

# Mon 23 Sept

Welcome and Registration 9

10:00 Welcome

10:05-10.30 hr: Invited keynote

**DR. FRANCESCO DI SERIO: INSTITUTE FOR SUSTAINABLE PLANT PROTECTION (CNR) ITALY**

**TITLE: DIVERSITY OF PLANT-ASSOCIATED BUNYAVIRICETES**

10.45-11.15: Coffee Break

11:15-13:00: Session on Virus multiplication

- Jia Li, Lei Cao, Yaqian Zhao, Jinghan Shen, Lei Wang, Mingfeng Feng, Min Zhu, Yonghao, Richard Kormelink, Xiaorong Tao, Xiangxi Wang: *Structural basis for the activation of orthotospovirus replication machinery and its dual-targeted inhibition by ribavirin*
- Kikyo Watanabe, Kazuhiro Ishibashi: *Host ESCRT components are required for TSWV ribonucleoprotein complex formation in the yeast replicon system.*
- Mingfeng Feng, Rong Guo, Yulong Yuan, Qin Hai Liu, Yuting Gao, Tianyi Zhang, Wenyu Zuo, Jia Li, Min Zhu, Zhongkai Zhang, Xiaorong Tao: *m6A RNA methylation positively regulates the infection of tomato spotted wilt virus.*
- Victor Sanchez-Camargo, Gertjan Kramer, Harrold van den Burg: *Plants deploy virus-specific RNA-binding proteome responses against viral infections*
- Kaili Xie, Zhongtian Xu, Qingling Qi, Yanjun Li, Xiaodi Hu, Wenkai Yan, Jianping Chen, Zongtao Sun: *Diverse RNA Viral Effectors Convergenly Facilitate Plant AGO4 Degradation to Promote Infection.*
- Michel Yvon, Thomas German, Diane Ullman, Yannis Michalakis, Stéphane Blanc: *Packaging of the genetic information of the tomato spotted wilt virus is segregating the three genome segments*

13:00 -14.15: Lunch break

14.15-16.00 Session on Virus-host-insect interaction I

- Abdelaal Shehata, Michael Mayfield, Kathleen Martin: *Exploring the Cellular Localization of Tomato spotted wilt virus and Soybean vein necrosis virus Proteins in Plant and Insect cells.*
- Cristina Rosa, Kaixi Zhao, Md. Tariqul Islam, Nathan R. Johnson, Michael J. Axtell: *Implications of mixed virus infection for their persistence and spread*
- Reghan Mutethia, Jeanmarie Verchot: *Investigating the interactions between Rose rosette virus and the phloem of rose plants*
- Yan Zhang, Bo-Xue Li, Qian-Zhuo Mao, Ji-Chong Zhuo, Hai-Jian Huang, Jia-Bao Lu, Chuan-Xi Zhang, Jian-Ping Chen, Jun-Min Li, Gang Lu: *The JAK-STAT pathway promotes persistent viral infection by activating apoptosis in insect vectors*
- Yu-Juan He, Gang Lu, Bo-Jie Xu, Qian-Zhuo Mao, Yu-Hua Qi, Gao-Yang Jiao, Hai-Tao Weng, Yan-Zhen Tian, Hai-Jian Huang, Chuan-Xi Zhang, Jian-Ping Chen, Jun-Min Li: *Maintenance of Persistent Transmission of a Plant Arbovirus in its Insect Vector Mediated by the Toll-Dorsal Immune Pathway.*
- Nina Guarneri, Ahmed M. Abd-El-Haliem, Marlot Westera, Petra Bleeker, Rob C. Schuurink: *Exploring the effects of TSWV and microsporidia infections on the effectorome of thrips*
- Niayesh Shahmohammadi, Yonggyun Kim: *TSWV suppresses host antiviral response by elevating an immunosuppressive C18 oxylipin level in the viral vector, Frankliniella occidentalis*

16:00-16.30 Coffee break

16:30- 17:15 Session on Virus-host-insect interaction II

- Qingjun Wu, Xiaobin Zheng, Yanran Wan: *The interaction between Frankliniella occidentalis and orthotospovirus*
- Lingna Shangguan, Yu Zhang, Ronzhen Chen, Hongmin Cui, Haohua Yu, Chongkun Zuo, Mingfeng Feng, Jia Li, Xiaorong Tao, Min Zhu: *Tomato spotted wilt virus promotes the offspring production of its vector, Frankliniella occidentalis, by suppressing the plant defence response induced by a thrips salivary elicitor.*
- Mitsuru Okuda, Takuya Shiba, Masahiro Hirae: *Analysis of the reproduction and transovarial transmission of rice stripe virus acquired by Laodelphax striatellus.*

## Tue 24 sept

9.00-9:45 hr Invited Keynote

**DR PASCAL MIESEN (RADBOD UNIVERSITY NIJMEGEN, NIJMEGEN, THE NETHERLANDS)**

**TITLE: "DECODING ANTIVIRAL IMMUNE RESPONSES IN INSECT VECTORS"**

9:45-11:15: Poster flashes & Coffee break

11:15-12:30 Session on The Biology of Thrips and Virus Vector Transmission

- József Fail, Kristóf Domonkos Király: *The current state of knowledge about the onion thrips cryptic species complex*
- Paolo Riccardi, Domenico Frisoli, Marco Mammella, Alberto Reggiani, Louis Gisberts: *Thrips resistance in pepper: a BASF/Nunhems success story*
- Shengyong Wu, Yannan Zhang, Zhen He, Wen Xie, Stuart R. Reitz, Yulin Gao: *Strategy for reducing populations of Frankliniella occidentalis and virus transmission by thrips using two predatory mites with complementary ecological niche*
- Momoko Matsuyama, Yasuhiro Tomitaka: *Molecular characterization of the glycoprotein an emerging orthotospovirus involved in transmission by thrips*
- Daniel K. Hasegawa, Alejandro Del-Pozo, Richard R. Smith, Laura J. Hladky: *Epidemiology and Economic Impact of Impatiens Necrotic Spot Virus: A Re-Emerging Orthotospovirus in the Salinas Valley of California*

12.30-14.00 Lunch break

14.00-15.30 Session on Virus Emergence, Metagenome & Virome analyses

- Marleen Botermans, Annelien Roenhorst, Pier de Koning, Christel de Krom, Carla Oplaat, Marcel Westenberg: *Flooded by novel findings in the High-Throughput Sequencing era: Bunyaviricetes findings from import, survey and wild plant samples – a phytosanitary perspective*
- Ozgur Batuman, Salih Yilmaz, and Scott Adkins: *Tomato chlorotic spot virus variants in Florida Sw-5 tomatoes and development of effective detection methods for field diagnosis*
- Antonio Tiberini, Ariana Manglli, Marina Allegrezza, Loredana Sigillo, Fabrizio Cillo, Michelino Tridentino, Andrea Gentili: *Biological and molecular characterization of tomato spotted wilt virus - TSWV (Orthotospovirus tomatomaculae) resistance-breaking isolates from central-south Italy*
- Jun-Min Li, Ting Li, Yu-Juan He, Zhuang-Xin Ye, Qian-Zhuo Mao, Gang Lu, Chuan-Xi Zhang, Jian-Ping Chen: *Diversity, function, and evolution of insect-specific bunyaviruses in rice planthoppers*

- Marcel Westenberg, Annelien Roenhorst, Pier de Koning, Jerom van Gemert, Ruben Schoen, Marleen Botermans: *Identification by high-throughput sequencing of two novel emaraviruses and one novel orthospovirus in several import consignments of Capsicum spp. from Southeast Africa*
- Fereshteh Esmailzadeh, Davoud Koolivand: First report of Alstroemeria necrotic streak virus on Cucumis melo in Iran

15:30-16:00 Coffee Break

16:00–16:30 Intermezzo on

- Diane Ullman: Remembering the Life of a Stellar Virus-Vector Biologist: Thomas L. German
- Richard Kormelink, Massimo Turina: Historical perspective on the contribution from other Plant Bunyavirologists that have retired / passed away

18:00 – 19:30 Visit Downtown Bari

20:00-22:00 Social Dinner

# Wed 25 sept

9.00-9:45 hr Invited Keynote

**PROF. XIAORONG TAO: DEPARTMENT OF PLANT PATHOLOGY, NANJING AGRICULTURAL UNIVERSITY (CHINA)**

**TITLE: "TSW- AND SW-5B- NLR-BASED RESISTANCE TO TOSPOVIRUSES"**

9:45-11:15: Poster flashes & Coffee break

11:15-12:45 Session on Host Plant Resistance

- Rajagopalbabu Srinivasan, Mark Abney, Albert Culbreath, Soraya Bertoli: *Interactions between tomato spotted wilt orthotospovirus and its vector, Frankliniella fusca, in Arachis hypogaea genotypes: host resistance mechanisms and implications*
- Sagi Hamo, Maya Barakat, Lee Tavor-Izhaki, Satyanarayana Tatineni, Moshe Dessau: *Things are not What They Seem: Structural and Functional Studies on RNA Silencing Suppressors from an Emaravirus*
- Luis Rubio: *Generation of pepper resistance-breaking isolates of tomato spotted wilt virus by experimental evolution*
- Roberta Spanò, Mariarosaria Mastrochirico, Tiziana Mascia: *Mix and match to counteract virus infections in plants: results of the application of vegetable grafting.*
- Marina Ciuffo, Marco Forgia, Paolo Margaria, Marco Mammella: *Biological and molecular characterization of tomato spotted wilt virus (TSWV) Italian isolates able to overcome resistance, both in pepper and tomato*

