



ICPP
2023

ONE HEALTH
for all plants,
crops and trees



20-25 August, France

PROGRAM



www.icpp2023.org





Welcome message from the President of the International Society for Plant Pathology (ISPP)

On behalf of the International Society for Plant Pathology, I am pleased to welcome you to Lyon to enjoy the International Congress of Plant Pathology in Lyon! *Bienvenue à toutes et à tous!* ICPP2023 has brought together plant pathologists and plant health researchers from around the world to discuss their latest research as well as current and future issues facing plant health experts. We are being hosted by members of the French Phytopathological Society, who have worked with an international planning committee to develop a program around the timely and challenging Congress theme, “One Health for all plants, crops and trees”. The ICPP2023 scientific program and satellite meetings are rich in talks, posters, and opportunities for discussions that consider the integral links of plant health with human, animal and environmental health.

I look forward to welcoming you in person this week. *Profitez bien de votre congrès!*

Sincerely,

Jan E. LEACH, President, ISPP
Colorado State University, USA

A message from the President of the French Phytopathological Society (SFP)

On behalf of the French Phytopathological Society, it is a real pleasure to welcome colleagues from all over the world to the ICPP2023 Conference. I am so glad that so many of you decided to join us in Lyon for this very promising meeting. I hope each of you will enjoy it, and it will be a pleasure to meet some of you again in person. Just one word: enjoy as much as you can. *Bienvenue à toutes et tous.*

Sylvie GERMAN-RETANA, President SFP
INRAE-Bordeaux Nouvelle Aquitaine, France

A message from the ICPP2023 Organizing Committee

On behalf of the ICPP2023 Organizing Committee, we are very pleased to welcome you to the 12th International Congress of Plant Pathology! This prestigious meeting is organized in France for the first time and hosted by the Lyon Convention Centre in its magnificent Amphitheater 3000. It's an opportunity for scientists to meet in person again, share Science and build new relationships. More than 2,300 attendees coming from 90 countries participate in this great event. “ONE HEALTH for all Plants, Crops and Trees” is the theme for ICPP2023 that will promote the integration of Plant Health & Plant Pathology into the One Health concept. The diversity of the scientific program offers a dynamic look into the latest knowledge of plant diseases and solutions to control them. 8 plenary sessions, 63 concurrent sessions, 9 round tables, and 20 satellite events will contribute to this dissemination of knowledge. Finally, we hope that ICPP2023 will give you the opportunity to discover Lyon, a UNESCO world heritage site with 2000 years of history ...and the French capital of gastronomy!

Nathalie POUSSEREAU & Mathias CHOQUER, ICPP2023 co-chairs
University Claude Bernard Lyon 1, France

CONFERENCE THEME



The One Health concept is a worldwide strategy for expanding interdisciplinary collaborations and communications in all aspects of health care for humans, animals and the environment. Plant Health and Plant Pathology are however usually not included into this definition. ICPP2023 will promote the integration of Plant Health & Plant Pathology into the One Health concept!

The formalization of “One Health” is often attributed to Claude Bourgelat (Lyon, 1712-1779), the founder of the first veterinary school in Lyon in 1761.

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THE INTERNATIONAL SOCIETY FOR PLANT PATHOLOGY (ISPP)

The International Society for Plant Pathology (founded in 1968) is a member of the International Union of Biological Sciences (IUBS), the International Union of Microbiological Societies (IUMS), in liaison with the UN Food and Agriculture Organization (FAO). The purpose of the ISPP is to promote the worldwide development of plant pathology, and the dissemination of knowledge about plant diseases and plant health management. The Society sponsors the International Congress of Plant Pathology (ICPP) at regular intervals and other international meetings on plant pathology and closely related subjects. The Society establishes committees to consider and report on special fields or problems in plant pathology. The Society organizes other activities including the publication of journals and newsletters, websites, as approved by the Executive Committee. The ISPP is incorporated under Minnesota USA Statute. The ISPP Council consists of the Executive Committee and Councilors nominated by Associated Societies (or by nominating bodies in countries with no society of plant pathology).



THE FRENCH PHYTOPATHOLOGICAL SOCIETY (SFP)

SFP is a non-profit association, created on May 12, 1971, whose objectives are:

- to encourage and develop studies in phytopathology, science which studies plant diseases and their remedies;
- to facilitate relations researchers in this discipline;
- to promote the dissemination of new data and knowledge in plant pathology.

SFP is a member of EFPP (European Foundation for Plant Pathology) and of ISPP (International Society for Plant Pathology), which gathers all the national societies of plant pathology, in particular APS, BSPP and SI-PaV with which SFP has close relations. SFP is also an associate member of COSSAF (College of Academic Societies of France) and of BioGée (Federation of Life Sciences and Technologies, Earth Sciences and the Environment).

ORGANIZING COMMITTEE

President

Valérie VERDIER,

President and CEO of the IRD.

Research Institute for Sustainable Development, Marseille, France.

Vice Presidents

Greg JOHNSON, *ISPP Immediate Past President, Australia.*

Khaled MAKKOUK, *ISPP Vice-President for Subject Matter Committees, Arab Journal of Plant Protection Editor-in-Chief, Beirut, Lebanon.*

Monica HOFTE, *University of Ghent, Belgium.*

Bart THOMMA, *University of Cologne, Germany.*

Organizing Chairpersons

Mathias CHOQUER, *SFP - French Phytopathological Society board, University of Lyon 1, France.*

Nathalie POUSSEREAU, *ISPP Vice-President for ICPP congress, University of Lyon 1, France.*

Scientific Programme Committee

Chair: **Didier THARREAU,**

SFP Former-Secretary, CIRAD-International Cooperation in Agricultural Research for Development, Montpellier, France.

Ranjit BANDYOPADHYAY, *IITA-International Institute of Tropical Agriculture, Ibadan, Nigeria.*

Odile CARISSE, *Chair of ISPP SMC Epidemiology, Agriculture and Agri-Food Canada, St-Jean-sur-Richelieu, Québec, Canada.*

Emerson DEL PONTE, *Federal University of Viçosa, Brazil.*

Antonio DI PIETRO, *University of Cordoba, Spain.*

Diana FERNANDEZ, *SFP Past-President, IRD, Montpellier, France.*

Florence FONTAINE, *University of Reims, France.*

Pascal FREY, *SFP Former-President, INRAE-Research Institute for Agriculture, Food and Environment, Champenoux, France.*

Sylvie GERMAN-RETANA, *SFP President, INRAE, Bordeaux, France.*

Marie Agnès JACQUES, *INRAE, Angers, France.*

Sophien KAMOUN, *Sainsbury Laboratory, Norwich, UK.*

Ousmane KOITA, *University of Bamako, Mali.*

Thierry LANGIN, *CNRS-National Center for Scientific Research, Director International Research Centre on Sustainable Agroecosystems, Clermont-Ferrand, France.*

Jan E. LEACH, *ISPP President, University of Colorado, USA.*

Marc-Henri LEBRUN, *CNRS, Paris-Saclay, France.*

Cindy MORRIS, *INRAE, Avignon, France.*

Gloria MOSQUERA, *CIAT- International Center for Tropical Agriculture, Cali, Colombia, USA.*

You-Liang PENG, *President Chinese Society of Plant pathology, China Agricultural University, Beijing, China.*

Philippe REIGNAULT, *ANSES-Agency for Food, Environmental and Occupational Health & Safety, Angers, France.*

Silvia RESTREPO, *Vice-President Los Andes University, Bogota, Colombia.*

Ivan SACHE, *SFP Former-President, AgroParisTech, Paris-Saclay, France.*

Eva STUKENBROCK, *Christian-Albrechts University of Kiel, Germany.*

Local Arrangement Committee (Lyon, France)

Benoit BARRÈS, *ANSES - Agency for Food, Environmental and Occupational Health & Safety.*

Franck BERTOLLA, *University of Lyon 1.*

Hasna BOUBAKRI, *University of Lyon 1.*

Typhaine BRUAL, *University of Lyon 1.*

Christophe BRUEL, *University of Lyon 1.*

Mathias CHOQUER, *University of Lyon 1.*

Amélie de VALLÉE, *University of Lyon 1.*

François-Xavier GILLET, *University of Lyon 1.*

Erwan GUEGUEN, *University of Lyon 1.*

Feth el Zahar HAICHAR, *INSA - National Institutes of Science and Technology.*

Florence HOMMAIS, *University of Lyon 1.*

Nathalie POUSSEREAU, *University of Lyon 1.*

Claire PRIGENT-COMBARET, *CNRS - National Center for Scientific Research.*

Yvan RAHBÉ, *INRAE - Research Institute for Agriculture, Food and Environment.*

Christine RASCLE, *CNRS - National Center for Scientific Research.*

Cécile RIBOT, *University of Lyon 1.*



Get Social During the Meeting!

Keep your finger on the pulse of the meeting, follow the official **#ICPP2023** hashtag, and engage with fellow attendees!

Locate your favorite workshops, view photos, and exchange ideas with colleagues on social media.

Use **#ICPP2023** on Twitter, Facebook, and Instagram to share your **ICPP2023 experience with your network**.



ICPP Central—Registration Hours & Speaker Ready Room

Sunday, August 20	→ 17:00 - 20:00
Monday, August 21	→ 07:30 - 20:00
Tuesday, August 22	→ 08:00 - 20:00

Wednesday, August 23	→ 08:00 - 20:00
Thursday, August 24	→ 08:00 - 20:00
Friday, August 25	→ 08:00 - 12:00

The Speaker Ready Room is available for presenters to make any last-minute changes to presentations and to do the final loading of presentations. All session presenters must upload their presentations the day before they are scheduled to present.

Only Lyon Convention Bureau

This desk will be staffed with a Lyon expert, who will be able to answer questions and assist with dinner reservations, tours, and activities.

Monday, August 21	→ 10:00 - 16:30
Tuesday, August 2	→ 10:00 - 16:30
Wednesday, August 23	→ 10:00 - 18:30

Photo Release

Photographs will be taken during the meeting. By registering for this meeting, you agree to allow ISPP and SFP to use photos of you in any of their publications and/or on their websites and membership materials.



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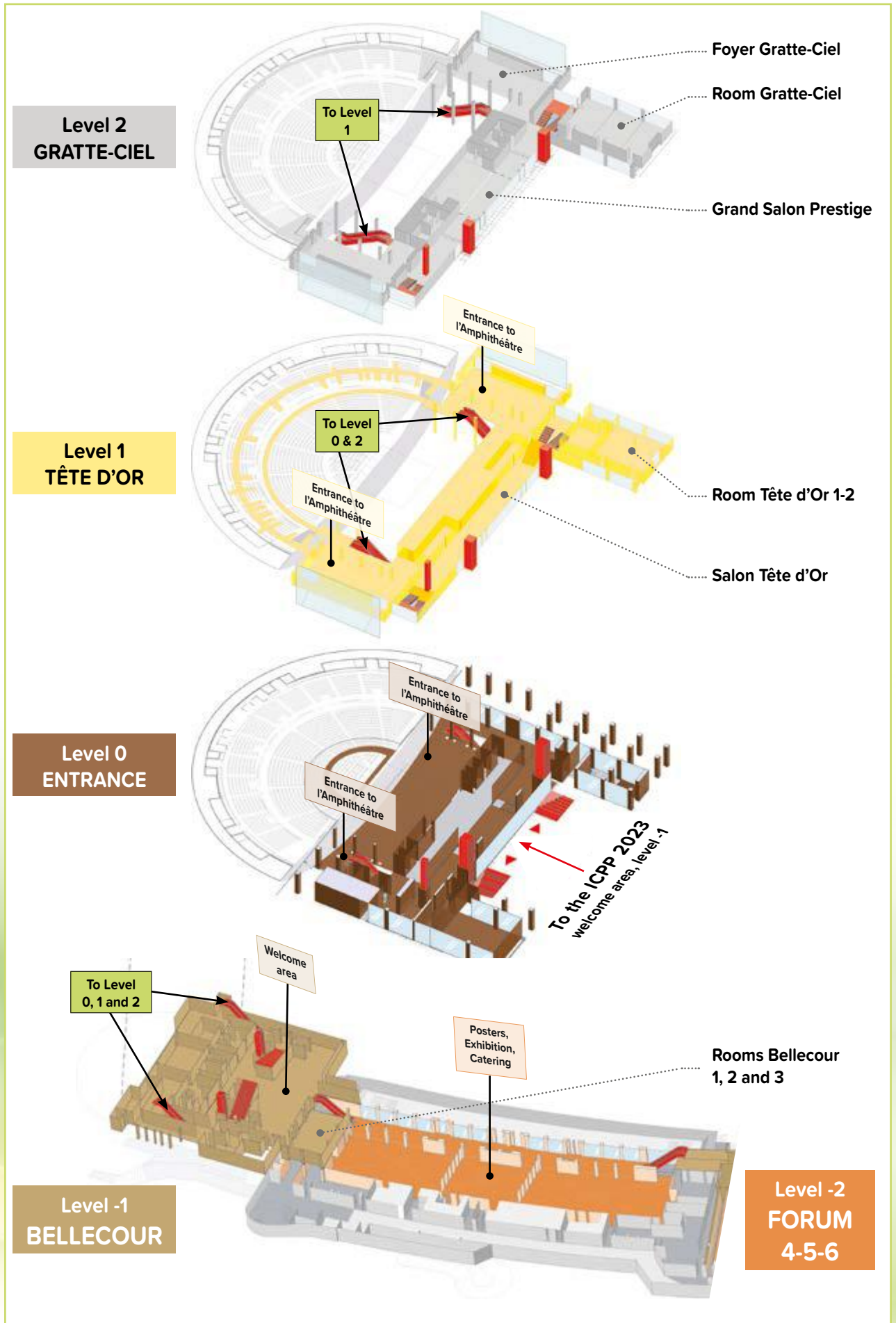
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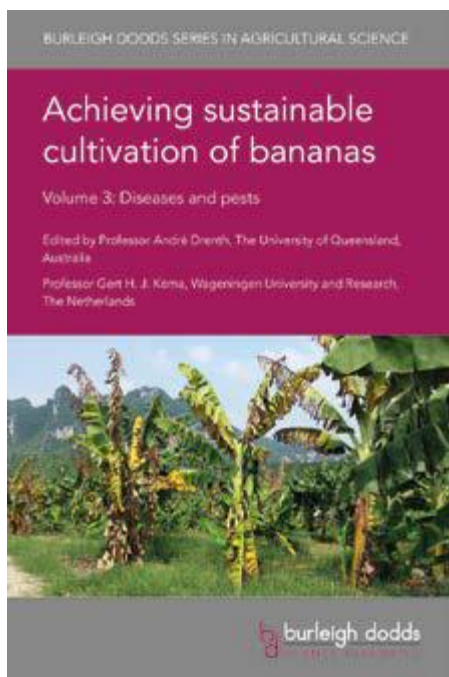
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- Provides a comprehensive analysis of the **major pests and diseases** affecting global banana production
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World-renowned experts return to edit the third volume:



Professor André Dreth, The University of Queensland, Australia



Professor Gert Kema, Wageningen University and Research, The Netherlands

Find out more about the book from the editors in their Chaired session: C8.5 – Controlling Globally Developing Disease Threats of Bananas (Bellecour 1: 18:00-20:00 – 24th August 2023).

GENERAL PROGRAM-AT-A-GLANCE

SUNDAY, AUGUST 20		
17:00	Registration	Welcome reception 18:00-20:00
20:00		

MONDAY, AUGUST 21		
08:30	Plenary Opening & Jakob Eriksson Prize	
10:00	COFFEE BREAK AND EXHIBITION	
10:30	KEYNOTE LECTURE	
12:30	LUNCH AND EXHIBITION	
14:00	CONCURRENT SESSIONS	
16:00	COFFEE BREAK AND EXHIBITION	
16:30	KEYNOTE LECTURE	
18:00	POSTERS SESSION, FLASH TALK SESSION AND EXHIBITION	ROUND TABLES 18:15 - 19:45
20:00		

TUESDAY, AUGUST 22		
08:30	KEYNOTE LECTURE	
10:00	COFFEE BREAK AND EXHIBITION	
10:30	CONCURRENT SESSIONS	
12:30	LUNCH AND EXHIBITION	
14:00	CONCURRENT SESSIONS	
16:00	COFFEE BREAK AND EXHIBITION	
16:30	KEYNOTE LECTURE	
18:00	POSTERS SESSION, FLASH TALK SESSION AND EXHIBITION	ROUND TABLES 18:15 - 19:45
20:00		

WEDNESDAY, AUGUST 23		
08:30	KEYNOTE LECTURE	
10:00	COFFEE BREAK AND EXHIBITION	
10:30	CONCURRENT SESSIONS	
12:30	LUNCH AND EXHIBITION	
14:00	KEYNOTE LECTURE	
15:30	Keynotes conclusion and Poster Prizes	
16:00	COFFEE BREAK	
16:30	POSTERS SESSION, FLASH TALK SESSION AND EXHIBITION	ROUND TABLES
18:30	Conference dinner (compulsary registration)	
20:00		
00:00		

THURSDAY, AUGUST 24		
08:30	CONCURRENT SESSIONS	
10:30	COFFEE BREAK AND EXHIBITION	
11:00	CONCURRENT SESSIONS	
13:00	LUNCH AND EXHIBITION	
14:30	CONCURRENT SESSIONS	
16:30	COFFEE BREAK	
17:00	POSTERS SESSION, FLASH TALK SESSION AND EXHIBITION	ROUND TABLES 16:45 - 17:45
18:00	CONCURRENT SESSIONS	
20:00	CONCURRENT SESSIONS	

FRIDAY, AUGUST 25		
08:30	CONCURRENT SESSIONS	
10:30	COFFEE BREAK	
11:00	CLOSING CEREMONY	
12:30		
14:00		
16:00	SFP GENERAL ASSEMBLY	
18:00	CONFERENCE GRAND PUBLIC	

17:00 - 20:00

Registration

Hall Bellecour

18:00 - 20:00

Welcome Reception

Forum 4-5-6

The ICPP2023 team is pleased to invite you to an intimate welcome reception before the congress starts the following day.

Let's welcome the ICPP_by_bike, and support the ISPP Resilience Bursary for Plant Pathologists.

We are looking forward to meeting you over wine and cheese, the basics of the French way of life! A professional music band will also be accompanying us during this cocktail for the greatest pleasure of our ears.



#ICPP_by_bike is a collective of about 20 scientists who strongly believe in facilitating biking as a means of personal and professional transportation – at all scales. From our homes and research institutes in Avignon, Montpellier and Bordeaux in France, Milan in Italy, Stratford-upon-Avon in the UK and Columbus, Ohio in the USA we will set out together for the ICPP-2023 conference in Lyon along the ViaRhôna (<https://en.viarhona.com/>) bike path starting from the legendary Pont Saint Bénézet bridge in Avignon. The main goals of the #ICPP_by_bike collective are to raise awareness about the carbon footprint of our professional and personal activities and to confront a biking challenge that can reveal obstacles to reducing our footprints. These goals are part of growing initiatives concerning environmental and social reasonability of our behaviors as citizens and professionals that include diverse actions ranging from reducing the use of pesticides in agriculture to fostering social and economic justice. To achieve our goal of biking for three days for a total of >250 km together in the August heat of southern France, we have spent several months building a cohesive team founded on a sense of solidarity. We would like to extend this solidarity to scientists qualifying for the ISPP Resilience Bursary. Please donate to the ISPP Resilience bursary in recognition of the kilometers we will pedal. For more information about #ICPP_by_bike contact cindy.morris@inrae.fr

The International Society for Plant Pathology (ISPP) (@Food_Security) established a “Resilience Bursary for Plant Pathologists” in 2022. ISPP contributed to and received funds from other plant pathology Societies and individuals to support emergency/refugee situations, specifically for plant pathologists. Currently the fund has supported about 13 refugee scientists from Ukraine through support for placements in Polish Research Agencies co-ordinated by the Polish Phytopathological Society. We are also liaising with the Turkish Society of Plant Pathology and the Arab Society for Plant Protection and the American Phytopathological Society (APS) Office of International Programs (OIP), to support students affected by the 2023 earthquake in Turkiye and Syria. For more information or questions about donations, contact resilience@isppweb.org. To keep up on news about the ISPP Resilience Bursary, subscribe to the ISPP Newsletter (It's free) https://www.isppweb.org/newsletters/search_volume.html



Live music band during the welcome reception

MONDAY, AUGUST 21

Program-at-a-glance



8:30 - 10:00	Plenary Opening & Jakob Eriksson Prize	L'Amphithéâtre
10:00 - 10:30	Coffee break and exhibition	Forum 4-5-6
10:30 - 12:30	K1 - Plant Pathology in a One Health World	L'Amphithéâtre
12:30 - 14:00	Lunch and exhibition	Forum 4-5-6
14:00 - 16:00	C1.1 - Biological Control - Part 1 The importance of augmentative biocontrol and plant microbiome function for plant health	L'Amphithéâtre
	C1.2 - Plant virus and host interactions from molecular mechanisms to crop protection	Gratte Ciel
	C1.3 - Plant responses to pathogens	Grand Salon Prestige
	C1.4 - Mycotoxin producing fungi and their management: A serious challenge to attain the One Health goals	Tête d'Or 1-2
	C1.5 - Bioinvasion in the urban environment: Pathways, early warning, mitigation measures, institutional frameworks and policy implementation	Salon Tête d'Or
	C1.6 - Mind the Gap: Innovation and Opportunities in Seed Health testing	Bellecour 1
	C1.7 - Impact of war and conflicts in plant pathology research and food safety of countries	Bellecour 2-3
16:00 - 16:30	Coffee break and exhibition	Forum 4-5-6
16:30 - 18:00	K2 - Food Security in an Unsecure Future & Glenn Anderson Lecture	L'Amphithéâtre
18:00 - 20:00	Poster viewing session 1	Forum 4-5-6
	F-21 - Flash Talk session	Agora
18:15 - 19:45	R1.1 - Getting rights right: A round table exploration of Indigenous rights and participation in plant pathology	L'Amphithéâtre
	R1.2 - Management of postharvest diseases in Mediterranean countries to reduce food waste	Bellecour 2-3



8:30 - 10:00 Plenary Opening & Jakob Eriksson Prize

L'Amphithéâtre

Chairpersons:

Jan E. LEACH, ISPP President (Colorado State University, Fort Collins - UNITED STATES)

Sylvie GERMAN-RETANA, SFP President (INRAE-Bordeaux Nouvelle Aquitaine, Bordeaux - FRANCE)

Valérie VERDIER, ICPP2023 Congress President (Research Institute for Sustainable Development, Marseille - FRANCE)

Presentation of the 13th Jakob Eriksson Prize 2023 for Plant Pathology

Dan FUNCK-JENSEN, Chair of Eriksson Commission (Swedish University of Agricultural Sciences, Uppsala - SWEDEN)

Jan E. LEACH, ISPP President (Colorado State University, Fort Collins - UNITED STATES)



The 13th Jakob Eriksson Prize is awarded to Professor Silvia Restrepo of the Universidad de los Andes, Bogota, Colombia for her pioneering international work in mycology and plant pathology, with a focus on diseases that impact crops important to the developing world such cassava and potato.

Jakob Eriksson Prize Oration - My Journey Studying Plant Pathology in Colombia: More Rewarding Than Challenging

Silvia RESTREPO (Universidad de los Andes, Bogota - COLOMBIA)

Plenary Wrap-Up and Announcements:

Nathalie POUSSEREAU and Mathias CHOQUER, ISPP Congress Vice Presidents (University of Lyon 1, Lyon - FRANCE)

10:00 - 10:30 Coffee break and exhibition

Forum 4-5-6

10:30 - 12:30 K1 - Plant Pathology in a One Health World

L'Amphithéâtre

Chairpersons:



Brenda WINGFIELD
(University of Pretoria,
Pretoria - SOUTH AFRICA)



Ivan SACHE
(Paris-Saclay University,
Paris - FRANCE)



K1-1

Plant health for ONE HEALTH in central and west Africa

Justin PITA
(Université Félix Houphouët-Boigny,
Abidjan - IVORY COAST)



K1-2

What is the added value of One Health for plant health?

Cindy MORRIS
(INRAE, Montfavet - FRANCE)



K1-3

Antimicrobial use and resistance in plant agriculture: a one-health perspective

Descartes KOU MBA
(Food and Agriculture Organization of the United Nations (FAO), Rome - ITALY)



K1-4

Empowering an indigenous perspective in the response to invasive pathogens

Melanie MARK-SHADBOLT
(Te Tira Whakamataki, Rangiora - NEW ZEALAND)



Posters exhibition created by bachelor students on «One Health – One World – A Fairy Tale?»

Mathias CHOQUER
(University Lyon 1, Lyon - FRANCE)

12:30 - 14:00 Lunch and exhibition

Forum 4-5-6

14:00 - 16:00 CONCURRENT SESSIONS

C1.1 - Biological Control - Part 1 The importance of augmentative biocontrol and plant microbiome function for plant health

L'Amphithéâtre

Chairpersons:

David B COLLINGE (University of Copenhagen, Copenhagen - DENMARK)

Dan Funck JENSEN (SLU, Swedish University of Agricultural Sciences, Uppsala - SWEDEN)

Sabrina SARROCCO (University of Pisa, Pisa - ITALY)

14:00 **C1.1-1 - Beneficial bacteria-fungi interactions to increase plant growth and health**

Stéphane COMPANT (AIT Austrian Institute of Technology GmbH, Center for Health and Bioresources, Bioresources Unit, Tulln - AUSTRIA)

14:20 **C1.1-2 - The role of small RNAs in regulating mycoparasitic interactions**

Mukesh DUBEY (Swedish University of Agricultural Sciences, Uppsala - SWEDEN)

14:35 **C1.1-3 - Trichoderma in the biocontrol of non-conventional targets: nematodes and insect pests**

Enrique MONTE (University of Salamanca, Salamanca - SPAIN)

14:55 **C1.1-4 - Plant modifies fungal non-self recognition to facilitate mycovirus transmission**

Jiatao XIE (Huazhong Agricultural University, Wuhan - CHINA)

15:10 **C1.1-5 - Intraspecific phenotypic and genetic variation in biocontrol interactions: challenges and opportunities**

Magnus KARLSSON (Swedish University of Agricultural Sciences, Uppsala - SWEDEN)

15:30 **C1.1-6 - Aureobasidium pullulans: up-and-coming biocontrol agent against crown rot, root rot, and grey mould**

Mudassir IQBAL (Swedish University of Agricultural Sciences, Alnarp - SWEDEN)

C1.2 - Plant virus and host interactions from molecular mechanisms to crop protection

Gratte Ciel

Chairpersons:

Anders HAFREN (Swedish University of Agriculture, Uppsala - SWEDEN)

Véronique ZIEGLER-GRAFF (IBMP, Strasbourg - FRANCE)

14:00 **C1.2-1 - Understanding the plant manipulation by geminiviruses**

Rosa LOZANO-DURÁN (Center for Molecular Plant Biology (ZMBP), University of Tübingen, Tübingen - GERMANY)

14:20 **C1.2-2 - A novel ilarvirus protein is expressed via stop codon readthrough and suppresses rdr6-dependent RNAi**

Nina LUKHOVITSKAYA (University of Cambridge, Cambridge - UNITED KINGDOM)

14:35 **C1.2-3 - Analysis of the interactome of 17k protein, an important virulence factor conserved in luteoviruses and poleroviruses**

Daowen WANG (Henan Agricultural University, Zhengzhou - CHINA)

14:55 **C1.2-4 - A plant virus exploits actin filament-binding kinesin motors to escape xenophagy**

Nirbhay Kumar KUSHWAHA (Swedish University of Agricultural Sciences, Uppsala - SWEDEN)

15:10 **C1.2-5 - Investigating the antiviral defenses protecting plant stem cells and germline from infection**

Marco INCARBONE (Gregor Mendel Institute (GMI), Vienna - AUSTRIA)

15:30 **C1.2-6 - Two Viral Proteins Translated from one Open Reading Frame Target Different Layers of Plant Defence**

Xueping ZHOU (Institute of Plant Protection, China Academy of Agricultural Sciences, Beijing - CHINA)

14:00 - 16:00

CONCURRENT SESSIONS (next)

C1.3 - Plant responses to pathogens

Grand Salon
Prestige

Chairpersons:

Carolina Sardinha FRANCISCO (Universität of Kiel, Kiel - GERMANY)

Isabel MI SAUR (University of Cologne, Cologne - GERMANY)

- 14:00 **C1.3-1 - Secretion of virulence factors determines the interaction of opportunistic Xanthomonas bacteria with the host and the microbiota**
Sebastian PFEILMEIER (University of Amsterdam, Amsterdam - NETHERLANDS)
- 14:20 **C1.3-2 - Influence of elevated temperatures on resistance against phoma stem canker**
Henrik STOTZ (University of Hertfordshire, Hatfield, UNITED KINGDOM)
- 14:35 **C1.3-3 - Impact of global warming on susceptibility of European maize cultivars to corn smut infections**
Karina VAN DER LINDE (University of Regensburg, Regensburg - GERMANY)
- 14:55 **C1.3-4 - Arabidopsis Nad Kinase C (NADKC): a Missing link between CA2+ signaling, metabolism, and plant stress response**
Elisa DELL'AGLIO (University of Milan, Milan - ITALY)
- 15:10 **C1.3-5 - Stomata, key players in wheat resistance to ZymoSeptoria tritici**
Cyrille SAINTENAC (Université Clermont Auvergne / INRAE GDEC, Clermont-Ferrand - FRANCE)
- 15:30 **C1.3-6 - SNTOX5 modulates the host immune system to induce programmed cell death and facilitate mesophyll colonization**
Gayan KARIYAWASAM (Department of Plant Pathology, North Dakota State University, Fargo, Nd - UNITED STATES)

C1.4 - Mycotoxin producing fungi and their management: a serious challenge to attain the One Health goals

Tête d'Or 1-2

Chairpersons:

Paola BATTILANI (Università Cattolica del Sacro Cuore, Piacenza - ITALY)

Alejandro ORTEGA-BELTRAN (International Institute of Tropical Agriculture, Ibadan - NIGERIA)

- 14:00 **C1.4-1 - Prediction of climate change impact on occurrence and prevalence of mycotoxin producing fungi**
Marco CAMARDO LEGGIERI (Università Cattolica del Sacro Cuore, Department of Sustainable Crop Production, Piacenza - ITALY)
- 14:20 **C1.4-2 - Pathogenicity, mycotoxins, and genetics of the toxigenic Fusarium proliferatum**
Antonio MORETTI (Research National Council of Italy, Bari - ITALY)
- 14:35 **C1.4-3 - Aflatoxin biocontrol: a climate-smart technology protecting staple crops in the sahel**
Titilayo FALADE (International Institute of Tropical Agriculture, Ibadan - NIGERIA)
- 14:55 **C1.4-4 - Identification and immobilization of a patulin biodegrading enzyme cgsdr and its application in detoxification of apple juice**
Boqiang LI (Institute of Botany, Chinese Academy of Sciences, Beijing - CHINA)
- 15:10 **C1.4-5 - Efficacy of the Aspergillus favus atoxigenic strain technology to reduce risks of aflatoxin contamination in commercial tree nut orchards in California**
Themis J. MICHAILIDES (Parlier, UNITED STATES)
- 15:30 **C1.4-6 - Preparing the oat industry for HT2 and T2 mycotoxin legislation**
Simon EDWARDS (Harper Adams University, Newport - UNITED KINGDOM)

14:00 - 16:00 CONCURRENT SESSIONS (next)

C1.5 - Bioinvasion in the urban environment: pathways, early warning, mitigation measures, institutional frameworks and policy implementation

Salon Tête d'Or

Chairpersons:

Carmen MORALES-RODRIGUEZ (Tuscia University, Viterbo - ITALY)

Johanna WITZELL (Faculty of Technology, Vaxjo - SWEDEN)

14:00 **C1.5-1 - Urban tree inventories - an effective tool in biosecurity?**

Johan OSTBERG (Nature Based Solution Institute AB, Malmö - SWEDEN)

14:20 **C1.5-2 - Complex health issues faced by urban trees**

Marta BELKA (Poznan University of Life Sciences, Poznan - POLAND)

14:35 **C1.5-3 - The value of botanical gardens for global plant health research: a South African case study**

Trudy PAAP (Department of Biochemistry, Genetics and Microbiology, Forestry and Agricultural Biotechnology Institute, University of Pretoria, Pretoria - SOUTH AFRICA)

14:55 **C1.5-4 - Tree insect pests and pathogens: socio-economic and environmental impacts in urban areas**

Susanne RAUM (Technical University of Munich, Chair for Strategic Landscape Planning and Management, Freising - GERMANY)

15:10 **C1.5-5 - Reporting systems and citizen science for the detection of regulated tree pests and pathogens in Britain**

Ana Maria PEREZ SIERRA (Forest Research, Farnham, England - UNITED KINGDOM)

15:30 **C1.5-6 - The epidemic spread of *Phytophthora nicotianae* in a mediterranean park in Athens is associated with high site invasibility and pathogen invasiveness**

Andrea VANNINI (Universita degli Studi della Tuscia, Viterbo - ITALY)

C1.6 - Mind the Gap: Innovation and Opportunities in Seed Health testing

Bellecour 1

Chairpersons:

Lisa ROTHMANN (University of the Free State, Bloemfontein - SOUTH AFRICA)

Gerbert HIDDINK (Enza Zaden, Enkhuizen - NETHERLANDS)

14:00 **C1.6-1 - Impact on global food security and biological relevance**

Rose SOUZA-RICHARDS (International Seed Federation, Nyon - SWITZERLAND)

14:20 **C1.6-2 - Identification and prevalence of seedborne fungal pathogens associated with soybean**

Lisa ROTHMANN (University of the Free State, Bloemfontein - SOUTH AFRICA)

14:35 **C1.6-3 - Streamlining diagnostics for seeds imported into Australia**

Fiona CONSTABLE (Agriculture Victoria, Bundoora - AUSTRALIA)

