

**Plant Viruses:**  
**Exploiting Agricultural and Natural Ecosystems**  
**11th International Plant Virus Epidemiology Symposium**  
**and**  
**3rd Workshop of the Plant Virus Ecology Network**

**June 20-24, 2010**  
**Cornell University,**  
**Ithaca, New York**  
**<http://www.isppweb.org/ICPVE/>**  
**[http://bioinfosu.okstate.edu/pve\\_rcn/PVENWksp10.html](http://bioinfosu.okstate.edu/pve_rcn/PVENWksp10.html)**

**Program Committees**

Alberto Fereres, IPVE  
Ulrich Melcher, PVEN  
Stewart Gray

**Virus Epidemiology**

Sunny Power, Mike Thresh, Roger Jones, Juan Alvarez

**Virus Ecology and Evolution**

Carolyn Malmstrom, Marilyn Roossinck, Hanu Pappu

**Vector Biology and Transmission**

Nilsa Bosque-Perez, Rodrigo Almeida, Stephane Blanc, Russ Groves

**Disease Management, Diagnosis, and Detection**

Jari Volkonen, Ian Barker, Scott Adkins

**Local Arrangements**

Stewart Gray, Chair  
Keith Perry, Sunny Power, Brian Nault, Marc Fuchs

# Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

The meeting organizers would like to acknowledge the financial support of the following institutions and companies.

**United States Department of Agriculture – Agricultural Research Service**

**Cornell University**

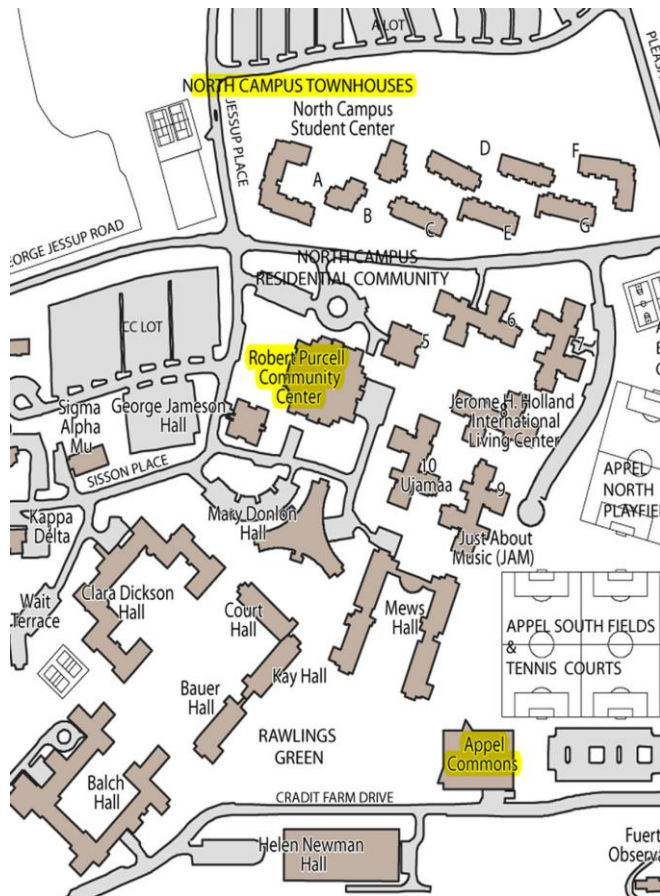
**Agdia, Inc – Please visit the poster for more information**

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## Meeting Locations



**The Sunday Reception and Dinner will be held in Room 303, Appel Commons**

**All of the symposia, the 15 minutes oral presentations and the 5 minute oral poster advertisements will be held in Room 303, Appel Commons.**

**Lunch is available in the cafeteria on the second floor of Appel Commons – your name tag will be required for entrance into the cafeteria.**

**The afternoon poster session will be held in Room 218, Robert Purcell Community Center. All posters will be displayed for the entire meeting**

**The PVEN business meeting will be held Tuesday @ 5:00 in Room 105 Robert Purcell Community Center**

**The IPVE business meeting will be held Tuesday @ 5:00 PM in Room 303, Appel Commons**

**Please be sure to stop by the Hospitality Suite at the Townhouses to socialize with conference participants and their guests. This will be open Sunday and Wednesday evenings after the dinners, and Monday, Tuesday and Thursday evenings from 7-11 PM. Complimentary assorted beverages and snacks will be available.**

# Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

## Meeting Schedule at a Glance

Time/Day	Sunday	Monday	Tuesday	Wednesday	Thursday
Theme		<b>Epidemiology</b>	<b>Ecology</b>	<b>Vectors</b>	<b>Management</b>
7:00 – 8:00		Breakfast	Breakfast	Breakfast	Breakfast
8:00		Introductions	Announcements	Announcements	Announcements
-:15			Keynote A. Power	Keynote S. Blanc	Keynote I. Barker
-:30		Keynote M. Jeger			
-:45			J. Legg Cassava viruses	F. Garcia-Arenal Co-evolution	R. Almeida Mealybug trans.
9:00		C. Desbiez Cucurbit viruses			
-:15			Coffee	M. Roossinck Wild plant viruses	P. Trebicki Impact of CO <sub>2</sub>
-:30		R. Jones ZYMV			
-:45			A. Culbreath TSWV	P. Cronin Host physiology	D. Stenger Phytoreovirus
11:00		N. Bosque-Perez Aphid response			
-:15			Lunch	Lunch	Lunch
-:30		Lunch			
-:45			Lunch	Lunch	Lunch
1:00		Lunch			
-:15			Lunch	Lunch	Lunch
-:30		Lunch			
-:45			Lunch	Lunch	Lunch
2:00	Registration and check- in	15 minute oral presentations			
-:15			15 minute oral presentations	15 minute oral presentations	15 minute oral presentations
-:30		15 minute oral presentations			
-:45			15 minute oral presentations	15 minute oral presentations	15 minute oral presentations
3:00		15 minute oral presentations			
-:15			15 minute oral presentations	15 minute oral presentations	15 minute oral presentations
-:30		15 minute oral presentations			
-:45			15 minute oral presentations	15 minute oral presentations	15 minute oral presentations
4:00		15 minute oral presentations			
-:15			15 minute oral presentations	15 minute oral presentations	15 minute oral presentations
-:30	15 minute oral presentations	15 minute oral presentations			
-:45			15 minute oral presentations	15 minute oral presentations	15 minute oral presentations
5:00	5 min Poster summaries	5 min Poster summaries			
-:15			5 min Poster summaries	5 min Poster summaries	5 min Poster summaries
-:30	5 min Poster summaries	5 min Poster summaries			
-:45			5 min Poster summaries	5 min Poster summaries	5 min Poster summaries
4:00	Posters and social time	Posters and social time			
-:15			Posters and social time	Posters and social time	Posters and social time
-:30	Posters and social time	Posters and social time			
-:45			Posters and social time	Posters and social time	Posters and social time
5:00	Business meetings 5:00	Business meetings 5:00			
-:15			Business meetings 5:00	Business meetings 5:00	Business meetings 5:00
-:30	Business meetings 5:00	Business meetings 5:00			
-:45			Business meetings 5:00	Business meetings 5:00	Business meetings 5:00
5:00	Dinner on own	Dinner on own			
-:15			Dinner on own	Dinner on own	Banquet at Wager Vineyard
-:30	Dinner on own	Dinner on own			
-:45			Dinner on own	Dinner on own	Banquet at Wager Vineyard
5:00	Welcome reception followed by dinner	Dinner on own			
-:15			Dinner on own	Dinner on own	Dinner on own
-:30	Dinner on own	Dinner on own			
-:45			Dinner on own	Dinner on own	Dinner on own

# Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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## **Sunday – Registration and Welcome reception and dinner**

12:00-5:00 Registration and Check in – Lobby of Robert Purcell Community Center

5:00-6:00 Welcome reception – Room 303 Appel Commons

6:00-8:00 Buffet dinner – Room 303 Appel Commons

## **Monday – Virus Epidemiology and Etiology**

**8:00-8:30 Welcome and Introductions – Room 303 Appel Commons**

*Moderator, Sunny Power*

**8:30-9:15 Keynote Speaker:**

Mike Jeger, Imperial College London, UK

Modeling plant virus transmission: from within-plant virus dynamics to epidemic development

*M. Jeger, G. Powell, L.V. Madden and F. van den Bosch*

### **Invited Presentations**

9:15 - James Legg, IITA-Tanzania

A tale of two epidemics: the contrasting dynamics of cassava mosaic and cassava brown streak diseases in East Africa.

*J.P. Legg, S.C. Jeremiah, H.M. Obiero, M. N. Maruthi, I. Ndyetabula, G. Okao-Okuja, D.J. Kim, H. Bouwneester, S. Bigirimana, W. Tata-Hangy, G. Gashaka, G. Mkamilo, T. Alicai, and P.L. Kumar*

9:45 - Cecile Desbiez, INRA, France

Molecular epidemiology of potyviruses infecting cucurbits in France: a case study for understanding evolution of plant virus populations.

*C. Desbiez, B. Joannon, C. Chandeysson, C. Wipf-Scheibel, and H. Lecoq*

10:15 – Coffee break

10:45 - Roger Jones, Dept of Agriculture and Food, Australia

Epidemiology of *Zucchini yellow mosaic virus*: effectiveness of non-host barriers, spread, resistance breakdown, alternative hosts, and molecular characterization.

*B. Coutts, M. Kehoe, S. Wylie, C. Webster and R. Jones*

11:15 - Albert Culbreath, Univ. of Georgia, U.S.

Epidemiology of tomato spotted wilt in peanut in the Southeastern United States.

*A. Culbreath and R. Srinivasan*

11:45 - Nilsa Bosque-Perez, Univ. of Idaho, U.S.

Influence of virus-induced changes in plants on aphid vectors and potential impacts on virus epidemiology.

