

Plant Virus Ecology Network

Workshop 4

Montpellier May 30/31- June 1 2011

Programme

Arrivals: Sunday 29th May

18:00: Welcome drink at Hotel Mercure



DAY 1: Monday 30th May – Amphitheatre Jacques Alliot - Cirad

08:30: Welcome and registration

09:00 – 9:25: Opening Session

09:00 – 09:05: Daniel Barthélémy, CIRAD – Scientific Director of Department “Biological systems”.

09:05 – 09:10: Michel Nicole, IRD - Scientific Director of Department “Plant resistance to pathogens”.

09:10 – 09:20: PVEN Scientific Committee: Introduction to PVEN, meeting guidelines and aims.

09:20 – 09:25: PVEN Scientific Committee: Overview of the programme

09:25 – 15:45: Session 1: Tropical environments

09:25 – 09:30: Denis Fargette. “An introduction to plant virus ecology in tropical environments”.

09:30 – 09:35: Oumar Traore (chair) - Session introduction.

09:35 – 10:15: Darren Martin. "Reconstructing the history of Maize streak virus strain-A dispersal to reveal diversification hotspots and its initial origins in Southern Africa".

10:15 – 10:45: Oumar Traore. “Virus diseases of rice in Burkina Faso”.

10:45 – 11:15: Claude Fauquet. “Control of cassava viruses in cassava in Africa”.

11:15 – 11:45: Coffee break

11:45 – 12:05: Abdessalem Tahiri. “Emergence and reemergence of tomato begomoviruses in the North-East of Morocco”.

12:05 – 12:25: Walter Leke Nkeabeng. “Molecular characterization of begomoviruses that infect vegetable crops in Southwestern Cameroon”.

12:25 – 12:45: Fidèle Tiendrebeogo. “The Okra leaf curl disease in Burkina Faso: impact on yield and molecular diversity of begomoviruses and associated satellite DNAs”.

12h45 – 14h15: Lunch

14:15 – 14:35: Justin Pita. “Cucumber mosaic virus, an ideal model to study RNA virus evolution”.

14:35 – 14:55: Cica Urbino. “Randomness and selection in the emergence of begomovirus recombinants”.

14:55 – 15:45: Discussion

15:45 – 17:20: Session 2: Meeting-wide poster session with coffee

Jean Heinrich Daugrois. “Biotic and abiotic factors altogether affect the spread of the vectored emerging disease, Yellow leaf of sugarcane, in Guadeloupe.”

Gretchen Kai Blaisdell. “Disease ecology of grapevine leafroll associated viruses”.

Juliette Doumayrou. “Evolution of Virulence: an Empirical Test of the Trade-off Hypothesis using the CaMV infecting *Brassica rapa*.”

Charles Mitchell. “Coinfection of hosts and vectors with cereal and barley yellow dwarf viruses: causes and consequences”.

Sunny Power. “Transmission dynamics of barley yellow dwarf virus”.

Cécile Desbiez. “Rapid population shifts in watermelon mosaic virus in France may be related to differential fitness in non-cucurbit hosts”.

Sylvie German-Retana. “Mutations in the CI-Cter cistron of *Lettuce mosaic virus* are associated with evolution towards resistance-breaking of eIF4E-mediated resistance in lettuce”.

Frédéric Fabre. “Modelling the evolutionary dynamics of viruses within their hosts: a case study using *Potato virus Y* and high-throughput sequencing”.

Pauline Bernardo and Emmanuel Fernandez. “First report of a new geminivirus from the South African Fynbos biome”.

Denis Filloux. “Without *a priori* exploration of yam (*Dioscorea* spp.) viral diversity in quarantine greenhouse”.

Emmanuelle Muller. “Origin of the emergence of badnaviruses such as *Banana streak virus* (BSV) and *Cacao swollen shoot virus* (CSSV)”.

17:30: Shuttle to Montpellier





DAY 2: Tuesday 31th May - Amphitheatre Jacques Alliot - Cirad

09:00 – 11:40: Session 3: Expanding perspectives in plant virus ecology: ecosystem and landscape ecology

09:00 – 9:05: Carolyn Malmstrom (chair)- Introduction to Sessions 3 & 4.

09:05 – 10:00: Val H. Smith. “Resource availability, host cell growth rate, and the dynamics of viral infections”.

10:00 – 10:25: Abbie Schrotenboer. “Landscape and community influences on virus vectors in biofuel crops”.

10:25 – 10:50: Coffee break

10:50 – 11:15: Karen Garrett. “Pathogen ecology across spatial and temporal environmental gradients”.

11:15 – 11:40: Virginie Ravigné. “Specialization in heterogeneous environments: a theoretical overview”.

11:40 – 12:50: Session 4: Expanding perspectives in plant virus ecology: host fitness

11:40 – 12:05: Allen Miller. “Binding of translation factors by diverse plant viral RNA translation elements has a negative effect on host fitness”.

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12:05 – 12:20: Carolyn Malmstrom. “Human modification of native grasses for biofuel production may increase virus susceptibility”.

12:20 – 12:50: Discussion: Advancing understanding of virus influence beyond disease.

12:50 – 14:15: Lunch

14:15 – 17:00: Session 5: Ecology of virus emergence

14:15 – 14:20: Ulrich Melcher (chair) - Introduction.

14:20 – 14:40: Serafin Gutierrez “Dynamics of the multiplicity of cellular infection in a plant virus”.

14:40 – 15:00: Gaël Thébaud “Replication of “inaccurate” viruses and transmissible genetic diversity”.

15:00 – 15:20: Benoit Moury “dN/dS-based methods detect positive selection linked to trade-offs between fitness traits in the coat protein of Potato virus Y”.

15:20 – 15:30: *Discussion of the first four presentations*

15:30 – 15:45: Ulrich Melcher “Covariation of nucleotide residues in the evolution of viral taxa”.

15:45 – 16:00: Akhtar Ali “Incidence and distribution of viruses in cucurbits crops and the detection of potential new virus from weeds in Oklahoma”.

16:00 – 16:15: Nancy Robertson “A new vitivirus discovered in *Ribes* sp. from Alaska”.

16:15 – 16:30: Thierry Candresse “Analysis of the phytoviral metagenome in vegetable crops and associated weeds in a temperate agricultural context”.

16:30 – 16:45: Hui Wang “Virus diversity and dynamics in woody perennials”.

16:45: Discussion of the last five presentations and whole session.

17:00: Departure to “Abbaye de Valmagne” (group photo and dinner)





DAY 3: Wednesday 1st June - Amphitheatre Jacques Alliot - Cirad

09:15 – 11:00: Session 6: Expanding perspectives in plant virus ecology: virus-vector relationships

09:15 – 09:20: Nilsa A. Bosque-Pérez (chair) - Session introduction

09:20 – 09:40: Laura L. Ingwell, Nilsa A. Bosque-Pérez & Sanford Eigenbrode .

“Viruliferous and nonviruliferous aphids differ in their responses to *Barley yellow dwarf virus*-infected plants”.

09:40 – 10:00: Samuel Alizon “Modelling the effect of transmission-mode on the evolution of virulence”.

10:00 – 10:20: Bryan Roosien “Plant disease status and acquisition of virus affect vector behavior and the spread of plant viruses: results from a model”.

10:20 - 10:45: Discussion

10:45 – 11:15: Coffee Break

11:15 – 11:45: Final discussion

11:45 – 12:30: PVEN planning meeting (optional)

12:30 – 14:00: Lunch

14:30: Shuttle to Montpellier