14:55 **C1.6-4 - Identification, detection and management of seedborne squash pathogens**

Marwa MOUMNI (Marche Polytechnic University, Ancona - ITALY)

15:10 **C1.6-5 - Future for HTS in seed health testing?**

Harrie KOENRAADT (Naktuinbouw (Netherlands inspection service for horticulture), Roelofarendsveen - NETHERLANDS)

15:30 **C1.6-6 - Molecular detection of *Ustilago nuda* in barley seeds and corresponding field infection levels**

Cecilia PANZETTI (Agroscope, Zurich - SWITZERLAND)

14:00 - 16:00 CONCURRENT SESSIONS (next)

C1.7 - Impact of war and conflicts in plant pathology research and food safety of countries

Bellecour 2-3

Chairpersons:

Jean-Jacques HERVE (Académie d'Agriculture de France - Relais territorial Centre, Paris - FRANCE)

Alex SHEVCHENKO (Taras Shevchenko National University of Kyiv, Kiev - UKRAINE)

Kateryna UDOVYCHENKO (Institute of Horticulture of National Academy of Agrarian Sciences of Ukraine, Novosilky, UKRAINE)

14:00 **C1.7-1 - Research and education in plant virology in Ukraine: the present is foggy, the future is bright?**

Irena BUDZANIVSKA (Taras Shevchenko National University of Kyiv, Kyiv - UKRAINE)

14:20 **C1.7-2 - Impact of war and climate change on viral diseases of winter wheat a threat to food security**

Alina DUNICH (ESC "Institute of Biology and Medicine", Taras Shevchenko National University of Kyiv, Kyiv - UKRAINE)

14:35 **C1.7-3 - Keep calm and grow plants, or how horticulture survives in war in Ukraine**

Kateryna UDOVYCHENKO (Institute of Horticulture of National Academy of Agrarian Sciences of Ukraine, Novosilky - UKRAINE)

14:55 **C1.7-4 - Crop pathogen severity and pests in banana, cassava, potato, and sweetpotato production in the lake Kivu region of Rwanda and Burundi**

R. A. MOUAFO-TCHINDA (Plant Pathology Department, University of Florida, Gainesville, FL - UNITED STATES)

15:10 **C1.7-5 - Phytosanitary management of icarda's germplasm seed collections for better future use**

Safaa KUMARI (International Center for Agricultural Research in the Dry Areas (ICARDA), Terbol Station, Zahle - LEBANON)

15:30 **C1.7-6 - Emerging and (re)emerging viral threats for commercial plants in Ukraine:**

War and others problems

Alex SHEVCHENKO (Taras Shevchenko National University of Kyiv, Kyiv - UKRAINE)

16:00 - 16:30 Coffee break and exhibition

Forum 4-5-6

16:30 - 18:00

K2 - Food Security in an Unsecure Future & Glenn Anderson Lecture

L'Amphithéâtre

Chairpersons:



Giuseppe STANCANELLI
(European Food Safety
Authority (EFSA),
Parma - ITALY)



Lise KORSTEN
(University of Pretoria,
Pretoria - SOUTH AFRICA)



Lone BUCHWALDT
(Canadian
phytopathological society,
Saskatoon - CANADA)



K2-1

**The Glenn Anderson lecture: agrifood system for a food and nutrition secure world:
From efficiency to resilience**

Bram GOVAERTS (Director General, CIMMYT, Texcoco - MEXICO)



K2-2

The beauty and complexity of wheat disease control

Fiona DOOHAN (University College Dublin, Dublin - IRELAND)



K2-3

**Crises Abound: Food Security, Health, Climate, Energy, Pandemics.
How Supercomputing, AI, and Large-Scale Systems Biology in a One Health
Framework Can Help Address the Major Challenges We Are Facing**

Daniel A. JACOBSON (Biosciences Oak Ridge National Laboratory, Oak Ridge - UNITED STATES)

18:15 - 19:45

ROUND TABLES

**R1.1 - Getting rights right: A round table exploration
of Indigenous rights and participation in plant pathology**

L'Amphithéâtre

**R1.2 - Management of postharvest diseases in Mediterranean
countries to reduce food waste**

Bellecour 2-3

18:00 - 20:00

POSTERS

Poster viewing session 1

Forum 4-5-6

F-21 - Flash Talk session

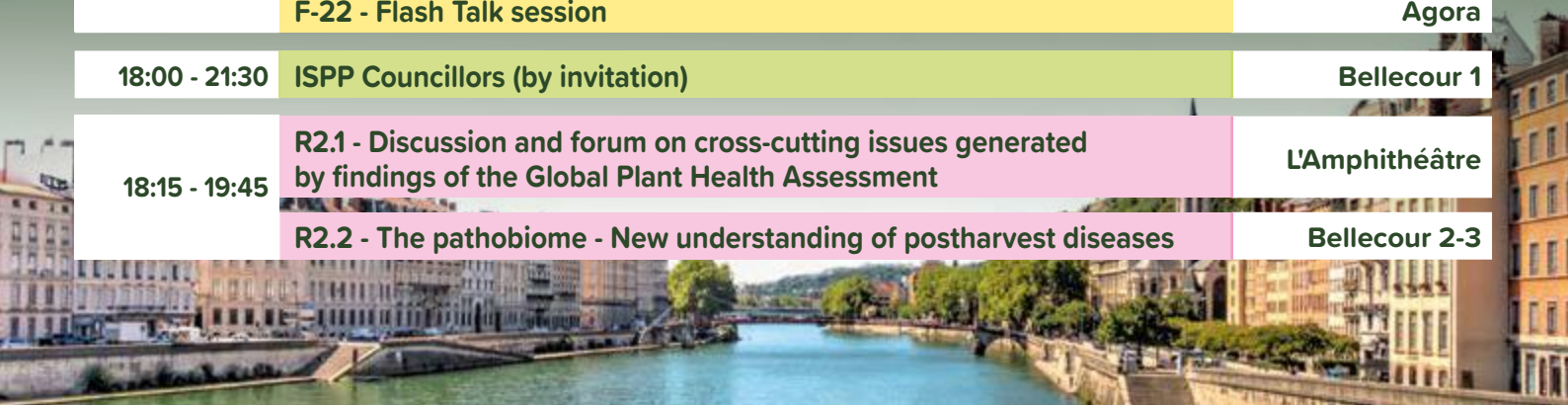
Agora

- 18:15 **F1.1-1 - Insights into the generalist lifestyle and biocontrol activity of fungal species of *Clonostachys* through analysis of their predicted secretomes**
Edoardo PIOMBO (Swedish University of Agricultural Sciences, Uppsala - SWEDEN)
- 18:20 **F1.1-2 - Isolation and identification of bacterial strains from apple flowers in trentino and their evaluation as biocontrol agents of *Erwinia amylovora***
Anna PEDRONCELLI (University of Trento, San Michele All'adige (Tn) - ITALY)
- 18:25 **F1.1-3 - Biocontrol of Fusarium wilt in tomato (*solanum lycopersicum* L.) Using systemic endophytic *Bacillus* strains**
Oluwafemi ADEDIRE (University of Ibadan, Ibadan - NIGERIA)
- 18:30 **F1.1-4 - Biological control of potato scab by *Pseudomonas* sp**
Lucas VITOR (Instituto Biológico, Campinas - BRAZIL)
- 18:35 **F1.2-1 - Identification of *A. thaliana* aly proteins as novel host interacting partners of the turnip yellows virus (TUYV) cp and CP-RT proteins**
Déborah KIERVEL (Institut de biologie moléculaire des plantes (IBMP), Strasbourg - FRANCE)
- 18:40 **F1.2-2 - P13 protein of Citrus tristeza virus is a key regulator of stem-pitting symptom development in citrus macrophylla**
Maryam KHALILZADEH (University of Florida, Citrus Research and Education Center, Lake Alfred, FL - UNITED STATES)
- 18:45 **F1.3-1 - Homeostasis of an innate avr mimic protein mediated by SCFOSFBX388 complex balances the growth and immunity of rice**
Zhao WENSHENG (China Agricultural University, Beijing - CHINA)
- 18:50 **F1.3-2 - Identification and functional validation of soft-rot susceptibility genes in the spice crop ginger - A stepping stone towards genome editing for soft rot resistance**
Lini VARGHESE (RAJIV GANDHI CENTRE FOR BIOTECHNOLOGY, Thiruvananthapuram - INDIA)
- 18:55 **F1.3-3 - Zap1 and STE12: antagonistic roles in the virulence of the dutch elm disease fungus *Ophiostoma novo-ulmi***
Thaïs CAMPOS DE OLIVEIRA (Université Laval, Québec - CANADA)
- 19:00 **F1.4-1 - Evaluation of winter wheat for Fusarium head blight resistance and deoxynivalenol level in Ontario, Canada**
Ljiljana TAMBURIC-ILINCIC (University of Guelph, Ridgetown - CANADA)
- 19:05 **F2.1-1 - Plant-encoded artificial small RNAs direct gene silencing in *Pseudomonas syringae* as well as disease protection**
Antinéa RAVET (Institut de Biologie de l'École Normale Supérieure (IBENS), Paris - FRANCE)
- 19:10 **F2.1-2 - Sa-independent mechanism in the tomato diageotropica (DGT) mutant enhance root-mediated resistance to *Ralstonia solanacearum* k60**
Katherine RIVERA-ZULUAGA (Purdue University, West Lafayette - UNITED STATES)
- 19:15 **F2.1-3 - Genetic structure of *Xanthomonas oryzae* PV. *Oryzae* populations and diversity of their tal effector repertoires in Burkina Faso**
Amadou DIALLO (Institut de Recherche pour le Développement, Montpellier - FRANCE)

TUESDAY, AUGUST 22

Program-at-a-glance

08:30 - 10:00	K3 - Invasive and Emerging Plant Diseases	L'Amphithéâtre
10:00 - 10:30	Coffee break and exhibition	Forum 4-5-6
10:30 - 12:30	C2.1 - Molecular drivers of plant bacterial interactions	L'Amphithéâtre
	C2.2 - BIOLOGICAL CONTROL - Part 2: The importance of augmentative biocontrol and plant microbiome function for plant health	Gratte Ciel
	C2.3 - Population genomics of plant pathogens	Grand Salon Prestige
	C2.4 - Viral modification of plants and vectors	Tête d'Or 1-2
	C2.5 - POST-HARVEST - Part 1: Interactions of postharvest pathogens with the host and its microbiome	Salon Tête d'Or
	C2.6 - Understanding emergence of pathogens in commercial and public forest ecosystems	Bellecour 1
	C2.7 - Food Security for Sustainable Food Systems	Bellecour 2-3
12:30 - 14:00	Lunch and exhibition	Forum 4-5-6
14:00 - 16:00	C3.1 - Molecular aspects of plant-fungal interactions Part 1: Effectors	L'Amphithéâtre
	C3.2 - Risk assessment for plant pathogens, a key tool for biosecurity under global changes	Gratte Ciel
	C3.3 - Post-harvest - Part 2: Sustainable managements of postharvest diseases: New technologies and approaches	Grand Salon Prestige
	C3.4 - Resilience in soil health and disease suppression	Tête d'Or 1-2
	C3.5 - Tracing the long-distance pathways of aerial dissemination of plant pathogens	Salon Tête d'Or
	C3.6 - Bacteriophages: Ecological roles and potential applications against bacterial plant pathogens	Bellecour 1
	C3.7 - Germplasm seed movement and global plant health	Bellecour 2-3
16:00 - 16:30	Coffee break and exhibition	Forum 4-5-6
16:30 - 18:00	K4 - A Global Plant Health Assessment of the state of Plant Health and its Impact on Ecosystem Services	L'Amphithéâtre
18:00 - 20:00	Poster viewing session 1	Forum 4-5-6
	F-22 - Flash Talk session	Agora
18:00 - 21:30	ISPP Councillors (by invitation)	Bellecour 1
18:15 - 19:45	R2.1 - Discussion and forum on cross-cutting issues generated by findings of the Global Plant Health Assessment	L'Amphithéâtre
	R2.2 - The pathobiome - New understanding of postharvest diseases	Bellecour 2-3



08:30 - 10:00	K3 - Invasive and Emerging Plant Diseases	L'Amphithéâtre
Chairpersons:		
	Nico HORN (EPPO - European and Mediterranean Plant Protection Organization, Paris - FRANCE)	
Philippe REIGNAULT (ANSES - French agency for food environmental and occupational health & safety, Maisons-Alfort - FRANCE)		
	K3-1 Emerging diseases in the vegetable sector: Challenges and perspectives (with Giovanna Gilardi and Massimo Pugliese as co-authors) Maria Lodovica GULLINO (University of Torino, Grugliasco - ITALY)	
	K3-2 Pandemic clonal lineages of the blast fungus Hernán A. BURBANO (University College London, London - UNITED KINGDOM)	
	K3-3 Risk assessment and management of pests and diseases in the EU: Past and present Roel POTTING (Nederlandse Voedsel- en Warenautoriteit (NVWA), Wageningen - NETHERLANDS)	
10:00 - 10:30	Coffee break and exhibition	Forum 4-5-6

10:30 - 12:30 CONCURRENT SESSIONS

C2.1 - Molecular drivers of plant bacterial interactions

L'Amphithéâtre

Chairpersons:

Jonathan JACOBS (The Ohio State University, Columbus - UNITED STATES)

Boris SZUREK (IRD, Montpellier - FRANCE)

- 10:30 **C2.1-1 - The making of a pathogen: How Xanthomonas adapts to plant environments**
Alice BOULANGER (University of Toulouse, INRAE, CNRS, UPS, Laboratory of Plants Microbe Environment Interactions (LIPME), UMR 441/2594, Toulouse - FRANCE)
- 10:50 **C2.1-2 - Role of phloem membrane contact sites on Candidatus liberibacter asiaticus infection**
Chiara BERNARDINI (University of Florida, Lake Alfred - UNITED STATES)
- 11:05 **C2.1-3 - For better or worse - The effect of interspecies microbial interactions on disease severity in plants**
Yael HELMAN (The Robert H. Smith Faculty of Agriculture, Food and Environment The Hebrew University of Jerusalem, Rehovot - ISRAEL)
- 11:25 **C2.1-4 - CRISPR/FNCAS12A-mediated efficient multiplex and iterative genome editing in bacterial plant pathogens without donor DNA templates**
Huanbin ZHOU (Chinese Academy of Agricultural Sciences, Beijing - CHINA)
- 11:40 **C2.1-5 - How proteostasis shapes plant-bacteria interactions**
Suayb USTUN (Ruhr-Universität Bochum, Bochum - GERMANY)
- 12:00 **C2.1-6 - CrispRi as a tool for the functional study of gene families in Xanthomonas**
Adriana J BERNAL (Laboratorio de interacciones moleculares de microorganismos agrícolas (LIMMA), Universidad de los Andes, Bogotá - COLOMBIA)

C2.2 - BIOLOGICAL CONTROL - Part 2: The importance of augmentative biocontrol and plant microbiome function for plant health

Gratte Ciel

Chairpersons:

Monica HOFTE (Ghent University, Gent - BELGIUM)

Claire PRIGENT-COMBARET (University Claude Bernard Lyon 1, Villeurbanne - FRANCE)

- 10:30 **C2.2-1 - Microbiome concepts for biocontrol of plant and human pathogens**
Gabriele BERG (TU Graz, Graz - AUSTRIA)
- 10:50 **C2.2-2 - Thirty years of research on biological control of potato common scab using plant-beneficial bacteria: What we have learned, what's next...**
Martin FILION (Agriculture and Agri-Food Canada, Saint-Jean-Sur-Richelieu - CANADA)
- 11:05 **C2.2-3 - Bacterial bioprotectants in natural and augmentative biological control**
Monica HOFTE (Ghent University, Gent - BELGIUM)
- 11:25 **C2.2-4 - From BCA discovery in cereals to biological control of Fusarium head blight**
David B COLLINGE (University of Copenhagen, Copenhagen - DENMARK)
- 11:40 **C2.2-5 - Pseudomonas protegens: Bacterial Swiss army knives for future prospects in plant protection against pest insects**
Jordan VACHERON (Department of Fundamental Microbiology, University of Lausanne, Lausanne - SWITZERLAND)
- 12:00 **C2.2-6 - Mechanism by which selected bacillus strains that confer tolerance to Verticillium wilt in potato and stimulate growth**
Min LI (Inner Mongolia Agricultural University, Huhhot - CHINA)

10:30 - 12:30

CONCURRENT SESSIONS (next)

C2.3 - Population genomics of plant pathogens

Grand Salon
Prestige

Chairpersons:

Pierre GLADIEUX (INRAE Montpellier, Montpellier - FRANCE)

Honour MCCANN (Max Planck Research Group Plant Pathogen Evolution, Tuebingen - GERMANY)

- 10:30 **C2.3-1 - A thousand-genome panel retraces the global spread and adaptation of a major fungal crop pathogen**
Alice FEURTEY (ETHZ, Zurich - SWITZERLAND)
- 10:50 **C2.3-2 - The Coevolutionary race between *Hyaloperonospora arabidopsidis* and *Arabidopsis thaliana* at a transcontinental scale**
Kevin MURRAY (Max Planck Institut für Biologie Tübingen, Tübingen - GERMANY)
- 11:05 **C2.3-3 - Origin and genome dynamics of *Fusarium* lineages causing global epidemics of Fusarium wilt of banana**
Michael SEIDL (Theoretical Biology & Bioinformatics, Department of Biology, Utrecht University, Utrecht - NETHERLANDS)
- 11:25 **C2.3-4 - Comparative genomics reveals key genetic polymorphisms associated with increased aggressiveness in Australian *Ascochyta rabiei***
Ido BAR (Griffith University, Nathan - AUSTRALIA)
- 11:40 **C2.3-5 - Genome mining of *Pseudomonas* populations reveals a mechanism for strain-specific killing of *Pseudomonas***
Talia KARASOV (University of Utah, Salt Lake City - UNITED STATES)
- 12:00 **C2.3-6 - Understanding the drivers of the pathogen population dynamics using strain-resolved metagenomics**
Neha POTNIS (Auburn University, Auburn - UNITED STATES)

C2.4 - Viral modification of plants and vectors

Tête d'Or 1-2

Chairpersons:

John CARR (University of Cambridge, Cambridge - UNITED KINGDOM)

Kristina GRUDEN (National Institute of Biology, Ljubljana - SLOVENIA)

- 10:30 **C2.4-1 - Modelling viral manipulation of plant-vector interactions**
Nik CUNIFFE (University of Cambridge, Cambridge - UNITED KINGDOM)
- 10:50 **C2.4-2 - Whitefly-borne cassava viruses and the estimation of viral retention period from access period experiments**
Ruairí DONNELLY (Epidemiology and Modelling Group, Cambridge - UNITED KINGDOM)
- 11:05 **C2.4-3 - The acrostyle, a cuticular micro-territory within aphid mouthparts involved in virus-vector and plant-insect interactions**
Marilyne UZEST (INRAE, Montpellier - FRANCE)
- 11:25 **C2.4-4 - Multi-Infection modifies aphid transmission and plant tissue localization of sugar beet infecting viruses**
Souheyla KHECHMAR (Institut National de Recherche pour l'Agriculture, l'alimentation et l'Environnement (INRAE) Colmar France, Colmar - FRANCE)
- 11:40 **C2.4-5 - Dynamics of potato virus y-plant cell interaction network**
Anna COLL (National Institute of Biology, Ljubljana - SLOVENIA)
- 12:00 **C2.4-6 - An aphid-borne polerovirus switches its vector to the whitefly *bemisia tabaci*: Agronomic importance, epidemiology and virus-vector molecular relationships**
Murad GHANIM (Volcani Institute, Rishon Lezion - ISRAEL)

10:30 - 12:30 CONCURRENT SESSIONS (next)

C2.5 - POST-HARVEST - Part 1: Interactions of postharvest pathogens with the host and its microbiome

Salon Tête d'Or

Chairpersons:

Samir DROBY (ARO, The Volcani Center, Rishon Lezion - ISRAEL)

Davide SPADARO (University of Torino, Grugliasco - ITALY)

- 10:30 **C2.5-1 - Molecular mechanism of fruit cell membrane resistance response to postharvest fungal pathogens**
Shiping TIAN (Institute of Botany, Chinese Academy of Sciences, Beijing - CHINA)
- 10:50 **C2.5-2 - Insights into the effects of agronomical management practices in *Aspergillus* incidence and carposphere's microbial communities of grapevine (CV. SYRAH)**
Stefanos Gabriel TESTEMPASIS (Faculty of Agriculture, Laboratory of Plant Pathology, Aristotle University of Thessaloniki, Thessaloniki - GREECE)
- 11:05 **C2.5-3 - The assembly and dynamics of the fruit microbiome: What can it tell us about biological control of postharvest diseases**
Samir DROBY (ARO, The Volcani Center, Rishon Lezion - ISRAEL)
- 11:25 **C2.5-4 - Identification of putative necrotrophic effectors of *Monilinia* SPP. Using a modified TRV-Expression vector as a high-throughput infiltration methodology**
Anselmo LOPEZ SANCHEZ-ORTIZ (Institute of Agrifood Research and Technology (IRTA), Lleida - SPAIN)
- 11:40 **C2.5-5 - Microbiomes: An Important tool to elucidate the epidemiology of postharvest pathogens**
Davide SPADARO (University of Torino, Grugliasco - ITALY)
- 12:00 **C2.5-6 - Ethylene sensing via GPCRs and Mapk pathway in *Colletotrichum gloeosporioides* is vital for host infection and represents potential targets for disease management**
Pinkuan ZHU (East China Normal University, Shanghai - CHINA)

C2.6 - Understanding emergence of pathogens in commercial and public forest ecosystems

Bellecour 1

Chairpersons:

Olga KOZHAR (Colorado State University, Fort Collins - UNITED STATES)

Aaron ONUFRAK (University of Tennessee, Knoxville - UNITED STATES)

Geoffrey M. WILLIAMS (USDA Forest Service, International Programs, Lansing - UNITED STATES)

- 10:30 **C2.6-1 - Pathogen emergence in changing ecosystems: Case study with *Phellinus noxius* in eastern Asia, Australia, and the Pacific Islands**
Olga KOZHAR (Colorado State University, Fort Collins - UNITED STATES)
- 10:50 **C2.6-2 - Can alien forest pathogens replace native ones? The case of *Heterobasidion irregulare* and *H. Annosum* in Europe**
Paolo GONTHIER (University of Torino, Grugliasco - ITALY)
- 11:05 **C2.6-3 - Botryosphaeriaceae associated with baobab (*Adansonia Digitata* L.) and marula (*Sclerocarya Birrea* A. Rich.) In agroforestry systems in Kenya**
Sheillah CHEROTICH (World Agroforestry (ICRAF), Nairobi - KENYA)
- 11:25 **C2.6-4 - Comparative genomics to decipher adaptation of the fungal pathogen *Austropuccinia PSIDII* to host species in the myrtaceae family**
Thaís BOUFLEUR (Department of Plant Pathology and Nematology, Luiz de Queiroz College of Agriculture, University of São Paulo, Piracicaba - BRAZIL)
- 11:40 **C2.6-5 - *Phytoplasma* sP. causing sudden wilt disease on yellow bleeding heart (*Dactylicapnos Scandens*) (D. Don) in India**
Raja PERIASAMY (COLLEGE OF HORTICULTURE AND FORESTRY, PASIGHAT, Pasighat - INDIA)
- 12:00 **C2.6-6 - Emergence of *Cryptostroma corticale* in Europe**
Elodie MULLER (INRAE, UMR IAM, Champenoux - France)

10:30 - 12:30 CONCURRENT SESSIONS (next)

C2.7 - Food Security for Sustainable Food Systems

Bellecour 2-3

Chairpersons:

Lise KORSTEN (University of Pretoria, Pretoria - SOUTH AFRICA)

Serge SAVARY (GBPUAT-India and UC Davis-USA, Castanet-Tolosan - FRANCE)

10:30 **C2.7-1 - Connected: A Community network for African Vector-Borne Plant Viruses**

Nina OCKENDON-POWELL (University of Bristol, Bristol - UNITED KINGDOM)

10:50 **C2.7-2 - A quantitative and qualitative analysis of rhizosphere microbial populations of maize and soybean as influenced by soil and plant genotype**

Lisa ROTHMANN (University of the Free State, Bloemfontein - SOUTH AFRICA)

11:05 **C2.7-3 - Understanding the benefits of breeding major food crops for durable resistance: A conceptual review and meta-analysis of empirical evidence**

Susan SPRAGUE (CSIRO, Canberra - AUSTRALIA)

11:25 **C2.7-4 - Assessment of CV. Shangi-Like potato lines with potato cyst nematode resistance in the field and with consumers**

Mellen .F. Nyabonyi NYABUTO (International institute of tropical Agriculture, Nairobi - KENYA)

11:40 **C2.7-5 - Pearl Millet-Future food for Asia and Africa: The importance, biotic constraints and their management**

Chandra NAYAKA (UNIVERSITY OF MYSORE, Mysore - INDIA)

12:00 **C2.7-6 - Chickpea seed endophytic (*Bacillus Subtilis*) as effective plant growth promoting microbes to improve chickpea productivity and nutritional quality under sustainable agriculture**

Arpan MUKHERJEE (Banaras Hindu University, Varanasi - INDIA)

12:30 - 14:00 Lunch and exhibition

Forum 4-5-6

14:00 - 16:00

CONCURRENT SESSIONS

C3.1 - Molecular aspects of plant-fungal interactions Part 1: Effectors

L'Amphithéâtre

Chairpersons:

Marc-Henri LEBRUN (INRAE, Thiverval-Grignon - FRANCE)

Ely OLIVEIRA-GARCIA (Kansas State University, Manhattan - UNITED STATES)

- 14:00 **C3.1-1 - Towards understanding how Magnaporthe oryzae co-opts plant endocytosis for translocation of cytoplasmic effectors**
Ely OLIVEIRA-GARCIA (Baton Rouge - UNITED STATES)
- 14:20 **C3.1-2 - Evolution of structurally conserved effector families in ascomycete fungi**
Sylvain RAFFAELE (INRAE, Castanet Tolosan - FRANCE)
- 14:35 **C3.1-3 - Entering via the front door: Cytoplasmic effectors taken into host cells via endocytosis**
Paul BIRCH (University of Dundee, Dundee - UNITED KINGDOM)
- 14:55 **C3.1-4 - Parastagonospora nodorum uses diverse effector functions to facilitate the colonization of wheat**
Tim FRIESEN (USDA-ARS Edward T. Schafer Agricultural Research Center, Fargo - UNITED STATES)
- 15:10 **C3.1-5 - Lessons to learn from a gall-inducing fungus**
Amin DJAMEI (University of Bonn, Bonn - GERMANY)
- 15:30 **C3.1-6 - Plant pathogens manipulate host microbiota to promote disease development**
Bart THOMMA (University of Cologne, Cologne - GERMANY)

C3.2 - Risk assessment for plant pathogens, a key tool for biosecurity under global changes

Gratte Ciel

Chairpersons:

Nico HORN (EPPO, Paris - FRANCE)

Giuseppe STANCANELLI (European Food Safety Authority (EFSA), Parma - ITALY)

- 14:00 **C3.2-1 - An overview of the ipcc global framework on pest risk analysis international standards**
Adriana MOREIRA (FAO, Roma - ITALY)
- 14:20 **C3.2-2 - Proactive global biosecurity strategies: Priorities based on crop landscapes, trade networks, and the ecological niches of 930 pathogens**
Aaron Isai PLEX SULA (Plant Pathology Department, University of Florida, Gainesville - UNITED STATES)
- 14:35 **C3.2-3 - The approach of the European and Mediterranean plant protection organization (EPPO): From early warning to risk management**
Muriel SUFFERT (EPPO, Paris - FRANCE)
- 14:55 **C3.2-4 - Prioritization of invasive alien pests with the potential to threaten agriculture, biodiversity, and forestry in Africa through horizon scanning**
Joseph MULEMA (CABI, Nairobi - KENYA)
- 15:10 **C3.2-5 - Commodity risk assessment as a tool to identify new plant pests: Challenges, future perspectives and links to horizon scanning and pest risk assessment**
Agata KACZMAREK (EFSA, Parma - ITALY)
- 15:30 **C3.2-6 - Interdisciplinary analysis and modelling of plant health threats to Scotland**
Daniel BEBBER (University of Exeter, Exeter - UNITED KINGDOM)

14:00 - 16:00 CONCURRENT SESSIONS (next)

C3.3 - POST-HARVEST - Part 2: Sustainable managements of postharvest diseases: New technologies and approaches

Grand Salon
Prestige

Chairpersons:

James ADASKAVEG (University of California, Riverside, Riverside - UNITED STATES)

Neus TEIXIDO (IRTA, Barcelona - SPAIN)

- 14:00 **C3.3-1 - Minicell-Encapsulated DSRNA (ME-DSRNA): A promising and scalable platform for targeted biocontrol of phytopathogenic fungi**
Sherif SHERIF (Virginia Tech, Winchester - UNITED STATES)
- 14:20 **C3.3-2 - Efficacy of antagonistic yeasts in the control of brown rot of nectarines and effect on fruit microbiome**
Giulia REMOLIF (Department of Agricultural, Forest and Food Sciences (DISAFA), University of Turin, Grugliasco (To) - ITALY)
- 14:35 **C3.3-3 - Postharvest decay management of citrus in the United States with cyproconazole and natamycin, new highly effective conventional and organic fungicides, respectively**
James ADASKAVEG (University of California, Riverside, Riverside - UNITED STATES)
- 14:55 **C3.3-4 - Reducing Brown rot and maintaining plum quality during cold storage with composite edible coatings containing avocado seed extract**
Ricardo LIMA DE SOUZA (Laboratori de Patologia, Centre de Tecnologia Postcollita (CTP), Institut Valencià d'Investigacions Agràries (IVIA), Montcada - SPAIN)
- 15:10 **C3.3-5 - Management of brown rot infections on stone fruit using epidemiological knowledge**
Rosario TORRES (IRTA, Lleida - SPAIN)
- 15:30 **C3.3-6 - Epigenetic control of long-lasting defence priming for the protection of fruit against postharvest diseases**
Estrella LUNA (University of Birmingham, Birmingham - UNITED KINGDOM)

C3.4 - Resilience in soil health and disease suppression

Tête d'Or 1-2

Chairperson: Danny COYNE (Nairobi - KENYA)

- 14:00 **C3.4-1 - An international collaboration for the development of a biological nematicide for use in Sub-Saharan Africa**
Jared JENSEN (AgBiome, Research Triangle Park - UNITED STATES)
- 14:20 **C3.4-2 - The changes of rhizosphere microbiome and transcriptome in arabidopsis grown under meso-plastic contaminated soil**
Dohui LEE (Department of Applied Science, Dong-A University, Busan - REPUBLIC OF KOREA)
- 14:35 **C3.4-3 - A culturomics approach identifies rhizospheric bacterial strains involved in legumes protection against the root rot agent aphanomyces euteiches**
Mohamed ZOUAOUI (Université Toulouse III - Paul Sabatier, Toulouse - FRANCE)
- 14:55 **C3.4-4 - Shift of bacterial communities is involved in the stimulation of Plasmodiophora brassicae resting spore germination**
Yao WANG (Georg August University of Göttingen, Göttingen - GERMANY)
- 15:10 **C3.4-5 - The Integration level of microbiome studies determines potential detection of glyphosate-associated dysbioses on/in plants and animals and subsequent disease development**
Ariena VAN BRUGGEN (Department of Plant Pathology, University of Florida, Gainesville - UNITED STATES)
- 15:30 **C3.4-6 - Exploring sustainable soilborne disease management solutions for specialty cut flower production**
Francesca HAND (The Ohio State University, Columbus - UNITED STATES)

14:00 - 16:00 CONCURRENT SESSIONS (next)

C3.5 - Tracing the long-distance pathways of aerial dissemination of plant pathogens

Salon Tête d'Or

Chairperson: Samuel SOUBEYRAND (INRAE, Avignon - FRANCE)

- 14:00 **C3.5-1 - Establishing a canadian biovigilance platform through nationwide aeronet, High Throughput Sequencing, and trajectory simulations**
Wen CHEN (Ottawa Research and Development Centre, Agriculture and Agri-Food Canada, Ottawa - CANADA)
- 14:20 **C3.5-2 - Surveillance of dispersal and pathogenicity variation of corn rusts**
Junmin LIANG (Institute of Microbiology, Chinese Academy of Sciences, Beijing - CHINA)
- 14:35 **C3.5-3 - A metacommunity model for entangled airborne pathosystems: Application to brown rot spread in peach orchards**
Andrea RADICI (INRAE, Avignon - FRANCE)
- 14:55 **C3.5-4 - Genomic analysis, trajectory tracking, and field investigation reveal origins and long-distance migration routes of wheat stripe rust in China**
Xiaoping HU (Northwest A&F University, Yangling - CHINA)
- 15:10 **C3.5-5 - Assessing long-distance, transoceanic and intercontinental atmospheric transport of soilborne plant pathogens entrained with aerosolized agricultural dust**
Rocio CALDERON (Plant Pathology and Plant-Microbe Biology Section, School of Integrative Plant Sciences, Cornell AgriTech, Cornell University, Geneva Ny - UNITED STATES)
- 15:30 **C3.5-6 - Use of spatio-temporal aerobiological data of spore abundance to understand the large-scale epidemiology of the ash dieback disease**
Mireia GOMEZ GALLEGO (INRAE, Champenoux - FRANCE)

C3.6 - Bacteriophages: Ecological roles and potential applications against bacterial plant pathogens

Bellecour 1

Chairpersons:

Clara TORRES-BARCELO (INRAE, Montfavet - FRANCE)

Jordan VACHERON (Department of Fundamental Microbiology, University of Lausanne, Lausanne - SWITZERLAND)

- 14:00 **C3.6-1 - Ecology and evolution of phage-bacteria interactions drive bacterial wilt disease dynamics**
Ville-Petri FRIMAN (University of Helsinki, Helsinki - FINLAND)
- 14:20 **C3.6-2 - Biogeographic distribution impacts Xanthomonas arboricola PV. Pruni susceptibility to bacteriophage**
Katherine DAMICO-WILLMAN (North Carolina State University, Raleigh - UNITED STATES)
- 14:35 **C3.6-3 - Coevolutionary analysis of bacteria-phage interactions identifies potential receptor targets for phage infection**
Mojgan RABIEY (University of Birmingham, Birmingham - UNITED KINGDOM)
- 14:55 **C3.6-4 - Do phages have an impact on the diversity of Pseudomonas syringae on apricot trees?**
Chloé FELTIN (PV-INRAE, Avignon - FRANCE)
- 15:10 **C3.6-5 - Keys and cost of the toxic relationship between novel phages and Xanthomonas hortorum PV. vitians: Molecular determinants and trade-off in planta**
Anaëlle BAUD (Université Lyon, Université Claude Bernard Lyon 1, CNRS, INRAE, VetAgro Sup, UMR Ecologie Microbienne, Villeurbanne - FRANCE)
- 15:30 **C3.6-6 - Evading infection: Temperature affects interaction between Dickeya fangzhongdai and its bacteriophage**
Špela ALIC (National Institute of Biology, Ljubljana - SLOVENIA)

14:00 - 16:00 CONCURRENT SESSIONS (next)

C3.7 - Germplasm seed movement and global plant health

Bellecour 2-3

Chairpersons:

Lava KUMAR (IITA Headquarters, Ibadan - NIGERIA)

Safaa KUMARI (International Center for Agricultural Research in the Dry Areas (ICARDA), Terbol Station, Zahle - LEBANON)

14:00 C3.7-1 - Regulatory framework for seed health

Yilmaz BALCI (United States Department of Agriculture (USDA), Riverdale, Maryland - UNITED STATES)

14:20 C3.7-2 - CGIAR germplasm health units apply a systems approach to germplasm seed health protection for conservation and safe international distribution

Lava Kumar PULLIKANTI (International Institute of Tropical Agriculture (IITA), Ibadan - NIGERIA)

14:35 C3.7-3 - Impact Network Analysis (INA) for national mitigation strategies for emerging seed-borne pathogens

Karen GARRETT (University of Florida, Gainesville - UNITED STATES)

14:55 C3.7-4 - Phytosanitary testing and sanitation for safe trans-national movement of clonally propagated crops: History and future

Giovanna MULLER (International Potato Center, Lima - PERU)

15:10 C3.7-5 - Public-Private partnership model to enhance safe international seed trade in the global south: A case study in south and southeast Asia






Ravi KHETARPAL (Asia-Pacific Association of Agricultural Research Institutions (APAARI), Bangkok - THAILAND)

15:30 C3.7-6 - Quarantine of germplasm for plant biosecurity against transboundary viruses: Importance of diagnostics and phytosanitary regulations

Celia Chalam VASIMALLA (ICAR-National Bureau of Plant Genetic Resources, Delhi - INDIA)

16:00 - 16:30 Coffee break and exhibition

Forum 4-5-6

16:30 - 18:00	K4 - A Global Plant Health Assessment of the state of Plant Health and its Impact on Ecosystem Services	L'Amphithéâtre
<p>Chairpersons:</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="312 405 416 521">  <p>Pascal FREY (INRAE, national research institute for Agriculture, Food and the Environment, Champenoux - FRANCE)</p> </div> <div data-bbox="938 405 1042 521">  <p>Neil MCROBERTS (UC Davis, Davis - UNITED STATES)</p> </div> </div>		
<div style="display: flex; flex-direction: column; gap: 10px;"> <div data-bbox="312 613 416 730">  <p>K4-1 State and evolution of plant health globally across Plant Systems and Ecoregions Federica BOVE (Università Cattolica del Sacro Cuore, Milan - ITALY)</p> </div> <div data-bbox="312 842 416 958">  <p>K4-2 Synthesis and implications of the findings from the GPHA Sonam SAH (B Pant University of Agriculture & Technology, Pantnagar - INDIA)</p> </div> <div data-bbox="312 1070 416 1187">  <p>K4-3 Impacts of plant health on services rendered by Plant Systems in Ecoregions Manjari SINGH (GB Pant University of Agriculture & Technology, Pantnagar - INDIA)</p> </div> </div>		
18:00 - 21:30	ISPP Councillors (by invitation)	
Bellecour 1		
18:15 - 19:45	ROUND TABLES	
R2.1 - Discussion and forum on cross-cutting issues generated by findings of the Global Plant Health Assessment		L'Amphithéâtre
R2.2 - The pathobiome - New understanding of postharvest diseases		Bellecour 2-3

18:00 - 20:00

POSTERS

Poster viewing session 1

Forum 4-5-6

F-22 - Flash Talk session

Agora

- 18:15 **F2.3-1 - Mining historic herbaria to track *Phytophthora infestans* effector and solanum r gene diversity and evolution over time**
Jean RISTAINO (NC State University, Raleigh - UNITED STATES)
- 18:20 **F2.3-2 - Herbaria in natural history collections illuminate the evolutionary history and emergence of citrus bacterial canker**
Lionel GAGNEVIN (CIRAD, Montpellier - FRANCE)
- 18:25 **F2.4-1 - Plant virus infection modifies volatile cues involved in multitrophic aphid-plant-parasitoid interactions**
Alberto FERERES (CSIC, Madrid - SPAIN)
- 18:30 **F3.1-1 - Novel nuclear localization sequence of mohr1, a nuclear effector of the rice blast fungus, is crucial for fungal pathogenicity and plant immune-response by transcriptional reprogramming**
You-Jin LIM (Research Institute of Agriculture and Life Sciences, Seoul National University, Seoul - REPUBLIC OF KOREA)
- 18:35 **F3.1-2 - Allele-specific recognition of the max effector avrrvi6 by rvi6 resistance protein in the apple-Venturia inaequalis pathosystem**
Maël BAUDIN (INRAE, Beaucouzé - FRANCE)
- 18:40 **F3.2-1 - Mapping global risk of Fusarium wilt in a changing climate with remote sensing and aerosol transport modeling**
Rocio CALDERON (Plant Pathology and Plant-Microbe Biology Section, School of Integrative Plant Sciences, Cornell AgriTech, Cornell University, Geneva Ny - UNITED STATES)
- 18:45 **F3.4-1 - Phytopathogenic fungi modify the bacterial diversity of the wheat rhizosphere grown in conventional and organic agricultural soils under ambient and future climate scenarios**
Adriana GIONGO (Julius Kühn Institute, Braunschweig - GERMANY)
- 18:50 **F3.7-1 - Seed pathway for pest dissemination: The ista reference pest list, a bibliographic resource in non-vegetable plant species.**
Nicolas DENANCE (GEVES, Beaucouzé - FRANCE)
- 18:55 **F4.1-1 - Combating onion bacterial diseases with pathogenomics tools and enhanced management strategies**
Lindsey DU TOIT (Washington State University, Mount Vernon - UNITED STATES)
- 19:00 **F4.1-2 - Ten year of PSTS10: A perspective on recent evolutions of French populations of Puccinia striiformis F.SP. Tritici (cause of wheat yellow rust)**
Tiphaine VIDAL (Université Paris-Saclay, INRAE, UR1290 BIOGER, Palaiseau - FRANCE)
- 19:05 **F4.2-1 - Alternaria alternata and strains of the a. Arborescens species complex are responsible of an upsurge of the apple leaf blotch disease in France**
Jaime AGUAYO (ANSES, Laboratoire de la Santé des Végétaux-LSV, Unité de Mycologie, Malzéville - FRANCE)
- 19:10 **F4.2-2 - Application of convolutional neural network model for detection of chili anthracnos**
Hae In KIM (Jeonbuk National University, Jeonju - REPUBLIC OF KOREA)
- 19:15 **F4.2-3 - Comparison of molecular diagnostic tools for fungal pathogen detection in soil**
Rumiana RAY (University of Nottingham, Sutton Bonington - UNITED KINGDOM)
- 19:20 **F4.3-1 - Adaptive genome evolution of the cereal powdery mildew fungi**
Stephan KUSCH (RWTH Aachen University, Aachen - GERMANY)
- 19:25 **F4.4-1 - Striving to stay clean: Detection of sweetpotato viruses on multiple seed generations in North Carolina**
Christie ALMEYDA (North Carolina State University, Raleigh - UNITED STATES)
















WEDNESDAY, AUGUST 23

Program-at-a-glance



08:30 - 10:00	K5 - Current Topics in Molecular Plant-Microbe Interactions	L'Amphithéâtre
10:00 - 10:30	Coffee break and exhibition	Forum 4-5-6
10:30 - 12:30	C4.1 - Progress in disease control - Part 1	L'Amphithéâtre
	C4.2 - Development of Molecular Diagnostic Tools for Plant Pathogens in a Globalizing World	Gratte Ciel
	C4.3 - Genome evolution in filamentous plant pathogens	Grand Salon Prestige
	C4.4 - The ecology plant viruses and epidemiology of the disease they cause: How fundamental ecological research in natural systems can inform and advance plant pathology	Tête d'Or 1-2
	C4.5 - Advances in the use of exotic sentinel trees and novel monitoring programs to detect incipient threats posed by forest pathogens	Salon Tête d'Or
	C4.6 - Post-Harvest - Part 3: Eco-epidemiological perspectives generating new concepts on postharvest diseases and mycotoxins	Bellecour 1
	C4.7 - Impact of scientific advances in plant health	Bellecour 2-3
12:30 - 14:00	Lunch and exhibition	Forum 4-5-6
14:00 - 15:30	K6 - New Developments in Plant Disease Management	L'Amphithéâtre
15:30 - 16:00	ICPP 2023 Best Posters Awards Ceremony	L'Amphithéâtre
16:00 - 16:30	Coffee break and exhibition	Forum 4-5-6
16:00 - 18:30	Poster viewing session 2	Forum 4-5-6
	F-23 - Flash Talk session	Agora
16:30 - 18:00	R3.1 - The impact of discoveries in plant health	L'Amphithéâtre
	R3.2 - Sharing and exploiting HTS data	Bellecour 2-3
	R3.3 - Germplasm Seed Movement and Global Plant Health	Salon Tête d'Or
16:30 - 18:00	ISPP Councillors (by invitation)	Bellecour 1
20:00 - 00:00	Conference dinner in Imagine Circus (compulsary registration in advance)	Imagine Circus



08:30 - 10:00	K5 - Current Topics in Molecular Plant-Microbe Interactions	L'Amphithéâtre										
<p>Chairpersons:</p> <table border="0" data-bbox="300 365 1190 488"><tr><td data-bbox="300 365 403 488"></td><td data-bbox="403 365 778 488">Jan E. LEACH (Colorado State University, Fort Collins - UNITED STATES)</td><td data-bbox="778 365 882 488"></td><td data-bbox="882 365 1190 488">Sophien KAMOUN (The Sainsbury Laboratory, Norwich - UNITED KINGDOM)</td></tr></table> <table border="0" data-bbox="300 577 1018 1227"><tr><td data-bbox="300 577 403 701"></td><td data-bbox="403 577 1018 701">K5-1 Regulation of bacterial growth and behavior by plant immunity Kenichi TSUDA (Huazhong Agricultural University, Wuhan - CHINA)</td></tr><tr><td data-bbox="300 801 403 925"></td><td data-bbox="403 801 1018 925">K5-2 Factors that influence the distribution of vector-borne parasites Saskia HOGENHOUT (John Innes centre, Norwich - UNITED KINGDOM)</td></tr><tr><td data-bbox="300 1025 403 1149"></td><td data-bbox="403 1025 1018 1149">K5-3 Impact of climate on plant-pathogen/microbiome interactions Sheng Yang HE (Duke University, Durham - UNITED STATES)</td></tr></table>				Jan E. LEACH (Colorado State University, Fort Collins - UNITED STATES)		Sophien KAMOUN (The Sainsbury Laboratory, Norwich - UNITED KINGDOM)		K5-1 Regulation of bacterial growth and behavior by plant immunity Kenichi TSUDA (Huazhong Agricultural University, Wuhan - CHINA)		K5-2 Factors that influence the distribution of vector-borne parasites Saskia HOGENHOUT (John Innes centre, Norwich - UNITED KINGDOM)		K5-3 Impact of climate on plant-pathogen/microbiome interactions Sheng Yang HE (Duke University, Durham - UNITED STATES)
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10:00 - 10:30	Coffee break and exhibition	Forum 4-5-6										

10:30 - 12:30 CONCURRENT SESSIONS

C4.1 - Progress in disease control - Part 1

L'Amphithéâtre

Chairpersons:

Helge SIEROTZKI (Syngenta Group, Stein - SWITZERLAND)

Anne Sophie WALKER (INRAE, Paris - FRANCE)

- 10:30 **C4.1-1 - Wine diseases and integration of biosolutions in control strategies**
EricCHANTELOT (FRENCH VINE INSTITUTE (IFV), Rodilhan - FRANCE)
- 10:50 **C4.1-2 - Optimizing field based control of Phytophthora capsici: Use of multiplex droplet digital PCR to quantify biological and pathogen populations**
OscarVILLANUEVA (Agriculture and Agri-Food Canada Research, Vineland-Stn - CANADA)
- 11:05 **C4.1-3 - Development of Myosin Inhibitor to control rice blast and false smut**
FengZHANG (Nanjing Agricultural University, Nanjing - CHINA)
- 11:25 **C4.1-4 - Fungicide sensitivity of Colletotrichum species causing bitter rot on apple in the mid-atlantic United States**
KariPETER (Pennsylvania State University, Biglerville - UNITED STATES)
- 11:40 **C4.1-5 - Can oligonucleotides become an alternative to conventional fungicides for plant disease control?**
DoloresFERNANDEZ-ORTUNO (Departamento de Microbiología, Facultad de Ciencias, Universidad de Málaga, Malaga - SPAIN)
- 12:00 **C4.1-6 - Identification and utilization of antifungal and defense-stimulating molecules for asian soybean rust control**
CaspasLANGENBACH (RWTH Aachen University, Plant Physiology Department (IPP), Aachen - GERMANY)

C4.2 - Development of Molecular Diagnostic Tools for Plant Pathogens in a Globalizing World

Gratte Ciel

Chairpersons:

PeterBONANTS (Wageningen UR, Wageningen - NETHERLANDS)

JamesSTACK (Kansas State University, Manhattan - UNITED STATES)

- 10:30 **C4.2-1 - Next generation sequencing and its impact on plant health risk assessment and Phytosanitary Measures**
GiuseppeSTANCANELLI (European Food Safety Authority (EFSA), Parma - ITALY)
- 10:50 **C4.2-2 - Using marple diagnostics to assess the genetic diversity of Puccinia striiformis F. SP. tritici (PST) in the Himalayan foothills of Nepal**
Ram BahadurKHADKA (Nepal Agricultural Research Council, Lalitpur - NEPAL)
- 11:05 **C4.2-3 - A pangenome approach to study diversity and functional markers and its applications to enhance diagnostics**
TheoVANDERLEE (Wageningen Plant Research, Wageningen - NETHERLANDS)
- 11:25 **C4.2-4 - Improving and developing diagnostics for high throughput identification of viruses, with a focus on begomoviruses**
FionaFILARDO (QLD Department of Agriculture and Fisheries, Brisbane - AUSTRALIA)
- 11:40 **C4.2-5 - Advancement in plant pathogen diagnostics in High Throughput Sequencing era**
MohammadARIF (University of Hawaii at Manoa, Honolulu - UNITED STATES)
- 12:00 **C4.2-6 - CrispR-Cas detection coupled with isothermal amplification of bursaphelenchus xylophilus**
JinWU (Beijing Forestry University, Beijing - CHINA)

10:30 - 12:30

CONCURRENT SESSIONS (next)

C4.3 - Genome evolution in filamentous plant pathogens

Grand Salon
Prestige

Chairpersons:

Thorsten LANGNER (The Sainsbury Laboratory, Norwich - UNITED KINGDOM)

Eva STUKENBROCK (Christian-Albrechts University of Kiel, Kiel - GERMANY)

10:30 **C4.3-1 - Waltz with plants: Genome evolution in filamentous pathogens**

Sophien KAMOUN (The Sainsbury Laboratory, Norwich - UNITED KINGDOM)

10:50 **C4.3-2 - A broad genomic survey of macrophomina SPP. Reveals host-genotype associations and evidence of on-going recombination**

Kayla K PENNERMAN (United States Department of Agriculture, Agricultural Research Service, Salinas - UNITED STATES)

11:05 **C4.3-3 - Adaptative evolution in virulence effectors of the rice blast fungus *pyricularia orizae***

Pierre GLADIEUX (INRAE, Montpellier - FRANCE)

11:25 **C4.3-4 - Pathogenicity of the conifer wilt pathogen, *Leptographium wageneri*: Genomic insights**

Tuan DUONG (University of Pretoria, Pretoria - SOUTH AFRICA)

11:40 **C4.3-5 - Exchange of intact nuclei plays a major role in the evolution of dikaryotic rust fungi**

Jana SPERSCHNEIDER (CSIRO, Canberra - AUSTRALIA)

12:00 **C4.3-6 - Transposons drive environmental adaptation in a clonally evolving fungal pathogen**

Antonio DI PIETRO (Universidad de Cordoba, Cordoba - SPAIN)

C4.4 - The ecology plant viruses and epidemiology of the disease they cause: How fundamental ecological research in natural systems can inform and advance plant pathology

Tête d'Or 1-2

Chairpersons:

Carolyn M. MALMSTROM (Michigan State University, Department of Plant Biology, Michigan - UNITED STATES)

Mark Paul RIVAREZ (CARAGA STATE UNIVERSITY, Butuan city - PHILIPPINES)

10:30 **C4.4-1 - From boots on the ground to nucleotides in the sequencer: Advances in the study of plant virus ecology using plant virus metagenomics**

Philippe ROUMAGNAC (Cirad, Montpellier - FRANCE)

10:50 **C4.4-2 - Alteration of plant species mixtures by virus infection**

Roger JONES (University of Western Australia, Crawley - AUSTRALIA)

11:05 **C4.4-3 - Virome release of an invasive exotic plant species in southern France**

Oumaima MOUBSET (PHIM - CIRAD, Montpellier - FRANCE)

11:25 **C4.4-4 - Occurrence and prevalence of *Schlumbergera virus X* in dragon fruit crops in Ecuador**

Lisbeth ESPINOZA-LOZANO (Escuela Superior Politécnica del Litoral - ESPOL, Guayaquil - ECUADOR)

11:40 **C4.4-5 - Factors influencing epidemiology and spread of whitefly-transmitted cucurbit viruses in the United States vary among production regions**

William WINTERMANTEL (USDA-ARS, Salinas - UNITED STATES)

12:00 **C4.4-6 - Epidemiology of yam viruses in Guadeloupe: Role of cropping practices and seed-tuber supply**

Sébastien GUYADER (INRAE, UR ASTRO, Petit-Bourg - GUADELOUPE)

10:30 - 12:30 CONCURRENT SESSIONS (next)

C4.5 - Advances in the use of exotic sentinel trees and novel monitoring programs to detect incipient threats posed by forest pathogens

Salon Tête d'Or

Chairpersons:

Sarah GREEN (Forest Research, Roslin - UNITED KINGDOM)

Caterina VILLARI (University of Georgia, Athens - UNITED STATES)

Geoffrey M. WILLIAMS (USDA Forest Service, International Programs, Lansing - UNITED STATES)

10:30 **C4.5-1 - Lessons learned from a reciprocal international sentinel planting project**

Pierluigi BONELLO (The Ohio State University, Columbus, Oh - UNITED STATES)

10:50 **C4.5-2 - Satellite based monitoring of invasive pests and alien plant bacterias: The Xylella fastidiosa and Toumeyella parvicornis case studies**

Rosa LASAPONARA (CNR, Potenza - ITALY)

11:05 **C4.5-3 - Four years of the European Union Reference Laboratory (EURL) for fungi and oomycetes**

Pedro Pablo PARRA GIRALDO (ANSES Plant Health Laboratory, EURL for fungi and oomycetes, Mycology Unit, Malzéville - FRANCE)

11:25 **C4.5-4 - Prescreening and monitoring of forest plant pathogens using sequencing technologies in regulatory research**

Guillaume J. BILODEAU (Canadian Food Inspection Agency, Ottawa Laboratory Fallowfield, Ottawa plant laboratory, Ottawa, On - CANADA)

11:40 **C4.5-5 - Dormant woody plants: A pathway of introduction into Europe of potentially invasive pests?**

Simone PROSPERO (WSL, Birmensdorf - SWITZERLAND)

12:00 **C4.5-6 - Observatree: 10 years of early warning citizen science**

Rebecca GOSLING (Woodland Trust, Grantham - UNITED KINGDOM)

C4.6 - Post-Harvest - Part 3: Eco-epidemiological perspectives generating new concepts on postharvest diseases and mycotoxins

Bellecour 1

Chairpersons:

Wayne JURICK II (USDA, Beltsville - UNITED STATES)

Achala KC (Oregon State University, Central Point - UNITED STATES)

10:30 **C4.6-1 - One small molecule with big biological impacts: New roles for patulin in host-microbeplant interactions during blue mold decay of apple fruit**

Wayne JURICK II (USDA, Beltsville - UNITED STATES)

10:50 **C4.6-2 - Preharvest factors associated with gray mold development in European pears**

Achala KC (Oregon State University, Central Point - UNITED STATES)

11:05 **C4.6-3 - Epidemiology of grain contamination with zearalenone and deoxynivalenol**

Pierce PAUL (The Ohio State University, Wooster - UNITED STATES)

11:25 **C4.6-4 - Inoculum dynamics and environmental factors associated with the preharvest contamination of citrus fruits by Geotrichum citri-aurantii**

Elena PEREZ (Instituto Nacional de Investigación Agropecuaria, Montevideo - URUGUAY)

11:40 **C4.6-5 - Associated trade barriers while managing postharvest diseases in sweetpotato**

Lina QUESADA (North Carolina State University, Raleigh - UNITED STATES)

12:00 **C4.6-6 - Re-Emerging Disease: The sour rot irruption on peach production**

Erick ZUÑIGA (IRTA, Lleida - SPAIN)

10:30 - 12:30 CONCURRENT SESSIONS (next)

C4.7 - Impact of scientific advances in plant health

Bellecour 2-3

Chairpersons:

Claire BAKER (Toothpick Company Ltd. (Toothpick Project), Bozeman - UNITED STATES)

Odile CARISSE (Agriculture and Agri-Food Canada, Saint-Jean-sur-Richelieu - CANADA)

10:30 **C4.7-1 - The Toothpick project: The impacts of a commercialized bioherbicide innovation**

Claire BAKER (Toothpick Company Ltd. (Toothpick Project), Bozeman - UNITED STATES)

10:50 **C4.7-2 - The plant disease pyramid: Plant disease and epidemic management requires a holistic approach**

Bernard SLIPPERS (Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria, Pretoria - SOUTH AFRICA)

11:05 **C4.7-3 - Global challenges facing plant pathology: Impact of scientific advances**

Michael JEGER (Imperial College London, Ascot - UNITED KINGDOM)

11:25 **C4.7-4 - Systematic maps for identification of scientific evidence for disease control methods in oats, oilseed rape and potato**

Anna BERLIN (Swedish university of agricultural sciences, Uppsala - SWEDEN)

11:40 **C4.7-5 - Data-driven decision making to reduce global crop losses**






Bryony TAYLOR (CABI, Wallingford - UNITED KINGDOM)

12:00 **C4.7-6 - Novel plant growth promoting rhizobacterias (PGPRs) as potential indicator of sustainable agriculture development**

Touseef HUSSAIN (Mati Mate Agromart Pvt Ltd., Bhavnagar - INDIA)

12:30 - 14:00 Lunch and exhibition

Forum 4-5-6

14:00 - 15:30	K6 - New Developments in Plant Disease Management	L'Amphithéâtre
<p>Chairpersons:</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="300 367 403 488">  <p>Jochen KLEEMANN (Bayer AG, Berlin - GERMANY)</p> </div> <div data-bbox="786 367 890 488">  <p>Mathews PARET (University of Florida, Gainesville - UNITED STATES)</p> </div> </div>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div data-bbox="300 577 403 698">  <p>K6-1</p> </div> <div data-bbox="300 705 1254 768"> <p>Disease early warning and advisory systems - the case of wheat rusts David HODSON (CIMMYT - International Maize and Wheat Improvement Center, Mexico - MEXICO)</p> </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 20px;"> <div data-bbox="300 801 403 922">  <p>K6-2</p> </div> <div data-bbox="300 929 1430 992"> <p>Advances in plant virus disease management in sub-Saharan Africa - the case of bunch top disease Lava KUMAR (IITA Headquarters, Ibadan - NIGERIA)</p> </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start; margin-top: 20px;"> <div data-bbox="300 1032 403 1153">  <p>K6-3</p> </div> <div data-bbox="300 1160 1198 1223"> <p>NLRseek™: High-throughput discovery pipeline for functional resistance genes Helen BRABHAM (2Blades Foundation, Norwich - UNITED KINGDOM)</p> </div> </div>		
15:30 - 16:00	ICPP 2023 Best Posters Awards Ceremony	L'Amphithéâtre
<p>Typhaine BRUAL (pH.D student of University Lyon 1, France) & a committee of young plant pathologists</p>		
16:00 - 16:30	Coffee break and exhibition	Forum 4-5-6

16:00 - 18:30

POSTERS


Poster viewing session 2

Forum 4-5-6

F-23 - Flash Talk session

Agora

- 16:15 **F3.3-1 - Cold and wild environments: Source of potential biocontrol agents for postharvest fungal diseases management**
Alessandra DI FRANCESCO (University of Udine, Udine - ITALY)
- 16:20 **F3.3-2 - Control of pomegranate postharvest diseases by in the field and after harvest treatments**
Annamaria MINCUZZI (University of Bari Aldo Moro, Bari - ITALY)
- 16:25 **F5.1-1 - A combined aerobiological approach allows differentiating the biology and environmental drivers of sporulation of two major fungal pathogens of chestnut**
Guglielmo LIONE (University of Torino, Grugliasco - ITALY)
- 16:30 **F5.1-2 - Aerobiota community assembly in vegetable production: Adapting metacommunity theory to nanopore metabarcoding**
Hervé VAN DER HEYDEN (McGill, Ste-Anne-de-Bellevue - CANADA)
- 16:35 **F5.2-1 - Platform development using a model host plant for high-throughput omics and CRISPR/CAS gene editing in *Phytophthora cinnamom***
Aayushree KHAREL (School of Life and Environmental Sciences, Deakin University, Waurn Ponds, Geelong - AUSTRALIA)
- 16:40 **F5.3-1 - Candidate effector proteins conserved across fungal and oomycete foliar pine pathogens**
Mariana TARALLO (Bioprotection Aotearoa, School of Natural Sciences, Massey University, Palmerston North - NEW ZEALAND)
- 16:45 **F5.4-1 - From mitochondrial genome to strobilurin resistance: In silico analysis of group I Intron evolution in fungal plant pathogens**
Benjamin CINGET (Université Laval, Québec - CANADA)
- 16:50 **F5.5-1 - The basal expression of immune receptors depends on salicylic acid levels regulated by the DMR6 family of hydroxylases**
Dmitry LAPIN (Utrecht University, Utrecht - NETHERLANDS)
- 16:55 **F5.7-1 - Phenotyping biotic-abiotic interactions affecting rice grain yield to discover tolerant genotypes**
Gloria MOSQUERA (Alliance Bioversity & CIAT, Palmira - COLOMBIA)
- 17:00 **F6.1-1 - Integrating diagnostic tools to predict disease pressures in winter wheat and refine the application of biological fungicides**
Lucy MALLARD (Newcastle University, Newcastle Upon Tyne - UNITED KINGDOM)
- 17:05 **F6.1-2 - Site-specific soil pest management in California strawberry & vegetable cropping systems**
Franck MARTIN (USDA-ARS, Salinas, CA - UNITED STATES)
- 17:10 **F6.2-1 - Plasmids plague pelargoniums: A tale of bacterial blight and convergent evolution**
Hannah TOTH (Ohio State University, Columbus - UNITED STATES)
- 17:15 **F6.2-2 - Finding a needle in a haystack using NGS and associated bioinformatics toolkit**
Xiang Sean LI (Canadian Food Inspection Agency, Charlottetown - CANADA)
- 17:20 **F6.2-3 - Automated pipeline for genomic epidemiological diagnoses of phytopathogenic bacteria**
Zachary FOSTER (Oregon State University, Corvallis, Or - UNITED STATES)

16:30 - 18:00	ROUND TABLES	
	R3.1 - The impact of discoveries in plant health	L'Amphithéâtre
	R3.2 - Sharing and exploiting HTS data	Bellecour 2-3
	R3.3 - Germplasm Seed Movement and Global Plant Health	Salon Tête d'Or
16:30 - 18:00	ISPP Subject Matter Committees (by invitation)	
20:00 - 00:00	Conference dinner in Imagine Circus (compulsary registration in advance)	
	<p data-bbox="309 882 1198 943">Imagine Circus</p> <p data-bbox="309 882 1509 842">Since its creation, the Cirque Imagine has wanted to offer a high artistic level. Artists with top level are recruited and offer the best show.</p> <p data-bbox="309 960 1362 1021">The International Congress of Plant Pathology is pleased to invite you at the Cirque Imagine for a wonderful evening show!</p> <p data-bbox="309 1088 515 1120">How to get there?</p> <p data-bbox="309 1135 536 1167">By public transport:</p> <p data-bbox="309 1167 1281 1198">Metro line A , Tram lines T3  and T7  – «Vaulx-en-Velin La Soie» stop.</p> <p data-bbox="309 1214 389 1245">By car:</p> <p data-bbox="309 1245 1402 1305"> 15 min from the center of Lyon, 5 min from the East ring road, exit 9 «Vaulx-en-Velin, la Soie», near the motorways</p> <p data-bbox="309 1323 1493 1384">If you registered to participate to the Conference Dinner, come to the welcome desk to get your free metro ticket!</p>	

THURSDAY, AUGUST 24

Program-at-a-glance

08:00 - 10:30	First ISPP Executive Committee and Secretariat (2023-2028), by invitation	Foyer Gratte Ciel Parc
08:30 - 10:30	C5.1 - Modeling and analysis to better understand and predict epidemics	Gratte Ciel
	C5.2 - Molecular aspects: Plant-oomycetes interactions	Grand Salon Prestige
	C5.3 - Current and emerging forest pathology issues	Tête d'Or 1-2
	C5.4 - Immune receptors: Activation, signaling & evolution	Salon Tête d'Or
	C5.5 - New Developments in Fungicide Resistance	Bellecour 1
	C5.6 - The Potential of Seed Microbiomes	Bellecour 3
	C5.7 - Plant pathogens interactions in multi stress conditions (abiotic and biotic stresses): Viruses and other pathogens?	Bellecour 2
10:30 - 11:00	Coffee break and exhibition	Forum 4-5-6
11:00 - 13:00	C6.1 - Progress in disease control - Part 2	Gratte Ciel
	C6.2 - High Throughput Sequencing approaches for the detection of pathogens	Grand Salon Prestige
	C6.3 - Molecular aspects: Plant-nematode interactions	Tête d'Or 1-2
	C6.4 - Particle-based delivery of biomolecules for crop protection	Salon Tête d'Or
	C6.5 - Soil-borne plant viruses	Bellecour 1
	C6.6 - Towards structure-based design of disease resistance genes	Bellecour 3
	C6.7 - A mechanistic approach of the varietal mixture effects on plant pathogens	Bellecour 2
13:00 - 14:30	Lunch break and exhibition	Forum 4-5-6
14:30 - 16:30	C7.1 - Molecular aspects of plant-fungal interactions Part 2: Mechanisms of infection	Gratte Ciel
	C7.2 - Plant protection potential of persistent (cryptic) viruses in fungi, plants and insect vectors of plant disease	Grand Salon Prestige
	C7.3 - At the heart of disease emergence: Determinants and consequences of host range contours of plant pathogens	Tête d'Or 1-2
	C7.4 - One health: Impact of resistance to antibiotics and fungicides in plant pathogens	Salon Tête d'Or
	C7.5 - Pathovars of Pseudomonas and Xanthomonas SPP.: Do they really exist?	Bellecour 1
	C7.6 - Social and cultural dimensions of international forest health	Bellecour 3
	C7.7 - APP-titude for social media in Plant Disease Research	Bellecour 2

THURSDAY, AUGUST 24

Program-at-a-glance



16:30 - 17:00	Coffee break and exhibition	Forum 4-5-6
16:30 - 18:00	Poster viewing session 2	Forum 4-5-6
	F-24 - Flash Talk session	Agora
16:45 - 17:45	International Plant Pathology organizations (by invitation)	Salon Tête d'Or
	ISPP Subject Matter Committee of "Forest Pathology" (by invitation)	Bellecour 1
16:45 - 17:45	R4.1 - Research Integrity in Plant Pathology	Bellecour 2
	R4.2 - Jobs in Plant Pathology: How a plant Pathologist works in industry setting (opened only for Ph.D students and Post-docs)	Foyer Gratte Ciel Parc
18:00 - 20:00	C8.1 - Botryosphaeria dieback: Which hosts are affected, what we know and how to fight	Gratte Ciel
	C8.2 - Emerging Phytophthora's: Tackling Global Outbreaks that Impact Food security	Grand Salon Prestige
	C8.3 - Latest advancements in knowledge and management of Ralstonia species	Tête d'Or 1-2
	C8.4 - Re-emergence of tobamoviruses threatening global vegetable production	Salon Tête d'Or
	C8.5 - Controlling Globally Developing Disease Threats of Banana	Bellecour 1
	C8.6 - From the deciphering of host pathogen interactions to disease management: The Leptosphaeria maculans /rapeseed case study	Bellecour 3
	C8.7 - Raising awareness of plants and ways of teaching plant pathology	Bellecour 2
20:30 - 22:30	Cérémonie des 50 ans de la SFP (by invitation - Private meeting in French)	Hôtel de Ville de Lyon



08:00 - 10:30	First ISPP Executive Committee and Secretariat (2023-2028), by invitation	Foyer Gratte Ciel Parc
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08:30 - 10:30	CONCURRENT SESSIONS	
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C5.1 - Modeling and analysis to better understand and predict epidemics	Gratte Ciel
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Chairpersons:

Larry MADDEN (Ohio State University, Wooster - UNITED STATES)

Peter OJIAMBO (North Carolina State University, Raleigh - UNITED STATES)

08:30 **C5.1-1 - Bayesian spatial epidemiological models to assist in outbreak response.**

The case of Xylella fastidiosa

Martina CENDOYA (Valencian Institute for Agricultural Research (IVIA), Valencia - SPAIN)

08:50 **C5.1-2 - A compartmental mathematical model based on aphid feeding behaviours allows more realistic modelling of non-persistently transmitted plant viruses**

Elin FALLA (University of Cambridge, Cambridge - UNITED KINGDOM)

09:05 **C5.1-3 - Exploiting similarities within phylogenetic clades of Colletotrichum SPP. to develop a mechanistic, weather-driven model for anthracnose diseases**

Irene SALOTTI (Università Cattolica del Sacro Cuore, Piacenza - ITALY)

09:25 **C5.1-4 - Effects of pathogen sexual reproduction on the evolutionary and epidemiological control provided by deployment strategies for two major resistance genes in agricultural landscapes**

Marta ZAFFARONI (INRAE, Bordeaux Science Agro, SAVE, Villenave-D'ornon - FRANCE)

09:40 **C5.1-5 - A spatially explicit network model to assess the effectiveness of within- and between-site treatment on epidemic spread across a landscape**

Peter OJIAMBO (North Carolina State University, Raleigh - UNITED STATES)

10:00 **C5.1-6 - Modeling the airborne inoculum of polystigma amygdalinum for improving the control of almond red leaf blotch**

Elena LAZARO (Centre de Protecció Vegetal i Biotecnologia, Institut Valencià d'Investigacions Agràries (IVIA), Moncada - SPAIN)

C5.2 - Molecular aspects: Plant-oomycetes interactions	Grand Salon Prestige
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Chairpersons:

Edouard EVANGELISTI (Wageningen University and Research, Wageningen - NETHERLANDS)

Eric GALIANA (INRAE, Sophia Antipolis - FRANCE)

08:30 **C5.2-1 - Mechanism of plant membrane damage by NEP1-LIKE proteins**

Gregor ANDERLUH (National Institute of Chemistry, Ljubljana - SLOVENIA)

08:50 **C5.2-2 - Discovery of protein markers of oomycete ev's**

Susan BREEN (University of Dundee, Dundee - UNITED KINGDOM)

09:05 **C5.2-3 - Kinetics of zoospores approaching a root using a microfluidic device**

Philippe THOMEN (Institut de Physique de Nice, Université Côte d'Azur, Nice - FRANCE)

09:25 **C5.2-4 - Effect of small molecule modulators of calcium signalling on Phytophthora infestans**

Emma CONDON (University College Cork, Kilkenny - IRELAND)

09:40 **C5.2-5 - Using LAB-ON-A-CHIP devices to study oomycete plant interactions**

Ashley GARRILL (University of Canterbury, Christchurch - NEW ZEALAND)

10:00 **C5.2-6 - Unlocking the secret to successful avocado defenses: The importance of nlr proteins during Phytophthora cinnamomi infection**

Alicia FICK (University of Pretoria, Pretoria - SOUTH AFRICA)

08:30 - 10:30 CONCURRENT SESSIONS (next)

C5.3 - Current and emerging forest pathology issues

Tête d'Or 1-2

Chairpersons:

Irene BARNES (Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria, Pretoria - SOUTH AFRICA)

Julio Javier DIEZ CASERO (University of Valladolid, Valladolid - SPAIN)

- 08:30 **C5.3-1 - A global account of the dothistroma needle blight pathogens and risks posed by emerging new lineages**
Irene BARNES (Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria, Pretoria - SOUTH AFRICA)
- 08:50 **C5.3-2 - Importance of healthy carriers in ash dieback**
Benoit MARÇAIS (INRAE, Champenoux - FRANCE)
- 09:05 **C5.3-3 - Current and emerging issues for managing Phytophthora in a landscape of rapid change**
Nari WILLIAMS (The New Zealand Institute for Plant and Food Research Limited, Havelock North - NEW ZEALAND)
- 09:25 **C5.3-4 - Genomic biosurveillance of invasive alien tree pathogens can detect variants, hybrids and reveal super-spreader events**
Richard HAMELIN (UBC, Vancouver - CANADA)
- 09:40 **C5.3-5 - Latent pathogens triggered by climate change are causing large-scale tree decline in California**
Matteo GARBELOTTO (University of California at Berkeley, Berkeley - UNITED STATES)
- 10:00 **C5.3-6 - Exogenous application of double-stranded RNA to control Fusarium circinatum on pines**
Irene T. BOCOS-ASENJO (Universidad de Valladolid, Palencia - SPAIN)

C5.4 - Immune receptors: Activation, signaling & evolution

Salon Tête d'Or

Chairpersons:

Thomas KROJ (INRAE, Montpellier - FRANCE)

Cecile SEGONZAC (Seoul National University, Seoul - REPUBLIC OF KOREA)

- 08:30 **C5.4-1 - Connecting the dots of PRR-mediated immune signaling**
Cyril ZIPFEL (UNIVERSITY OF ZURICH, Zurich - SWITZERLAND)
- 08:50 **C5.4-2 - A tree-specific family of defense peptides shows anti-rust fungi and elicitor activities**
Julie LINTZ (Université de Lorraine, INRAE, UMR Interactions Arbres/Microorganismes, Nancy - FRANCE)
- 09:05 **C5.4-3 - Enzymatic activities of tir domains: Molecular basis and immune signalling in plants and beyond**
Bostjan KOBE (University of Queensland, Brisbane - AUSTRALIA)
- 09:25 **C5.4-4 - The MLA immune receptor against barley powdery mildew mimics the binding interface of effector target to confer resistance against the blast fungus**
Diana GOMEZ DE LA CRUZ (The Sainsbury Laboratory, University of East Anglia, Norwich - UNITED KINGDOM)
- 09:40 **C5.4-5 - Highly variable plant immune receptors are widespread in plants and share distinct genomic and Epigenomic Features**
Ksenia KRASILEVA (University of California, Berkeley, Berkeley - UNITED STATES)
- 10:00 **C5.4-6 - Receptor-like cytoplasmic kinases from various subfamilies positively and differentially regulate AVR4/CF-4-Triggered reactive oxygen species production in nicotiana benthamiana**
Wen HUANG (Laboratory of Phytopathology, Wageningen University, Wageningen - NETHERLANDS)

08:30 - 10:30 CONCURRENT SESSIONS (next)

C5.5 - New Developments in Fungicide Resistance

Bellecour 1

Chairpersons:

Claudia GODOY (Embrapa, Londrina - BRAZIL)

Mingguo ZHOU (Nanjing Agricultural University, Nanjing - CHINA)

08:30 **C5.5-1 - Fungal clone wars: How hybridisation and clonal expansion led to a new type of DMI resistance in barley spot form net blotch**

Fran LOPEZ RUIZ (Curtin University, Perth - AUSTRALIA)

08:50 **C5.5-2 - Status of resistance evolution of barley diseases and current control strategies in Europe**

Mascha HOFFMEISTER (BASF SE, Limburgerhof - GERMANY)

09:05 **C5.5-3 - Fungicide resistance in most relevant brazilian crops**

Luis DEMANT (FRAC- BR, Paulínia - BRAZIL)

09:25 **C5.5-4 - Field profiling of fungicide resistance frequencies**

Noel KNIGHT (University of Southern Queensland, Toowoomba - AUSTRALIA)

09:40 **C5.5-5 - Fungicide resistance mechanisms and management in Fusarium graminearum species complex**

Zhonghua MA (Zhejiang Univ., Hangzhou - CHINA)

10:00 **C5.5-6 - Prevalence and co-occurrence of two fungicide resistance markers in Erysiphe necator**

Márk NEMETH Z. (Plant Protection Institute, Centre for Agricultural Research, ELKH, Budapest - HUNGARY)

C5.6 - The Potential of Seed Microbiomes

Bellecour 3

Chairpersons:

Lindsey DU TOIT (Washington State University, Mount Vernon - UNITED STATES)

Marie-Agnes JACQUES (IRHS - INRAE, Beaucouzé - FRANCE)

08:30 **C5.6-1 - Seed microbiota: Diversity, assembly and transmission**

Matthieu BARRET (INRAE, Angers - FRANCE)

08:50 **C5.6-2 - Future of seed pathology in the metagenomics era**

Jonathan JACOBS (The Ohio State University, Columbus - UNITED STATES)

09:05 **C5.6-3 - New insights into tree seed mycobiomes - A biosecurity perspective**

Iva FRANIC (Swedish University of Agricultural Sciences, Alnarp - SWEDEN)

09:25 **C5.6-4 - Soybean and cotton spermosphere soil microbial dynamics**

Zachary NOEL (Auburn University, Auburn - UNITED STATES)

09:40 **C5.6-5 - Prevalence of viruses in pasture and horticultural plant seed microbiomes**

Tim SAWBRIDGE (Department of Energy, Environment and Climate Action, Bundoora - AUSTRALIA)

08:30 - 10:30 CONCURRENT SESSIONS (next)

C5.7 - Plant pathogens interactions in multi stress conditions (abiotic and biotic stresses): Viruses and other pathogens?

Bellecour 2

Chairpersons:

Piotr TREBICKI (University of Melbourne, Melbourne - AUSTRALIA)

Manuella VAN MUNSTER (INRAE, Montpellier - FRANCE)

08:30 **C5.7-1 - Plant-Virus-Vector interactions under abiotic stresses**

Manuella VAN MUNSTER (INRAE, Montpellier - FRANCE)

Piotr TREBICKI (University of Melbourne, Melbourne - AUSTRALIA)

08:50 **C5.7-2 - Searching for sustainable and efficient sources of disease resistance upon fluctuating climate: Characterization of the wheat-specific responses to Fusarium head blight under contrasting irrigation**

Larissa ADAMIK (Université Clermont Auvergne, Clermont-Ferrand - FRANCE)

09:05 **C5.7-3 - Drought exacerbate virus effect on canola plants**

Clara LAGO (Institute of Agricultural Science, Spanish Research Council, Madrid - SPAIN)

09:25 **C5.7-4 - The Botrytis cinerea pectin lyase BCPNL1 is involved in pathogenicity and its pectinolytic activity contributes to the impact of host nitrogen nutrition on disease severity**

Antoine DAVIERE (Université Paris-Saclay, INRAE, AgroParisTech, Institut Jean-Pierre Bourgin (JJPB), Versailles - FRANCE)

09:40 **C5.7-5 - Can temperature adaptation drive Ralstonia solanacearum range expansion in the future?**

Karla CARDENAS GOMEZ (UNIVERSITY OF YORK, York - UNITED KINGDOM)

10:00 **C5.7-6 - Barley shows reduced Fusarium head blight under drought and modular expression of differential expressed genes under combined stress**

Christina STEIDELE (Technical University of Munich, Freising-Weihenstephan - GERMANY)

10:30 - 11:00 **Coffee break and exhibition**

Forum 4-5-6

11:00 - 13:00

CONCURRENT SESSIONS (next)

C6.1 - Progress in disease control - Part 2

Gratte Ciel

Chairpersons:

Guido SCHNABEL (Clemson University, Clemson - UNITED STATES)

Gerd STAMMLER (BASF, Ludwigshafen - GERMANY)

- 11:00 **C6.1-1 - The Australian way of crop disease control in agriculture and horticulture**
Levente KISS (University of Southern Queensland, Toowoomba - AUSTRALIA)
- 11:20 **C6.1-2 - Integrated control of strawberry powdery mildew incorporating the use of a prediction system and a bio-available silicon nutrient**
Bo LIU (University of Hertfordshire, Hatfield - UNITED KINGDOM)
- 11:35 **C6.1-3 - Fungicide resistance management, monitoring and alternatives investigated in the South African citrus industry**
Jan VAN NIEKERK (Citrus Research International, Nelspruit - SOUTH AFRICA)
- 11:55 **C6.1-4 - A perspective for the use of synthetic analogs of the natural peptaibol trichogin GA IV as biopesticides**
Silvio TUNDO (Department of Land, Environment, Agriculture and Forestry (TESAF), University of Padova, Legnaro - ITALY)
- 12:10 **C6.1-5 - The evolution of fungicide resistance in European cereal pathogen populations**
Nichola HAWKINS (National Institute of Agricultural Botany, Cambridge - UNITED KINGDOM)
- 12:30 **C6.1-6 - Integrated plant disease management of cereals in France: From research to practice**
Romain VALADE (ARVALIS, Boigneville - FRANCE)

C6.2 - High Throughput Sequencing approaches for the detection of pathogens

Grand Salon
Prestige

Chairpersons:

Fiona CONSTABLE (Agriculture Victoria, Bundoora - AUSTRALIA)

Sebastien MASSART (Liege University, Gembloux - BELGIUM)

- 11:00 **C6.2-1 - To trust or not to trust ? That is the question when detecting a pathogen with high Throughput Sequencing: Considerations for improving the reliability of detection**
Sebastien MASSART (Liege University, Gembloux - BELGIUM)
- 11:20 **C6.2-2 - High Throughput Sequencing: Research to reality - The Australian post entry quarantine journey**
Julie PATTEMORE (Australian Government, Canberra - AUSTRALIA)
- 11:35 **C6.2-3 - Validating small RNA sequencing and assembly as a generic method for virus indexing in potato and sweetpotato germplasm**
Jan KREUZE (International Potato Center, Lima - PERU)
- 11:55 **C6.2-4 - Rose viruses: Understanding the current status and protecting the future of the United Kingdom rose sector**
Ines VAZQUEZ IGLESIAS (Fera Science Ltd., York - UNITED KINGDOM)
- 12:10 **C6.2-5 - High Throughput Sequencing approaches for fastidious bacterial detection and identification**
Fiona CONSTABLE (Agriculture Victoria, Bundoora - AUSTRALIA)
- 12:30 **C6.2-6 - Metagenomic sequencing for tomato and pepper bacterial spot diagnostics**
Taylor KLASS (The Ohio State University Department of Plant Pathology, Columbus - UNITED STATES)

11:00 - 13:00 CONCURRENT SESSIONS (next)

C6.3 - Molecular aspects: Plant-nematode interactions

Tête d'Or 1-2

Chairpersons:

Diana FERNANDEZ (IRD, Montpellier - FRANCE)

Paulo VIEIRA (ARS-USDA, Beltsville - UNITED STATES)

- 11:00 **C6.3-1 - Cellular and molecular mechanisms involved in GPA2-Mediated effector-triggered immunity against potato cyst nematodes**
Aska GOVERSE (Laboratory of Nematology, Department of Plant Science, Wageningen University, Wageningen - NETHERLANDS)
- 11:20 **C6.3-2 - Genomic variations associated to MI-1 resistance breaking down by *Meloidogyne incognita***
Ana ZOTTA MOTA (INRAE, Biot - FRANCE)
- 11:35 **C6.3-3 - Beech leaf disease: An emergent threat to beech forest ecosystems**
Paulo VIEIRA (ARS-USDA, Beltsville - UNITED STATES)
- 11:55 **C6.3-4 - Sugr: The subventral gland "Master" regulator of Plant-Parasitic cyst nematodes**
Anika DAMM (University of Cambridge, Cambridge - UNITED KINGDOM)
- 12:10 **C6.3-5 - Detection of root-knot nematodes: Traditional VS. Novel approach with hyperspectral imaging**
Barbara GERIC STARE (Agricultural Institute of Slovenia / Kmetijski inštitut Slovenije, Ljubljana - SLOVENIA)
- 12:30 **C6.3-6 - Shoot! Where's my feeding site? Defining a tissue-independent response to nematode parasitism**
Olaf KRANSE (University of Cambridge, Cambridge - UNITED KINGDOM)

C6.4 - Particle based delivery of biomolecules for crop protection

Salon Tête d'Or

Chairpersons:

Giorgio BALESTRA (UNIVERSITA DEGLI STUDI DELLA TUSCIA, Viterbo - ITALY)

Mathews PARET (University of Florida, Gainesville - UNITED STATES)

- 11:00 **C6.4-1 - Bioclay - Delivering RNA sprays to crops using clay particles for sustainable crop protection**
Neena MITTER (The University of Queensland, St Lucia - AUSTRALIA)
- 11:20 **C6.4-2 - Using nanocarriers for targeted RNAi therapy in controlling plant pathogens**
Washington DA SILVA (The Connecticut Agricultural Experiment Station, New Haven - UNITED STATES)
- 11:35 **C6.4-3 - Cellulose-based nanoparticles to deliver active natural compounds: A successful case in the management of the tomato bacterial speck disease**
Daniele SCHIAVI (Department of Agriculture and Forest Sciences, University of Tuscia, Viterbo - ITALY)
- 11:55 **C6.4-4 - The use of artificial nanovesicles for DSRNA delivery in Spray-Induced Gene Silencing (SIGs) for crop protection**
Jonatan NIÑO SÁNCHEZ (University of Valladolid, Palencia - SPAIN)
- 12:10 **C6.4-5 - Synthetic lipid nanoparticles: Fabrication and use for plant disease protection**
Laura CHALUPOWICZ (Agricultural Research Organization, Volcani Center, Rishon Lezion - ISRAEL)
- 12:30 **C6.4-6 - Potential use of chitosan-based nanoparticles in crop protection**
Theoni MARGARITPOULOU (Benaki Phytopathological Institute, Scientific Directorate of Phytopathology, Kifissia - GREECE)

11:00 - 13:00

CONCURRENT SESSIONS (next)

C6.5 - Soil-borne plant viruses

Bellecour 1

Chairpersons:

Claude BRAGARD (UC Louvain, Louvain - BELGIUM)

Eugénie HEBRARD (IRD, Montpellier - FRANCE)

- 11:00 **C6.5-1 - Viruses interact with soil and plant microbiomes**
Ella Tali SIERADZKI (École Centrale de Lyon, Ecully - FRANCE)
- 11:20 **C6.5-2 - Naturally occurring viral chimeric RNA - A novel class of functional sub-viral agents associated with virus infections in plants**
Eugene SAVENKOV (Department of Plant Biology, Swedish University of Agricultural Sciences (SLU), Uppsala - SWEDEN)
- 11:35 **C6.5-3 - Virus-Nematode-Plant interactions during transmission of grapevine fanleaf virus**
Christophe RITZENTHALER (CNRS Université de Strasbourg, Strasbourg - FRANCE)
- 11:55 **C6.5-4 - Soil-Borne multipartite BNYVV differentially controls its segment copy number**
Yi GUO (University of Bologna, DISTAL, Bologna - ITALY)
- 12:10 **C6.5-5 - Towards a better understanding of furovirus-host interaction - Identification of factors influencing infection**
Annette NIEHL (Julius Kühn-Institut, Braunschweig - GERMANY)
- 12:30 **C6.5-6 - Adaption of bnyvv towards RZ1 resistance in sugar beet**
Mark VARRELMANN (Institute of Sugar Beet Research, Göttingen - GERMANY)

C6.6 - Towards structure-based design of disease resistance genes

Bellecour 3

Chairpersons:

Thomas KROJ (INRAE, Montpellier - FRANCE)

You-Liang PENG (China Agricultural University, Beijing - CHINA)

- 11:00 **C6.6-1 - How to create new resistance genes by the molecular engineering of NLR immune receptors**
Thomas KROJ (INRAE, Montpellier - FRANCE)
- 11:20 **C6.6-3 - Recognition of pathogen effectors by non-canonical domains in plant NLR immune receptors**
Mark BANFIELD (John Innes Centre, Norwich - UNITED KINGDOM)
- 11:40 **C6.6-4 - Revive broken NLR-Genes**
Daniel ZENDLER (Molecular Plant Pathology, SILS, Universiteit van Amsterdam, Amsterdam - NETHERLANDS)
- 11:55 **C6.6-5 - Designer RGA5 sensor receptors conferring altered specificity of blast resistance in rice**
Junfeng LIU (China Agricultural University, Beijing - CHINA)

11:00 - 13:00 CONCURRENT SESSIONS (next)

C6.7 - A mechanistic approach of the varietal mixture effects on plant pathogens

Bellecour 2

Chairpersons:

Elisabeth FOURNIER (INRAE, Montpellier - FRANCE)

Jean-Benoit MOREL (INRAE, Montpellier - FRANCE)

Frédéric SUFFERT (INRAE, Palaiseau - FRANCE)

11:00 **C6.7-1 - Utilizing biodiversity science to guide sustainable crop management**

Anna-Liisa LAINE (University of Zurich, Zurich - SWITZERLAND)

11:20 **C6.7-2 - How species mixtures suppress plant diseases: Insights from a meta-analysis**

Bob DOUMA (Centre for Crop Systems Analysis, Wageningen University, Wageningen - NETHERLANDS)

11:35 **C6.7-3 - Combining sources of resistance in varietal mixtures to manage the evolutionary dynamic of pathogen populations of cereal crops: A way to solve the efficiency-sustainability trade-off?**

Frédéric SUFFERT (INRAE, Palaiseau - FRANCE)

11:55 **C6.7-4 - Plant-Plant interactions modulate wheat susceptibility to Septoria**

Laura MATHIEU (PHIM, INRAE, CIRAD, IRD, Institut Agro, Univ Montpellier, Montpellier - FRANCE)

12:10 **C6.7-5 - Smarter varietal mixtures to improve plant disease management**

Alexey MIKABERIDZE (University of Reading, Reading - UNITED KINGDOM)

12:30 **C6.7-6 - Variable effects of a wheat cultivar mixture on Septoria tritici blotch: Investigating key factors involved in mixture effect variation between European sites**

Tiphaine VIDAL (Université Paris-Saclay, INRAE, UR1290 BIOGER, Palaiseau - FRANCE)

13:00 - 14:30 Lunch and exhibition

Forum 4-5-6

14:30 - 16:30 CONCURRENT SESSIONS (next)

C7.1 - Molecular aspects of plant-fungal interactions Part 2: Mechanisms of infection

Gratte Ciel

Chairpersons:

Antonio DI PIETRO (Universidad de Cordoba, Cordoba - SPAIN)

Nathalie POUSSEREAU (Université Claude Bernard Lyon 1, Lyon - FRANCE)

- 14:30 **C7.1-1 - Functional analysis of the mep effector gene repertoire of the blast fungus *Magnaporthe oryzae***
Nicholas TALBOT (The Sainsbury Laboratory, Norwich - UNITED KINGDOM)
- 14:50 **C7.1-2 - Regulation of effector gene expression as concerted waves in *Leptosphaeria maculans*: A two-players game involving a chromatin remodeler and a specific transcription factor**
Isabelle FUDAL (INRAE, Palaiseau - FRANCE)
- 15:05 **C7.1-3 - Tight regulation of cell wall degrading enzymes is critical for virulence of the wheat pathogen *Zymoseptoria tritici***
Andrea SANCHEZ-VALLET (Centro de Biotecnología y Genómica de Plantas, Universidad Politécnica de Madrid (UPM) – Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA/CSIC), Pozuelo De Alarcon - SPAIN)
- 15:25 **C7.1-4 - Addressing redundant roles of phytotoxic proteins for necrotrophic infection of *Botrytis cinerea* by multi-K.O. mutagenesis**
Matthias HAHN (RPTU Kaiserslautern University, Kaiserslautern - GERMANY)
- 15:40 **C7.1-5 - Suppression and counter-suppression of plant immunity by an EXO-BETA-1,3-GLUCANASE of GH17 family and an elongation factor 1ALPHA of the rice blast fungus**
You-Liang PENG (China Agricultural University, Beijing - CHINA)
- 16:00 **C7.1-6 - The fungal pathogen *Ustilago maydis* modulates host gene expression to trigger tumor formation in maize**
Gunther DOEHLEMANN (UNIVERSITY OF COLOGNE, Cologne - GERMANY)

C7.2 - Plant protection potential of persistent (cryptic) viruses in fungi, plants and insect vectors of plant disease

Grand Salon
Prestige

Chairpersons:

María A. AYLLON (Universidad Politécnica de Madrid, Madrid - SPAIN)

Massimo TURINA (National Research Council of Italy, Torino - ITALY)

- 14:30 **C7.2-1 - Exploring mycovirus-mediated hypovirulent strain as plant vaccine to control crop disease**
Daohong JIANG (Huazhong Agricultural University, Wuhan - CHINA)
- 14:50 **C7.2-2 - Effects on the sporogenesis and biocontrol functions of *Trichoderma* SPP. by the mycoviruses**
Wu BEILEI (Institute of Plant Protection, Chinese Academy of Agricultural Sciences, Beijing - CHINA)
- 15:05 **C7.2-3 - Conditional mutualism between grapevine rupestris stem pitting-associated virus and *Vitis vinifera* confers tolerance to drought and fungal diseases**
Giorgio GAMBINO (National Research Council of Italy (CNR), Torino - ITALY)
- 15:25 **C7.2-4 - Investigating plant persistent viruses in pepper**
Satish Bharathwaj VISWANATHAN (UNIVERSITY OF CAMBRIDGE, Cambridge - UNITED KINGDOM)
- 15:40 **C7.2-5 - Latent virus infection in insect pests: The case study of iflaviruses and *Phytoplasma* vectors**
Sara OTTATI (Università degli studi di Torino, Grugliasco (To) - ITALY)
- 16:00 **C7.2-6 - The miscellaneous mycovirome associated to the plant pathogenic fungus *Erysiphe necator***
María A. AYLLON (Universidad Politécnica de Madrid, Madrid - SPAIN)

14:30 - 16:30 CONCURRENT SESSIONS (next)

C7.3 - At the heart of disease emergence: Determinants and consequences of host range contours of plant pathogens

Tête d'Or 1-2

Chairpersons:

Benoit MOURY (INRAE, Montfavet - FRANCE)

Méline SAUBIN (Université de Lorraine, INRAE, IAM, Nancy - FRANCE)

- 14:30 **C7.3-1 - On the emergence of new pathogens: Insights from comparative genome studies of the Septoria blotch pathogen**
Eva STUKENBROCK (Christian-Albrechts University of Kiel, Kiel - GERMANY)
- 14:50 **C7.3-2 - Stemphylium vesicarium causes foliar disease on celery in Michigan, USA**
Abdelrazek ABDELRHIM (Department of Plant Pathology, Faculty of Agriculture, Minia University, El-Minya - EGYPT)
- 15:05 **C7.3-3 - Demographic and genomic consequences of a rapid adaptation event in the poplar rust pathogen**
Méline SAUBIN (Université de Lorraine, INRAE, IAM, Nancy - FRANCE)
- 15:25 **C7.3-4 - History of the law of barberry eradication: - Why was the law removed and should it be reinstated? A case study from Sweden**
Anna BERLIN (Swedish univeristy of agricultural sciences, Uppsala - SWEDEN)
- 15:40 **C7.3-5 - Subpopulation differences in susceptibility to viral disease in north American switchgrass: Genetic and ecological considerations**
Michael RYSKAMP (Michigan State University, Department of Plant Biology, Michigan - UNITED STATES)
- 16:00 **C7.3-6 - Survival niches of Curtobacterium flaccumfaciens PV. flaccumfaciens**
Daniele Maria NASCIMENTO (Sao Paulo State University, Botucatu - BRAZIL)

C7.4 - One health: Impact of resistance to antibiotics and fungicides in plant pathogens

Salon Tête d'Or

Chairpersons:

Claude BRAGARD (UC Louvain, Louvain - BELGIUM)

Sally MILLER (Ohio State University, Columbus - UNITED STATES)

- 14:30 **C7.4-1 - Medical implications of azole fungicide use on Aspergillus fumigatus: A One Health challenge requiring a multidisciplinary approach**
Paul VERWEIJ (Radboud University Medical Centre, Nijmegen - NETHERLANDS)
- 14:50 **C7.4-2 - Sensitivity to azole fungicides in nordic populations of Parastagonospora nodorum causing stagonospora nodorum blotch of wheat and Aspergillus fumigatus causing invasive aspergillosis in humans**
Andrea FICKE (Norwegian Institute of Bioeconomy Research (NIBIO), Aas - NORWAY)
- 15:05 **C7.4-3 - The hunt for killer Aspergillus fumigatus in the environment - Surveillance of tomato and corn fields in Ohio**
Melanie IVEY (The Ohio State University, Wooster - UNITED STATES)
- 15:25 **C7.4-4 - Elucidating the impacts of anthropogenic activities on beneficial and pathogenic plant microbe interactions**
Wisnu Adi WICAKSONO (Graz University of Technology, Graz - AUSTRIA)
- 15:40 **C7.4-5 - Use of antibiotics to control plant pathogenic bacteria: Genetic and genomic considerations**
Marie VERHAEGEN (Université catholique de Louvain (UCLouvain), Louvain-La-Neuve - BELGIUM)

14:30 - 16:30 CONCURRENT SESSIONS (next)

C7.5 - Pathovars of *Pseudomonas* and *Xanthomonas* spp.: Do they really exist?

Bellecour 1

Chairpersons:

Teresa COUTINHO (University of Pretoria, Pretoria - SOUTH AFRICA)

Marion FISCHER-LE SAUX (INRAE, Beaucoz  - FRANCE)

- 14:30 **C7.5-1 - The pathovar concept misrepresents the reality of disease as a multifactor process; It's time to modernize**
Cindy MORRIS (INRAE, Montfavet - FRANCE)
- 14:50 **C7.5-2 - Pathovars of *Xanthomonas campestris*, diagnostics and disease resistance**
Joana VICENTE (Fera Science Ltd, York - UNITED KINGDOM)
- 15:05 **C7.5-3 - Bacterial pathovar does not align with current (META) genomics-based pathogen identification**
Jonathan JACOBS (The Ohio State University, Columbus - UNITED STATES)
- 15:25 **C7.5-4 - Phylogeny-Assisted Subspecific classification of xanthomonads infecting tomato and pepper**
Jeffrey B. JONES (Department of Plant Pathology, University of Florida, Gainesville - UNITED STATES)
- 15:40 **C7.5-5 - Time to revisit the pathovar concept, towards a polyphasic approach?**
Marion FISCHER-LE SAUX (INRAE, Beaucoz  - FRANCE)

C7.6 - Social and cultural dimensions of international forest health

Bellecour 3

Chairpersons:

Melanie MARK-SHADBOLT (Te Tira Whakamataki, Rangiora - NEW ZEALAND)

Geoffrey M. WILLIAMS (USDA Forest Service, International Programs, Lansing - UNITED STATES)

- 14:30 **C7.6-1 - The Global forest health crisis: A public good social dilemma in need of International Collective Action**
Geoffrey M. WILLIAMS (USDA Forest Service, International Programs, Lansing - UNITED STATES)
- 14:50 **C7.6-2 - NGA rakau taketake - Control, protect, cure novel. Tools and technologies for Detection and Management**
Dave MILNER (Kahu Environmental, Wellington - NEW ZEALAND)
Marion WOOD (Auckland - NEW ZEALAND)
- 15:05 **C7.6-4 - Indigenous seed banking to protect against plant pathogens in aotearoa New Zealand**
Marcus SHADBOLT (Te Tira Whakamataki, Rangiora - NEW ZEALAND)
Phoebe FORDYCE (Te Tira Whakamataki, Rangiora - NEW ZEALAND)
- 15:20 **C7.6-5 - Media coverage of forest survival in Turkey**
Akile GURSOY (Beykent University, Istanbul - TURKEY)
- 15:40 **C7.6-6 - An indigenous solution to a plant pathogen impacting an iconic tree species in Aotearoa-New Zealand**
Tohe ASHBY (Nga Tirairaka o Ngati Hine, Whangarei - NEW ZEALAND)
Jamie ATARIA (Te Tira Whakamataki, Rangiora - NEW ZEALAND)

14:30 - 16:30 CONCURRENT SESSIONS (next)

C7.7 - APP-titude for social media in Plant Disease Research

Bellecour 2

Chairpersons:

Maria Lodovica GULLINO (University of Torino, Grugliasco - ITALY)

Gregory I JOHNSON (International Society for Plant Pathology, Jamison - AUSTRALIA)

Andrea MASINO (University of Torino, Grugliasco - ITALY)

14:30 **C7.7-1 - Enhancing social media delivery to plant pathologists**

Gregory I JOHNSON (International Society for Plant Pathology, Jamison - AUSTRALIA)

14:50 *Discussion*

15:05 **C7.7-3 - The international year of plant health: Being a journalist helps**

Maria Lodovica GULLINO (University of Torino, Grugliasco - ITALY)

15:25 **C7.7-4 - From phytopathological strolls to social media scrolls: An opportunity to raise awareness of plant pathogens**

Frédéric SUFFERT (INRAE, Palaiseau - FRANCE)

15:40 **C7.7-5 - The intersection of social media and indigenous rights in plant pathology**

Hanareia EHAU-TAUMAUNU (The New Zealand Institute for Plant and Food Research Limited, Auckland - NEW ZEALAND)

16:00 *Discussion*

16:30 - 17:00 Coffee break and exhibition

Forum 4-5-6

THURSDAY, AUGUST 24

Detailed program

16:30 - 18:00 POSTERS

Poster viewing session 2

Forum 4-5-6

F-24 - Flash Talk session

Agora

- 16:45 **F6.3-1 - RNAI-mediated parasitism gene silencing as source of crop protection resistance to *Meloidogyne incognita***
Maria Fatima GROSSI-DE-SA (Embrapa Genetic Resources and Biotechnology, Brasilia-Df - BRAZIL)
- 16:50 **F7.1-2 - Spatiotemporal analysis of tan spot in wheat using transcriptome and high-resolution elemental imaging**
Fatima NAIM (Curtin University, Bentley - AUSTRALIA)
- 16:55 **F7.2-1 - Distinct persistent insect viruses characterize local populations of tospovirus-transmitting thrips species**
Marika ROSSI (Institute for Sustainable Plant Protection, Torino - ITALY)
- 17:00 **F9.2-1 - Pectobacterium and Dickeya potato blackleg pathogens: Effect of intra and inter-species strains associations in field trial**
Jeremy CIGNA (FN3PT-inov3PT, Paris - FRANCE)
- 17:05 **F9.2-2 - Role of anaerobic respirations of carbon sources on survival and ecological fitness of Dickeya genus**
Feth El Zahar HAICHAH (INSA Lyon, Villeurbanne - FRANCE)
- 17:10 **F9.2-3 - Small secretory proteins in the pathogenesis of *Sclerotinia sclerotiorum***
Jiasen CHENG (Huazhong Agricultural University, Wuhan - CHINA)
- 17:15 **F9.3-1 - Extremophilic fungal endophytes show high efficacy against soil-borne oomycete and fungal pathogens**
Abdullah AL-SADI (Sultan Qaboos University, Seeb - OMAN)
- 17:20 **F9.3-2 - Fungi associated with macadamia plants at different growth stages**
Jahangir KHAN (The University of Queensland, Brisbane - AUSTRALIA)
- 17:25 **F9.4-1 - Early detection and plant-disease modelling of *Fusarium oxysporum* infection of processing tomato plants using a cost-effective artificial intelligent nose**
Hanyue FENG (University of Melbourne, Parkville - AUSTRALIA)
- 17:30 **F9.4-2 - How reachable is Europe for the Japanese beetle: Tracking planes, trains and trucks to inform surveillance strategies**
Leyli BORNER (INRAE, Institut Agro, Univ Rennes, IGEPP, Le Rheu - FRANCE)
- 17:35 **F9.4-3 - Apple scab forecasting: An insight into prevailing and prospective methods**
K. P. SINGH (G B Pant University of Agriculture & Technology, Pantnagar - INDIA)

16:45 - 17:45 PRIVATE MEETINGS (by invitation)

International Plant Pathology organizations

Salon Tête d'Or

ISPP Subject Matter Committee of «Forest Pathology»

Bellecour 1

16:45 - 17:45 ROUND TABLES

R4.1 - Research Integrity in Plant Pathology

Bellecour 2

R4.2 - Jobs in Plant Pathology: How a plant Pathologist works in industry setting (opened only for Ph.D students and Post-docs)

Foyer Gratte Ciel Parc

18:00 - 20:00 CONCURRENT SESSIONS

C8.1 - Botryosphaeria dieback: Which hosts are affected, what we know and how to fight

Gratte Ciel

Chairpersons:

Josep ARMENGOL (Universitat Politecnica de Valencia, Valencia - SPAIN)

Florence FONTAINE (University of Reims Champagne-Ardenne, Reims - FRANCE)

- 18:00 **C8.1-1 - Botryosphaeriaceae on crops: Currents status of the taxonomy of genera and species**
Artur ALVES (Universidade de Aveiro, Aveiro - PORTUGAL)
- 18:20 **C8.1-2 - Occurrence of Botryosphaeriaceae species pathogens in agriculture and forest systems in California**
Akif ESKALEN (University of California, Davis, Davis - UNITED STATES)
- 18:35 **C8.1-3 - The latent pine pathogen Diplodia sapinea contains two dispensable chromosomes with distinct genomic characteristics**
Brenda WINGFIELD (University of Pretoria, Pretoria - SOUTH AFRICA)
- 18:55 **C8.1-4 - Botryosphaeriaceae cankers of almond in California: Species diversity, molecular detection and biological control**
Florent TROUILLAS (University of California, Davis, Parlier - UNITED STATES)
- 19:10 **C8.1-5 - Botryosphaeria panicle and shoot blight of pistachio: From a dilemma of the California pistachio industry to a success story**
Themis MICHAILIDES (University of California Davis, Parlier - UNITED STATES)
- 19:30 **C8.1-6 - Neofusicoccum parvum: A plant pathogen of global significance**
Bernard SLIPPERS (Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria, Pretoria - SOUTH AFRICA)

C8.2 - Emerging Phytophthora's: Tackling Global Outbreaks that Impact Food security

Grand Salon
Prestige

Chairpersons:

Lise KORSTEN (University of Pretoria, Pretoria - SOUTH AFRICA)

Jean RISTAINO (NC State University, Raleigh - UNITED STATES)

- 18:00 **C8.2-1 - Predicting future Phytophthora outbreaks: New tools to identify emerging lineages and track spread**
Jean RISTAINO (NC State University, Raleigh - UNITED STATES)
- 18:20 **C8.2-2 - The range and contribution of barcoding in Phytophthora and other oomycetes**
David COOKE (The James Hutton Institute, Dundee - UNITED KINGDOM)
- 18:35 **C8.2-3 - Multivariate bayesian analysis to predict invasiveness of Phytophthora pathogens**
Treena BURGESS (Murdoch University, Perth - AUSTRALIA)
- 18:55 **C8.2-4 - Implications of host range and thermal response evolution for emergence of plant pathogenic Phytophthora species**
Daniel BEBBER (University of Exeter, Exeter - UNITED KINGDOM)
- 19:10 **C8.2-5 - Integrating traits, phylogeny and human drivers into risk assessment frameworks for emerging Phytophthora threats**
Louise BARWELL (UK Centre for Ecology and Hydrology, Wallingford - UNITED KINGDOM)
- 19:30 **C8.2-6 - Investigating the risk from Phytophthora in plant nursery green waste**
Kadiatou SCHIFFER-FORSYTH (Forest Research, Roslin - UNITED KINGDOM)

18:00 - 20:00 CONCURRENT SESSIONS (next)

C8.3 - Latest advancements in knowledge and management of *Ralstonia* species

Tête d'Or 1-2

Chairpersons:

Kalpana SHARMA (International Potato Center, Nairobi - KENYA)

Mathews PARET (University of Florida, Gainesville - UNITED STATES)

- 18:00 **C8.3-1 - Describing the known global distribution, host range, and genomic diversity of the *Ralstonia* species complex through cohort-based undergraduate research**
Tiffany LOWE-POWER (UC Davis, Davis - UNITED STATES)
- 18:20 **C8.3-2 - The special case of race 3 BIOVAR 2: Why is *Ralstonia solanacearum* IIB-1 so effective?**
Caitilyn ALLEN (University of Wisconsin-Madison, Madison Wi - UNITED STATES)
- 18:35 **C8.3-3 - Proteases and structural components that restrict *R. solanacearum* colonisation in resistant tomato**
Marc VALLS (Univeristat de Barcelona, Barcelona - SPAIN)
- 18:55 **C8.3-4 - The expansion of the tropical *Ralstonia pseudosolanacearum* (PHY I) to the temperate climates and considerations on the new risks**
Maria BERGSMAN-VLAMI (Netherlands Institute for Vectors, Invasive plants and Plant health (NIVIP), Wageningen - NETHERLANDS)
- 19:10 **C8.3-5 - Bacterial wilt of potato: A threat to food security in Sub-Saharan Africa**
Kalpana SHARMA (International Potato Center, Nairobi - KENYA)
- 19:30 **C8.3-6 - Elucidation of infection mechanism of *Ralstonia solanacearum* on ginger using aseptically regenerated plants**
Kouhei OHNISHI (Kochi University, Nankoku - JAPAN)

C8.4 - Re-emergence of tobamoviruses threatening global vegetable production

Salon Tête d'Or

Chairpersons:

Kai-Shu LING (USDA Agricultural Research Service, Charleston - UNITED STATES)

William WINTERMANTEL (USDA-ARS, Salinas - UNITED STATES)

- 18:00 **C8.4-1 - Global emergence of tomato brown rugose fruit virus in tomato and pepper and its management**
Kai-Shu LING (USDA Agricultural Research Service, Charleston - UNITED STATES)
- 18:20 **C8.4-2 - Water and soil contaminated with emerging tobamoviruses are the source of plant infections**
Nataša MEHLE (National Institute of Biology, Ljubljana - SLOVENIA)
- 18:35 **C8.4-3 - Improving strategies for tomato brown rugose fruit virus surveillance in tomato fruit production**
Adrian FOX (Fera, York - UNITED KINGDOM)
- 18:55 **C8.4-4 - The Emerging tomato brown rugose fruit virus reveals a crossroad between viral movement and plant immunity**
Ziv SPIEGELMAN (Department of Plant Pathology and Weed Research, Agricultural Research Organization - Volcani Institute, Rishon Lezion - ISRAEL)
- 19:10 **C8.4-5 - Cucumber green mottle mosaic virus symptomatology in cucumber plants exposed to fluctuating temperatures and soil pathogens**
Aviv DOMBROVSKY (ARO The Volcani Center, Rishon Le Zion - ISRAEL)
- 19:30 **C8.4-6 - The role of the weed species *Amaranthus viridis* in the epidemiology and survival of cucumber green mottle mosaic virus**
Joanne MACKIE (Agriculture Victoria Research, Department of Energy, Environment and Climate Action, Bundoora - AUSTRALIA)

18:00 - 20:00 CONCURRENT SESSIONS (next)

C8.5 - Controlling Globally Developing Disease Threats of Banana

Bellecour 1

Chairpersons:

Andre DRENTH (The University of Queensland, Brisbane - AUSTRALIA)

Gerrit Hj KEMA (Wageningen University, Wageningen - NETHERLANDS)

- 18:00 **C8.5-1 - Fusarium wilt of banana caused by tropical race 4: Problems and prospects**
Gerrit Hj KEMA (Wageningen University, Wageningen - NETHERLANDS)
- 18:20 **C8.5-2 - From gene discovery to commercial release: A GM cavendish banana highly resistant to Fusarium wilt tropical Race 4**
James DALE (Queensland University of Technology, Brisbane - AUSTRALIA)
- 18:35 **C8.5-3 - Limiting Fungicide use in the management of banana leaf spot diseases**
Jean CARLIER (CIRAD, Montpellier - FRANCE)
- 18:55 **C8.5-4 - Effect of a plant-based biological control of Fusarium wilt on the soil microbiome**
Eliana TORRES BEDOYA (University of Exeter, Exeter - UNITED KINGDOM)
- 19:10 **C8.5-5 - Banana bunchy top virus - Managing this ever-expanding threat**
John THOMAS (The University of Queensland, QAAFI, Brisbane - AUSTRALIA)
- 19:30 **C8.5-6 - An optimised sampling and detection protocol for Fusarium oxysporum F. SP. cubense tropical race 4 from environmental soil**
D. MOSTERT (Stellenbosch University, Stellenbosch - SOUTH AFRICA)

C8.6 - From the deciphering of host pathogen interactions to disease management: The Leptosphaeria maculans /rapeseed case study

Bellecour 3

Chairpersons:

Dilantha FERNANDO (University of Manitoba, Winnipeg - CANADA)

Thierry ROUXEL (INRAE, Thiverval-Grignon - FRANCE)

- 18:00 **C8.6-1 - A set of international isolates of the brassica napus pathogen Leptosphaeria maculans towards elucidating the basis and evolution of plant disease**
Angela VAN DE WOUW (University of Melbourne, Horsham - AUSTRALIA)
- 18:20 **C8.6-2 - Advances in characterisation of quantitative resistance to Leptosphaeria maculans (Blackleg) in rapeseed (Canola)**
Susan SPRAGUE (CSIRO, Canberra - AUSTRALIA)
- 18:35 **C8.6-3 - Structural and functional characterization of effector proteins to propose knowledge-driven plant resistance management**
Clémentine LOUET (INRAE, UR 1290 BIOGER, Palaiseau - FRANCE)
- 18:55 **C8.6-4 - A multiplex High Thoughtput Sequencing tool for the study of avirulence allelic diversity and race structure in populations of Leptosphaeria maculans**
Thierry ROUXEL (INRAE, Thiverval-Grignon - FRANCE)
- 19:10 **C8.6-5 - Function of B.napus cell surface receptors in resistance against blackleg disease of canola**
M. Hossein BORHAN (Agriculture and Agri-Food Canada, Saskatoon - CANADA)
- 19:30 **C8.6-6 - Success in r-gene labeling, multi genes, kasp markers and QR: A game changer in the canola blackleg playbook in Canada**
Dilantha FERNANDO (University of Manitoba, Winnipeg - CANADA)

18:00 - 20:00 CONCURRENT SESSIONS (next)

C8.7 - Raising awareness of plants and ways of teaching plant pathology

Bellecour 2

Chairpersons:

Erik ALEXANDERSSON (SLU, Loma - SWEDEN)

Elsa BALLINI (Institut agro Montpellier, Montpellier - FRANCE)

18:00 **C8.7-1 - Teaching plant pathology**

Maria Lodovica GULLINO (University of Torino, Grugliasco - ITALY)

18:20 **C8.7-2 - Teaching plant pathology in the larger context of science and the humanities**

Brett ARENZ (University of Minnesota, Twin Cities - UNITED STATES)

18:35 **C8.7-3 - Graduate education in plant pathology: Preparing scholars to advance the discipline**

James STACK (Kansas State University, Manhattan - UNITED STATES)

18:55 **C8.7-4 - A step forward in the application and teaching of modern statistical methods for plant pathology**

Demetrio MARCIANÒ (Dipartimento di Scienze Agrarie e Ambientali (DISAA), University of Milan, Milan - ITALY)

19:10 **C8.7-6 - A convenient bibliometric pipeline to snap-shot large research fields - An example of application with the field of molecular plant immunity**

Benjamin PETRE (Unité Mixte de Recherche Université de Lorraine/INRAE Interactions Arbres-Microorganismes, Nancy - FRANCE)

20:30 - 22:30

**Cérémonie des 50 ans de la SFP
(by invitation - Private meeting in French)**

Hôtel de Ville
de Lyon

FRIDAY, AUGUST 25

Program-at-a-glance



08:30 - 10:30	C9.1 - CRISPR crops: Plant Genome Editing Toward Disease Resistance	Auditorium Lumière
	C9.2 - Necrotrophic plant pathogens	Amphi Pasteur
	C9.3 - Endophytes and diseases	Salon Pasteur
	C9.4 - The future of disease surveillance and prediction: Beyond the usual suspects	Rhone 3A
	C9.5 - Forest pathogenic fungi interacting with insect pests: Research fronts and perspectives	Rhone 2
	C9.6 - Synergism/antagonism between microbial pathogens and disease complexes: Implications in epidemiology and management	Rhone 1
	C9.7 - Biology and paleovirology of the Caulimoviridae	Rhone 3B
10:30 - 11:00	Coffee break and exhibition	Place Haute
11:00 - 12:30	Closing Ceremony	Auditorium Lumière
14:00 - 16:00	SFP General Assembly (by invitation)	Auditorium Lumière
16:00 - 18:00	Conférence grand public Les plantes attaquées par des microbes nuisibles: demain nous lutterons avec des microbes bénéfiques	Auditorium Lumière



08:30 - 10:30

CONCURRENT SESSIONS

C9.1 - CRISPR crops: Plant Genome Editing Toward Disease Resistance

Auditorium
Lumière

Chairpersons:

Jean-Luc GALLOIS (INRAE, Montfavet - FRANCE)

Ricardo OLIVA (World vegetable center, Shanhua, Tainan - TAIWAN)

- 08:30 **C9.1-1 - Resistance to viruses based on EIF4E: From natural variation to edited genes**
Jean-Luc GALLOIS (INRAE, Montfavet - FRANCE)
- 08:50 **C9.1-2 - Genome editing of a rice CDP-DAG synthase confers broad-spectrum disease resistance**
Guotian LI (Huazhong Agricultural University, Wuhan - CHINA)
- 09:05 **C9.1-3 - Applications of gene editing for high-throughput gene function discovery and disease resistance improvement in rice**
Kabin XIE (National Key Laboratory of Crop Genetic Improvement, Huazhong Agricultural University, Wuhan - CHINA)
- 09:25 **C9.1-4 - Tapping into plant immune priming by genome editing- towards agriculturally improved crops**
Maya BAR (ARO Volcani Institute, Rishon Lezion - ISRAEL)
- 09:40 **C9.1-5 - Genome editing of an African elite rice variety confers resistance against endemic and emerging Xanthomonas oryzae PV. Oryzae Strains**
Boris SZUREK (IRD, Montpellier, FRANCE)
- 10:00 **C9.1-6 - Disease resistant GM AND GE CROPS: A regulatory trip around the world**
Crystal TURNBULL (Norwegian University of Life Sciences (NMBU), Aas - NORWAY)

C9.2 - Necrotrophic plant pathogens

Amphi Pasteur

Chairpersons:

Matthias HAHN (RPTU Kaiserslautern University, Kaiserslautern - GERMANY)

Henri William NASSER (MAP UMR 5240 CNRS-UCBL-INSA Lyon, Villeurbanne - FRANCE)

- 08:30 **C9.2-1 - Mechanisms of host specificity in the genus Botrytis**
Jan VAN KAN (Wageningen University, Wageningen - NETHERLANDS)
- 08:50 **C9.2-2 - Is the mechanistic action of nlp-induced plant membrane damage universal?**
Nika ZIBRAT (National Institute of Chemistry, Ljubljana - SLOVENIA)
- 09:05 **C9.2-3 - Pectobacterium brasiliense: What have we learned in nearly two decades of research?**
Lucy MOLELEKI (University of Pretoria, Pretoria - SOUTH AFRICA)
- 09:25 **C9.2-4 - Identification OF PTTNLS1 – A putative Pyrenophora teres F. Teres effector involved with barley RPT5-Mediated resistance**
Karl EFFERTZ (Washington State University, Pullman - UNITED STATES)
- 09:40 **C9.2-5 - Small molecules, big impact: Multilevel regulation of C-DI-GMP and its effectors on virulence factors of Dickeya dadantii**
Ching-Hong YANG (University of Wisconsin, Milwaukee, Milwaukee - UNITED STATES)
- 10:00 **C9.2-6 - A counter staining technique eliminates the need for transformation and results in more accurate quantification in multiple fungal-plant interactions**
Ashley NELSON (Department of Plant Pathology, North Dakota State University, Fargo - UNITED STATES)

08:30 - 10:30 CONCURRENT SESSIONS (next)

C9.3 - Endophytes and diseases

Salon Pasteur

Chairpersons:

Pedro JIMENEZ (Universidad Militar Nueva Granada, Nueva Granada - COLOMBIA)

Silvia RESTREPO (Universidad de los Andes, Bogota - COLOMBIA)

08:30 **C9.3-1 - Endophytism, an evolutionary gate to symbioses**

Marc-André SELOSSE (Muséum national d'Histoire naturelle, Paris - FRANCE)

08:50 **C9.3-2 - Apoplastic space of two cultivars provides highly different environments for pathogen colonization: Insights from proteome and microbiome profiling**

Carolina Sardinha FRANCISCO (Christian-Albrechts Universität of Kiel, Kiel - GERMANY)

09:05 **C9.3-3 - Relationship between fungal endophytes and plant disease**

Birgit JENSEN (University of Copenhagen, Frederiksberg C - DENMARK)

09:25 **C9.3-5 - From field to microbial landscapes: Impact of sustainable practices in microbial community in a corn-soybean rotation system**

Alejandro ROJAS (University of Arkansas - Division of Agriculture, Fayetteville - UNITED STATES)

09:45 **C9.3-6 - Pathogenicity of Endophytic Fusarium Species from Corn Plants (Zea Mays) in Peninsular Malaysia**

Latiffah ZAKARIA (Universiti Sains Malaysia, Minden - MALAYSIA)

C9.4 - The future of disease surveillance and prediction: Beyond the usual suspects

Rhone 3A

Chairpersons:

Cindy MORRIS (INRAE, Montfavet - FRANCE)

Emerson DEL PONTE (Universidade Federal de Viçosa, Viçosa - BRAZIL)

08:30 **C9.4-1 - Landscape ecology of rice yellow mottle virus along the Niger valley and implications for disease surveillance and anticipation**

Oumar TRAORE (Institut de l'Environnement et de Recherches Agricoles (INERA), Ouagadougou - BURKINA FASO)

08:50 **C9.4-2 - The role of vineyard characteristics, technology and cultivation in the grape diseases prevalence: First lectures of a large-scale citizen science**

Ivett KOCSIS (Hungarian University of Agriculture and Life Sciences, Budapest - HUNGARY)

09:05 **C9.4-3 - Combining network analysis and machine learning for designing surveillance strategies**

Samuel SOUBEYRAND (INRAE, Avignon - FRANCE)

09:25 **C9.4-4 - Path-Finder: Finding the spore before the disease**

Tracey Vivien STEINRUCKEN (CSIRO, Dutton Park - AUSTRALIA)

09:40 **C9.4-5 - The phytopathobot: An autonomous robot for real-time disease detection and severity estimation in vineyards**

Katie GOLD (Cornell University, Geneva - UNITED STATES)

09:55 **C9.4-6 - Digitization of dehradun (India) forest fungarium with data mining of plants disease**

Yadav NEELESH (Forest Research Institute Dehradun, Dehradun - INDIA)

08:30 - 10:30 CONCURRENT SESSIONS (next)

C9.5 - Forest pathogenic fungi interacting with insect pests: Research fronts and perspectives

Rhone 2

Chairpersons:

Cécile ROBIN (INRAE, Cestas - FRANCE)

Andrea VANNINI (Universita degli Studi della Tuscia, Viterbo - ITALY)

- 08:30 **C9.5-1 - A phylogenetic epidemiology approach to predicting the establishment of a multihost pest-pathogen complex**
Shannon LYNCH (State University of New York College of Environmental Science and Forestry, Syracuse - UNITED STATES)
- 08:50 **C9.5-2 - A new and unusually widespread infestation of the previously rare stroma-forming fungus *Curreya pityophila* in association with the adelgid species *pineus pini* affecting *pinus sylvestris* across Scotland**
Sarah GREEN (Forest Research, Roslin - UNITED KINGDOM)
- 09:05 **C9.5-3 - XYLOSANDRUS SP. And associated fungi: A high-risk symbiosis for natural environments**
Carmen MORALES-RODRIGUEZ (Tuscia University, Viterbo - ITALY)
- 09:25 **C9.5-4 - Ophiostomatoid fungal species associated with mediterranean bark beetle *orthotomicus erosus* in Croatia**
Marta KOVAC (Croatian Forest Research Institute, Jastrebarsko - CROATIA)
- 09:40 **C9.5-5 - Effects of *Lymantria monacha* outbreaks on foliar fungal communities and non-target insects**
Vytautas CESNA (Institute of Forestry, Lithuanian Research Centre for Agriculture and Forestry, Kaunas - LITHUANIA)
- 10:00 **C9.5-6 - Elms, Beetles, *Ophiostoma Novo-Ulmi* and *Geosmithia* SPP.: A complex interaction between main players of dutch elm disease**
Francesco PECORI (National Research Council - Institute for Sustainable Plant Protection, Sesto Fiorentino - ITALY)

C9.6 - Synergism/antagonism between microbial pathogens and disease complexes: Implications in epidemiology and management

Rhone 1

Chairpersons:

Teresa COUTINHO (University of Pretoria, Pretoria - SOUTH AFRICA)

Jay Ram LAMICHHANE (INRAE, Castanet-Tolosan - FRANCE)

- 08:30 **C9.6-1 - Tomato pith necrosis: A bacterial disease complex caused by endophytic pseudomonads**
Vittoria CATARA (University of Catania, Catania - ITALY)
- 08:50 **C9.6-2 - Two are worse than one, the consequences of co-infection with a Viral/Oomycete complex caused by cucumber green mottle mosaic virus and *Pythium* species under different environmental regimes**
Omer FRENKEL (Agriculture Research Organization, Volcani Center, Rishon Lezion - ISRAEL)
- 09:05 **C9.6-3 - Life history traits, coinfection and epidemiological dynamics in a parasitic complex: The case of *Ascochyta* blight of pea**
Christophe LE MAY (Institut Agro Rennes-Angers, Rennes - FRANCE)
- 09:25 **C9.6-4 - Interactions of two phloem limited viruses in their host plant and vector and implications for vector fitness and epidemics**
Rajagopalbabu SRINIVASAN (University of Georgia, Griffin - UNITED STATES)
- 09:40 **C9.6-5 - Synergism between viruses in the wheat streak mosaic disease complex in wheat**
Stephen WEGULO (University of Nebraska-Lincoln, Lincoln - UNITED STATES)
- 10:00 **C9.6-6 - Synergistic relationship of *Harzia ixtarensis* with *Colletotrichum fragariae* causing anthracnose on *Annona cherimola* fruit in Mexico**
Ramón VILLANUEVA-ARCE (Instituto Politécnico Nacional. Unidad Profesional Interdisciplinaria de Biotecnología-Laboratorio de Biotecnología Alimentaria, Ciudad De México - MEXICO)

08:30 - 10:30 CONCURRENT SESSIONS (next)

C9.7 - Biology and paleovirology of the Caulimoviridae

Rhone 3B

Chairpersons:

Andrew GEERING (The University of Queensland, St Lucia - AUSTRALIA)

Pierre Yves TEYCHENEY (Cirad-Bios-Umr-Pvmt, Saint Pierre - REUNION)

08:30 **C9.7-1 - Charting the Interactome of cauliflower mosaic virus**

James SCHOELZ (University of Missouri, Columbia - UNITED STATES)

08:50 **C9.7-2 - Origin, spread and control of endogenous pararetroviruses within petunia**

Gilbert CHOFONG (Julius Kühn-Institut, Federal Research Centre for Cultivated Plants, Institute for Epidemiology and Pathogen Diagnostics, Braunschweig - GERMANY)

09:05 **C9.7-3 - Diagnosis and epidemiological dynamics of cacao swollen shoot badnaviruses in west Africa: Major advances and gaps in knowledge**

George A. AMEYAW (Cocoa Research Institute of Ghana, New Akim Tafo - GHANA)

09:25 **C9.7-4 - Identification and distribution of novel badnaviral sequences integrated in the genome of cacao (Theobroma Cacao)**

Emmanuelle MULLER (CIRAD, Montpellier - FRANCE)

09:40 **C9.7-5 - Molecular biology of rice tungro bacilliform virus (Tungrovirus Bacillooryzae): New leads to control rice tungro disease**

Indranil DASGUPTA (University of Delhi South Campus, New Delhi - INDIA)

10:00 **C9.7-6 - Unravelling the structure of endogenous badnaviruses of African yam shed light on the origin and diversity of yam caulimoviridae insertions**

Marie UMBER (INRAE - UR ASTRO, Petit-Bourg - FRANCE)

10:30 - 11:00 Coffee break and exhibition

Place Haute

11:00 - 12:30 Closing Ceremony

Auditorium
Lumière

Chairperson: Sylvie GERMAN-RETANA, SFP President (INRAE-Bordeaux Nouvelle Aquitaine, Bordeaux - FRANCE)



Closing plenary presentation

The Future of Plant Pathology in a One Health World

Monica HÖFTE (University of Ghent, Ghent - BELGIUM)

State of ISPP and Awards Ceremony

Jan E. LEACH, ISPP President (Colorado State University, Fort Collins - UNITED STATES)

Future of ISPP and Invitation to ICPP2028

Yong Hwan LEE, Incoming ISPP President

Andrew GEERING, Australasian Plant Pathology Society Vice President

Closing Remarks

Nathalie POUSSEREAU and Mathias CHOQUER, ISPP Congress Vice Presidents (University of Lyon 1, Lyon - FRANCE)

Sylvie GERMAN-RETANA, SFP President (INRAE-Bordeaux Nouvelle Aquitaine, Bordeaux - FRANCE)

14:00 - 16:00	SFP General Assembly (by invitation)	Auditorium Lumière
16:00 - 18:00	CONFÉRENCE GRAND PUBLIC Les plantes attaquées par des microbes nuisibles : demain nous lutterons avec des microbes bénéfiques	Auditorium Lumière
<p>Animée par Marc-André Selosse (Professeur du Muséum National d'Histoire Naturelle de Paris)</p> <div style="display: flex; align-items: flex-start;">   <div style="flex-grow: 1;"> <p>La santé des plantes, d'un intérêt vital pour notre alimentation, est menacée par des microbes tels que des champignons ou des bactéries. Si l'on découvre au 19^{ème} siècle l'origine microbienne des maladies de plantes et au 20^{ème} siècle le premier virus sur une plante malade, aujourd'hui une toute autre image plus positive des microbes émerge. Comme l'Homme et les Animaux, les Plantes sont peuplées de microbes assurant leur santé et formant ce qu'on appelle le microbiote. Demain, les propriétés défensives du microbiote offriront des perspectives pour lutter contre les microbes indésirables.</p> </div> </div>		

ICPP 2023 Exhibition Booth 29

Molecular Diagnostics for Plant Health



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MONDAY 21 & TUESDAY 22 AUGUST

BIOLOGICAL CONTROL - The importance of augmentative biocontrol and plant microbiome function for plant health

P1.1-001 Microbial biological control agents (MBCAS): Consumers' friends or foes?

Bennet Rohan DEVASAHAYAM (Halle (Saale) - GERMANY)

P1.1-002 In-vitro evaluation of bioagents against claviceps fusiformis causing ergot of pearl millet

Sathish KUMAR (Buldana - INDIA)

P1.1-003 Trichoderma afroHarzianum - A new pathogen in maize | Annette PFORDT (Goettingen - GERMAN)

P1.1-004 Biological control over sources of powdery mildew inoculum (Erysiphe Necator), gray rot (Botrytis Cinerea) and arm death (Diplodia Serjata), in periods of winter dormancy of Vitis vinifera | Eduardo DONOSO (Maule - CHILE)

P1.1-005 In vitro efficacy of some plant extracts on the inhibition of pectobacterium carotovorum, the causative agent of bacterial soft rot | Mahdi MIRZAEI (Tehran - IRAN (ISLAMIC REPUBLIC OF))

P1.1-006 Insight of the bacteria communities in the phyllosphere of coffea arabica CATIMOR7963 associating with geographical differences | Le LI (Haikou, Hainan - CHINA)

P1.1-007 A potential biocontrol agent for managing potato common scab in Taiwan | Tsung-Chun LIN (aichung City - TAIWAN)

P1.1-008 Application of a biocontrol agent for managing root-knot nematode, Meloidogyne graminicola

Tsung-Chun LIN (Taichung City - TAIWAN)

P1.1-009 Bacillus megaterium strains isolated from rhizosphere as promising agent for biostimulants

Yangseon KIM (Jeongeup - REPUBLIC OF KOREA)

P1.1-011 Designing synthetic microbial community for biotic stress mitigation in agriculture | Rashi TYAGI (New Delhi - INDIA)

P1.1-012 A lab to land experience on Trichoderma based technology for better plant health management in tribal regions of north east India | Pranab DUTTA (Umiam - INDIA)

P1.1-013 Evaluation of multi-bacillus strains on control of southern blight in pepper | Wen-Hsin CHUNG (Taichung - TAIWAN)

P1.1-014 Present status, characterization & biological control using native bacterial strains for dieback & black root rot diseases of strawberry in Pakistan | Nasir MEHMOOD (Rawalpindi - PAKISTAN)

P1.1-015 Isolation and identification of penicillium corylophilum as antibacterial-producing fungi in the soil environment of koya provin | Taha ZRARY (Koya - IRAQ)

P1.1-016 A biological agent serenade for promoting the banana growth and modifying rhizosphere soil microbial diversity and community composition | Sijun ZHENG (Kunming - CHINA)

P1.1-017 Simplicillium as the dominant mycoparasites of hemileia vastatrix revealing regional genetic diversification

Le LI Haikou (Hainan - CHINA)

P1.1-018 Potential growth suppression and bacteriostatic activity of plant-associated lactic acid bacteria (LAB) against pantoea stewartii of the jackfruit bronzing disease | Khimphin CHONG (Kota Kinabalu - MALAYSIA)

P1.1-019 Induction of pepper resistance against pepper mild mottle virus by bacillus velezensis treatment

Ying-Huey CHENG (Kaohsiung - TAIWAN)

P1.1-020 Prospects for the use of microbial preparations to protect fruit crops from fire blight

Olga SHEMSHURA (Almaty - KAZAKHSTAN)

P1.1-021 Lecanicillium as the principal natural enemy of hemileia vastatrix displaying genetic divergence with geographic patterns and leaf symptom preferences in field sets | Le LI (Haikou, Hainan - CHINA)

MONDAY 21 & TUESDAY 22 AUGUST

P1.1-022 Reduction of pathogens causing *Fusarium* head blight in wheat grain by *aureobasidium pullulans* strains producing aureobasidin a | Urszula WACHOWSKA (Olsztyn - POLAND)

P1.1-023 Microrna expression profile reveal the regulation of E-Poly-L-Lysine on nicotiana tabacum anti-tobacco mosaic virus | He LIU (Shenyang - CHINA)

P1.1-024 Biological soil crust microalgae as a novel source for the development of biocontrol agent
Hagai RAANAN (Gilat - ISRAEL)

P1.1-025 Fighting lettuce bacterial pathogens with beneficial *Pseudomonas* strains
Antoine ZBORALSKI (Saint-Jean-sur-Richelieu - CANADA)

P1.1-026 Effects of *Pseudomonas alcaliphila* EJ2 on the endophytic microbiome and proteome of rice under salt stress
Yuxia SHA (Yinchuan - CHINA)

P1.1-027 The impact of microbial volatile organic compounds on plant and microbiome interactions
Anahita BARGHI (Busan - REPUBLIC OF KOREA)

P1.1-028 Application of antagonistic and entomopathogenic fungal consortium against *Fusarium* wilt and aphids of cumin
Pratibha SHARMA (Jaipur - INDIA)

P1.1-029 Control of anthracnose and thrips in cucumber by *Bacillus subtilis* with production of volatile compounds
Tzu-Pi HUANG (Taichung - TAIWAN)

P1.1-030 Screening and application of induced resistance microbe for viral disease control in cucumber
Mei Ju LIN (Taichung - TAIWAN)

P1.1-031 Interaction of aub 209 (*Streptomyces enissocaesilis*) and audt 626- (*Streptomyces Racemochromogenes*) rhizobacteria and *Sclerotium rolfsii* root rot pathogen on relative expression of defence related genes in soybean through QRT-PCR | Jahagirdar SHAMARAO (Dharwad - INDIA)

P1.1-032 Characterising and harnessing the haematococcus algal microbiome - Towards biocontrol of the fungal pathogen *Paraphysoderma sedebokerense* | Jeanne MIEBACH (Paris - FRANCE)

P1.1-033 Characterization of the mode of action of a biocontrol product through the pathosystem tomato micro-tom and *Phytophthora infestans* | Valentin PENAUD (Mont-Saint-Aignan - FRANCE)

P1.1-034 Characterization and identification of *Fusarium* spp. Species that affect orange crops (*Citrus X Sinensis* L.) In Chile
María Alejandra GARZÓN NIVIA (Santiago - CHILE)

P1.1-035 Saprobic conidial fungi from the southern amazon in the in vitro control of phytopathogens
Solange Maria BONALDO (Sinop - BRAZIL)

P1.1-036 Black soldier fly (*Hermetia illucens*) frass preparations with antagonism against phytopathogenic fungi *Fusarium oxysporum* and *Ganoderma boninense* | Martin ZORRILLA (Singapore - SINGAPORE)

P1.1-037 Exploring the feasibility of biocontrol using *Streptomyces* strains against soybean phytopathogenic fungi
Su In LEE (Jinju-Si - REPUBLIC OF KOREA)

P1.1-038 Metatranscriptomic analyses reveal fungal functional genes with possible roles in the interactions among dominant fungal genera during noble rot development of grapes | Margot OTTO (Eger - HUNGARY)

P1.1-039 Determining the microbiota contribution on crop performance by coupling in situ and in vitro approaches
Rosa KEMMERLING Le Rheu Cedex FRANCE

P1.1-040 Study on phenolic substances in poplar anthracnose | Linxuan ZHANG (Beijing - CHINA)

P1.1-041 Harnessing the inner beast: development of biocontrol agents for sweet acacia (*Vachellia farnesiana*)
Amelia LIMBONGAN (Merauke - INDONESIA)

P1.1-042 Action of *Pythium oligandrum* on grapevine trunk diseases and its impact on microbial communities
Séverine LOPEZ (Villenave-D'ornon - FRANCE)

P1.1-043 Dynamics of microbiota and *Fusarium* spp. Responsible for *Fusarium* head blight and implications for biocontrol strategies | Toan Bao Hung NGUYEN (Plouzané - FRANCE)

P1.1-044 Selection of native *Trichoderma* isolates obtained from banana rhizospheric soil in the canary islands for the control of *Fusarium oxysporum* f. sp. *Cubense* (STR4) | Raquel CORREA-DELGADO (San Cristóbal De La Laguna - SPAIN)

MONDAY 21 & TUESDAY 22 AUGUST

- P1.1-045** Using bacteriophages as evolutionary tools to control bacterial wilt disease: plant transcriptomic response to phage-resistant bacteria | Sara FRANCO ORTEGA (York - UNITED KINGDOM)
- P1.1-046** Efficacy of biopesticide LIFEGARD® WG for controlling plasmopara viticola and erisiphe necator in European grapevine (Vitis Vinifera) | Angela PAUL (Geneva - UNITED STATES)
- P1.1-047** Response of cucumber phyllosphere microbiome to the application of synthetic and environmentally friendly fungicides in managing powdery mildew | Ping-Hu WU (Taipei - TAIWAN)
- P1.1-049** Groel protein from the potential biocontrol agent rhodospseudomonas palustris enhances resistance to rice blast disease | Yue CHEN (Changsha - CHINA)
- P1.1-050** Management of almond canker diseases with the biocontrol agent Trichoderma atroviride strain SC1 in California Rosa JAIME FRIAS (Parlier - UNITED STATES)
- P1.1-051** Effect of additional arbuscular mycorrhizal fungi (amf) application into planting hole for ganoderma disease management in oil palm plantation | Normahnani MD NOH (Selangor - MALAYSIA)
- P1.1-052** Screening biocontrol agents for cash crop Fusarium wilt based on fusaric acid tolerance and antagonistic activity to Fusarium oxysporum | Qinggang GUO (Baoding - CHINA)
- P1.1-053** A natural metabolite, rejuagro, to control apple fire blight, citrus canker, and citrus greening diseases Ching-Hong YANG (Milwaukee - UNITED STATES)
- P1.1-054** Field epidemiology of an obligate biotrophic plant pathogen in the context of classical biological weed control Isabel ZEIL-ROLFE (Canberra - AUSTRALIA)
- P1.1-055** Biocontrol activity against soil-borne plant pathogens by bacillus SPP | Jin, Tong CHEN (Yunlin - TAIWAN)
- P1.1-056** Self-resistance mechanisms during the biosynthesis of antimicrobial n-oxide phenazine in lysobacter antibioticus Yangyang ZHAO (Nanjing - CHINA)
- P1.1-057** Doping in p. Radiata: can plant growth promoting bacteria enhance morpho-biochemical traits Frederico LEITÃO (Aveiro - PORTUGAL)
- P1.1-058** Diversity of nodule-inhabiting bacteria associated with cultivars of pisum sativum and their biocontrol potential against aphanomyces euteiches | Adrien GAUTHIER (Mont-Saint-Aignan - FRANCE)
- P1.1-059** Metatranscriptomic analyses of grapes reveal differences in expressed functional genes of filamentous and yeast fungi during noble rot and grey rot | Margot OTTO (Eger - HUNGARY)
- P1.1-060** In vitro characterization of pichia membranaefaciens for postharvest biocontrol of Monilinia fructicola Elissa LARCO TERÁN (Metropolitan Region - CHILE)
- P1.1-061** Enhanced biological control against acremonium acuatum and trichotecium roseum on grapefruits by application of bacillus velezensis MWS28 with sodium alginate | Kyungseok PARK (Ansung - REPUBLIC OF KOREA)
- P1.1-062** Biological control efficacy by antagonistic bacteria on postharvest diseases caused by Botryosphaeriaceae fungi family | Lucía GUIRADO MANZANO (Málaga - SPAIN)
- P1.1-063** The rapid decline of the invasive species aianthus altissima under the challenge of Verticillium dahliae: A physiochemical study | Cristina NALI (Pisa - ITALY)
- P1.1-065** Biological control of ZymoSeptoria tritici in wheat | Hans Jørgen Lyngs JØRGENSEN (Frederiksberg C - DENMARK)
- P1.1-066** Can wild brassicaceae defense compounds enhance the antagonistic effect of seed-borne fungi against alternaria brassicicola? | Thomas LERENARD (Beaucouze - FRANCE)
- P1.1-067** The microbiome of tuta absoluta, in search of a bio-control method | Adebola Azeez LATEEF (Ilorin - NIGERIA)
- P1.1-068** Multifunctional beneficial bacteria from the tomato endophytome and their biocontrol activity Daniele NICOTRA (Catania - ITALY)
- P1.1-070** Nematicidal activity of a bacterial control agent against clover cyst nematode Hyoung-Rai KO (Wanju - REPUBLIC OF KOREA)
- P1.1-071** Epigenetic changes in tomato plants modulated by soil microbiomes | Myoungsub KIM (Busan - REPUBLIC OF KOREA)
- P1.1-072** Resistant kiwifruit species of hayward can benefication flavobacterium to suppress bacterial canker pathogens | Lili HUANG (Yangling - CHINA)

MONDAY 21 & TUESDAY 22 AUGUST

- P1.1-073** Effects of beneficial microbes on disease resistance in tomato plants | Pi-Fang Linda CHANG (Taichung City - TAIWAN)
- P1.1-074** Evaluation of several arbuscular mycorrhizal fungi products on growth and tolerance of oil palm seedlings against basal stem rot disease caused by *ganoderma boninense* | Afnan Shazwan NASARUDDIN (Banting - MALAYSIA)
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- P1.1-076** A bacterial protein rhp-*psp* modulates plant auxin production and alters leaf metabolites composition to implement mutualistic interaction with plant | Pin SU (Changsha - CHINA)
- P1.1-077** Microbiota interactions and assembly on rice leaf | Qianze PENG (Haikou - CHINA)
- P1.1-078** Antifungal chemical compounds of *Trichoderma* isolates against the incitants of calonectria leaf blight of eucalyptus Ratnaboli BOSE (Dehradun - INDIA)
- P1.1-079** Increased production and use of inosine by spontaneous variation in *paenibacillus polymyxa* E681 Younmi LEE (Andong - REPUBLIC OF KOREA)
- P1.1-081** Sodium alginate bioencapsulation formulation on the efficacy of *bacillus* SP. As biological control against phytopathogen Mochammad Mirza SAPUTRA (Surabaya - INDONESIA)
- P1.1-082** Identification and characterization of *brevibacillus halotolerans* B-4359: A potential antagonistic bacterium against red pepper anthracnose in Korea | Yongho JEON (Andong-Si - REPUBLIC OF KOREA)
- P1.1-083** Endophytes from halophytes: A source of beneficial microbes for a sustainable agriculture Emmanouil MARKAKIS (Heraklion, Crete- GREECE)
- P1.1-084** Biocontrol potential of *bjerkandera adusta* and *sistotrema brinkmannii* against *Heterobasidion* SPP. Primary infections | Darta KLAVINA (Salaspils - LATVIA)
- P1.1-085** Identification of a *streptomyces* specialized metabolite involved in antifungal activity, plant defense stimulation and bacteria fitness in the rhizosphere | Clément NICOLLE (Auzeville - FRANCE)
- P1.1-086** Biological control efficacy of chinese cabbage clubroot caused by *Plasmodiophora brassicae* Joohee NAM (Gwangju-Si - REPUBLIC OF KOREA)
- P1.1-087** Plant genotype specific modulation of *Clonostachys rosea*-mediated biocontrol of *Septoria tritici* blotch disease on wheat | Sidhant CHAUDHARY (Uppsala - SWEDEN)
- P1.1-088** Multi-transcriptome analysis to elucidate the flavobacterium-mediated suppression of bacterial wilt and the causative bacterium | Soon-Kyeong KWON (Jinju - REPUBLIC OF KOREA)
- P1.1-089** Evaluating new *Erwinia* phages as biocontrol tools against fireblight disease in fruit trees Clara TORRES-BARCELÓ (Montfavet - FRANCE)
- P1.1-090** Sporulation potential, dispersal gradient and mycelium growth in coniferous wood of the biocontrol agent *phlebiopsis gigantea* | Keitlina KRASTINA (Salaspils - LATVIA)
- P1.1-091** Effect of bioactive metabolites of native strain of *Trichoderma Harzianum* for management of major foliar diseases of maize in Meghalaya, India | Madhusmita MAHANTA (Umiam- INDIA)
- P1.1-092** Microalga-antifungal bacteria synergistic effect on plant pathogenic fungi and king's strawberry quality Kim MIN-JEONG (Wanju - REPUBLIC OF KOREA)
- P1.1-093** Experimental evolution to study the adaptation of plant-beneficial *pseudomonads* to insects Maria ZWYSSIG (Zürich - SWITZERLAND)
- P1.1-094** Characterization of pepper-microbiome for identification of putative biocontrol agents against *Fusarium* species Lourena MAXWELL (Shanhua - TAIWAN)
- P1.1-095** Dissection of the endophytic and rhizospheric microbiomes of *atractylodes lancea* of different origins and verification of microbe functions on *A. lancea* | Sheng WANG (Beijing - CHINA)
- P1.1-096** Efficacy of *bca*'s and *pri*'s for the control of potato early blight and potato late blight | Marian PÕLDMETS (Tartu - ESTONIA)
- P1.1-097** Investigation of *pti* activation following the perception of an elicitor combination, in *Arabidopsis thaliana* Lisa CABRE (Saint-Malo - FRANCE)
- P1.1-098** Effects of bioinoculants and organic soil amendments on nematode composition of apple orchards Expedito OLIMI (8010 Graz - AUSTRIA)
- P1.1-099** In vivo and in vitro antifungal activity and molecular mechanism of dimethyl trisulfide against *Colletotrichum gloeosporioides* from mango | Lihua TANG (Nanning - CHINA)

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Sandra CASTILLO (Bogota - COLOMBIA)

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Cafer EKEN (Aydin - TURKEY)

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Jaehyo PARK (Seoul - REPUBLIC OF KOREA)

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Shamima AKTER (Gazipur - BANGLADESH)

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Iris YEDIDIA (Rishon Lezion - ISRAEL)

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Latif ZOHAIB (Multan - PAKISTAN)

P1.1-114 Towards a monitoring of biocontrol agents : new tools for a better understanding of their establishment in the environment | Camille JOLLARD (Boigneville - FRANCE)

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Islem YANGUI (Sousse - TUNISIA)

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Léa JOBERT (Montpellier - FRANCE)

P1.1-117 Secondary metabolites of insect symbionts and their antimicrobial activity | Yinglao ZHANG (Hefei - CHINA)

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Abalo Itolou KASSANKOGNO (Bobo Dioulasso - BURKINA FASO)

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Almendra ASTETE FARFAN (Fort Collins - UNITED STATES)

P1.1-121 Disease-induced changes in soybean mycobiome determine plant health | Yao ZHAO (Nanjing - CHINA)

P1.1-122 Biocontrol effects of rhizobacteria producing volatile-organic compounds and cyclolipopeptides against the major pathogen fungi of wheat | Claire PRIGENT-COMBARET (Villeurbanne - FRANCE)

P1.1-123 A seed endophytic Trichoderma sp. Protects the wheat plant against infection caused by the fungal wheat pathogen ZymoSeptoria tritici | Amir MIRZADI GOHARI (Dublin - IRELAND)

P1.1-125 Exploiting biodiversity in perennial crops: effect of mycorrhizal based products on the vineyard rhizosphere

Tito CAFFI (Piacenza - ITALY)

P1.1-126 Occurrence of natural populations of entomopathogenic nematode steinernema feltiae in cereal fields of southeast idaho | Pooria ENSAFI (Idaho Falls - UNITED STATES)

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Tristan LURTHY (Villeurbanne - FRANCE)
- P1.1-128 Use of natural compounds with low environmental impact for the protection of seed-bearing onion against fungal diseases** | Gianfranco ROMANAZZI (Ancona - ITALY)
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Muhammad ABID (Mutan - PAKISTAN)
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Mathilde VINCENT (Villeurbanne - FRANCE)
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Simranjit KAUR (Carlow - IRELAND)
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Emilia PINI (Taipei - TAIWAN)
- P1.1-133 Synergism of Trichoderma genotypes for management of Fusarium wilt in tomato** | Abdul HANNAN (D.g. Khan - PAKISTAN)
- P1.1-134 Management of adult and immature large pine weevil (Hylobius Abietis L.) Using novel local-provenance entomopathogenic fungi and commercial entomopathogenic nematodes** | Luis QUINZO-ORTEGA (Liverpool - UNITED KINGDOM)
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Dimitrios TSITSIGIANNIS (Athens - GREECE)
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Quentin BAZERQUE (Castanet-Tolosan - FRANCE)
- P1.1-140 Efficacy of Trichoderma SPP. Against Phytophthora capsici, the cause of root rot of Chilli**
Muhammad Usman ALI (Faisalabad - PAKISTAN)
- P1.1-141 Evaluating the antagonistic efficacy of plant growth-promoting rhizobacteria against alternaria solani-induced early blight disease in tomato plants** | Amjad Shahzad GONDAL (Multan - PAKISTAN)
- P1.1-142 A decision support system based on literature review and farmers' experience to promote an efficient use of microbial biocontrol agents against diseases** | Thomas PRESSECQ (Montfavet - FRANCE)
- P1.1-143 Effect of biocontrol agents as pruning wound protectants against grapevine trunk diseases**
Marcelo BUSTAMANTE (Davis - UNITED STATES)
- P1.1-144 Italian traditional maize landraces and their microbiome: new perspectives for biological control of Fusarium verticillioides** | Alessia Regina Vera FOLLADOR (Milano - ITALY)
- P1.1-145 Can predators mitigate soilborne diseases?** | Arne SCHWELM (Wexford - IRELAND)
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Stephen GOODWIN (West Lafayette - UNITED STATES)
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David VELA-CORCIA (Malaga - SPAIN)
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Said EL-HASSAN (Coventry - UNITED KINGDOM)
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Mariam BARRO (Bobo-Dioulasso - BURKINA FASO)
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Muhammad WARIS (Gandakha - PAKISTAN)

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Permaul HEMWATTIE (Berbice - GUYANA)

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Gabriela VULETIN SELAK (Split - CROATIA)

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Anthony MABELE (Kakamega - KENYA)

P1.2-002 Psac and atpsyn-a genes induce the rna silencing pathway and cause resistance against the soybean mosaic virus

Kook-Hyung KIM (Seoul - REPUBLIC OF KOREA)

P1.2-003 A plant-specific homolog of dp1/yop1 family proteins plays a proviral role in potyvirus infection

Mingshuo XUE (Villeneuve-D'ornon - FRANCE)

P1.2-004 Transcriptomic responses to the banana bunchy top virus in banana | Tendekai MAHLANZA (Pretoria - SOUTH AFRICA)

P1.2-005 Nmd-mediated virus restriction is compromised by virus-induced autophagic degradation of smg7 in plants

Fangfang LI (Beijing - CHINA)

P1.2-006 Transcriptomic and functional analyses reveal the roles of exogenous boron in alleviating cucumber green mottle mosaic virus infection | Xinyue BI (Shenyang - CHINA)

Xiuling YANG (Beijing - CHINA)

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Xiuling YANG (Beijing - CHINA)

P1.2-008 Occurrence of yellowing viruses infecting cucurbits in Korea and development of multiplex RT-PCR assay for simultaneous detection of three cucurbit viruses | Hae-Ryun KWAK (Wanju - REPUBLIC OF KOREA)

Hae-Ryun KWAK (Wanju - REPUBLIC OF KOREA)

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Hsuan-Chun LAI (Chiayi - TAIWAN)

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Heron DELGADO KRAIDE (Piracicaba - BRAZIL)

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Shekhah ALQAHTANI (Bristol - UNITED KINGDOM)

P1.2-012 A plant viral protein promotes plant disease development via modulating auxin homeostasis

Hanu R PAPPU (Pullman - UNITED STATES)

P1.2-013 Pathogen-triggered metabolic adjustments to potato virus y infection in potato

Hanumantha PAPPU (Pullman - UNITED STATES)

P1.2-014 The triose phosphate/phosphate translocator exports photosynthetic glyceraldehyde 3-phosphate from chloroplasts to trigger antimicrobial immunity in plants | Cheng-Gui HAN (Beijing - CHINA)

Cheng-Gui HAN (Beijing - CHINA)

P1.2-015 Characteristic analysis of cucumber mosaic virus infected in autophagy-defective nicotiana benthamiana plants

Wataru MATSUNAGA (Sapporo - JAPAN)

P1.2-016 The role of 6k1 and ci genetic regions in the adaptation of potato virus y in pepper | Aggeliki RAMPOU (Athens - GREECE)

Aggeliki RAMPOU (Athens - GREECE)

P1.2-017 Development of fosmid-based system for construction of infectious cDNA clone of papaya leaf distortion mosaic virus isolate from Taiwan | Li CHANG (Taipei - TAIWAN)

Li CHANG (Taipei - TAIWAN)

P1.2-018 Sugarcane mosaic virus-encoded nia-pro manipulates pre-mRNA splicing in maize | Kaitong DU (Beijing - CHINA)

Kaitong DU (Beijing - CHINA)

P1.2-019 Development of barley yellow dwarf virus (BYDV) infectious clones

Izayana SANDOVAL-CARVAJAL (Harpenden - UNITED KINGDOM)

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Nikon VASSILAKOS (Kifissia, Athens - GREECE)

P1.2-021 Differential response of pepper against two evolutionarily distinct isolates of potato virus y

Nikon VASSILAKOS (Kifissia, Athens - GREECE)

P1.2-022 Is the glycoprotein responsible for differences in dispersal rates between lettuce necrotic yellows virus subgroups?

Colleen HIGGINS (Auckland - NEW ZEALAND)

P1.2-023 Determination of pvv resistance and expression of resistance associated genes in tomato plants

Nihan GUNES (?zmir - TURKEY)

P1.2-024 Dynamic transcriptional profiles of Arabidopsis thaliana protoplasts transfected by tomato spotted wilt virus

Ho-Hsiung CHANG (Taichung - TAIWAN)

P1.2-025 The role of ci helicase activity in potyviral movement | William ASPELIN (Helsinki - FINLAND)

P1.2-026 Sneaky suo: plant protein promoting potyviral translation | Pinky DUTTA (Helsinki - FINLAND)

P1.2-027 Evolution of papaya leaf curl virus in India: interplay between mutation, recombination and selection force

Aarshi SRIVASTAVA (Gorakhpur - INDIA)

P1.2-028 Screening pepper proteins conditioning infection of pepper mild mottle virus | Tao ZHOU (Beijing - CHINA)

P1.2-029 The virulence factor of beet necrotic yellow vein virus (bnvyv) acts as transcriptional repressor

Mansi MANSI (Uppsala - SWEDEN)

P1.2-030 A search for resistance breaking strains of tomato spotted wilt orthotospovirus in Croatia and slovenia

Dijana KORIC (Zagreb - CROATIA)

P1.2-031 Sweet surprise: the search for genes conferring curly top resistance in sugar beet

Jordan WITHYCOMBE (Fort Collins - UNITED STATES)

P1.2-032 The interplay between viral proline/serine-rich proteins and the plant posttranslational modifications dynamics

Emilyn MATSUMURA (Wageningen - NETHERLANDS)

P1.2-033 Spitfire - screening of pisum sativum accessions for pnydv resistance | Shin-Yee TAN (Braunschweig - GERMANY)

P1.2-034 Oat sterile dwarf | Anna LINNELL (Nyköping - SWEDEN)

P1.2-035 Grapevine fanleaf virus RNAs exhibit a unique uridylation pattern | Shahinez GARCIA (Colmar - FRANCE)

P1.2-036 Development of a quantitative pea necrotic yellow dwarf virus (pnydv) screening system for the selection of resistant pea (Pisum Sativum L.) Accessions | Thomas OBERHAENSLI (Frick - SWITZERLAND)

P1.2-037 Grapevine fanleaf virus avirulence factor 2ahp (homing protein) interacts with several proteins of nicotiana

occidentalis involved in plant immunity | Maïlys PIAU (Colmar - FRANCE)

P1.2-039 Changes to the host transcriptome triggered by begomoviral dna-b: a case study using sri lankan cassava mosaic

virus. | Indranil DASGUPTA (New Delhi - INDIA)

P1.2-040 Cannabis virome reconstruction and antiviral rnai characterization by small rna sequencing

Niccolo' MIOTTI (Milan - ITALY)

P1.2-041 Oxidative stress and activated methyl cycle-related responses in poty-potexvirus synergism in nicotiana benthamiana

Kristiina MÄKINEN (Helsinki - FINLAND)

P1.2-042 Allele mining for EIF4G-mediated resistance in 3K rice genomes, detection of signals for positive selection, and development of pace markers for identified eif4g allele types | Genelou ATIENZA-GRANDE (Los Banos - PHILIPPINES)

P1.2-043 The characterization of the helper component proteinase (hc-pro) of three tulip-infecting potyviruses

Réka SÁRAY (Budapest - HUNGARY)

P1.2-044 Genomic characterization of papaya ringspot virus (prsv) on carica papaya and its management through aphid

vectors in punjab Pakistan | Muhammad WAHAB (Faisalabad - PAKISTAN)

P1.2-045 Peanut stunt virus movement protein has a substantial contribution to host range and symptom determination

Dóra PINCZÉS (Budapest - HUNGARY)

P1.2-046 The effect of tomato spotted wilt virus nss protein self-interaction on silencing suppression and avirulence in pepper

plants | Asztéria ALMÁSI (Budapest - HUNGARY)

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Bakary OUATTARA (Ouagadougou - BURKINA FASO)

Plant responses to pathogens

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Jofil MATI-OM (Biliran - PHILIPPINES)

P1.3-002 Screening of advance oil palm planting materials for ganoderma disease resistant varieties

Mohd Hefni RUSLI (Kajang - MALAYSIA)

P1.3-003 Research highlights on the evaluation of soybean genotypes for responses to pathogens in the southern states of the USA | Shuxian LI (Stoneville - UNITED STATES)

P1.3-005 Teratosphaeria destructans-resistant eucalyptus genotype produce a wax compound that inhibits pathogen germination in-vitro and in-vivo | Michael WINGFIELD (Pretoria - SOUTH AFRICA)

P1.3-006 The impact of low-temperature plasma on secondary metabolites and antioxidant enzymes in different half-sib families of pinus sylvestris seeds leva | CESNIENE (Kaunas - LITHUANIA)

P1.3-007 Disease resistance screening in a sugarcane plant breeding programme: can we do things differently?

Richard S RUTHERFORD (Durban - SOUTH AFRICA)

P1.3-008 Identification of leaf rust resistance genes in wheat cultivars from gansu province in China

Shelin JIN (Lanzhou - CHINA)

P1.3-009 Development of tests for resistance/tolerance to viral yellows in sugar beet | Valérie CADOT (Beaucouzé - FRANCE)

P1.3-011 Developing a disease screening pipeline for resistance to Fusarium head blight of wheat

Lindy ROSE (Cape Town - SOUTH AFRICA)

P1.3-012 Feeding behavior of sharpshooter vectors of Xylella fastidiosa and emission of volatile compounds explain resistance to leaf scald disease in plum genotypes in Brazil | Heloisa THOMAZI-KLEINA (Curitiba - BRAZIL)

P1.3-013 Understanding pyrenopeziza brassicae populations for effective control of light leaf spot in winter oilseed rape

Laura SAPELLI (Hatfield - UNITED KINGDOM)

P1.3-014 A novel resistance pathway in n-gene tobacco against tmv identifies an old inhibitor and an earlier function

Eseul BAEK (Jeonju - REPUBLIC OF KOREA)

P1.3-015 Tobacco myb transcription factor NTMYB92 is involved in the negative regulation of n gene-independent virus resistance | Munehisa YOSHIKAWA (Tokyo - JAPAN)

P1.3-016 Assessment of quantitative resistance against pyrenopeziza brassicae in brassica napus tilling mutants

Laura GIMENEZ MOLINA (Hatfield - UNITED KINGDOM)

P1.3-017 Is there a potential for a genetic control of the barley disease, ramularia leaf spot?

Laura ROHRIG (Edinburgh - UNITED KINGDOM)

P1.3-018 Philippine musa balbisiana accessions: key sources of resistance against banana bunchy top virus

Fe DELA CUEVA (Los Baños - PHILIPPINES)

P1.3-019 A moderate resistance in oat varieties to don producers does not guarantee a moderate resistance to HT2+T2 producers | Ingerd Skow HOFGAARD (Ås - NORWAY)

P1.3-020 AustroPuccinia psidii interferes with guava leaf stomatal regulation | Manoel GONÇALVES (Piracicaba - BRAZIL)

P1.3-021 Screening resistance loci to plasmopara viticola, the causal agent of grapevine downy mildew, in Vitis amurensis with foliar spectroscopy | Robetauli Mastiur SIMANGUNSONG (Ithaca - UNITED STATES)

P1.3-022 Characterization of ht-resistance genes against exserohilum turcicum

Barbara LUDWIG NAVARRO (Göttingen - GERMANY)

P1.3-023 The role of ear domain in plant immunity | Sara ABDELSAYED (Coventry - UNITED KINGDOM)

P1.3-024 Are phytohormones the messengers in systemic induced resistance in Austrian pine?

Pierluigi Bonello (Columbus, Oh - UNITED STATES)

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Dejan PRVULOVIC (Novi Sad - SERBIA)
- P1.3-026 Plant epigenetics for forest resilience against invasive pathogens** | Estrella LUNA (Birmingham - UNITED KINGDOM)
- P1.3-027 Profiling molecular responses of *nicotiana glutinosa* to infection with lettuce necrotic yellows virus subgroups to understand virus dispersal** | Colleen HIGGINS (Auckland - NEW ZEALAND)
- P1.3-028 The role of dormancy-associated (drm) disordered proteins in plant - pathogen interactions**
Marion WOOD (Auckland - NEW ZEALAND)
- P1.3-029 Evaluation of Greek olive cultivars for susceptibility to *fomitiporia mediterranea***
Emmanouil MARKAKIS (Heraklion - GREECE)
- P1.3-030 Here comes the sun! an inner nuclear envelope protein that regulates plant nuclear dynamics and transcriptional stress responses against pathogens** | Divya CHANDRAN (Faridabad - INDIA)
- P1.3-031 Characterization of olive fruit resistance to *Colletotrichum godetiae*** | Anabel EXPOSITO DIAZ (Cordoba - SPAIN)
- P1.3-033 A dead-box rna helicase regulates iron homeostasis and immune response in *Arabidopsis***
Yingying XING (Beijing - CHINA)
- P1.3-034 Differential response of sugar beet genotypes to the local and systemic beet curly top virus infection: virus accumulation and transcriptome assay in resistant and susceptible genotypes** | Omid EINI (Göttingen - GERMANY)
- P1.3-035 The rice HVA22 proteins in rice immunity** | Jun LIU (Beijing - CHINA)
- P1.3-036 Changes in terpene profiling of *pinus pinaster* and *P. RADIATA* in response to wounding and infection with *Fusarium circinatum*** | David FARIÑA FLORES (Madrid - SPAIN)
- P1.3-037 Combined transcriptional and metabolic profiling to determine phytohormone response in *pinus-Fusarium circinatum* interaction** | Laura HERNANDEZ-ESCRIBANO (Madrid - SPAIN)
- P1.3-038 Intraspecific diversification of pathogen defence signalling in the wild tomato species *solanum chilense***
Remco STAM (Kiel - GERMANY)
- P1.3-039 Hlb tolerance is associated with enhanced carbohydrate dynamics in the leaves, upregulation of defense activators, and preservation of xylem connectivity** | Jacobo ROBLEDO (Lake Alfred - UNITED STATES)
- P1.3-040 Avocado sunblotch viroid: the smallest avocado pathogen causing big changes in host gene expression**
Melissa JOUBERT (Pretoria - SOUTH AFRICA)
- P1.3-041 Epidemiology and molecular characterization of a newly emerging monopartite begomovirus in South Africa, capable of inducing severe symptoms in commercial tomato cultivars with multiple ty resistance genes**
Lindy ESTERHUIZEN (Pretoria - SOUTH AFRICA)
- P1.3-042 Breeding for resistance against phomopsis husk rot disease in the Australian macadamia orchards**
Vivian RINCON FLOREZ (Brisbane - AUSTRALIA)
- P1.3-043 Resistance and response to *Fusarium* head blight disease in pigmented wheat genotypes** | Linda FELICI (Viterbo - ITALY)
- P1.3-044 Evaluation of soybean genotypes for response to *coniothyrium glycines*, the cause of red leaf blotch**
Sprine MISIANI (Nairobi - KENYA)
- P1.3-045 Detecting biochemical change in cassava leaf spot tissues caused by *curvularia lunata hc-04* by using synchrotron fourier-transform infrared spectroscopy** | Hoang NGUYEN HUY (Nakhon Ratchasima - THAILAND)
- P1.3-046 Influence of salicylic acid on enzyme activity to control anthracnose disease in cassava by in vitro and in vivo studies**
Rungthip SANGPUEAK (Nakhon Ratchasima - THAILAND)
- P1.3-047 Genome-wide association analysis identifies resistance loci for bacterial blight in diverse East African rice germplasm**
Moses OKELLO (Kampala - UGANDA)
- P1.3-048 Treatments with a volatile organic compound cause metabolic changes in grapevine leaves against downy mildew**
Sara AVESANI (San Michele All'adige (Tn) - ITALY)
- P1.3-049 Cloning and mechanism analysis of adult plant resistance genes to rust in wheat** | Caixia LAN (Wuhan - CHINA)
- P1.3-051 Immunity modulation by distinct rhizosphere microbiota in rice under nitrogen supply**
Mehwish ROY (Gyeongsan, Gyeongbuk, Korea - REPUBLIC OF KOREA)

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- P1.3-052** Evaluating the effect of *Plasmodiophora brassicae* virulence on glucosinolate profiles in clubroot-resistant and susceptible oilseed rape cultivars | Nazanin ZAMANI-NOOR (Braunschweig - GERMANY)
- P1.3-053** Characterization of hormonal responses in two clones of *Cupressus sempervirens* with differential susceptibility to *Seiridium cardinale* | Giulia SCIMONE (Pisa - ITALY)
- P1.3-054** Evaluation of resistance and presence of secondary metabolites in almond cultivars during infection by the wilt fungus *Verticillium dahliae* | Alike TZIMA (Athens - GREECE)
- P1.3-055** Identification of new sources of resistance to bacterial spot and bacterial canker in wild tomato varieties Shatrupa RAY (Rishon Letsiyon - ISRAEL)
- P1.3-056** The plant immune system of ferns and liverworts | Baptiste CASTEL (Auzesville-Tolosane - FRANCE)
- P1.3-057** Identification of plant genotype dependent microbiome recruitment associated with disease resistance against root rot in peas | Valentin GFELLER (Frick - SWITZERLAND)
- P1.3-058** *Candidatus liberibacter asiaticus* attenuates phloem defense responses to allow its propagation and movement in citrus | Amit LEVY (Lake Alfred - UNITED STATES)
- P1.3-059** *ATNPR1* Boosts the basal immune responses and enhances tolerance to *liberibacter* infection in citrus Poulami SARKAR (Lake Alfred - UNITED STATES)
- P1.3-060** Gene co-expression networks based on tolerant and susceptible transcriptome enable a broad view of plant responses to differing pathogens | Marie-Anne VAN SLUYS (Sao Paulo - BRAZIL)
- P1.3-061** Performance of commercial varieties against *Phytophthora sojae* | Pablo GRIJALBA (Caba - ARGENTINA)
- P1.3-062** Functional analysis of sugar transporters in grape upon *Botrytis cinerea* infection Benoit MONNEREAU (Poitiers - FRANCE)

Mycotoxin producing fungi and their management: a serious challenge to attain the One Health goals

- P1.4-001** Case studies of mycotoxin contamination in organic maize stored and milled by smallholder farmers in southwest France | Jean-Michel SAVOIE (Villenave D'ornon - FRANCE)
- P1.4-002** Encapsulated essential oils in mesoporous silica nanoparticles to control *Fusarium avenaceum* and its enniatins production | Jean-Michel SAVOIE (Villenave D'ornon - FRANCE)
- P1.4-003** Investigation of the effective inhibition of DON production by botanical compounds Ia and Meja and their inhibition mechanism | Jing GAO (Nanjing - CHINA)
- P1.4-004** Population genetic structure of pathogens causing *Fusarium* crown rot and its mycotoxin contamination of wheat in China | Hao ZHANG (Beijing - CHINA)
- P1.4-005** Endoplasmic reticulum-mitochondria encounter structures (ermes) regulate energy metabolism: a new drug target for pathogenic fungi? | Jichang SONG (Nanjing - CHINA)
- P1.4-006** Efforts to develop management strategies for the aflatoxin contamination of hazelnut in Azerbaijan Alejandro ORTEGA-BELTRAN (Ibadan - NIGERIA)
- P1.4-007** The occurrence and control of ochratoxin A from postharvest diseases | Fuguo XING (Beijing - CHINA)
- P1.4-008** *Fusarium pseudograminearum* glyoxal oxidase gene *fpgglx* functions in the virulence and mycotoxin reduction caused by the mycovirus *FPGMBV1* | Honglian LI (Zhengzhou - CHINA)
- P1.4-009** Unraveling the host-selective toxic interaction of cassiicolin with lipid membranes and its cytotoxicity Bao Quoc NGUYEN (Ho Chi Minh - VIETNAM)
- P1.4-010** Post-harvest sustainable strategies to reduce mycotoxins contamination and pest infestation in chickpea (*Cicer Arietinum* L.) stored seeds | Samuele RISOLI (Pisa - ITALY)
- P1.4-011** Quest for *Fusarium*: a sampling strategy to predict the risk of contamination in Irish cereal crops Diana BUCUR (Carlow - IRELAND)
- P1.4-012** Resistance to *Fusarium* head blight in wheat: influence of the fungal mycotoxin profile Diana MNGOMEZULU (Bloemfontein - SOUTH AFRICA)

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- P1.4-013** Efficacy of the *Aspergillus flavus* atoxigenic strain technology to reduce risks of aflatoxin contamination in commercial tree nut orchards in California | Ramon JAIME (Parlier - UNITED STATES)
- P1.4-014** Displacement of aflatoxin producing fungi by an *Aspergillus flavus* atoxigenic biocontrol in commercial almond orchards in several areas of California | Ramon JAIME (Parlier - UNITED STATES)
- P1.4-016** Developing potential biocontrol against mycotoxigenic fungi of cereals | Vijay Kumar SHARMA (Rishon Lezion - ISRAEL)
- P1.4-017** New challenges in the apple chain due to mycotoxin producing fungi and mycotoxins
Paola BATTILANI (Piacenza - ITALY)
- P1.4-018** Potential for aflatoxin B1 and B2 production by *Aspergillus flavus* strains isolated from bambara groundnut (*Vigna Subterranea* (L.) Verdcourt) seeds produced in Burkina Faso | S. Amidou OUILI (Ouagadougou - BURKINA FASO)
- P1.4-019** Identifying sorghum grain fungal colonisers, quantification of mycotoxins and development of weather-based predictive models for *Fusarium graminearum* | habiso MASISI (Bloemfontein - SOUTH AFRICA)
- P1.4-020** Occurrence of *Fusarium* spp. in german oat fields - results from a three year monitoring
Charlotte RODEMANN (Göttingen - GERMANY)
- P1.4-021** The proteomes that feed the world | Sophia HEIN (Freising - GERMANY)
- P1.4-022** Combating aflatoxin exposure risks through conservation agriculture | Juliet AKELLO (Kampala - UGANDA)
- P1.4-023** Mycotoxin producing *Fusarium* species in estonian grasslands and silage | Britt PUIDET (Tartu - ESTONIA)
- P1.4-024** *Fusarium culmorum* produces NX-2 toxin simultaneously with deoxynivalenol and 3-ACETYL-Deoxynivalenol or nivalenol | Simon SCHIWEK (Brunswick - GERMANY)
- P1.4-025** Seasonal prevalence of aflatoxin and strategies for mitigation in the groundnut, maize and sorghum value chains in Uganda | George MAHUKU (Kampala - UGANDA)
- P1.4-026** Mycotoxin exposure in foods eating by vegans and vegetarians: evaluating the current risk assessment
Avice HALL (Hatfield - UNITED KINGDOM)
- P1.4-027** Modelling the effect of weather on deoxynivalenol contamination in Swedish spring cereals using machine learning algorithms | Katarzyna MARZEC-SCHMIDT (Skara - SWEDEN)
- P1.4-028** *Alternaria* species: a “from farm to fork” phytopathological and toxicological global concern in mediterranean area
Mario MASIELLO (Bari - ITALY)

Bioinvasion in the urban environment: pathways, early warning, mitigation measures, institutional frameworks and policy implementation

- P1.5-001** Biosecurity surveillance for early detection of invasive species in urban forests in australia
Angus CARNEGIE (Parramatta - AUSTRALIA)
- P1.5-003** Monitoring emerging pathogens in horse chestnut trees across Europe and their correlation to the leaf miner infestation | Yasin KORKMAZ (Freiburg - GERMANY)
- P1.5-004** Prevalence of asav-infected flowering ash (*f. ornus*) trees of two german metropolises | Kira KÖPKE (Berlin - GERMANY)
- P1.5-005** A diverse range of *Phytophthora* species recovered from two South African botanical gardens
Trudy PAAP (Pretoria - SOUTH AFRICA)
- P1.5-006** Diversity of *Phytophthora* communities in a sentinel arboretum in southern Italy | Federico LA SPADA (Catania - ITALY)
- P1.5-007** Smart urban forest monitoring: a project for remote sensing detection and early warning in forest trees
Antonio TIBERINI (Roma - ITALY)
- P1.5-008** The novi sad poplar tree die-back and decay linked to *Fusarium solani*, *graphium penicillioides*, and *cyclocybe aegerita*
Milutin DJILAS (Novi Sad - SERBIA)
- P1.5-009** *Pestalotopsis tujae* associated with arborvitae tip blight in nurseries, urban and rural environments in Serbia
Milutin DJILAS (Novi Sad - SERBIA)

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Mind the Gap: Innovation and Opportunities in Seed Health testing

P1.6-001 Testing and trends in seed-transmitted diseases of pulse crops in montana, USA

Erin GUNNINK TROTH (Bozeman - UNITED STATES)

P1.6-002 Validation of a *Ascochyta rabiei* detection method on chickpea seeds | Isabelle SERANDAT (Beaucouzé - FRANCE)

P1.6-003 Brazilian pcr testing in crop seeds | Thiago Costa FERREIRA (Lagoa Seca - BRAZIL)

P1.6-004 Use of basic substances and potential basic substances for the control of seedborne pathogens

Gianfranco ROMANAZZI (Ancona - ITALY)

Molecular drivers of plant bacterial interactions

P2.1-001 Increasing the resilience of plant immunity to a warming climate | Sheng-Yang HE (Durham - UNITED STATES)

P2.1-002 The *Ralstonia pseudosolanacearum* type iii effector ripl delays flowering and promotes susceptibility to pathogen in plants | Wanhui KIM (Seoul - REPUBLIC OF KOREA)

P2.1-003 SSTF, a novel sulforaphane sensing transcription factor of *Xanthomonas campestris*, is required for sulforaphane tolerance and virulence | Fengquan LIU (Nanjing - CHINA)

P2.1-004 Identification of genes required for ptr1-mediated immunity in *nicotiana benthamiana*

Diana Carolina MAZO MOLINA (Ithaca - UNITED STATES)

P2.1-005 A novel *Pseudomonas* cyclic lipopeptide induces plant immunity through cell wall perception and cytoplasmic signaling

Hailei WEI (Beijing - CHINA)

P2.1-006 A ubiquitin family protein plays a role in the pathogenicity of *acidovorax citrulli* | Dafna TAMIR-ARIEL (Rehovot - ISRAEL)

P2.1-007 Dual rna-sequencing of chili pepper cultivars and *Xanthomonas euvesicatoria* pv. *euvesicatoria* causing bacterial leaf spot (BLS) | Desi UTAMI (Queensland - AUSTRALIA)

P2.1-008 *Nicotiana benthamiana* as a surrogate host of two plant-pathogenic *clavibacter* species

In Sun HWANG (Seoul - REPUBLIC OF KOREA)

P2.1-009 Comparison of the signal transduction efficiency in the vfm quorum sensing system of the genus *Dickeya* according to the polymorphism of the vfm genes | Sarah YAMMINE (Montpellier - FRANCE)

P2.1-010 A putative multi-sensor hybrid histidine kinase, *baraac*, inhibits the expression of the type III secretion system regulator *hrpg* in *acidovorax citrulli* | Tingchang ZHAO (Haidian District - CHINA)

P2.1-011 DDI1 - a novel regulator of the 26s proteasome and immunity in plants | Margot RAFFEINER (Bochum - GERMANY)

P2.1-012 Processing bodies: novel regulators of plant immunity targeted by bacterial effectors

Manuel GONZALEZ-FUENTE (Bochum - GERMANY)

P2.1-013 Analysis of *psa* effector and *actinidia* immunity genes | Markéta VLKOVÁ (Tübingen - GERMANY)

P2.1-014 Evaluation of defense induction in grapevine plants (*Vitis vinifera* L.) by *Pseudomonas* protegens, through QPCR.

Braulio RUIZ (Chillán - CHILE)

P2.1-015 Characterization of differential colonization abilities of *Pseudomonas amygdali* pv. *lachrymans*, the causal agent of cucumber bacterial diseases | Tingchang ZHAO (Haidian District - CHINA)

P2.1-016 Type III-Secreted effectors and toxins play a tissue-specific role in the pathogenicity of *Pseudomonas syringae* PV *syringae* | Ziyue ZENG (Cambridge - UNITED KINGDOM)

P2.1-017 Chemotaxis and aerotaxis are required for plant infection of *Pseudomonas syringae* PV. TABACi 6605

Yuki ICHINOSE (Okayama - JAPAN)

P2.1-019 Contact dependent inhibition in *Ralstonia pseudosolanacearum* | Rekha GOPALAN NAIR (Tübingen - GERMANY)

P2.1-020 QTL-Bound tales: bacterial effector association with resistance quantitative trait loci of *oryza sativa*

Jacob SHARKEY (Dusseldorf - GERMANY)

P2.1-021 Flavonoids and fatty acids, key metabolites in *Pseudomonas syringae* development on cherry shoots

Diana VINCHIRA-VILLARRAGA (Birmingham - UNITED KINGDOM)

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P2.1-022 Characterizing environmental sensing mechanisms in *Dickeya dadantii*

Juliana GONZALEZ-TOBON (Ithaca - UNITED STATES)

P2.1-023 The *Xanthomonas* type iii effector nudx4 is an nadh/adp-ribose pyrophosphorylase that manipulates plant immunity

Baodian GUO (Nanjing - CHINA)

P2.1-024 A micro- and macro-perspective of bacterial pathogens affecting onion in georgia, USA

Bhabesh DUTTA (Tifton - UNITED STATES)

P2.1-025 Characterization of the infection process in bacterial rice blight by *Xanthomonas oryzae* PV. ORYZAE

Nora R. ZÖLLNER (Düsseldorf - GERMANY)

P2.1-026 Development of a soil inoculation method coupled with blocker-mediated 16S RRNA gene amplicon sequencing reveals the effect of antibacterial T6SS on agrobacteria tumorigenesis and gallobiome composition

Si-Chong WANG (Taipei - TAIWAN)

P2.1-027 Gene expression profiling in soils of *Dickeya dadantii*, a causal pathogen of quick decline disease of fruit trees

Takashi FUJIKAWA (Tsukuba - JAPAN)

P2.1-028 Elucidating the role of the 'Candidatus *Phytoplasma mali*' protein pme10 during photosynthesis and symptom development of apple proliferation disease | Simone EGGER (Pfaffen - ITALY)

P2.1-029 Type III effectors of *Pseudomonas syringae* regulate the nlr transcripts' stability by triggering UPF3 degradation in *Arabidopsis* | Eunji LEE (Busan - REPUBLIC OF KOREA)

P2.1-030 The secreted serine protease chpg of *Clavibacter michiganensis* acts as a host specificity determinant that restricts it from eggplants | Doron TEPER (Rishon LeZion - ISRAEL)

P2.1-031 Phenotypic testing of candidate virulence genes in *Pseudomonas syringae* pv. *aesculi* associated with adaptation and infection in horse chestnut | Sabrine DHAOUADI (Birmingham - UNITED KINGDOM)

P2.1-032 Improved method for isolation of *Clavibacter sepedonicus* from potato extracts using *Solanum melongena*

Mathijs NAS (Emmeloord - NETHERLANDS)

P2.1-033 Interactions and genome biology of *Dickeya fangzhongdai*: a potential threat to potato industry

Shefali DOBHAL (Hawaii - UNITED STATES)

P2.1-034 Large-scale transposon mutagenesis reveals type III secretion effector HOPR1 is a major virulence factor in *Pseudomonas syringae* PV. *Actinidiae* | Yasuhiro ISHIGA (Tsukuba - JAPAN)

P2.1-035 Recent *Xanthomonas translucens* pv. *undulosa* isolates are more virulent and possess a distinct tal effector repertoire compared to older isolates | Diego GUTIERREZ CASTILLO (Fort Collins - UNITED STATES)

P2.1-036 Host recognition of *Clavibacter* secreted serine proteases | Charis RAMSING (Davis - UNITED STATES)

P2.1-037 *Serratia fonticola*, a putative bacteria associated with abnormal vertical growth syndrome in macadamia

Olufemi AKINSANMI (Brisbane, Queensland - AUSTRALIA)

P2.1-038 Genomic diversity and pathogenicity of Australian agrobacterium species in horticulture crops

Rebecca ROACH (Brisbane - AUSTRALIA)

P2.1-039 Plant-associated bacteria extracellular vesicles: characterization and potential ecological roles

Timothée ZANNIS-PEYROT (Lyon - FRANCE)

P2.1-040 Leaf margin morphology deeply affects pathogen fitness and ecology | Laurent NOEL (Castanet-Tolosan - FRANCE)

P2.1-041 Bioinformatics approach for identifying possible *Phytoplasma* effector proteins | Kayhan DEREÇIK (Istanbul - TURKEY)

P2.1-042 Genomic identification of the novel agrobacterial genes contributing to plant transformation | Yu WU (Taipei - TAIWAN)

P2.1-043 Comparative genomic analysis of *Spiroplasma citri* in naturally infected citrus samples and in vitro cultures

Isil TULUM (Istanbul - TURKEY)

P2.1-044 Involvement of tales in *Xanthomonas campestris* pv. *campestris* pathogenicity in cauliflower

Brice CHARLEUX (Auzesville-Tolosane - FRANCE)

P2.1-045 Identification of virulence related genes regulated by a bacterial carbonic anhydrase

Lingwei WAN (Ithaca - UNITED STATES)

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P2.1-046 Development of genetic tools for study of host-pathogen interactions in *Xanthomonas*

Jeffrey SCHACHTERLE (Fargo - UNITED STATES)

P2.1-047 Role of chemotaxis cluster ii in woody and herbaceous plants pathogen bacteria

Carla Ariadna LAVADO BENITO (Málaga - SPAIN)

P2.1-048 Genome biology and evolution of *Clavibacter michiganensis* | Mohammad ARIF (Honolulu - UNITED STATES)

P2.1-049 Impact of a carbonic anhydrase on expression of virulence-related genes in *Pseudomonas syringae*

Wei ZHANG (Ithaca - UNITED STATES)

P2.1-050 Diversity of potential mobile unites in 'Candidatus *Phytoplasma solani*' genomes - implications of specific transposon-like elements in *Phytoplasma* pathogenicity and evolution | Martina SERUGA MUSIC (Zagreb - CROATIA)

P2.1-051 Temperature plays a decisive role in the ability of *Pseudomonas syringae* to trigger eti and drives in planta bacterial growth dynamics | Emma CAULLIREAU (Verona - ITALY)

P2.1-053 Identification and characterization of *Xanthomonas arboricola* pv. *juglandis* from bacterial blight and brown apical necrosis of walnuts in türkiye | Damla ERTIMURTAS (Izmir - TURKEY)

P2.1-054 Molecule polymorphism of G-X-Y interruptions in collagen triple helix protein of *Candidatus liberibacter asiaticus*

Fang DING (Wuhan - CHINA)

P2.1-055 Colonization of the leaf vasculature by *Xanthomonas campestris* pv. *campestris*

Misha PAAUW (Amsterdam - NETHERLANDS)

P2.1-056 Completing Koch's postulates for the citrus Huanglongbing bacterium, *Candidatus liberibacter asiaticus*

Yongping DUAN (Fort Pierce - UNITED STATES)

P2.1-057 Revealing barely susceptibility genes responding to bacterial leaf streak | Zhaohui LIU (Fargo - UNITED STATES)

P2.1-058 Genomic and phenotypic biology of novel strains of *Dickeya zeae* | Gamze BOLUK-SARI (Honolulu - UNITED STATES)

P2.1-059 DNA supercoiling as a global transcriptional regulator: a complex mechanism involved in the infection process of the phytopathogen *Dickeya dadantii*? | Maïwenn PINEAU (Villeurbanne - FRANCE)

P2.1-060 Functional characterization of the *Xanthomonas campestris* talome | Corinne AUDRAN (Castanet-Tolosan - FRANCE)

P2.1-061 Cassava bacterial blight is promoted by tale-independent activation of the mesweet10e sugar transporter

Carlos ZARATE (Montpellier - FRANCE)

P2.1-062 *Ralstonia* tale-like proteins target host arginine decarboxylase genes and can act as hooks for plant resistance against bacterial wilt disease | Niels GALLAS (Tübingen - GERMANY)

P2.1-063 Complete genome sequences and characterization of *Xanthomonas arboricola*, the novel causal agent of bacterial leaf blight of blueberry | Monika KALUZNA (Skierniewice - POLAND)

P2.1-064 Deciphering of the proximal proteome of two yopJ family acetyltransferases from two plant vascular pathogenic bacteria | Léa MONGE WALERYSZAK (Auzerville-Tolosane - FRANCE)

P2.1-067 Optimized yeast 2-hybrid platform to discover plant-bacteria interactions

Michael MULOT (Evry-Courcouronnes - FRANCE)

P2.1-068 Live visualization of type iii-mediated host transcriptional reprogramming during *Xanthomonas translucens* infection

Jules BUTCHACAS (Columbus - UNITED STATES)

P2.1-069 A natural single nucleotide mutation in the small regulatory rna arcZ of *Dickeya solani* switches off the antimicrobial activities against yeast and bacteria | Typhaine BRUAL (Villeurbanne - FRANCE)

P2.1-070 The selective autophagy receptor NBR1 is a central hub in plant immunity | Ophélie LÉGER (Bochum - GERMANY)

P2.1-071 Alien pathogen impact is driven by the lack of plant-pathogen co-evolution dynamics: the case of olive quick decline syndrome caused by *Xylella fastidiosa* SUBSP. *Paucis* | Valeria SCALA (Roma - ITALY)

P2.1-072 The analysis of extracellular vesicles mediating the interaction between *Pectobacterium* and *Arabidopsis*

Malgorzata WALERON (Gdansk - POLAND)

P2.1-073 Identification of effectors from phloem-restricted bacterial pathogens, and their host target

Julien LEVY (College Station - UNITED STATES)

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Population genomics of plant pathogens

- P2.3-001** Advances in genomics of *tilletia indica* causing karnal bunt of wheat | Malkhan Singh GURJAR (New Delhi - INDIA)
- P2.3-002** Examination of large chromosomal inversions in the genome of *Erwinia amylovora* strains reveals worldwide distribution and north america-specific types | Frank ZHAO (Prosser - UNITED STATES)
- P2.3-003** Population genetic diversity and migration patterns of *exserohilum turcicum* from maize-based cropping systems in South Africa | David Livingstone NSIBO (Pretoria - SOUTH AFRICA)
- P2.3-004** Genetic diversity and population structure of wheat stripe rust pathogen (*Puccinia Striiformis F. Sp. Tritici*) in Türkiye based on genome-wide single nucleotide polymorphisms | Mehmet TEKIN (Antalya - TURKEY)
- P2.3-005** *Fusarium* and the emergence of bakanae disease in bangladesh | Asmaul HUSNA (Penang - MALAYSIA)
- P2.3-006** Evolutionary impact of chickpea (*cicer arietnum*) host resistance on a clonal *Ascochyta rabiei* population in Australia Hayley WILSON (Brisbane - AUSTRALIA)
- P2.3-007** Genomic analysis of a new virus involved in papaya 'sticky' disease unveils a lineage of plant-infecting viruses related but distinct from totiviruses | Diego QUITO-AVILA (Guayaquil - ECUADOR)
- P2.3-008** Genetic diversity and population structure of 18 Tunisians *orobanche foetida* populations using radseq Amal BOUKTEB (Tunis - TUNISIA)
- P2.3-009** Diversity and aggressiveness of *Fusarium* spp. associated with chickpea in Montana Monica BRELSFORD (Bozeman - UNITED STATES)
- P2.3-010** Mating-type locus analysis in *ganoderma boninense*, the basal stem rot causing pathogen of oil palm Hun Jiat TUNG (Semenyih - MALAYSIA)
- P2.3-011** Adaptive evolution of an exotic forest pathogen is mediated by interspecific genic introgression Matteo GARBELOTTO (Berkeley - UNITED STATES)
- P2.3-012** Who needs a mate? adaptation in defiance of extremely low genetic diversity in the clonally propagated *Ascochyta rabiei* population in Australia | Niloofar VAGHEFI (Melbourne - AUSTRALIA)
- P2.3-013** Population genomic analyses reveal extensive genomic regions within selective sweeps associated with adaptation and demographic history of a wheat fungal pathogen | Taiguo LIU (Beijing - CHINA)
- P2.3-014** Contribution of historical herbarium small RNAs to the reconstruction of a cassava mosaic geminivirus evolutionary history | Adrien RIEUX (St Pierre De La Réunion - FRANCE)
- P2.3-015** Determining the contribution of onion transplants to the population genetics of *stemphylium vesicarium* in New York, USA using microsatellite markers | Natalia PINEROS-GUERRERO (Geneva, Ny - UNITED STATES)
- P2.3-016** Genomic diversity and virulence of scab-causing *streptomyces* SPP. in the province of Quebec, Canada Martin FILION (Saint-Jean-Sur-Richelieu - CANADA)
- P2.3-017** Diversity of mobile genetic elements and associated fitness factors to elucidate the evolution of *Xanthomonas* Kylie WEIS (Auburn - UNITED STATES)
- P2.3-018** High genetic diversity found in emerging eucalyptus pathogen *elsinoe necatrix* Michael J. WINGFIELD (Pretoria - SOUTH AFRICA)
- P2.3-019** Is a shift in pathogen structure causing the increased incidence of common bunt caused by *tilletia* SPP. in Swedish winter wheat? | Anna BERLIN (Uppsala - SWEDEN)
- P2.3-020** Understanding the population structure and pathogenicity of *bipolaris oryzae* on commercial and wild Australian rices | Sabrina ML MORRISON (Brisbane - AUSTRALIA)
- P2.3-022** Emergence and evolution of a novel lineage of *Ralstonia solanacearum* with expanded host range Daria EVSEEVA (Tübingen - GERMANY)
- P2.3-024** Morphological, molecular and pathogenic characterization of *alternaria* species causing apple leaf and fruit spot disease in catalonia (Northeastern Spain) | Concepció MORAGREGA (Girona - SPAIN)
- P2.3-025** Phylogenomic analyses and comparative genomic of *Pseudomonas syringae* associated with almond (*Prunus Dulcis*) in California Florent TROUILLAS (Parlier - UNITED STATES)

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- P2.3-026** Population dynamics and adaptive architecture of the fungus *pseudocercospora fijiensis* in response to resistance in banana | Cassandre JOLIVET (Montpellier - FRANCE)
- P2.3-027** Comparative genomic analysis of *Pseudomonas savastanoi* PV. *fraxinii* isolated from ash trees in the UK | Katherine HINTON (Birmingham - UNITED KINGDOM)
- P2.3-028** Perilous coexistence: chilli leaf curl virus and *Candidatus Phytoplasma trifolii* infecting *capsicum annum*, India | Vineeta PANDEY (Gorakhpur - INDIA)
- P2.3-029** Diversity of *peronosclerospora philippinensis* (W. Weston) C.g. shaw causing downy mildew in sugarcane and corn in the Philippines | Fe DELA CUEVA (Los Baños - PHILIPPINES)
- P2.3-030** Impact of fungicide applications on the population structure of *ZymoSeptoria tritici* in Europe | Eula Gems OREIRO (Uppsala - SWEDEN)
- P2.3-031** Spatial-temporal genetic diversity of *neoscytalidium dimidiatum* populations in Taiwan | Cheng-Fang HONG (Taichung City - TAIWAN)
- P2.3-032** Sequencing and recombination analysis of watermelon mosaic isolates from the Czech Republic | Karima BEN MANSOUR (Prague - CZECH REPUBLIC)
- P2.3-033** Phenotypic and genotypic characterization of *Phytophthora infestans* isolates from Kenya and Nigeria | Phillip WHARTON (Aberdeen - UNITED STATES)
- P2.3-034** Aspen mosaic-associated virus populations in Finland and Sweden | Shaheen NOURINEJHAD ZARGHANI (Berlin - GERMANY)
- P2.3-035** Population genomic analyses uncover diversity, differentiation of subpopulations and mechanisms of evolution of *Fusarium asiaticum* in a historic context | Meixin YANG (Beijing - CHINA)
- P2.3-036** Genomic and phenotypic characterization of epidemiologically most successful haplotypes of the fire-blight pathogen, *Erwinia amylovora* | Tanja DREO (Ljubljana - SLOVENIA)
- P2.3-037** Identification of four novel species of *Pseudomonas* associated with bacterial leaf spot of cucurbits | Kiersten BUSHONG (Gainesville - UNITED STATES)
- P2.3-038** Genetic diversity and virulence in a worldwide collection of sunflower broomrape (*Orobanche Cumana* Wallr.) populations | Alberto MARTIN-SANZ (Carmona - SPAIN)
- P2.3-039** Genetic diversity analysis of broomrape (*Orobanche Cumana*) populations in sunflower growing areas in Europe | Clothilde BOUBEE DE GRAMONT (Mondonville - FRANCE)
- P2.3-040** Population genomic analyses reveal possible hybridization and deep genetic structure in the barley pathogen *Pyrenophora teres* | Julie RAMIREZ (Montpellier - FRANCE)
- P2.3-041** Population genomic analyses reveal patterns of host specialization and hybridization in *ceratocystis fimbriata*, *C. Eucalypticola* and *C. Manginecans* | Tuan A. DUONG (Pretoria - SOUTH AFRICA)
- P2.3-042** Diversity of *Xanthomonas nasturtii*, the cause of black rot of watercress | Joana VICENTE (York - UNITED KINGDOM)
- P2.3-043** Phylogenetic identification of *alternaria* spp. belonging to sections *alternaria* and *infectoriae* isolated from wheat seeds with black point symptom | José Manuel AGUIRRE-RAYO (Texcoco - MEXICO)
- P2.3-044** Differences in *f. musae* genomes | Luca DEGRADI (Milano - ITALY)
- P2.3-045** Comparative genomics and association with pathogenic traits in *Xanthomonas* | Alvaro L PEREZ QUINTERO (Montpellier - FRANCE)
- P2.3-046** Population genetics of two invasive fungi (*cryphonectria parasitica* and *Fusarium circinatum*) in Spain | Farooq AHMAD (Palencia - SPAIN)
- P2.3-047** Anastomosis group typing of *rhizoctonia solani* kühn infecting solanaceous vegetable crops | Amjad Shahzad GONDAL (Multan - PAKISTAN)
- P2.3-048** Blueberry virus I: a novel and widespread blueberry virus in the United States | Ioannis TZANETAKIS (Fayetteville - UNITED STATES)
- P2.3-049** Comparative genomic analysis and phenotypic studies of *pectobacterium cacticidum* and proposal of reclassification to a new genus *alcornia* | Malgorzata WALERON (Gdansk - POLAND)
- P2.3-050** Inter-continental population differentiation spot form of net blotch isolates | Simon ELLWOOD (Bentley - AUSTRALIA)

MONDAY 21 & TUESDAY 22 AUGUST

Viral modification of plants and vectors

- P2.4-002** Impact of 'Candidatus liberibacter asiaticus' on the expression and activation of toll signaling pathway genes in diaphorina citri, the vector of citrus greening disease | Mahnaz RASHIDI (Lake Alfred - UNITED STATES)
- P2.4-003** Plant bacterial pathogen manipulates the fatty acids metabolism of the insect vector to fulfill its nutritional needs | Nabil KILLINY (Lake Alfred - UNITED STATES)
- P2.4-004** Short-distance movement of Bemisia tabaci meam1 and transmission of tomato severe rugose virus to tomato plants in the field | Felipe FRANCO DE OLIVEIRA (Piracicaba - BRAZIL)
- P2.4-005** Iris yellow spot orthotospovirus-thrips complex in onion production areas in the USA: progress toward developing management tactics | Hanu PAPPU (Pullman - UNITED STATES)
- P2.4-006** Biased pollen transfer by bumblebees favors the paternity of virus-infected plants in cross-pollination | Alex MURPHY (Cambridge - UNITED KINGDOM)
- P2.4-007** The renewed threat of tomato spotted wilt, a global agricultural pandemic | Kiran GADHAVE (Amarillo - UNITED STATES)
- P2.4-008** Vectors of Xylella spp. and its role in global transmission | Wan-Hsiu YANG (Taichung City - TAIWAN)
- P2.4-009** Induction of aphid resistance in tobacco by the cucumber mosaic virus CMVDELTA2B mutant is jasmonate-dependent | John CARR (Cambridge - UNITED KINGDOM)
- P2.4-010** Effects of a viral counter-defense protein on plant-insect interactions in Arabidopsis thaliana | Arden BERLINGER (Cambridge - UNITED KINGDOM)
- P2.4-011** Monopartite and bipartite begomoviruses differentially interact with two common whitefly cryptic species (b and q) | Rajagopalbabu SRINIVASAN (Griffin - UNITED STATES)
- P2.4-012** Presence of tobamovirus alters the mechanical transmissibility of begomovirus | Deri GUSTIAN (Taichung - TAIWAN)
- P2.4-013** Identification of plant virus receptors in the stylets of their insect vectors using CRISPR-CAS9 mutant aphid lines | Yu FU (Montpellier - FRANCE)
- P2.4-014** The influence of diaphorina citri flavi-like virus on Huanglongbing bacteria vectoring and psyllid biology | Chunyi LIN (Lake Alfred - UNITED STATES)
- P2.4-015** The transmission of barley yellow dwarf viruses by four cereal aphid species | Piotr TREBICKI (Parkville - AUSTRALIA)
- P2.4-016** Characterising the interaction of the cucumber mosaic virus 1A and 2B proteins | Sam CRAWSHAW (Cambridge - UNITED KINGDOM)
- P2.4-017** Timing of in-season plant-to-plant spread of potato virus Y in potato in Idaho, United States | Kasia M. DUELLMAN (Idaho Falls - UNITED STATES)
- P2.4-018** Parameters influencing wheat dwarf disease incidence and leafhopper abundance in Sweden | Elham YAZDKHASTI (Uppsala - SWEDEN)
- P2.4-019** Transmission efficiency of tomato chlorosis virus (TOCV) to potato plants by Bemisia tabaci MEAM1 and Med and damage caused by this crinivirus on this vegetable | Gabriel Madoglio FAVARA (Botucatu - BRAZIL)
- P2.4-020** First report of Bidens mosaic virus infecting patchouli plants (Pogostemon cablin Benth.) in Brazil | Caroline MARTINES (Botucatu - BRAZIL)
- P2.4-021** Transmission efficiency of begomovirus by different populations of Bemisia tabaci Med in São Paulo state | Cíntia Sabino OLIVEIRA (Botucatu - BRAZIL)
- P2.4-022** Collection and identification of potential Xylella fastidiosa vectors - assessment of bacteria transmission in Poland | Monika KALUZNA (Skierniewice - POLAND)
- P2.4-023** Transmission of cucurbit leaf crumple virus (geminiviridae: begomovirus) by vector Bemisia tabaci with differing secondary endosymbiont composition | Sharon ANDREASON (Charleston - UNITED STATES)
- P2.4-024** Genome-wide association study reveals loci associated with vector competency of diaphorina citri, insect vector of citrus greening disease | Douglas STUEHLER JR. (Fort Pierce - UNITED STATES)
- P2.4-025** How might management interventions be matched to the stage of epidemics for cassava viruses? | Ruairí DONNELLY (Cambridge - UNITED KINGDOM)

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Understanding emergence of pathogens in commercial and public forest ecosystems

P2.6-001 Microbiome interactions of *Heterobasidion* fruiting body and associated decayed woody tissues

Wenzi REN (Helsinki - FINLAND)

P2.6-003 Genomic diversity, pathogenicity and stability of epiphytic *Pseudomonas* population in prunus SPP. - searching for the sources of new disease outbreaks | Ziyue ZENG (Cambridge - UNITED KINGDOM)