*N. Bosque-Perez*

# Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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**12:15-1:30 – Lunch – North Star Cafeteria, Appel Commons**

**15 minute Oral Presentations – Room 303 Appel Commons**

*Moderator – Juan Manuel Alvarez*

- 1:30 – Landscape/pathosystem components that contribute to epidemic risk in plant virus pathosystems: a conceptual model  
*F. W. Nutter, Jr.*
- 1:45 – Emergence, establishment, and epidemiology of *Cucurbit yellow stunting disorder virus* in California  
*W. M. Wintermantel, E. T. Natwick, R. L. Gilbertson and J. D. McCreight*
- 2:00 – Epidemiology of *Iris yellow spot virus* in eastern North American onion ecosystems  
*B. Nault, C. Hsu, E. Smith, A. Shelton, M. Fuchs and C. Hoepfing*
- 2:15 – Search for factors potentially involved in the rapid shift in *Watermelon mosaic virus* (WMV) populations in south-eastern France  
*H. Lecoq, F. Fabre, B. Joannon, C. Wipf-Scheibel, C. Chandeysson, A. Schoeny and C. Desbiez*
- 2:30 – *Pepino mosaic virus*: what do we know so far and how to proceed  
*R. A. A. van der Vlugt*
- 2:45 – The epidemiology of *Tobacco streak virus* in central Queensland, Australia  
*M. Sharman, J. E. Thomas and D. M. Persley*
- 3:00 – Alternative hosts of two tospoviruses in Queensland, Australia  
*D. Persley, M. Sharman, J. Thomas and C. Gambley*
- 3:15 – Epidemiological analysis of multi-virus infections of watermelon in experimental fields in southwest Florida  
*W. W. Turechek, C. S. Kousik, C. G. Webster, P. A. Stansly, P. D. Roberts and S. Adkins*

**5 minute Poster Advertisements – Room 303 Appel Commons**

*Moderator – Roger Jones*

- 3:30 – Phenology of aphids and their potential as virus vectors in a northern seed potato production area in Finland – Poster # Ep1  
*S. M. Kirchner, L. Hiltunen, E. Virtanen and J. P. T. Valkonen*
- 3:35 – Preliminary disease progress curve of *Potyvirus*es and vector interaction in garlic crop in Argentina – Poster # Ep2  
*M. C. Perotto, S. Lanati, S. Panonto, E. E. Cafrune and V. C. Conci*

## Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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- 3:40 – **WITHDRAWN** Occurrence and epidemics of *Wheat dwarf virus* in China - Poster # Ep3  
*Xifeng Wang, B. Wu and G. Zhou*
- 3:45 – **WITHDRAWN** Temporal and spatial spread of *Chickpea chlorotic dwarf virus* (CpCDV) in chickpea in northern Sudan – Poster # Ep4  
*Abdelmagid Adlan Hamed*
- 3:50 – The genus *Torradovirus*, a new plant virus genus now harbouring three species all infecting tomato – Poster # Ep5  
*Martin Verbeek, A. Dullemans, P. Maris, H. van den Heuvel and R. van der Vlugt*
- 3:55 – Evaluation of thrips-*Iris yellow spot virus* interactions through an indicator host, lisianthus (*Eustoma grandiflorum*) – Poster # Ep6  
*Rajagopalbabu Srinivasan, D. Riley, S. Diffie, H. Pappu and R. Gitaitis*

### 4:00 – 6:00 Posters – Room 218, Robert Purcell Community Center

Coffee, Iced Tea and snacks provided –cash bar also available  
AUTHORS – please plan to be at your posters from at least 4:30-5:00

- Ep7 Relationships between *Citrus tristeza virus* spread and aphid species (Hemiptera, Aphididae) population composition in different citrus species and geographical areas  
*C. Marroquín, Alfonso Hermoso de Mendoza and M. Cambra*
- Ep8 Dually stressed tobacco plants demonstrate heavier cell pathology  
*O. Iutinska, A. Bysov, O. Shevchenko and V. Polischuk*
- Ep9 The incidence and genetic diversity of *Turnip yellows virus* (TuYV) in winter oilseed rape (*Brassica napus*) in England  
*Elvis Asare-Bediako, C. Jenner, M. Stevens and J. Walsh*
- Ep10 Occurrence and distribution of viruses in cucurbits from Oklahoma  
*Akhtar Ali and A. Khattab*
- Ep11 Detection of *Soil-borne cereal mosaic virus* in Belgium on wheat and barley  
*C. Vaïanopoulos, A. Legrève, C. Lorca, V. Moreau, M. Wattiez and C. Bragard*
- Ep12 Epidemiology of *Plum pox virus* in Ukraine  
**I. Budzanivska**, L. Usko, A. Gospodaryk, F. Demyanenko and V. Polischuk
- Ep13 Multiplex PCR assay for the simultaneous differentiation *Potato virus Y* strains and the first report of the occurrence of the Eu-PVY<sup>NTN</sup> strain in Japan  
*M. Chikh Ali, T. Maoka, M. Taniguchi, J. Sasaki and T. Natsuaki*

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- Ep14 Monitoring and forecasting virus diseases in legumes in the Palouse region of the inland Pacific Northwest, USA  
*D. S. Husebye, **Sanford D. Eigenbrode**, E. Bechinksi, A. V. Karasev, S. L. Clement, B. Vemulapati and H. Pappu*
- Ep15 Disruption of two defensive signaling pathways by the cucumber mosaic virus 2b RNA silencing suppressor  
*M. G. Lewsey, A. M. Murphy, D. MacLean, N. Dalchau, J. H. Westwood, K. Macaulay, M. H. Bennett, M. Moulin, D. E. Hanke, G. Powell, A. G. Smith, **Heiko Ziebell** and J. Carr*
- Ep 16 *Cassava brown streak virus* diversity and development of improved virus diagnostics  
***M. N. Maruthi**, M. M. Abarshi, I. U. Mohammed, S. E. Seal, R. J. Hillocks, L. Kumar, and J. Legg*
- Ep 17 Epidemiology of cassava brown steak disease in Uganda  
***T. Alicai**, C. A. Omongo, R. Kawuki, A. Pariyo, Y. Baguma, A. Bua*
- Ep 18 Symptomatology and biological characterization of Citrus tristeza virus isolates in Pakistan  
***M. Abbas**, M. M. Khan, S. M. Mughal and I. A. Khan*

Dinner is on your own – ask any of the locals for recommendations on restaurants. Ithaca has an amazing selection of cuisine types for a town of its size. You can walk to College Town or grab the bus to the Downtown Commons.

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## Tuesday – Virus Ecology and Evolution

**8:00-8:15 Welcome and Introductions – Room 303 Appel Commons**

*Moderator – Carolyn Malmstrom*

**8:15-9:00 Keynote Speaker:**

Alison “Sunny” Power, Cornell Univ., U.S.

The community ecology of *Barley/cereal yellow dwarf viruses* in Western US grasslands.

*A. Power, E.T. Borer, C.E. Mitchell, and E.W. Seabloom*

### **Invited Presentations**

9:00 - William Schneider, USDA-ARS, U.S.

Balancing selection for replication and horizontal transmission by mimicking field conditions

*W. Schneider, A. L. Stone, B. Tian, F. E. Gildow and V. D. Damsteegt*

9:30 - Fernando Garcia-Arenal, Universidad Politecnica de Madrid, Spain

*Arabidopsis thaliana* as a model system for plant virus ecology and plant-virus co-evolution

*F. García-Arenal, I. Pagán, A. Fraile, N. Montes and C. Alonso-Blanco*

10:00 Coffee Break

10:30 - Marilyn Roossinck, Noble Foundation, U.S.

Wild plant viruses and disease ecology

*M. Roossinck*

11:00 - Jan Kreuze, CIP, Peru

siRNA deep sequencing for the discovery and sequencing of novel viruses

*J. F. Kreuze, W. Cuellar, G. Müller, R. Kumria, C. Fauquet and I. Barker*

11:30 - J. Patrick Cronin, Univ. North Carolina, U.S.

Host physiological phenotype predicts key epidemiological parameters

*J. Patrick Cronin, M. E. Welsh, M. G. Dekkers, S.T. Abercrombie and C. E. Mitchell*

**12:00-1:30 – Lunch – North Star Cafeteria, Appel Commons**

**15 minute Oral Presentations – Room 303 Appel Commons**

*Moderator – Marilyn Roossinck*

1:30 – When did the new world and old world begomoviruses diverge?

*Siobain Duffy and J. A. McConnell*

1:45 – Origin, evolution and molecular epidemiology of *Papaya ringspot virus*



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*X. A. Olarte Castillo, Y. Rojas, P. Tennant, M. Fuchs, R. Sierra, A. J. Bernal, G. Fermin and S. Restrepo*

2:00 – Long-term evolution of the *Luteoviridae*: time-scale and mode of virus speciation  
*Israel Pagán and E. C. Holmes*

2:15 – Adaptation of *Soybean dwarf virus* to new host species  
*Bin Tian, W. L. Schneider and F. E. Gildow*

2:30 – Towards the description of the plant virus metagenome of the French sub-Antarctic Islands  
*Armelle Marais, C. Faure, S. Arous, L. Svanella-Dumas, C. Couture, M. Hullé and Thierry Candresse*

2:45 – Ecogenomic study of plant viruses reveals widespread infection of wild plants with *Zucchini yellow mosaic virus*  
*Prasenjit Saha, F. Chavarría, J. Quan, H. C. Lai, B. A. Roe and M. J. Roossinck*

3:00 – The significance of wild plants in the evolutionary diversification of *Sweet potato feathery mottle virus* in East Africa  
*A. K. Tugume, S. B. Mukasa and J. P. T. Valkonen*

3:15 – Plant-virus co-evolution in wild brassicas  
*J. A. Walsh, C. Obermeier, P. J. Hunter, R. Machado, K. Ohshima and M. J. Kearsey*

## **5 minute Poster Advertisements – Room 303 Appel Commons**

*Moderator – Hanu Pappu*

3:30 – The effect of transmission mode on genetic diversity in *Zucchini yellow mosaic virus* (ZYMV). Poster # Ec1  
*Heather E. Simmons, E. C. Holmes and A. G. Stephenson*

3:35 – Genetic structure and molecular variability of *Grapevine fanleaf virus* populations within three naturally infected California vineyards. Poster # Ec2  
*J. E. Oliver, E. Vigne and M. Fuchs*

3:40 – Next-generation sequencing of plant viruses. Poster # Ec3  
*Wendy Monger, R. Glover, I. Adams and N. Boonham*

3:45 – Genetic variability, recombination events and rates of molecular evolution in *Citrus tristeza virus*. Poster # Ec4  
*G. Silva, and G. Nolasco*

3:50 – A survey of begomoviruses and associated satellites infecting plants in the cotton-growing areas of Northwestern India. Poster # Ec5  
*V. Zaffalon, V. S. Reddy, S. K. Mukherjee, M. Tepfer and Jeremy R. Thompson*

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3:55 – The evolution of cassava brown streak-associated viruses (family *Potyviridae*) in East Africa. Poster # Ec6

*D. R. Mbanzibwa, Y. P. Tian, A. K. Tugume, S. B. Mukasa, F. Tairo, S. Kyamanywa, A. Kullaya and J. P. T. Valkonen*

## 4:00 – 6:00 Posters – Room 218, Robert Purcell Community Center

Coffee, Iced Tea and snacks provided –cash bar also available

AUTHORS – please plan to be at your posters from at least 4:30-5:00

Ec7 The diversity of ampeloviruses and badnaviruses in Australian pineapples and their association with mealybug wilt of pineapple (*Ananas comosus*)

*C. F. Gambley, V. Steele, A. D. W. Geering and J. E. Thomas*

Ec8 Variation in sugarcane cultivar host range of *Sugarcane yellow leaf virus* genotypes in Guadeloupe

*Jean Heinrich Daugrois, D. Sarah, F. Emmanuel, G. Jean-Claude and R. Philippe*

Ec9 Sequence comparison of different *Cauliflower mosaic virus* isolates infecting canola in Iran

*Nooh Shahraeen, S. Ghaderi Maryam and F. Rakhshandehroo*

Ec10 Metagenomics and quarantine: searching for the unknown

*Philippe Roumagnac*

Ec11 Epidemiology and phylogenetic aspects of *Iris yellow spot virus* (Tospovirus) naturally infecting onion plants in Peru

*A. S. Oliveira, R. C. T. Aliaga, T. A. Melgarejo, R. N. Lima and R. O. Resende*

Ec12 Sequence analysis of *Potato virus M* isolates from Czech Republic

*Helena Plchova, N. Cerovska, T. Moravec and P. Dedic*

Ec13 Use of plant viruses in non-food agriculture

*Noemi Cerovska, H. Plchova, T. Moravec, H. Hoffmeisterova, J. Folwarczna, V. Ludvíkova and M. Smahel*

Ec14 Genetic diversity of *Pepino mosaic virus* in the U. S. and identification of a tomato infecting strain capable of inducing disease on potato

*Kai-Shu Ling*

Ec15 Evolution of resistance-breaking in *Tomato spotted wilt virus*: response to selection by sw5 mediated resistant tomato

*Jessica L. Houle, J. W. Moyer and G. G. Kennedy*

## Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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- Ec16 Molecular characterization of endogenous plant pararetroviruses in wild *Dahlia* sp from natural habitats  
*S. G. Eid, C. V. Almeyda, K. L. Druffel, D. E. Saar and H. R. Pappu*
- Ec17 Molecular epidemiology of *African cassava mosaic viruses* in Yangambi, northeastern Democratic Republic of Congo  
*G. Monde, J. Walangululu, S. Winter and C. Bragard*
- Ec18 Three commonly co-occurring perennial grass species have less herbivore and pathogen attack in their introduced range than in their native range  
*G. Kai Blaisdell and Bitty A. Roy*

### **5:00-6:00PM Business Meetings to be held independently for IPVE and PVEN**

The PVEN business meeting will be held Tuesday @ 5:00 in Room 105 Robert Purcell Community Center

The IPVE business meeting will be held Tuesday @ 5:00 PM in Room 303, Appel Commons

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## Wednesday – Vector Biology/Virus Transmission

**8:00-8:15 Announcements – Room 303 Appel Commons**

*Moderator – Nilsa Bosque-Perez*

**8:15-9:00 Keynote Speaker:**

Stephane Blanc, INRA, France

The seemingly simple non-circulative transmission of a plant virus is hiding an extremely sophisticated interplay between virus, plant and vector

### **Invited Presentations**

9:00 - Bryony Bonning, Iowa State University, U.S.

An aphid gut binding peptide impedes entry of *Pea enation mosaic virus* into the aphid hemocoel

*S. Liu and B. Bonning*

9:30 - Rodrigo Almeida, Univ. California Berkley, U.S.

