm temperatures and colonization of hydathodes and glandular trichomes. **J. L. Norelli** and M. T. Brandl. USDA-ARS, Kearneysville, WV and USDA-ARS, Albany, CA

3:45 PM Epidemics of Phytophthora root and crown rot of petunias in Virginia. **C. Hong**. Virginia Polytechnic Institute and State University, Virginia Beach, VA

4:00 PM Integrated pest management of cacao pests and diseases – current status and an industry perspective. **P. K. Hebbar** and R. D. Lumsden. M & M Mars Inc., McLean, VA and World Cocoa Foundation, McLean, VA

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5:30 PM -- 7:00 PM **Poster Session / Social** (Pennsylvania Room). Poster titles listed at the end of the Program

7:00 PM -- 9:00 PM **Banquet** (Pennsylvania Room), with awards and guest speaker **Eric Erbe**, Director, Electron Microscopy Lab. USDA-ARS, Beltsville, MD.
“Agriculture, Snowflakes and Avalanches: Frontiers in Electron Microscopy.”

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## **Friday morning**

7:30 AM-- 9:00 AM **Continental Breakfast** (Atrium)

9:00 AM-- 10:20 AM **Symposium III** (Delaware Room). **Diagnostics in a Genomics Era.** **Chair, Bill Schneider**. USDA-ARS, Ft. Detrick, MD

9:00 AM Introduction. **Bill Schneider**. USDA-ARS, Ft. Detrick, MD

9:05 AM Spiroplasma and phytoplasma genomes provide clues to pathogenicity and molecular markers for diagnostics. **Robert E. Davis**. USDA-ARS, Beltsville, MD

9:30 AM Identification of an unknown virus from infected plants using mass spectrometry. **Bret Cooper**. USDA-ARS, Beltsville, MD

9:55 AM Developing advanced diagnostics for plant pathogen detection. **Bill Schneider**. USDA-ARS, Ft. Detrick, MD

**Friday morning, cont'd**

10:20 AM – 10:40 AM **Break**

10:40 AM – 12:30 PM **Roundtable Workshop: Tricks of the Trade, Hints for Successful Molecular Methods Including Diagnostics** (Delaware Room).

**Chair: Mary Strem, USDA-ARS, Beltsville, MD**

10:40 AM Introduction. **Mary Strem.** USDA-ARS, Beltsville, MD

10:45 AM Differential display. **Mary Strem.** USDA-ARS, Beltsville, MD

10:55 AM Polyacrylamide gel electrophoresis. **Kristi Bottner.** USDA-ARS, Beltsville, MD

11:05 AM 2-D protein gels. **Mike McMahon.** USDA-ARS, Ft. Detrick, MD

11:15 AM Pulse-field gel electrophoresis. **Ellen Dally.** USDA-ARS, Beltsville, MD

11:25 AM **Break**

11:35 AM Strand specific RT-PCR. **Diana Sherman.** USDA-ARS, Ft. Detrick, MD

11:45 AM Multiplex RT-PCR . **Marie Carras.** USDA-ARS, Ft. Detrick, MD

11:55 AM Bacterial genomics: gene identification and bioinformatics. **Jonathan Shao.** USDA-ARS, Beltsville, MD

12:05 PM High through-put genome sequencing (without robots). **Kelly Davis.** University of Maryland, College Park, MD

12:15 PM AFLP DNA fingerprinting and sequencing plant and fungal DNA. **Sue Mischke.** USDA-ARS, Beltsville, MD

12:30 PM - 1:30 PM **Executive Committee Meeting** (Atrium)

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We thank Dow Chemical Company and Bayer CropScience for their sponsorship of the Wednesday evening Social.

Posters

Variant plant response in the whole plant nuclear targeting assay. **A. Abraitene**, Y. Zhao, and R.W. Hammond. USDA-ARS, Beltsville, MD

Using electrodiagnostics to monitor plant stress parameters in the greenhouse and field. **C. J. Baker**, W. G. Gensler, N. N. Mock, and J. Clark. USDA-ARS, Beltsville, MD and Agriculture Electronics Corporation, Tucson, AZ

Maryland's response to sudden oak death. **D. L. Clement**, M. K. Malinoski, J. H. Bowers, and R. H. Anacker. University of Maryland, Ellicott City, MD and Maryland Department of Agriculture, Annapolis, MD

Host resistance, reduced risk fungicides and cover crops for management of pumpkin foliar disease. **K. L. Everts** and C. B. Fitzgerald. University of Maryland, Salisbury, MD and Cooperative Extension, Howard County, MD

Potential fungicides to control target spot on tobacco. **C. S. Johnson**. Virginia Polytechnic Institute and State University, Blacksburg, VA.

Carrot purple leaf: a new carrot disease associated with *Spiroplasma citri* and phytoplasmas in Washington. **I.-M. Lee**, K. D. Bottner, J. E. Munyaneaza, R. E. Davis, J. Crosslin, L. Du Toit, and T. Crosby, USDA-ARS, Beltsville, MD, USDA-ARS, Prosser, WA, Washington State University, Prosser, WA, and Mercer Ranch, Prosser, WA

DNA fingerprinting of fungal and plant genomes using capillary electrophoresis. **S. Mischke**, N. O'Neill, and D. Zhang, USDA-ARS, Beltsville, MD

Sugar beet root maggot (*Tetanopsis myopaeformis*) as a model system for elucidating disease and pest resistance mechanisms in roots. **A. Smigocki**, S. Haymes, and D. Puthoff. USDA-ARS, Beltsville, MD

Susceptibility of lilac to *Phytophthora ramorum*, the sudden oak pathogen. **N. Shishkoff**, USDA-ARS, Ft. Detrick, MD

Genetic transformation and regeneration of commercial pear (*Pyrus communis* L.) cultivars 'Onward' and 'Old Home'. **Q. Sun**, R.E. Davis, and Y. Zhao. USDA-ARS, Beltsville, MD

-tubulin (*tubA*) gene in *Phaeosphaeria nodorum* and *P. avenaria*. A. Malkus and **P. P. Ueng**. Plant Breeding and Acclimatization Institute, Radzikow, Poland and USDA-ARS, Beltsville, MD

Enhanced suppression of Fusarium wilt of watermelon using hairy vetch green manure and cultivar resistance. **X. G. Zhou** and K. L. Everts. University of Maryland, Salisbury, MD and University of Delaware, Georgetown, DE

Understanding the chemical toxicity of rye (*Secale cereale*) against *Meloidogyne incognita*. **I. A. Zasada** (1), S. L. F. Meyer (1), and C. Rice (2). (1) USDA-ARS Nematology Laboratory, Beltsville, MD; (2) USDA-ARS Environmental Chemistry Laboratory, Beltsville, MD

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**Program Committee:**

Bob Davis-Chair  
Jay Norelli  
Bill Bruckert  
Dan Roberts  
Tom Evans  
Nikki O'Neill  
Arv Grybauskas  
Nina Shishkoff  
Talo Pastor-Corrales  
Shunyuan Xiao  
Mary Strem  
Bill Schneider

**Local Arrangements Committee:**

Nikki O'Neill-Chair  
Jacyn Baker  
Dan Roberts  
Mary Strem  
Sue Mischke  
Julie Wolf  
John Clark  
Talo Pastor-Corrales  
Arv Grybauskas

Notes: