Program

- The ISPVE 2022 venue will be at the CSIC main campus located in Calle Serrano 117, 28006, Madrid.
- The Registration and Welcome Reception will be on Sunday at 7 pm at the "Residencia de Estudiantes". Calle del Pinar 21, Madrid.
- Registration will continue on Monday at 7:45 am at the Rocasolano Building. Both places are located within walking distance from the venue. The Oral Sessions will be held from Monday to Wednesday at the Rocasolano Building.

Sunday 5th, June

19:00-22:00 **REGISTRATION & WELCOME RECEPTION**

"Residencia de Estudiantes". Calle del Pinar 21, Madrid.
2 min-walking distance from venue (Rocasolano Building).

Monday 6th, June

7:45-8:30 **REGISTRATION (Rocasolano Building)**

8:30-9:00 **OPENING CEREMONY (Juan A Hermoso, Nilsa Bosque-Perez, Alberto Fereres)**

Session 1. General Epidemiology

Chairs: Michael J. Jeger & Alberto Fereres

9:00-9:45	O1	KEYNOTE LECTURE: Emerging themes and approaches in plant virus epidemiology. *Michael J. Jeger.*
9:45-10:00	O2	Whitefly-transmitted virus dominance in mixed infections varies among three cucurbit production regions in the United States. *William M. Wintermantel.*
10:00-10:15	O3	Cucurbit cytorhabdovirus 1: a novel whitefly transmitted cytorhabdovirus infecting zucchini crops in Greece. *Chrysoula Orfanidou.*
10:15-10:45		*Coffee Break & Poster Exhibit (CFMAC-CSIC)*
10:45-11:00	O4	Epidemiology and genetic diversity of cucurbit aphid-borne yellows virus and watermelon mosaic virus in cucurbit crops. *Pedro Gómez.*
11:00-11:15	O5	Molecular insights on potato yellow vein crinivirus infections in single and mixed infections with a potyvirus, in Colombia. *Liliana Franco-Lara.*
11:15-11:30	O6	Epidemiology of tomato brown rugose fruit virus in active greenhouses. *Zafeiro Zisi.*
11:30-11:45	O7	Tomato brown rugose fruit virus in aqueous environments – survival and significance of water-mediated transmission. *Nataša Mehle.*
11:45-12:00	O8	Cotton leafroll dwarf disease: an enigmatic virus disease on cotton in Georgia, USA. *Sudeep Bag.*
12:00-12:15	O9	Prevalence and vector transmission of new maize viruses in São Paulo State, Brazil. *João Lopes.*

12:15-12:30	O10	High-throughput sequencing survey on cereal and barley yellow dwarf viruses indicates their underestimated diversity and spread. *Merike Sõmera.*
12:30-14:15		*Lunch & Poster Exhibit*

Session 2. Diagnostics, Surveillance & Modeling

Chairs: Jan Kreuze & Marleen Botermans

14:15-14:45	O11	KEYNOTE LECTURE: Developing elements for global plant virus management: diagnostics, surveillance, and modelling. *Jan Kreuze.*
14:45-15:00	O12	Applying high throughput sequencing in a generic surveillance workflow: a case study using UK peas. *Aimee R. Fowkes.*
15:00-15:15	O13	Detection of global soybean viruses in metagenomic sequence data using Microbe Finder (MiFi®). *Marcos R. Ribeiro-Junior.*
15:15-15:30	O14	HTS as a powerful tool to assist the phytosanitary risks, associated with newly introduced tuber crops in Belgium. *Kris De Jonghe.*
15:30-15.45	O15	Tomato brown rugose fruit virus in the Netherlands: The rise of a novel clade. *Marleen Botermans.*
15:45-16:00	O16	Evaluating the threat of introducing non-European virus isolates of tomato leaf curl New Delhi virus into Europe. *Stephan Winter.*
16:00-16:30		*Coffee Break & Poster Exhibit (CFMAC-CSIC)*
16:30-16:45	O17	The spread of cassava brown streak viruses, CBSV and UCBSV, from coastal Africa to the continent. *Samar Sheat.*
16:45-17:00	O18	Dispersion and evolutionary history of rice yellow mottle virus in West and Central Africa: tales of rice and men. *Nils Poulicard.*
17:00-17:15	O19	Deciphering the influence of soil structure and nutrients on furovirus infection rates in wheat. *Annette Niehl.*
17:15-17:30	O20	Global risk predictions for Pierce's disease of grapevines. *Alex Giménez-Romero.*
17:30-18:30		Poster Session 1 (odd numbers, w/presenters)

Tuesday 7th, June

Session 3. Virus Ecology and Evolution

Chairs: Fernando García-Arenal & Peter Palukaitis

8:30-9:00	O21	KEYNOTE LECTURE: Virus host ranges and transmission dynamics in heterogeneous environments. *Fernando García-Arenal.*
9:00-9:15	O22	Plant virus mixed infections modulate vertical transmission. *Alberto Cobos.*
9:15-9:30	O23	Global diversity of solanum nigrum ilarvirus 1 among diverse plant hosts and associated metagenomes and its biological characterization. *Mark P. S. Rivarez.*
9:30-9:45	O24	Genome formula and coordinated gene expression in within-host populations of a multipartite virus. *Stéphane Blanc.*
9:45-10:00	O25	A cross-environment viromics study of tomatoes, weeds and water reveals many new plant virus species and links between sample types. *Denis Kutnjak.*
10:00-10:15	O26	Factors that determine the epidemiology of a crop pathogen, tobacco mild green mosaic virus, in its wild reservoir *Nicotiana glauca*. *Rafael De Andrés Torán.*
10:15-10:45		*Coffee Break & Poster Exhibit (CFMAC-CSIC)*
10:45-11:00	O27	Phylogenetics and evolution wheat streak mosaic virus: its origin and the source of the Australian epidemic. *Adrian Fox*
11:00-11:15	O28	Decoding the wheat virome using metagenomics. *Shahideh Nouri.*
11:15-11:30	O29	Viral diversity of cassava mosaic begomoviruses in coastal and western Kenya. *Anna E. Dye.*
11:30-11:45	O30	Rice yellow mottle disease in western Burkina Faso: incidence, diversity and dynamics at local scale. *Charlotte Tollenaere.*
11:45-12:00	O31	Phylogenetic and population analyses of cotton leafroll dwarf virus reveals extensive genomic variability and global sub-populations. *Judith K. Brown.*
12:00-12:15	O32	The rare case of the first whitefly-transmitted polerovirus. *Murad Ghanim.*
12:15-12:30	O33	Potato virus Y adaptation to various resistance QTL combinations in pepper and impact on host tolerance. *Thibaud Jayet.*
12:30-14:15		*Lunch & Poster Exhibit (CFMAC-CSIC)*

Session 4. Virus-Vector Interactions

Chairs: Veronique Brault & Murad Ghanim

14:15-14:45	O34	KEYNOTE LECTURE: When plants and aphids are under the control of viruses! *Veronique Brault.*
14:45-15:00	O35	Yellowing viruses promoting their own spread by reducing Mature Plant Resistance to aphids in sugar beet. *Sharella Schop.*
15:00-15:15	O36	Aphid symbionts influence the transmission of a plant virus. *Patricia Sanches.*

15:15-15:30	O37	Complex interactions in co-occurring vector-borne pathosystems: a case study of potato virus Y and zebra chip disease on a solanaceous crop. *Arash Rashed.*
15:30-15.45	O38	Virus-induced changes in tomato plants infected with tomato yellow leaf curl virus and tomato chlorosis virus influence host selection by their common vector *Bemisia tabaci. Irene Ontiveros.*
15:45-16:00	O39	How do you make a mixed infection: effect of acquisition sequence on propagation of TYLCV and ToMoV by *Bemisia tabaci. Alana L. Jacobson.*
16:00-16:30		*Coffee Break & Poster Exhibit (CFMAC-CSIC)*
16:30-16:45	O40	Relating acquisition of cassava mosaic begomovirus components A and B to transmission of single and co-infections by *Bemisia tabaci* SSA1-SG1. *George G. Kennedy.*
16:45-17:00	O41	Specificity in transmission of old- and new-world begomoviruses by *Bemisia tabaci* MEAM1 and MED cryptic species. *Rajagopalbabu Srinivasan.*
17:00-17:15	O42	Investigation of the replacement between two tomato-infecting begomoviruses from the perspective of vector transmission. *Wei-Hua Li.*
17:15-17:30	O43	*In planta* production of filamentous virus-like particles: insights into 3-D models of different sweet potato infecting viruses vectored by aphids or whiteflies. *Ornela Chase.*
17:30-18:30		Poster Session 2 (even numbers, w/presenters)
18:30-21:00		**FREE TOUR "Madrid de los Austrias"**

Wednesday 8th, June

Session 5. Other Vector-Borne Diseases

Chairs: Cecilia Tamborindeguy & Saskia Hogenhout

8:30-9:00	O44	KEYNOTE LECTURE: How does '*Candidatus* Liberibacter solanacearum' manipulate plant and insect immunity? *Cecilia Tamborindeguy.*
9:00-9:15	O45	Florida citrus growers' potential 'toolbox' for Huanglongbing (HLB) management: an alphabet soup (ISVs, PDIs, IPCs, NATI etc.). *Ozgur Batuman.*
9:15-9:30	O46	Vector biology, abundance, dispersal and temporal transmission dynamics shape *Xylella fastidiosa* epidemiology in Apulia. *Domenico Bosco.*
9:30-9:45	O47	Elucidating the inoculation mechanism of *Xylella fastidiosa*. *Daniele Cornara.*
9:45-10:00	O48	The immunodominant membrane protein (Imp) of Flavescence dorée phytoplasma interacts with gut proteins of insect vectors. *Luciana Galetto.*
10:00-10:15	O49	Investigation of the diversity of the destructive 16SrV phytoplasma group in grapevine, hazelnut and leafhoppers. *Zala Kogej.*
10:15-10:45		*Coffee Break & Poster Exhibit (CFMAC-CSIC)*

Session 6. Disease Management

Chairs: Hanu R. Pappu & P. Lava Kumar

10:45-11:15	O50	KEYNOTE LECTURE: Disease management in the omics era: Status and future prospects. *Hanu R. Pappu.*
11:15-11:30	O51	The interplay between Autophagy and defense hormone Salicylic acid shape disease during viral infection and contribute to host resistance. *Aayushi Shukla.*
11:30-11:45	O52	Habitat manipulation for sustainable management of *Philaenus spumarius*, the European vector of *Xylella fastidiosa*. *Alberto Fereres.*
11:45-12:00	O53	Specificity of resistance and tolerance to cucumber vein yellowing virus in melon accessions and evidence for resistance-breaking associated with a single mutation in VPg. *Cécile Desbiez.*
12:00-12:15	O54	Advances in epidemiology and control of banana bunchy top virus disease pandemic in sub-Saharan Africa. *P. Lava Kumar.*
12:15-12:30	O55	Integrated control of a polerovirus. *John A. Walsh.*
12:30-14:15		*Lunch & Poster Exhibit (CFMAC-CSIC)*
14:15-14:30	O56	Efficacy of the insecticide dimpropyridaz (AxaliON™) against the transmission of barley yellow dwarf virus (BYDV). *Jorge Sanz-Gomez.*
14:30-14:45	O57	Use of glandular trichomes to control whitefly-transmitted viruses in tomato: modulation by natural enemies. *Enrique Moriones.*

Session 7. Climate Change

Chair: Tomás Canto

14:45-15:15	O58	KEYNOTE LECTURE: Anthropogenic climate change and its impact on interactions between viruses and plants. *Tomás Canto.*
15:15-15:30	O59	Milder autumns may increase risk for infection of crops with turnip yellows virus. *Anders Kvarnheden.*
15:30-15:45	O60	Modelling the effects of climate change on plant virus vertical transmission and prevalence. *Álvaro Gutiérrez-Sánchez.*
15:45-16:00	O61	Stability of the resistance conferred by *Sbm1* and *Sbm2* against soil-borne furoviruses in wheat in the context of climate change. *Kevin Gauthier.*
16:00-16:30		*Coffee Break & Poster Exhibit (CFMAC-CSIC)*
16:30-17:30		**BUSINESS MEETING**
20:30-22:30		**CLOSING BANQUET at Restaurante JaiAlai**

LIST OF POSTERS

SESSION 1: GENERAL EPIDEMIOLOGY

***S1-P1*- Spread and genetic diversity of two badnaviruses infecting grapevine in Greece**

C.L. Sassalou, L. Lotos, E. Palla, P. Panailidou, N. I. Katis, and V. I. Maliogka

Aristotle University of Thessaloniki, Faculty of Agriculture, Forestry and Natural Environment, School of Agriculture, Plant Pathology Laboratory, 54124 Thessaloniki, Greece.

***S1-P2*- The application of high-throughput sequencing reveals new viral pathogens implicated in the etiology of pepper yellows disease in Greece**

V. Gavrili, L. Lotos, N.I. Katis, and V.I. Maliogka

Aristotle University of Thessaloniki, Faculty of Agriculture, Forestry and Natural Environment, School of Agriculture, 54124, Thessaloniki, Greece.

***S1-P3* - Occurrence of tomato yellow leaf curl virus on resistant tomato cultivars in Korea**

M. Bae[1], M. Kwak[1], M. C. Son[1], H. S. Choi[2], H. R. Kwak[2], H. S. Byun[2], and E. J. Kil[1]

[1]Department of Plant Medicals, Andong National University, Korea; [2]Crop Protection Division, National Institute of Agricultural Sciences, RDA, Korea.

***S1-P4*- Adventitious plants act as a reservoir of cucumber mosaic virus in chili-pepper crops in northern Spain**

M. Ojinaga[1], S. Mendarte[2], B. Juaristi[1], U. Apodaka[1], A. Revillas[1], A. Ortiz-Barredo[1], and S. Larregla[1]

[1]Plant Production and Protection Department, NEIKER - Basque Institute for Agricultural Research and Development, Derio (Bizkaia), Spain; [2]Conservation of Natural Resources Department, NEIKER - Basque Institute for Agricultural Research and Development, Derio (Bizkaia), Spain.

***S1-P5*- Infectious clones of tomato black ring virus fused with green fluorescence protein (GFP) as a tool for pathogenesis monitoring in plant tissues**

A. Zarzyńska-Nowak[1], J. Minicka[1], P. Wieczorek[2], and B. Hasiów-Jaroszewska[1]

[1]Department of Virology and Bacteriology, Institute of Plant Protection-National Research Institute, Poznań, Poland; [2]Department of Molecular Biology and Biotechnology, Institute of Plant Protection-National Research Institute, Poznań, Poland.

***S1-P6*- Molecular characterization of sugarcane streak mosaic virus in Côte d'Ivoire**

M. M. Ouattara[1], C. Desbiez[2], G. Girardot[2], B. Ble[3], K. A. Yao[4], K. D. Kouame[1] , and A. Schoeny[2]

[1]UFR Biosciences, Laboratoire de Biotechnologie, Agriculture et Valorisation des Ressources biologiques, Université Félix Houphouët-Boigny, Abidjan, Côte d'Ivoire; [2]Pathologie Végétale, INRAE, Montfavet, France; [3]Sucrivoire, UAI, Borotou-Koro, Côte d'Ivoire ; [4]Sucrivoire, UAI, Zuénoula, Côte d'Ivoire

***S1-P7*- The emergence of Tomato Leaf Curl New Delhi Virus in France**

A. Patthamapornsirikul[1] , E. Verdin[1], and C. Desbiez[1]

[1]Pathologie Végétale, INRAE, Avignon, France.

***S1-P8*- Effects of the serial passages of tomato severe rugose virus (ToSRV) by different hosts on the viral infection rate, genetic diversity and population structure**

C. G. Ferro, G. M. Favara, H. D. Kraide, and J. A. M. Rezende

Plant Pathology and Nematology Department, Escola Superior de Agricultura Luiz de Queiroz, University of São Paulo, Piracicaba, SP, Brazil.

***S1-P9*- Effect of temperature and between-host transmission on the induction of tomato black ring virus defective RNA particles**

D. Budzyńska, J. Minicka, A. Taberska, and B. Hasiów-Jaroszewska

Department of Virology and Bacteriology, Institute of Plant Protection-National Research Institute, Poznań, Poland.

***S1-P10*- Virome analyses of *Cnidium officinale* infecting viruses based on next-generation sequencing in Korea**

J. H. Kang[1], M. Kwak[1], C. R. Jung[2], J.-B. Yoon[3], and E. J. Kil[1]

[1]*Department of Plant Medicals, Andong National University, Korea;* [2]*Forest Medicinal Resources Research Center, NiFoS, Korea;* [3]*Horticulture and Herbal Crop Environment Division, National Institute of Horticultural and Herbal Science, RDA, Korea*.

***S1-P11*- The effect of satellite RNAs on the accumulation of tomato black ring virus in different hosts**

J. Minicka[1], A. Taberska[1], A. Zarzyńska-Nowak[1], S.F. Elena[2,3], and B. Hasiów-Jaroszewska[1]

[1]*Department of Virology and Bacteriology, Institute of Plant Protection – National Research Institute, Poznań, Poland;* [2]*Instituto de Biología Integrativa de Sistemas, CSIC-Universitat de València, València, Spain;* [3]*The Santa Fe Institute, Santa Fe, NM, USA.*

***S1-P12*- Epidemiology and factors influencing the spatial spread of yam mosaic virus in yam fields in Nigeria**

B.O. Osundahunsi[1], B. Odu[2], B. Aighewi[3], N. Maroya[1] and P. Lava Kumar[1]*

[1]*International Institute of Tropical Agriculture (IITA), Oyo Road, PMB 5320, Ibadan, Nigeria;* [2]*Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria;* [3]*IITA, Kubwa, PMB 82, Abuja, Nigeria.*

***S1-P13*- Evaluation of the RNA silencing suppression ability of three cherry virus F encoded proteins**

L. Lotos[*], A. Katsiani[*], N.I. Katis, and V.I. Maliogka

*Aristotle University of Thessaloniki, Faculty of Agriculture, Forestry and Natural Environment, School of Agriculture, Plant Pathology Laboratory, 54124, Thessaloniki, Greece. *Both authors have contributed equally.*

S1-P14*- Differences in the 3' intergenic region and the V2 protein of two variants of Tomato curly stunt virus play an important role in disease pathology in *Nicotiana benthamiana

M. E. C. Rey, A. M. Zwolinski, and A. Brigden

University of the Witwatersrand, School of Molecular and Cell Biology, South Africa.

***S1-P15*- Survey for identification and epidemiology of citrus viroids in various *Citrus spp.* in Greece**

N. Tektonidis, A. Karagianni, L. Mikalef, and M. M. Mathioudakis

Plant Pathology Laboratory, Institute of Olive tree, Subtropical Crops & Viticulture / ELGO-DIMITRA, Chania,Crete, Greece.

***S1-P16*- High throughput sequencing of the tomato viromes in Korea**

M. Kwak[1], M. Bae[1], M. C. Son[1], H. S. Choi[2], H. R. Kwak[2], H. S. Byun[2], and E. J. Kil[1]

[1]*Department of Plant Medicals, Andong National University, Korea;* [2]*Crop Protection Division, National Institute of Agricultural Sciences, RDA, Korea.*

S1-P17- Virome release of an invasive exotic plant species in Southern France

O. Moubset[1], D. Filloux[1], H. Fontes[2], C. Julian[1], E. Fernandez[1], L. Claude[1], F. Chiroleu[3], F. Mesleard[2,4], S. Kraberger[8], J. Custer[8], A. Salywon[5], E. Makings[6], D. P. Martin[7], A. Varsani[8,9], and P. Roumagnac[1]

[1]CIRAD, BGPI, Montpellier, France; [2]Tour du Valat, Institut de recherche pour la conservation des zones humides méditerranéennes, Le Sambuc-Arles, France; [3]CIRAD, UMR PVBMT, F-97410 Saint-Pierre, La Réunion, France; [4]Institut Méditerranéen de Biodiversité et Ecologie, UMR CNRS-IRD, Avignon Université Aix-Marseille Université, IUT d'Avignon, 84911 Avignon, France; [5]Desert Botanical Garden, Phoenix, AZ, United States; [6]Arizona State University, Tempe, AZ, USA; [7]Department of Integrative Biomedical Sciences, Institute of infectious Diseases and molecular Medicine, University of Cape Town, Cape Town, South Africa; [8]The Biodesign Center for Fundamental and Applied Microbiomics, Center for Evolution and Medicine, School of Life Sciences, Arizona State University, Tempe, AZ, USA; [9] Department of Integrative Biomedical Sciences, Structural Biology Research Unit, University of Cape Town, Observatory, Cape Town, South Africa.

S1-P18- Identification of a new 'old' tobamovirus originating from pepper

R.A.A. van der Vlugt[1], P. van Bekkum[1], and C.C.M.M. Stijger[2]

[1]Wageningen Plant Research, Wageningen University and Research, Wageningen The Netherlands; [2]Wageningen Greenhouse Horticulture and Flowerbulbs, Wageningen University and Research, Wageningen, The Netherlands.

SESSION 2: DIAGNOSTICS, SURVEILLANCE AND MODELING

***S2-P1*- High throughput sequencing identifies a divergent strain of cherry latent virus 1 in sweet cherry in Greece**

C.G. Orfanidou, A. Katsiani, N.I. Katis, and V.I. Maliogka

Faculty of Agriculture, Forestry and Natural Environment, School of Agriculture, Plant Pathology Laboratory, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece.

***S2-P2*- Improving strategies for the detection of tomato brown rugose fruit virus**

A. Skelton[1], A. Fowkes[1], L. Frew[1], J. van Gemert[2], Y. L. Loh[1], O. Maksimovic[3], R. Macarthur[1], M. Botermans[2], and A. Fox[1]

[1]Fera Science Ltd, York Biotech Campus, Sand Hutton, York, United Kingdom; [2]National Plant Protection Organization, Geertjesweg 15, 6706 EA Wageningen, The Netherlands; [3]National Institute of Biology, Večna pot 111, SI-1000 Ljubljana, Slovenia.

***S2-P3*- Development of quick and accurate diagnostic methods for tomato infecting viruses based on RPA and RT-RPA techniques**

M. Kwak[1], W. K.Cho[2], and E. J. Kil[1]

[1]Department of Plant Medicals, Andong National University, Korea; [2]College of Biotechnology and Bioengineering, Sungkyunkwan University, Korea.

***S2-P4*- Unveiling the virome of stone fruit trees in Greece using high throughput sequencing approaches**

A. Katsiani[1], C.L. Sassalou[1], C. Orfanidou[1], C. Beta[1], N. I. Katis[1], P. Drogoudi[2], and V.I. Maliogka[1]

[1]Faculty of Agriculture, Forestry and Natural Environment, School of Agriculture, Plant Pathology Laboratory, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece; [2]Department of Deciduous Fruit Trees, Hellenic Agricultural Organization-'DIMITRA', Institute of Plant Breeding and Genetic Resources, 38 R.R. Station, 59035 Naoussa, Greece.

***S2-P5*- A decade of foreign pest interceptions and introductions in Spain**

B. Dáder[1], E. Viñuela[1], and P. del Estal[1,2]

[1]Department of Crop Production, Escuela Técnica Superior de Ingeniería Agronómica, Alimentaria y de Biosistemas, Universidad Politécnica de Madrid, Madrid, Spain; [2]National Reference Laboratory for Arthropods, Spain.

***S2-P6*- Characterization of the viral community associated with pineapple mealybug wilt diseased plants in Reunion Island through a metagenomic approach**

D. Massé[1,2], T. Candresse[3], D. Filloux[4], S. Massart[5], N. Cassam[1], B. Hostachy[1], A. Marais-Colombel[3], E. Fernandez[4], P. Roumagnac[4], E. Verdin[6], P. Y. Teycheney[7], P. Lefeuvre[7], and J. M. Lett[7]

[1]ANSES - LSV RAPT, Saint Pierre, La Réunion, France; [2]Pôle de Protection des Plantes, Université de La Réunion, UMR PVBMT, Saint-Pierre, Ile de La Réunion, France; [3]UMR 1332 Biologie du Fruit et Pathologie, INRAe-Univ. Bordeaux, Villenave d'Ornon, France; [4]Campus International de Montferrier-Baillarguet, CIRAD, UMR PHIM, Montpellier, France; [5]Plant Pathology Laboratory, Gembloux Agro-Bio Tech, University of Liège, Gembloux, Belgique; [6]UR407 Unité de Pathologie Végétale, INRAe, Montfavet, France; [7]Pôle de Protection des Plantes, CIRAD, UMR PVBMT, Saint-Pierre, Ile de La Réunion, France.

***S2-P7*- Early warning system and mitigation strategies for Tomato brown rugose fruit virus**

E. Vogel[1], Z. Zisi[2], N. Ortega-Parra[3], C. Vos[2], and I. Hanssen[1]

[1]De Ceuster Meststoffen NV (DCM), Belgium; [2]Scientia Terrae Research Institute VZW, Belgium; [3]De Ceuster Meststoffen BV (DCM), the Netherlands.

***S2-P8*- Schlumbergera virus X in Dragon Fruit (*Hylocereus spp.*) in Spain**

D. Janssen, C. García, and L. Ruiz
Centro La Mojonera, IFAPA, Almeria, Spain.

***S2-P9*- Development of a reverse transcription loop-mediated isothermal amplification assay for detection of pepper viruses**

E. Baek[1], J. Y. Yoon[2], and P. Palukaitis[1]
[1]Department of Horticultural Science, Seoul Women's University, Seoul, Republic of Korea; [2]Graduate School on Plant Protection and Quarantine, Jeonbuk National University, Jeonju, Republic of Korea.

***S2-P10*- Detection of Augusta disease in tulip and other flowerbulbs**

B. Mulder[1], E. T.M. Meekes[2], I. van Duivenbode[3], C. de Krom[4], I. C.C.M.M. Stijger[5], M. Verbeek[6], and I. J.E. Stulemeijer[1]
[1]Flower Bulb Inspection Service (BKD), Lisse, The Netherlands; [2]Naktuinbouw, Roelofarendsveen, The Netherlands; [3]Dutch General Inspection Service for agricultural seeds and seed potatoes (NAK), Emmeloord, The Netherlands; [4]National Plant Protection Organization (NPPO-NL), Wageningen, The Netherlands, [5]Greenhouse horticulture & Flower Bulbs, Wageningen University & Research (WUR), Bleiswijk, The Netherlands; [6]Biointeractions and Plant Health, Wageningen University & Research (WUR), Wageningen, The Netherlands.

S2-P11- Comparative sensitivity of nucleic acid-based diagnostic assays for detecting the banana bunchy top virus in banana plants and aphid vector

A. O. Adediji[1,2], G.I. Atiri[2], and P. L. Kumar[1]
[1]International Institute of Tropical Agriculture, Oyo Road, PMB 5320, Ibadan, Nigeria; [2]Department of Crop Protection and Environmental Biology, University of Ibadan, Ibadan, Nigeria.

***S2-P12*- Rapid and sensitive detection of rice stripe virus by RT-RPA and real-time RT-RPA methods**

J. Jeon, and E. J. Kil
Department of plant Medicals, Andong National University, Andong, Korea.

***S2-P13*- Metagenomic probes for the rapid identification of quarantine viruses in cereal grains**

R. Gomes Ruschel[1,2], A.S. Espindola[2], F. Ochoa-Corona[1,2], M.R. Ribeiro-Junior[1,2,3], M. Malapi-Wight[4], X. Hu[5], and O. Hurtado-Gonzales[5]
[1]Department of Entomology and Plant Pathology, Oklahoma State University, Stillwater, Oklahoma, United States; [2]Institute of Biosecurity and Microbial Forensic, Stillwater, Oklahoma, United States; [3]Department of Plant Protection, School of Agriculture, Sao Paulo State University, Botucatu, Sao Paulo, Brazil; [4]USDA-APHIS-BRS Biotechnology Risk Analysis Programs, Riverdale, Maryland, United States; [5]USDA-APHIS-PPQ Plant Germplasm Quarantine Program – Beltsville, Maryland, United States.

***S2-P14*- Mix infection of garlic virus D (GarVD), onion yellow dwarf virus (OYDV), and leek yellow stripe virus (LYSV) in garlic in Oklahoma, USA**

M. R. Ribeiro-Junior[1,2,3], D. M. do Nascimento[2] , R. Gomes Ruschel[1,2], J. Olson[1], S. Wallace[1], and F.M. Ochoa-Corona[1,2]
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***S2-P15*- Diversity of yellow dwarf viruses in south-eastern Australia**

N. Nancarrow[1,2], S. Maina[3], S.K. Lam[1], B. Rodoni[4], M. Afab[2], and P. Trębicki[1,2]

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***S2-P16*- Toward the characterization of a novel Bymovirus infecting rice in Burkina Faso by combining metagenomics and targeted sequencing**

M. Bangratz[1], M. Barro[2], D. Sérémé[2], I. Wonni[2], A. I. Kassankogno[2], P. Roumagnac[1], D. Filloux[1], E. Fernandez[1], J. Orjuela[1], A. Comte[1], C. Tollenaere[1]*, and N. Poulicard[1]*

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S2-P17- Cucurbit chlorotic yellows virus is widespread in mixed infections on cucurbits and also infects wild radish (*Raphanus raphanistrum*), a common weed in Georgia, USA

S.R. Kavalappara[1], S. Bag[1], A. Sparks[2], C. Mcgregor[3], D. G. Riley[2], and W.M. Wintermantel[4]

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***S2-P18*- Vector-borne diseases with non-stationary vector populations: the case of growing and decaying populations**

A. Giménez-Romero[1], R. Flaquer-Galmés[2], and M. A. Matías[1]

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***S2-P19*- Modelling plant resistance deployment: the R package landsepi**

L. Rimbaud[1], J. Papaïx[2], J. F. Rey[2], J. L. Gaussen[2], M. Zaffaroni[3], and F. Fabre[3]

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SESSION 3: VIRUS ECOLOGY & EVOLUTION

***S3-P1*- Plant-virus interactions in a heterogeneous landscape: analysis of four tobamovirus species**

A.D. Zamfir, B.M. Babalola, A. Fraile, M. J. McLeish, and F. García-Arenal

Centro de Biotecnología y Genómica de Plantas (CBGP), Universidad Politécnica de Madrid (UPM) and Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA) and E.T.S.I. Agronómica, Alimentaria y de Biosistemas, Campus de Montegancedo, UPM, 28223 Pozuelo de Alarcón, Madrid, Spain.

***S3-P2*- Genetic variability and evidence of a new subgroup in Watermelon mosaic virus isolates infecting cucurbits in the United States**

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[1]Department of Biological Science, The University of Tulsa, Tulsa Oklahoma, 74104, US; [2]Present address: Department of Plant Pathology, Faculty of Agriculture, Assiut University, Assiut, Egypt.

***S3-P3*- Influence of habitat on incidence, host use & genetic structure of cucumber mosaic virus (CMV)**

B. M. Babalola, A. Fraile, M. J. McLeish, and F. García-Arenal

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***S3-P4*- Targeting of genomic and minus strands of viral RNA contributes to amiRNA-mediated antiviral resistance and promotes the emergence of complex viral populations**

F. Mesel[1], M. Zhao[1,2], B. García[1], J. A. García[1], and C. Simón-Mateo[1]

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***S3-P5*- Virus diversity in natural Dutch plant ecosystems along a chronosequence**

D.E. Boezen[1], C.M. Malmstrom[2], R.A.A. van der Vlugt[3], and M.P. Zwart[1]

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***S3-P6*- Wild plant species: enemies or allies of carrot crops?**

F. Salavert[1], H. McGrath[2], A. Fox[3], I. Adams[3], and N. Boonham[1]

[1]Newcastle University, Newcastle Upon Tyne, UK; [2]Rothamsted Research, Harpenden, UK; [3]FERA Science Ltd, York, UK.