Grapevine leafroll-associated viruses – mealybug transmission biology and ecology

*R. P. P. Almeida and K. M. Daane*

10:00 – Coffee Break

10:30 - Piotr Trebicki, DPI, Biosciences Division, Australia

The impact of elevated CO<sub>2</sub> on wheat, *Cereal yellow dwarf virus* and its aphid vector

*P. Trebicki, A. Freeman, J. Luck, M. Aftab, S. King, M. Spackman, G. Fitzgerald, K. Powell, S. Seneweera and N. A. Bosque-Perez*

11:00 - James Ng, Univ. California Riverside, U.S.

Virus-vector interactions mediating the specific retention and whitefly transmission of criniviruses

*J. Ng*

11:30 - Drake Stenger, USDA, ARS, U.S.

Sequence polymorphism of a glassy-winged sharpshooter phytoeovirus reveals a bottleneck in the Californian population

*D. Stenger*

**12:00-1:30 – Lunch – North Star Cafeteria, Appel Commons**

**15 minute Oral Presentations – Room 303 Appel Commons**

*Moderator – Rodrigo Almeida*

1:30 – Differential transmission rates of PVY<sup>O</sup> and PVY<sup>NTN</sup> from two inoculum sources by three aphid vectors

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*J.M. Alvarez and F. Cervantes*

- 1:45 – Vector fitness on infected plants affects virus epidemiology  
*Belén Belliure, B. Sabater-Muñoz, M. E. Martínez and M. R. Albiach-Martí*
- 2:00 – Deceptive chemical signals induced by a plant virus attract insect vectors to inferior hosts  
*Kerry Mauck, C. De Moraes and M. Mescher*
- 2:15 – Comparative genome analysis of an asymptomatic *Citrus tristeza virus* isolate with its symptomatic aphid transmitted sub-isolates  
*Avijit Roy, N. Choudhary, V. D. Damsteegt and R. H. Brlansky*
- 2:30 – Alterations of capsid protein amino acid positions internal to the virion disrupt nonpersistent virus transmission by aphids  
*C. A. Bricault and Keith Perry*
- 2:45 – New insights on the transmission mechanisms of plant viruses by their aphid vectors  
*A. Moreno, E. Garzo, G. Fernandez, M. Kassem, M. A. Aranda and A. Fereres.*
- 3:00 – Identification of *Myzus persicae* proteins that interact with PVY HC-Pro *in vitro*  
*Ahmad Al-Mrabeih, A. Ziegler, B. Fenton, G. Cowan and L. Torrance*
- 3:15 – Biomarkers distinguishing virus transmission competent and refractive insect populations identified by coupling genetics with quantitative intact proteomics  
*Michelle Cilia, C. Tamborendeguy, K. Howe, T. Fish, T. Thannhauser and S. Gray*

## 5 minute Poster Advertisements – Room 303 Appel Commons

*Moderator – Russ Groves*

- 3:30 – Determination of aphid transmission efficiencies for N, NTN and Wilga strains of *Potato virus Y*. Poster # Vb1  
*Martin Verbeek, P. Piron, A. Dullemans, C. Cuperus and R. van der Vlugt*
- 3:35 - Antagonistic effects of PVY-infected potato plants on aphids. Poster # Vb2  
*S. Boquel, P. Giordanengo and A. Ameline*
- 3:40 - Variation in transmission of *Tomato spotted wilt tospovirus* among isolates and populations of a vector, *Thrips tabaci*. Poster # Vb3  
*Alana Jacobson and G. Kennedy*
- 3:45 - Do secondary bacterial endosymbionts of *Sitobion avenae* clones affect vector specificity or transmission efficiency for barely yellow dwarf virus? Poster # Vb4  
*Hussein Alkhedir, S. Vidal, P. Karlovsky, A. Habekuss, and E. Schliephake*
- 3:50 - What's new in polerovirus transmission? Poster # Vb5  
*Sylvaine Boissinot, B. Bencharki, B. Monsion, S. Revollon, M. Erdinger, C. Reinbold, V. Ziegler-Graff, S. Tanguy, D. Tagu and V. Brault*

# Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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## 4:00 – 6:00 Posters – Room 218, Robert Purcell Community Center

Coffee, Iced Tea and snacks provided –cash bar also available  
AUTHORS – please plan to be at your posters from at least 4:30-5:00

- Vb6 Transmission of several isolates of *Tomato spotted wilt virus* (TSWV) by *Frankliniella occidentalis*  
*D. Debreczeni, L. Rubio, J. Aramburu, L. Galipienso, C. López, S. Soler and **Belén Belliure***
- Vb7 Transmission of two isolates of *Broad bean wilt virus1* (BBWV-1) by several aphid species  
*I. Ferriol, L. Rubio and **Belén Belliure***
- Vb8 Responses of *Myzus persicae* to headspace volatiles of *Nicotiana benthamiana* infected with artificial mutants of *Potato leaf roll virus*  
***Sanford D. Eigenbrode**, H. Ding, A. V. Karasev and J. Kuhl*
- Vb9 Bird cherry-oat aphid behavior in response to barley yellow dwarf virus disease infection of wheat  
*L. L. Ingwell, **Nilsa A. Bosque-Perez**, L. M. Unger, H. Ding, A. V. Karasev and S. D. Eigenbrode*