12:45-14:00 Lunch

14:00-14:45 hr Invited Keynote

**PROF. LIYING SUN: NORTHWEST A&F UNIVERSITY, CHINA**

**TITLE: CROSS-KINGDOM VIRUS INFECTION: REVITALIZING VIROCONTROL FOR PHYTOPATHOGENIC FUNGAL DISEASES**

14.45-15.30 hr Session on Disease Management

- Rajagopalbabu Srinivasan, Mark Abney, Albert Culbreath, Scott Monfort, Scott Tubbs, Robert Kemerait: *Forty-year story of managing tomato spotted orthotospovirus and thrips in peanut production systems of Southeastern United States*
- Surender Kumar, Senthilraja Chinniah, Arinder Arora, Kiran R. Gadhave: *Novel resistance breaking strains of tomato spotted wilt virus: characterization, transmission and management through an RNAi-based approach.*
- Na Hee Kim, Seung Hyeon Oh, Kook-Hyung Kim: *Management of the tomato spotted wilt virus disease by treatment with an organized copper nanoparticle, which delays the virus infection and increases yield in the pepper plant (provisional).*

Closing end with coffee break

Posters (and to be orally introduced during poster flash sessions):

1. Marlot Emese Westera, Petra Bleeker, Nina Guarneri, Rob C. Schuurink: *Don't shoot the messenger: Cross kingdom RNA interference in the thrips-tospovirus-tomato interaction*
2. Niccolò Miotti, Lorenzo Pandolfi, Carlo Pennacchio, Camilla Baratto, Massimo Turina, Andrea Ponzoni, Emanuela Gobbi, Guido Faglia, Marina Ciuffo: *Early detection of tomato spotted wilt virus in tomato plants using Raman spectroscopy and electronic nose technology: a precision agriculture approach*
3. Machiel Cligge, Petra Bleeker, Frank Takken: *Exploring the use of a tospovirus vector for Virus-Induced Genome Editing*
4. Luisa Rubino, Maria Isabella Prigigallo: *The International Committee on Taxonomy of Viruses has adopted a binomial nomenclature for virus species: an update of plant infecting viruses in the phylum Negarnaviricota*
5. Yi Guo, Niccolò Miotti, Federica Bono, Saul Pagnoni, Emanuela Gobbi, Beatriz Navarro, Francesco Di Serio, Frederic Aparicio Herrero, Massimo Turina: *Can Trichoderma gamsii cogu-like virus 1 infect plants?*
6. Dijana Škoric, Jelena Zindović, Paolo Margaria, Dorotea Grbin, Patrik Pul, Martin Jagunić, Sandra Džoganović, Vladan Božović, Nataša Mehle, Anja Pecman, Zala Kogej Zwitter, Denis Kutnjak, Ana Vučurović: *Sequence analyses of tomato spotted wilt virus in tomato and pepper from Croatia, Slovenia and Montenegro*
7. Maria Isabella Prigigallo, Ugo Picciotti, Giovanni Bubici: *Tomato spotted wilt virus impairs primary metabolism in tomato in a virus accumulation-dependent manner*
8. Silvia Rotunno, Roberto Pierro, Monica Marra, Fulco Frascati, John Hammond, Pasquale Restuccia, Anna Maria Vaira, Laura Miozzi: *The virome of Freesia hyb. showing leaf necrosis syndrome identified by an NGS-based omics approach: search for new actors on the stage*
9. Jeanmarie Verchot, Venura Herath, Ramon Jordan, John Hammond: *Genetic Diversity among Rose Rosette Virus Isolates*
10. Jian Ye, Hongwei Wang, Xiujuan Wu: *LecRK1 is a plant host entry factor for Tomato spotted wilt orthotospovirus*
11. Jian Ye, Haixi Sun, Kaixing Gao, Si Huang, Bilian Qian, Pingzhi Zhao: *Temporal-spatial research on plant cellular mechanisms against geminivirus early infection*
12. Xiaobin Zheng, Jiangjiang Yuan, Yanran Wan, Qingjun Wu: *FoVPS24 and FoVPS28 in Frankliniella occidentalis defense against tomato spotted wilt orthotospovirus by regulating autophagy*
13. Lulu Li, Jianping Chen, Zongtao Sun: *Exploring the shared pathogenic strategies of independently evolved effectors across distinct plant viruses*
14. Daniel Zandler, Frank Takken: *Revive broken NLR-genes*