***S3-P7*- Characterization of the biological properties of a chimeric potyvirus, and of its adaptation to a compatible experimental host**

H. Sun[1], F. del Toro[1], M. Makki[2], F. Tenllado[1], and T. Canto[1]

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***S3-P8*- Molecular characterization of watermelon mosaic virus isolates infecting zucchini and pumpkin plants in the Czech Republic**

K. Ben Mansour[1], M. Komínková[2], P. Komínek[2], J. Brožová[2], J. Kazda[1], M. Zouhar[1], and P. Ryšánek[1]

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S3-P9*- Multipartite virus genome formula variability in local lesions of *Chenopodium quinoa

M. Johnson[1, 2] and M. Zwart[1]

[1]*Microbial Ecology, Netherlands Institute of Ecology, NIOO-KNAW, Wageningen, The Netherlands;* [2]*Department of Virology, Wageningen University and Research, Wageningen, The Netherlands.*

***S3-P10*- TuYV isolates found in Sugar beet**

S. Schop[1], E. Raaijmakers[2], and R.A.A. van der Vlugt[1]

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***S3-P11*- High genetic diversity of *Plum pox virus* in subspontaneous trees in North Macedonia sheds new light into its evolutionary history**

S. Dallot[1], M. Brevet[1], D. Filloux[2], E. Fernandez[2], R. Rusevski[3], B. Kuzmanovska[3], and G. Thébaud[1]

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SESSION 4: VIRUS-VECTOR INTERACTIONS

***S4-P1*- Two populations of *Bemisia tabaci* Mediterranean in Brazil are unable to transmit three native begomoviruses**

A.M. Nogueira[1], V. H. Bello[1], E. Vicentin[1], C. S. de Oliveira[1], C. C. Martines[1], T.M.C. Barbosa[2], E. S. Gorayeb[1], L. F. M. Watanabe[1], J. M. Marubayashi[1], F. M. Zerbini[2], M. Ghanim[3], J. A. M. Rezende[4], M. A. Pavan[1], and R. Krause-Sakate[1]

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***S4-P2*- Towards understanding the importance of mixed infections for vector-mediated spread of sweet potato virus diseases**

C. Ontañón, O. Chase, and J.J. López-Moya

Centre for Research in Agricultural Genomics (CRAG), CSIC-IRTA-UAB-UB, Cerdanyola del Vallès, Barcelona, Spain.

***S4-P3*- Aphid response to volatiles emitted by melon plants after single and mixed virus-infection**

E. Garzo, A. Moreno, and A. Fereres

Instituto de Ciencias Agrarias, CSIC, Madrid Spain

***S4-P4*- Detecting virus-carrying *Xiphinema* spp. as an alternative to species identification of *Xiphinema* in trade**

E. Everaert, N. Viaene, and K. De Jonghe

Flanders Research Institute for Agriculture, Fisheries and Food (ILVO), Merelbeke, Belgium.

***S4-P5*- *Bemisia tabaci* Mediterranean cryptic species survey on soybean in Sao Paulo State (Brazil) and its interaction with cowpea mild mottle virus**

F. Barreto da Silva[1], J. Uzan[1], J. M. Marubayashi[1], R. S. Raposo[1], C. C. Martines[1], M. R. Ribeiro-Junior[1,2], A. M. Nogueira-Portilho[1], Marcelo A. Pavan[1], and R. Krause-Sakate

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***S4-P6*- Pre-infection of tomato plants carrying Sw-5 gene with tomato chlorosis virus does not seem to alter the infection with groundnut ringspot virus**

H. D. Kraide[1], V. M. Camelo-García[2], G. M. Favara[1], F. F. de Oliveira[1], C. G. Ferro[1], E. Y. N. Carmo[1], E. F. B. Lima[3], A. B. Filho[1], and J. A. M. Rezende[1]

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S4-P7*- New insights about the biology and structure of insect-transmitted plant viruses of the family *Secoviridae

I. Ferriol[1,2], M. Byrne[3], A. Javed[3], N. Ranson[3], G. P. Lomonossoff[4], and J. J. López-Moya[1]

[1]Centre for Research in Agricultural Genomics (CRAG-UAB-UB-CSIC-IRTA), Spain; [2]Instituto de Ciencias Agrarias (ICA-CSIC), Spain; [3]University of Leeds, Leeds, England; [4]John Innes Centre (JIC), Norwich, England.

S4-P8- **Endosymbiont community structure of rice stripe virus-viruliferous *Laodelphax striatellus* (Hemiptera: Delphacidae) in Korea**

M. Kwon, and E.-J. Kil
Department of Plant Medicals, Andong National University, Korea.

S4-P9- **A database on the transmission of plant viruses**

Peters[1], P. van Vredendaal[2], and R.A.A. van der Vlugt[1]
[1]Laboratory of Virology, Wageningen University and Research, The Netherlands; [2]Wageningen Library, Wageningen University and Research, The Netherlands.

S4-P10- **The role of HCPro in the transmission properties of nine PVY field isolates from Tunisia**

M. Makki[2], H. Sun[1], F. del Toro[1], K. Necira[2], F. Tenllado[1], F. Khouaja[2], and T. Canto[1]
[1]Department of Microbial and Plant Biotechnology. Margarita Salas Center for Biological Research. Ramiro de Maeztu 9, 28040 Madrid, Spain; [2]Laboratory of Molecular Genetics, Immunology and Biotechnology (LR99ES12). Faculty of Sciences. University of Tunis El Manar. Manar II, Tunis 2092, Tunisia.