*We will board the buses at 5:30PM for a 45 minute trip to Wagner Vineyard and Micro-Brewery located on the east side of Seneca Lake, the largest and deepest of the Finger Lakes. There will be a reception from 6:30-7:30. Appetizers and a cash bar will be available. The winery tasting room and store will be open at this time if you want to sample the Wagner Wines and Beers or pick up some New York State Wine paraphernalia. A buffet dinner will be served at 7:30. We should be back on campus by 10:30.*



# Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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## Thursday – Virus Disease Management/Detection/Diagnosis

### **8:00-8:15 Announcements – Room 303 Appel Commons**

*Moderator – Scott Adkins*

### **8:15-9:00 Keynote Speaker**

Ian Barker, CIP, Nairobi  
Clean seed programs in Africa

### **Invited Presentations**

9:00 - Jari Valkonen, University of Helsinki, Finland

Cryotherapy of shoot tips as an efficient means for virus and phytoplasma elimination and healthy plant production

***J. Valkonen***

9:30 - Scott Adkins, USDA, ARS, U.S.

Ecology and management of whitefly-transmitted vegetable viruses in Florida

***S. Adkins, C.G. Webster, C. S. Kousik, S. E. Webb, P. D. Roberts, P. A. Stansly and W. W. Turechek***

10:00 Coffee Break

10:30 - Britt-Louise Lennefors, Syngenta Corp, Sweden

Combination of natural and engineered resistance to rhizomania in sugar beet

***B. Lennefors, E. I. Savenkov, J. Bensefelt, E. Wremerth-Weich, P. van Roggen, S. Tuveesson, J. P. T. Valkonen and J. Gielen***

11:00 - Renato Resende – Universidade de Brasilia, Brazil

Development of broad, stable and durable resistance to monopartite and bipartite begomoviruses in Brazilian tomato lines

***R. Resende***

11:30 - Russell Groves, University of Wisconsin, U.S.

Modeling vector flights to increase effectiveness of foliar protectant programs

***R. L. Groves, A. Charkowski and A. Crockford***

### **12:00-1:30 – Lunch – North Star Cafeteria, Appel Commons**

### **15 minute Oral Presentations – Room 303 Appel Commons**

*Moderator – Jari Valkonen*

1:30 – A mutation in the NIB cistron of *Potato virus Y* confers virulence towards the *Pvr4* resistance of pepper and a high competitiveness cost in susceptible cultivar

***B. Janzac, J. Montarry, A. Palloix, O. Navaud and Benoît Moury***



# Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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- 1:45 – Modulation of virus-host plant interplay in the tomato yellow leaf curl disease by using insect resistance in the tomato host  
*M. J. Rodríguez-López, E. Garzo, J. P. Bonani, A. Fereres, R. Fernández-Muñoz and E. Moriones*
- 2:00 – Mild and aggressive *Pepino mosaic virus* isolates: tomato transcriptomic responses and the potential of cross-protection as a control strategy  
*Inge M. Hanssen, H. P. van Esse, A. Paeleman, I. Gutiérrez-Aguirre, K. Goen, L. Wittemans, B. Lievens, M. Ravnikaran- Bart and P. H. J. Thomma*
- 2:15 – Controlling the banana bunchy top disease pandemic in sub-Saharan Africa  
*P. Lava Kumar, R. Hanna, A. Fotso, M. Soko, S. A. Akinbade, O. J. Alabi, J. Ngeve and R. A. Naidu*
- 2:30 – Improved virus diagnostics to support seed certification in Australia  
*B. C. Rodoni, M. Milinkovic, C. Bottcher, P. Pongsapit and S. Sombat*
- 2:45 – Epidemiology of *Plum pox virus* (PPV) in nursery blocks and evaluation of the effect of horticultural mineral oil treatments  
*Eduardo Vidal, A. Moreno, E. Bertolini and M. Cambra*
- 3:00 – Biological control of vectors affects virus dispersal  
*Belén Belliure, H. R. Amorós, M. A. Marcos-Garcia, I. R. Steba, A. Moreno and A. Fereres*
- 3:15 – A cucumber mosaic virus mutant that induces resistance to its aphid vector in tobacco  
*Heiko Ziebell, A. Murphy, M. G. Lewsey, J. H. Westwood, K. L. Perry, M. Stevens and J. P. Carr*

## **5 minute Poster Advertisements – Room 303 Appel Commons**

*Moderator – Ian Barker*

- 3:30 – Rhizomania of sugar beet: Similarities and differences between the Iranian and European situation. Poster # Dm1  
*Y. Galein, A. Champeil, M. Merhvar and C. Bragard*
- 3:35 – Survival of *Pepino mosaic virus* in aqueous environment reveals the need for efficient detection system suitable not only for plant but also for environmental samples. Poster # Dm2  
*Maja Ravnikar, N. Mehle, N. Prezelj, D. Delić, U. Vidic, P. Kramberger and I. Gutierrez-Aguirre*
- 3:40 – Viruses in weeds in *Dioscorea* yam fields in Nigeria. Poster # Dm 3  
*S. Asala, C. P. Shinggu, R. Asiedu and P. Lava-Kumar*



# Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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- 3:45 – Simultaneous detection of two important bean RNA viruses by multiplex reverse transcription polymerase chain reaction. Poster # Dm4  
*A. Saidi, Nooh Shakraeen and A. Azizi,*
- 3:50 – Distribution of PVY strains in susceptible and moderately resistant North American cultivars. Poster # Dm5  
*Jonathan Whitworth, S. Gray, A. Karasev and J. Lorenzen*
- 3:55 – Detection and molecular epidemiology of *Oat sterile dwarf virus*. Poster # Dm6  
*I. Eriksson, J. N. E. Ramsell, A. Linnell, N. Shad, J. Holmblad, B. Ekblom, L. Frykberg, F. Rabenstein and Anders Kvarnheden*

## 4:00 – 6:00 Posters – Room 218, Robert Purcell Community Center

Coffee, Iced Tea and snacks provided –cash bar also available  
AUTHORS – please plan to be at your posters from at least 4:30-5:00

- Dm7 Restricted spread by *Bemisia tabaci* of *Tomato yellow leaf curl virus* in the begomovirus-resistant Brazilian line TX-468  
*R. C. Pereira-Carvalho, J. A. Díaz-Pendón, R. Fernández-Muñoz, R. O. Resende, L. S. Boiteux and E. Moriones*
- Dm8 Occurrence, incidence and distribution of viruses infecting yam (*Dioscorea* spp) in Nigeria  
*S. Asala, M. D. Alegbejo, B. D. Kashina, O. O. Banwo, R. Asiedu and P. Lava-Kumar*
- Dm9 A *Cucumber mosaic virus* 2b-mutant was not able to establish a systemic infection in bell pepper (*Capsicum annuum* L.)  
*J. Masiri, N. V. Velasquez and John F. Murphy*
- Dm10 Incidence and prevalence of *Strawberry mild yellow edge virus* (SMYEV) in Argentina  
*A. K. Torrico, F. Fernández, A. Ishikawa, N. G. Meneguzzi, L. R. Conci, M. del Huerto Sordo, A. M. Borquez, R. Pacheco, V. Obregón, D. S. Kirschbaum and Vilma C. Conci*
- Dm11 Plum pox potyvirus  
*Vahida Seremet*
- Dm12 A tospovirus new to North America: virus detection and discovery through the use of a macroarray for viruses of solanaceous crops  
*Keith L. Perry and X. Lu*
- Dm13 Toward aphid-resistant transgenic plants  
*S. Liu, Z. Wang, S. Sivakumar, L. Georgievska, G. F. King, W. A. Miller and Bryony C. Bonning*

## Plant Viruses: Exploiting Agricultural and Natural Ecosystems-

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- Dm14 Potyviruses of legume weeds and *Passiflora* spp. from Western Australia: Biological properties and phylogenetic placement of coat protein sequences  
*B. A. Coutts, M. A. Kehoe, C. J. Webster, S. J. Wylie and R. A. C. Jones*
- Dm15 Incidence and control of cucurbit viruses in NWFP Pakistan  
*Asad Ali, A. Hussain, M. Ahmad and T. Natsuaki*
- Dm16 Post-transcriptional gene silencing (PTGS) is a mechanism of plant host-defense against viruses  
*P. Gouveia, A. Costa and G. Nolasco*
- Dm17 Development of several laboratory assays for the detection of *Apricot latent virus*  
*L. Grimová, M. Zouhar and P. Ryšánek*
- Dm18 Virus diseases of cereal crops in the Czech Republic  
*J. Jarošová, S. Gadiou, J. Ripl and Jiban Kumar Kundu*
- Dm19 *Potato leafroll virus* (PLRV) resistant potatoes  
*Tomas Moravec, H. Plchova, P. Dedic and N. Cerovska*
- Dm20 Viral infection of wild orchids in Ukraine  
*V. Polischuk, I. Budzanivska and G. Koroteeva*
- Dm21 Analysis of the temporal and spatial spread of *Plum pox virus* as influenced by USA and Canadian eradication programs  
*A. Gougherty and Forrest W. Nutter, Jr.*
- Dm22 *Bean common mosaic virus* and *Bean common mosaic necrosis virus* in Mazandaran province of Iran  
*Shahraeen Nooh, S. Asghari and G. Shereen*
- Dm23 Precision breeding *Potato virus Y* resistance using a modified potato gene  
*J. Cavatorta, M. Jahn and S. Gray*
- Dm24 Plant virus control employing RNA-based vaccines: A novel non-transgenic strategy  
Andreas Voloudakis, Thomas Hohn and Maria Holeva (**Jari Valkonen** presenting)

6:00 – The conference is officially adjourned. For those of you staying in Ithaca we will have the hospitality suite open from 7:00 – 11:00PM.

**Thank you for attending the conference and have a safe trip home.**