SESSION 5: OTHER VECTOR-BORNE DISEASES

S5-P1*- Impact of insecticides in the feeding behaviour of *Philaenus spumarius* associated to the transmission of *Xylella fastidiosa

Clara Lago[1,2], D. Cornara[1,3,4], S. A. Minutillo[4], A. Moreno[1,5], and A. Fereres[1,5]

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***S5-P2*- Landscape complexity promotes the abundance of potential vectors of *Xylella fastidiosa* in Portuguese vineyards**

I. Rodrigues[1,2], M. Villa[1], P. Baptista[1], and J. A. Pereira[1]

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***S5-P3*- Olfactory behavior of *Philaenus spumarius* and *Cicadella viridis* to cis-3-hexen-1-ol and cis-3-hexenyl acetate**

I. Rodrigues[1,2], J. Benhadi-Marín[1], N. Rodrigues[1], P. Baptista[1], and J. A. Pereira[1]

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***S5-P4*- Association of '*Candidatus* Phytoplasma asteris' (group 16SrI) and '*Candidatus* Phytoplasma fraxini' with a new syndrome in potato crops in Colombia**

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***S5-P5*- In planta distribution of '*Candidatus* Phytoplasma asteris' (16SrI) and '*Candidatus* Phytoplasma fraxini' (16SrVII) infecting *Quercus humboldtii* trees in mixed infections**

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***S5-P6*- Preparedness for *Xylella fastidiosa* in Australia; understand biology, physiology and ecology or potential vectors**

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S5-P7*- Finding a suitable host plant for transmission trials and infectivity screening with *Xylella fastidiosa* and its vector *Philaenus spumarius

S. Avosani[1], G. Cavallo[1], M.L. Vitale[1], M. Ripamonti[3a], N. Bodino[3], D. Bosco[4], V. Verrastro[1], and D. Cornara[1,2]

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S5-P8- **Population genomics of the meadow spittlebug *Philaenus spumarius*, the main insect vector of *Xylella fastidiosa* in Europe**

R. Biello[1], Q. Liu[1], S. T. Mugford[1], A. Stewart[2], C. Harkin[2], K. Lester[3], R. Cairns[3], M. Wilson[4], S. Conyers[5], D. Allen[5], D. De Marzo[5], G. Clover[1], T. C. Mathers[1], and S. A. Hogenhout[1]

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S5-P9- **New sustainable approaches for interfering with vector-borne plant pathogens transmission**

V. Zaffaroni-Caorsi[1], D. Cornara[2,3], D. Bosco[4], C. Marzachi[5], and V. Mazzoni[6]

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SESSION 6: DISEASE MANAGEMENT

***S6-P1*- Survival and disinfection of tomato brown rugose fruit virus on common glasshouse surfaces**

A. Skelton, L. Frew, A. Fowkes, and A. Fox
Fera Science Ltd, York Biotech Campus, Sand Hutton, York, United Kingdom.

***S6-P2*- Impact of dimpropyridaz (AxaliON™) on the feeding behaviour of aphid and whitefly vectors of plant viruses**

Moreno, A.[1], A. Herraiz[1], J. Sanz-Gomez[2], and A. Fereres[1]
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***S6-P3*- Integrated pest management controls the spread of tomato leaf curl New Delhi virus in zucchini crops.**

D. Janssen, M.M. Tellez, E. Rodriguez, A. Simón, M. Boulares, and L. Ruiz
Centro La Mojonera, IFAPA, Almeria, Spain.

***S6-P4*- Secondary dissemination of tomato severe rugose virus (ToSRV) and tomato chlorosis virus (ToCV) in tomato fields under the effect of insecticides**

F. F. de Oliveira, G. M. Favara, V. H. Bello, H. D. Kraide, C. G. Ferro, E. Y. N. Carmo, A. B. Filho, and J. A. M. Rezende
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***S6-P5*- A high-throughput image analysis method for assessing pepper quantitative resistance to Cucumber mosaic virus**

J. Hirsch[1], M. Szadkowski[1], S. Piry[1,2], C. Lacroix[1], L. McLeod[3], B. Moury[1], V. Lefebvre[3]
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***S6-P6*- Degeneration of Clean Virus-tested Sweetpotato Seed in High and Low Virus Pressure Areas at the Lake Zone, Tanzania**

K.O. Ogero[1, 2*], J.F. Kreuze[3], M.A. McEwan[4], C.J.M. Almekinders[5], P.C. Struik[6], and R.A.A. van der Vlugt[2]
[1]International Potato Center (CIP), C/o Tanzania Agricultural Research Institute (TARI) Tanzania; [2]Laboratory of Virology, Wageningen University and Research (WUR), The Netherlands; [3]International Potato Center, (CIP) Peru; [4]International Potato Center, Regional Office for Sub-Saharan Africa (CIP – SSA), Kenya; [5]Knowledge Technology and Innovation Group, Social Sciences, Wageningen University and Research (WUR), The Netherlands; [6]Centre for Crop Systems Analysis, Wageningen University and Research (WUR), The Netherlands.

S6-P7*- Field biotest development with virus inoculation in sugar beet – efficacy of dimpropyridaz (AxaliON™) against *Beet mild yellowing virus* (BMYV) transmitted by *Myzus persicae

M. Varrelmann[1], R. Hossain[1], C. Lachmann[1], and J. Sanz-Gomez[2]
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***S6-P8*- Application of a reverse genetic system for Beet necrotic yellow vein virus to study Rz1 resistance breaking in sugar beet**

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S6-P9- **Development of *Agrobacterium tumefaciens* infiltration of infectious clones of grapevine geminivirus A directly into greenhouse-grown grapevine and *Nicotiana benthamiana* plants**

Y.-W. Kuo[1], A. Bednarska[1], M. Al Rwahnih[1,2], and B. W. Falk[1]

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S6-P10- **Epidemiology and management of tomato spotted wilt virus in *Chrysanthemum morifolium* in South Korea**

J. Y. Yoon[1], J. B. Yoon[2], M. H. Seo[2], and S. K. Choi[2]

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SESSION 7: CLIMATE CHANGE

NO POSTERS