P2.6-004 *Ceriporia lacerata* may be a potential tree pathogen | Wei-Ting CHUANG (Taipei - TAIWAN)

P2.6-005 Top down and bottom up: how the interaction of two pathogens fuels mortality of common ash (*Fraxinus Excelsior*) in Europe | Renate HEINZELMANN (Birmensdorf Zh - SWITZERLAND)

P2.6-006 A case study of expansion of *Heterobasidion parviporum* genotypes in a Norway spruce stand on peat soil

Darta KLAVINA (Salaspils - LATVIA)

P2.6-007 Environmental regulation of the *hymenoscyphus fraxineus* lifecycle

Matt COMBES (Alice Holt Lodge, Farnham - UNITED KINGDOM)

P2.6-008 Poplar rust never sleeps: evolutionary characterization of the first avirulence gene in the poplar rust fungus

melampsora larici-populina | Pascal FREY (Nancy - FRANCE)

Food Security for Sustainable Food Systems

P2.7-001 Improved shiitake mushroom cultivation in the natural growing conditions for the food and nutritional security of tribal farmers of India | Raja PERIASAMY (Pasighat - INDIA)

P2.7-002 Integrated management of finger millet production system in northeast India for food security and sustainability

Gopal Kumar NIROULA CHHETRY (Imphal(Canchipur) - INDIA)

P2.7-003 Assessment of combining microbial agents and silicon dioxide to control stem rot and southern blight disease on kidney bean in Taiwan | Ying-Ru LIANG (Wufong - TAIWAN)

Molecular aspects of plant-fungal interactions Part 1: Effectors

P3.1-001 The infection cushion, a key organ of virulence for *Botrytis cinerea* | Mélanie CRUMIERE (Lyon - FRANCE)

P3.1-002 Nps2, encoding a non-ribosomal peptide synthetase, is a virulence factor of the maize anthracnose fungus

c. graminicola | Lala ALIYEVA-SCHNORR (Halle - GERMANY)

P3.1-003 Virulence profile of *Colletotrichum falcatum* went isolates prevailing in Pakistan

Waqas ARSHAD (Faisalabad - PAKISTAN)

P3.1-004 Genetic transformation and expression of dsred and egfp in *Ascochyta pisi* to characterize *Ascochyta* blight disease progression in pea (*pisum sativum* L.) | Pankaj KUMAR (Poznan - POLAND)

P3.1-005 Identifying effectors from the fungal pathogen *ZymoSeptoria tritici* that can overcome resistance in commercial wheat cultivars | Amir MIRZADI GOHARI (Dublin - IRELAND)

P3.1-006 Analysis of factors involved in growth inhibition and blackening of rice roots infected with *pyricularia grisea*

Zikai XIANG (Kobe - JAPAN)

P3.1-007 *Melaleuca quinquenervia*; towards a model for myrtle rust research | Alyssa MARTINO (Sydney - AUSTRALIA)

P3.1-008 The perfect dawn: the role of early morning lighting on immunity | Gina VONG (York - UNITED KINGDOM)

P3.1-009 Forest tree mycobiome: impact on *Heterobasidion* pathogenesis and plant health | Fred ASIEGBU (Helsinki - FINLAND)

P3.1-010 Characterization of nrps and pks gene clusters and families in *alternaria dauci* and demonstration of the aldaulactone biosynthesis pathway through ko mutants | Jérôme Monroe BERNADINO (Angers - FRANCE)

P3.1-011 A comparative study of sa-ja-aba cross-talk in response to *alternaria brassicae* in susceptible and resistant brassica species | Shikha DIXIT (Raipur - INDIA)

P3.1-012 Novel genes associated with susceptibility or cryptic quantitative disease resistance to *pyrenopeziza brassicae* in *brassica napus* | Henrik STOTZ (Hatfield - UNITED KINGDOM)

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- P3.1-013** Novel resources for southern blight disease resistance breeding in common bean | Samuel ERIMA (Kamapala - UGANDA)
- P3.1-014** Heterologous expression in *Nicotiana benthamiana* identifies candidate effector proteins from *Phyllachora maydis* that suppress cell surface-triggered immune responses | Namrata JAISWAL (West Lafayette, IN - UNITED STATES)
- P3.1-015** Identification of a pathogenicity chromosome in *Fusarium oxysporum* f. sp. *Cepae* | Kosei SAKANE (Tottori - JAPAN)
- P3.1-016** A transcriptomic analysis of the role of other fungi in *Botrytis cinerea* caused noble rot of grapevine | Ádám István HEGYI (Eger - HUNGARY)
- P3.1-017** Metatranscriptomic analysis of possible changes in oenologically relevant components of grape berries during noble rot | Ádám István HEGYI (Eger - HUNGARY)
- P3.1-018** Comparative transcriptomic analysis of MAPK-mediated regulation of pathogenicity, stress responses and development in *Cytophora chrysosperma* | Dianguang XIONG (Beijing - CHINA)
- P3.1-019** Transgenic brassica napus seedlings overexpressing rice acyl-CoA-binding protein OsACBP5 are protected against seedling infection by fungal phytopathogens | Mee Len CHYE (Pokfulam, Hong Kong - HONG KONG)
- P3.1-020** Identification and use of a conserved locus for standardised target site integration in *Fusarium graminearum* | Martin DARINO (Harpden - UNITED KINGDOM)
- P3.1-021** Identification and characterization of candidate effectors from the wheat pathogen *Zymoseptoria tritici* | Sandra GOMEZ (West Lafayette - UNITED STATES)
- P3.1-022** Resistance to *Sclerotinia sclerotiorum* by over-expressing executor 1, defensin, syntaxin of plants (SYP121) or lecrk a4.3 in transgenic brassica napus | Lone BUCHWALDT (Saskatoon - CANADA)
- P3.1-023** Genetic characterization and pathogenicity screening of *Fusarium* spp. isolates causing post flowering stalk rot in maize | Prashant JAMBHULKAR (Jhansi - INDIA)
- P3.1-025** Isolation and steps towards molecular characterisation of *Ascochyta rabiei* exosomes | Matin GHAHERI (Brisbane - AUSTRALIA)
- P3.1-026** Oxalic acid metabolism contributes to full virulence and pycnidial development in the poplar canker fungus *Cytophora chrysosperma* | Yuanyuan WANG (Beijing - CHINA)
- P3.1-027** VDTSP2 modulates plant symptom development and stress responses in *Verticillium dahliae* | Chen TANG (Beijing - CHINA)
- P3.1-028** Septins regulate virulence in *Verticillium dahliae* and differentially contribute to microsclerotial formation and stress responses | Yonglin WANG (Beijing - CHINA)
- P3.1-029** Transcriptome variations in *Verticillium dahliae* in response to two different inorganic nitrogen sources | Wenwen LI (Beijing - CHINA)
- P3.1-030** Characterization of the promoter of the avirulence gene *avrpi9* in the rice blast fungus *Magnaporthe oryzae* | Chatchawan JANTASURIYARAT (Bangkok - THAILAND)
- P3.1-031** Occurrence and parasitic specialization of large-spored *Alternaria* species associated with early blight of potato and tomato in Algeria | Djida AYAD (Brest - FRANCE)
- P3.1-032** The rice blast fungus *Sr* protein 1 regulates alternative splicing with unique mechanisms | Jun YANG (Beijing - CHINA)
- P3.1-033** Biological characteristics contributing to virulence enhancement in *Fusarium oxysporum* f. sp. *cucumerinum* after the selective pressure of resistant cucumber | Shidong LI (Beijing - CHINA)
- P3.1-035** Regulatory mechanisms of in planta specific expression of a fungal effector gene, *moHtr1*, in the rice blast fungus | Yoon-Ju YOON (Seoul - REPUBLIC OF KOREA)
- P3.1-036** Dissection of the SDS2-mediated cell death and defense pathway to *Magnaporthe oryzae* in rice | Guo-Liang WANG (Columbus - UNITED STATES)
- P3.1-037** Function and host cell localization of *SIX3* and *SIX5* effectors in *Fusarium oxysporum* f. sp. *Cepae* | Kazunori SASAKI (Yamaguchi - JAPAN)
- P3.1-038** Analysis of MSP1-induced post-translational modification dynamics unveiled novel insights into rice-*Magnaporthe oryzae* interaction | Gihyun LEE (Miryang - REPUBLIC OF KOREA)

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- P3.1-039** Assay for transposase accessible-chromatin with High Throughput Sequencing (Atac-Seq) reveals the molecular responses of postharvest pear during *penicillium expansum* infection | Lina ZHAO (Zhenjiang - CHINA)
- P3.1-040** CCEG1, a glycoside hydrolase 12 protein from *Cytophora chrysosperma*, can trigger plant immunity but is not required for fungal virulence | Xu ZHIYE (Málaga - SPAIN)
- P3.1-041** The lysin protein *bdm1* of *Botryosphaeria dothidea* plays important roles in full virulence and inhibits plant immunity by binding chitin and protecting hyphae from hydrolysis | Xiao-Qiong ZHU (Beijing - CHINA)
- P3.1-042** The gene of a *gpi*-anchoring protein a promising new target for the control of the cucurbit powdery mildew *Podosphaera xanthii* | Isabel P. ROJI (Málaga - SPAIN)
- P3.1-043** Distribution of avirulence genes of the rice blast fungus collected from the northern areas of Korea in 2021 | Sook-Young PARK (Suncheon - REPUBLIC OF KOREA)
- P3.1-044** Role of endogenous eugenol in the resistance to *Botrytis cinerea* of the hybrid grapevine cultivar “Baco Blanc” | Xavier HASTOY (Villenave D'ornon - FRANCE)
- P3.1-045** Systemic colonization of potato plants by co-infection with *Verticillium dahliae* and *Fusarium oxysporum* | Ruifang JIA (Hohhot - CHINA)
- P3.1-046** Pesticide application causes changes in gene expression of thousand cankers disease host and pathogen | Denita HADZIABDIC (Knoxville - UNITED STATES)
- P3.1-047** RNA sequencing-based transcriptome analysis of two contrasting *S. lycopersicum* varieties infected by *Botrytis cinerea* | Mariola TOBAR (Santiago - CHILE)
- P3.1-048** Unravelling the cell wall integrity pathway of *Fusarium graminearum* | Nora A FOROUD (Lethbridge - CANADA)
- P3.1-049** Identification of *Solanum lycopersicum* small RNA transferred to *Botrytis cinerea* during the infection process | Mariola TOBAR (Santiago - CHILE)
- P3.1-050** Transcriptome analysis of different potato cultivars reveals the cultivar-specific molecular events in early blight disease | Sajeevan RADHA SIVARAJAN (Lomma - SWEDEN)
- P3.1-051** Transcriptomic analyses revealed pathogenicity-related genes in the fungal pathogen *Verticillium longisporum* | Vahidehalsadat RAFIEEBANADAKI (Uppsala - SWEDEN)
- P3.1-052** Transcriptomic responses controlling aggressiveness of *Ascochyta rabiei* during *Ascochyta* blight infection in chickpea | Mahmuda Binte MONSUR (170 Kessels Rd, Nathan Qld 4111 - AUSTRALIA)
- P3.1-053** Uncovering global diversity and evolution of virulence genes *toxa* and *toxb* in tan spot pathogen *Pyrenophora tritici-repentis* | Reem ABOUKHADDOUR (Lethbridge - CANADA)
- P3.1-054** Maize antifungal protein AFP1 elevates fungal chitin levels by targeting chitin deacetylases and other glycoproteins | Lay-Sun MA (Taiwan, Taipei - TAIWAN)
- P3.1-055** Collapse of aerial hyphae as a potential signal to induce perithecia formation in the cereal pathogen *Fusarium graminearum* | Yun-Seon CHOI (Asan - REPUBLIC OF KOREA)
- P3.1-056** *Ustilago maydis* N-glycosylated apoplastic effector ALE1 targets maize ZMTX1 to counteract its attack on xylenase 11a | Chibbhi KUMARASAMY BHASKAR (Taipei - TAIWAN)
- P3.1-057** Pathogenic effector *Vmusp1* contributes to the full virulence of *Valsa mali* and interacts with apple heat shock protein 70 as a potential target | Lili HUANG (Yangling - CHINA)
- P3.1-058** Strategies to discover disease response genes against *Fusarium* head blight in wheat | Maria A. HENRIQUEZ (Morden - CANADA)
- P3.1-059** A *Valsa mali* virulence effector *Vmpr1c* represses apple resistance to *Valsa* canker by compromising MDVQ29-mediated immunity | Lili HUANG (Yangling - CHINA)
- P3.1-060** *Ustilago maydis* Pr-1-like protein has evolved two distinct domains for dual virulence activities | Yu-Han LIN (Taiwan, Taipei - TAIWAN)
- P3.1-061** Dissection of the ubiquitin E3 ligase-mediated disease resistance mechanism in rice against *Magnaporthe oryzae* | Yue NING (Beijing - CHINA)
- P3.1-062** Impacts of myrtle rust disease on the soil microbial community associated with the naïve host *Lophomyrtus bullata* | Mahajabeen PADAMSEE (Auckland - NEW ZEALAND)

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Risk assessment for plant pathogens, a key tool for biosecurity under global changes

P3.2-001 Nutritional management and prediction of tomato leaf curl virus disease

Muhammad Ahmad ZESHAN (Sargodha - PAKISTAN)

P3.2-002 Adapting to the projected epidemics of Fusarium head blight of wheat in Korea under climate change

Kwang-Hyung KIM (Seoul - REPUBLIC OF KOREA)

P3.2-003 A generic process-based simulation model with two-way coupling of epidemics and crop growth

Laetitia WILLOCQUET (Biot - FRANCE)

P3.2-004 Conifer susceptibility to the pine wilt disease : combining host response to the nematode bursaphelenchus xylophilus and its insect vector monocamus galloprovincialis | Xavier TASSUS (Angers - FRANCE)

P3.2-005 Pest risk analysis, an effective tool to enhance crisis preparedness towards emerging pests: the case of TOBRFV in France | Christine TAYEH (Angers - FRANCE)

P3.2-006 The risk assessment of sharp eyespot caused by ceratobasidium cereale on cereals in Korea

Sook-Young PARK (Suncheon - REPUBLIC OF KOREA)

P3.2-007 The EPPO platform on pest risk analysis, a hub for risk assessments of plant pathogens

Muriel SUFFERT (Paris - FRANCE)

P3.2-008 The EPPO alert list, a tool to raise awareness on emerging pests in the EPPO region | Muriel SUFFERT (Paris - FRANCE)

P3.2-009 Distribution and diversity of abaca bunchy top virus and banana bunchy top virus causing bunchy top of abaca in caraga, Philippines | Elizabeth PARAC (Butuan City - PHILIPPINES)

P3.2-010 Assessing the risk of long-term establishment of fall armyworm (faw) in new zealand under current and future climate scenarios | Hossein Ali NAROU EI KHANDAN (Wellington - NEW ZEALAND)

P3.2-011 Australian plant biosecurity | Stacey AZZOPARDI (Mascot - AUSTRALIA)

P3.2-012 When finding a solution is not sufficient: economic viability of citrus disease management and the role of extreme environmental factors Ibtisam | AL ABRI (Al-Khod - OMAN)

P3.2-013 Identifying priority quarantine pests based on assessing their economic, social and environmental risks

Emilio RODRIGUEZ-CEREZO (Sevilla - SPAIN)

P3.2-014 Fig mosaic disease in tuscany (Italy): molecular characterization and investigation of virus-host interaction

Athos PEDRELLI (Pisa - ITALY)

P3.2-015 A spatio-temporal database of first introductions of plant pests in the EU | Maria-Chiara ROSACE (Piacenza - ITALY)

P3.2-016 Disease systems analysis for protecting global food security: an introduction to the R2M toolbox

Berea ETHERTON (Gainesville - UNITED STATES)

P3.2-017 Estimation of tylenchulus semipenetrans population on different citrus varieties grown in the national agricultural research center, islamabad, Pakistan | Sohail MUHAMMAD (Rawalpindi - PAKISTAN)

P3.2-020 Virus diseases of vegetables in mali and northern cote d'ivoire, west Africa

Legesse WUBETU BIHON (Addis Ababa - ETHIOPIA)

P3.2-021 Building global surveillance and mitigation strategies for laurel wilt

Romaric A. MOUAFO-TCHINDA (Gainesville, FL, Usa - UNITED STATES)

P3.2-022 Risk analysis of the cut flower trade and geographic hotspots to protect global agriculture from invasive pests and pathogens | Manoj CHOUDHARY (Gainesville - UNITED STATES)

P3.2-023 Quick assessments of the potential for establishment of quarantine pests in Sweden

Johanna BOBERG (Uppsala - SWEDEN)

P3.2-024 Bacterial leaf streak of maize caused by Xanthomonas vasculorum pv. vasculorum, a disease that might threaten European maize production | Andrew ASPIN (Sand Hutton - UNITED KINGDOM)

P3.2-025 Impact of climate change on potential distribution of Dickeya zeae causal agent of stalk rot of maize in sialkot district Pakistan | Sajjad HYDER (Sialkot - PAKISTAN)

P3.2-026 Horizon scanning for plant health threats: 7 years of support to EU risk managers | M. LARENAUDIE (Angers - FRANCE)

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P3.2-027 Efsa activities on risk assessment and preparedness for invasive alien plant pathogens in Europe

Matteo CROTTA (Parma - ITALY)

Resilience in soil health and disease suppression

P3.4-001 The role of soil bacteria and root exudates in regulating dormancy and germination of microsclerotia of *Verticillium longisporum* | Sarenqimuge SARENQIMUGE (Göttingen - GERMANY)

P3.4-002 Organic amendments transformed the apple (*malus domestica* borkh.) rhizosphere fungal, but not bacterial, community in an orchard replant soil | Lindani MOYO (Stellenbosch - SOUTH AFRICA)

P3.4-003 Biological suppression of soilborne fungal pathogen *Verticillium dahliae* in cotton soils
Linda SMITH (Brisbane - AUSTRALIA)

P3.4-004 Woodchip amendment can alter banana soil microbial abundance and disease suppressive potential
Hazel GAZA (South Johnstone - AUSTRALIA)

P3.4-005 Effects of soil physicochemical properties on *Fusarium oxysporum* f. sp. *elaeidis* disease incidence and severity in oil palm plantations of cameroon development corporation (CDC) | Lilian Zemenjuh MOFORCHA (Buea - CAMEROON)

P3.4-006 Cropping sequences that reduce pathogen inoculum and maintain overall soil biological health reduce disease incidence of *Verticillium wilt* of cotton | Linda SMITH (Dutton Park - AUSTRALIA)

P3.4-007 The relationship between shifts in the rhizosphere microbial community and root rot disease in a continuous cropping american ginseng system | Yan-Meng BI (Tianjin - CHINA)

P3.4-008 Impacts of elevated CO₂ on interactions with root microbes for enhanced oak growth and defence against pathogens | Rosa SANCHEZ-LUCAS (Birmingham - UNITED KINGDOM)

P3.4-009 Effect of residue management on cercospora leaf spot of table beet and soil microbiome
Pratibha SHARMA (Geneva, Ny - UNITED STATES)

P3.4-010 Is the planting of pesticide-treated seed profitable? results from a large-scale farmer-led arable cropping system experiments in north-east France | Jay Ram LAMICHHANE (Castanet-Tolosan - FRANCE)

P3.4-011 The root microbiome of dryland and irrigated spring wheat: an eight-year study
David WELLER (Pullman - UNITED STATES)

P3.4-012 Examining the impact of soil on tree health and disease progression
Vanja MILENKOVIC (Birmingham - UNITED KINGDOM)

P3.4-013 Effects of termination time of leguminous cover crops on root diseases of succeeding peas
Maria FINCKH (Witzenhausen - GERMANY)

P3.4-014 Underlying monoculture soil conditions causes of the durian *Phytophthora* stem canker escalation
Sok Leng CHONG (Kuala Terengganu - MALAYSIA)

P3.4-015 Assessment of disease threats and biofungicide efficacy in wood substrates
Anissa POLEATEWICH (Durham - UNITED STATES)

P3.4-016 Resilient circular growing media for the future | Florien GORTER (Wageningen - NETHERLANDS)

P3.4-018 Efficiency of biocompost on the growth of tomato plants and incidence of *Fusarium wilt* in nursery
Naiema GORASHI (Khartoum - SUDAN)

P3.4-019 Impact of steaming on soil health indicators and biocontrol agents | Jane DEBODE (Merelbeke - BELGIUM)

P3.4-020 Willow chips supplementation in soil enhances resistance against potato late blight
Marika RASTAS (Jokioinen - FINLAND)

P3.4-021 Using rna-seq to assess the meta-transcriptome of microbiome of field crops
Erik ALEXANDERSSON (Lomma - SWEDEN)

P3.4-022 Monitoring the presence of entomopathogenic nematodes in maize fields: towards biological control by conservation biocontrol | Eric NGUEMA-ONA (Saint-Malo - FRANCE)

P3.4-023 Response of the soil microbial community, dry root rot and common bean yield to cover crops in a no-tillage field | Murillo LOBO (Santo Antônio De Goiás - BRAZIL)

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- P3.4-024 Fortification of compost with bioagents for growth improvement and suppression of wilt disease on chickpea plants**
Hanan | MUDAWI (Khartoum - SUDAN)
- P3.4-025 Biochar amendment with alternate wetting-drying in rice field: an unique combination of crop disease management and quality enhancement** | Arnab MAJUMDAR (Kolkata - INDIA)
- P3.4-026 Impact of different tillage systems on net carbon exchange rates (ncer) and winter wheat infection a long-term study**
| Zuzanna SAWINSKA (Poznan (Poznan-Jezyce) - POLAND)
- P3.4-027 Impact of soil management on disease suppression of soil borne pathogens in arable fields**
Joeke POSTMA (Wageningen - NETHERLANDS)
- P3.4-028 Chitin-fortified black soldier fly composted organic fertilizer as an effective tool for managing potato cyst nematodes and improving potato yields** | Emmanuel Onyekwelu ANEDO (Nairobi - KENYA)
- P3.4-029 Enhancing soil phosphorus availability and wheat bioprotection against *ZymoSeptoria tritici* using the *Pseudomonas*-exuded isopyoverdine** | Félicie GOUDOT (Lille - FRANCE)
- P3.4-030 Sorghum-sudangrass as an organic amendment in anaerobic soil disinfestation decreases disease severity and promotes plant vigor** | Wilson OUMA (Knoxville, Tn - UNITED STATES)
- P3.4-031 Grapevines with esca symptoms have lower or higher colonization by native arbuscular mycorrhizal fungi?**
Lucia LANDI (Ancona - ITALY)
- P3.4-032 Effect of compost and biocontrol agents on lettuce and tomato *Fusarium* wilts and on rhizosphere microbiome**
Massimo PUGLIESE (Grugliasco - ITALY)

Tracing the long-distance pathways of aerial dissemination of plant pathogens

- P3.5-001 Sinks, sources and bottlenecks of atmospheric connectivity networks** | Davide MARTINETTI (Avignon - FRANCE)
- P3.5-002 Pathotypic and molecular characterization of *xoc* in Senegal** | Hamidou TALL (Kolda - SENEGAL)
- P3.5-003 Seasonal spore production, germination and fungicide resistance shifts of *cercospora beticola* in commercial sugar beet fields in the USA** | Gary SECOR (Fargo, Nd - UNITED STATES)
- P3.5-004 Quantification of airborne basidiospores of *ganoderma zonatum* at different altitudinal gradients and their relationship with environmental conditions in oil palm** | Juan LÓPEZ (Santa Marta - COLOMBIA)
- P3.5-005 Dispersal kernels are steeper than the observed gradients** | Alexey MIKABERIDZE (Reading - UNITED KINGDOM)

Bacteriophages: ecological roles and potential applications against bacterial plant pathogens

- P3.6-001 Characterization of novel bacteriophages against *Erwinia amylovora*, a causal pathogen for fire blight disease and their application in** | Sun HWANG (Seoul - REPUBLIC OF KOREA)
- P3.6-002 Development of phage cocktail for preventing soft rot disease caused by *pectobacterium* species in kimchi cabbage**
Chang-Sik OH (Seoul - REPUBLIC OF KOREA)
- P3.6-003 Developing phage therapy to reduce plant pathogen virulence in *Ralstonia solanacearum***
Daniel NARINO ROJAS (York - UNITED KINGDOM)
- P3.6-004 Characterisation of phage that lyse *brenneria goodwinii* and *gibbsiella quercinecans*, the causative agents of bleeding cankers associated with acute oak decline** | Emily GRACE (Birmingham - UNITED KINGDOM)
- P3.6-005 Isolation and characterisation of virulent phages against European *Xylella fastidiosa* subspecies**
Caroline LEBRUN (Marseille - FRANCE)
- P3.6-006 Bacteriophage as a biocontrol agent in bacterial blood disease of banana in indonesia**
rda SAFNI (Medan - INDONESIA)
- P3.6-007 Phage biocontrol of bacterial leaf blight on rice caused by *Xanthomonas oryzae* pv. *oryzae* in Vietnam**
Nga NGUYEN (Cantho - VIETNAM)

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Germplasm seed movement and global plant health

- P3.7-001** Seed transmission of spinach downy mildew | Kelley CLARK (Salinas - UNITED STATES)
- P3.7-002** Development and application of reverse transcription droplet digital pcr assays for detection and quantification of major apple viruses from in vitro micropropagated apple plantlets | Hyo-Jeong LEE (Gwangju - REPUBLIC OF KOREA)
- P3.7-003** Recovery of bls-associated pathogen from seed, seedlings, and leaf samples in south dakota
Shaukat ALI (Broomings - UNITED STATES)
- P3.7-004** Emergence of new diseases in imported germplasm of apple | Harender RAJ (Solan - INDIA)
- P3.7-005** Exploration of methods for detecting insects in seed lots | Isabelle SERANDAT (Beaucouzé - FRANCE)
- P3.7-006** Alfalfa seed virome | Lev NEMCHINOV (Beltsville - UNITED STATES)
- P3.7-008** Seed potato certification role in disease management in Australia | Nigel CRUMP (Toolangi - AUSTRALIA)
- P3.7-009** Evaluation of in situ and ex situ forage germplasm collections revealed the first occurrence and seed-transmission of alfalfa mosaic virus and southern bean mosaic virus infecting brachiaria SPP | Wobit BEDANE (Addis Ababa - ETHIOPIA)
- P3.7-010** Taxonomic diversity of rice seed associated bacteria in representative seed imports from various countries into african rice ghu | Fatimata BACHABI (Bouaké - COTE D IVOIRE)
- P3.7-011** Sweetpotato virus incidence and elimination in the global germplasm collection maintained at the international potato center (CIP) | Alexandre MELLO (Lima - PERU)
- P3.7-012** Phytosanitary evaluation of the in vitro cassava collection (manihot esculenta crantz): collection history and phytosanitary evaluation | Maritza CUERVO (Cali - COLOMBIA)
- P3.7-013** Identification, conservation and formation of a bank of strains of quarantine fungi isolated from bean seeds and tropical forages, from the germplasm bank “future seeds” | Julio Cesar RAMIREZ (Cali - COLOMBIA)
- P3.7-014** Detection and characterization of seed-borne bacterial leaf blight in wheat
Abdul Rahman MOUKAHEL (Zahle - LEBANON)
- P3.7-015** Effectiveness of natural compounds and low risk active ingredients for the control of fungal diseases on seed-bearing cabbage | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.7-016** Germplasm seed movement and global plant health | Lava Kumar PULLIKANTI (Ibadan - NIGERIA)
- P3.7-017** Phytosanitary procedures for the conservation and use of plant genetic resources conserved in the iita’s international genebank | Lava Kumar PULLIKANTI (Ibadan - NIGERIA)

PROGRESS IN DISEASE CONTROL - Part1

- P4.1-001** Nanoparticles of chitosan, antioxidant and organic acid and their native on fungi causing root rot of growing cucumber plant in green houses | El- Sayed ZIEDAN (Cairo - EGYPT)
- P4.1-002** Transgenic citrus expressing a truncated oncocin antimicrobial peptide suppresses asian citrus psyllid (diaphorina citri) and reduces citrus canker | Magali FERRARI GRANDO (Fort Pierce - UNITED STATES)
- P4.1-003** Can rapid detection methods help target pathogen control measures?
Neil BOONHAM (Newcastle Upon Tyne - UNITED KINGDOM)
- P4.1-004** Adavelt active (florypicoxamid), a naturally inspired solution for broad spectrum disease control
Andrea HUFNAGL (Guyancourt - FRANCE)
- P4.1-005** Selecting Phytophthora-tolerant citrus rootstocks | Zakariae BAIZ (Casablanca - MOROCCO)
- P4.1-006** Loranthus ligustrinus is an emerging parasite causing declining the yield of citrus reticulata orange in India and its sustainable management methods | Raja PERIASAMY (Pasighat - INDIA)
- P4.1-007** Green synthesis of ferrocenyl chalcones and their evaluation against plant pathogenic fungi and root knot nematode
Dinesh Kumar YADAV (Bhopal - INDIA)
- P4.1-008** Field efficacy of various systemic and biological fungicides against coffee leaf rust in Hawaii
Zhiqiang CHENG (Honolulu - UNITED STATES)
- P4.1-009** Use of biological products-base management programs for the control of sweet cherry diseases
Ernesto MOYA-ELIZONDO (Chillán - CHILE)

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- P4.1-010 Bacterial spot incited by *Xanthomonas cucurbitae*: a serious emerging disease of cucurbits**
Mohammad BABADOOST (Urbana, Illinois - UNITED STATES)
- P4.1-011 Using rna interference to protect crops against fungal pathogens** | Mark BELMONTE (Winnipeg - CANADA)
- P4.1-012 Sugar beet cultivars (CR+) with *C. beticola* resistant gene can improve the economic viability of the industry where cercospora leaf spot is a major problem** | Mohamed KHAN (Fargo - UNITED STATES)
- P4.1-013 A plant disease complex between a plant parasitic nematode and a fungus - reevaluating *pratylenchus capsici* disease etiology** | Sigal BROWN MIYARA (Rishon Lezion - ISRAEL)
- P4.1-014 Evaluation of organic materials review institute (OMRI) products and varieties for *Fusarium* head blight (FHB) management in organic winter wheat in Indiana, United States of America**
Camila ROCCO DA SILVA (West Lafayette - UNITED STATES)
- P4.1-015 Management of tar spot in conventional and organic corn systems in Indiana, United States of America**
Camila ROCCO DA SILVA (West Lafayette - UNITED STATES)
- P4.1-016 Resistance to *Fusarium oxysporum* F. SP. *luffae* in luffa germplasm despite the pathogen colonization**
Ahmed NAMISY (Taichung - TAIWAN)
- P4.1-017 Investigating the mode of action of a new biofungicide** | Sofia MONTANARI (San Michele All'adige (Tn) - ITALY)
- P4.1-018 Study of the effect of diseases on oil plants: a case study of the sunflower plant** | Maamar BOUKABCHA (Chlef - ALGERIA)
- P4.1-019 A snapshot of sensitivity of southeastern United States *Monilinia fructicola* isolates from peach to propiconazole and thiophanate methyl** | Guido SCHNABEL (Clemson - UNITED STATES)
- P4.1-020 Identification of 7-hydroxytropolone as an active molecule produced by *Pseudomonas* PA14H7 against *Dickeya*, causal agent of blackleg on potato** | Euphrasie LEPINAY (Achicourt - FRANCE)
- P4.1-021 Optimum timing of fungicide applications for managing kernel smut of rice** | Xin-Gen ZHOU (Beaumont - UNITED STATES)
- P4.1-022 Exploring alternatives and synthetic fungicides for apple bitter rot management in the mid-atlantic U.S.A.**
Srdan ACIMOVIC (Winchester - UNITED STATES)
- P4.1-023 Evaluation of *burkholderia glumae* control in rice (*oryza sativa*) variety 67 with silver nanoparticles (AGNPS)**
Giovanni CHAVES-BEDOYA (Cucuta - COLOMBIA)
- P4.1-024 Development of resources for control of stripe rust on wheat and barley in the United States**
Xianming CHEN (Pullman, Wa - UNITED STATES)
- P4.1-025 Detection of *Erwinia amylovora* in apple rootstocks: a case study in high-density apple orchards**
Srdan ACIMOVIC (Winchester - UNITED STATES)
- P4.1-026 In vitro and in situ antifungal activity of three plant extracts and two synthetic fungicides for the control of vascular wilt of oil palm caused by *Fusarium oxysporum* F. SP. *elaedis*** | Lilian Zemenjuh MOFORCHA (Buea - CAMEROON)
- P4.1-027 Innovative optical device for real-time spore detection applied on grapevine downy and powdery mildew**
Sara LEONI (Nyon - SWITZERLAND)
- P4.1-028 The plant pathology in the tropical plant health network scope** | Adriano CUSTÓDIO (Londrina - BRAZIL)
- P4.1-029 Screening of biocontrol solutions against black-rot (*Guignardia Bidwellii*), among registered anti-mildews biofungicides to design black rot control strategies for conventional and organic viticulture and the deployment of resistant varieties** | Marie-Cécile DUFOUR (Villenave-D'ornon, France - FRANCE)
- P4.1-030 Broad-spectrum control of foliar diseases with an enzyme-based biochemical pesticide**
Hilary MAYTON (Ithaca - UNITED STATES)
- P4.1-031 Novel sources of resistance to soybean seedling disease pathogen *Pythium irregulare***
Guohong CAI (West Lafayette - UNITED STATES)
- P4.1-032 Exogenous application of methyl salicylate induces defense in brassica against peach potato aphid *myzus persicae***
Jamin ALI (Newcastle Under Lyme - UNITED KINGDOM)
- P4.1-033 A super absorbent polymer containing copper for controlling mal secco disease of lemon**
Federico LA SPADA (Catania - ITALY)
- P4.1-034 Application of yeast, resistance inductors and multi-site fungicides in the control of diseases in cotton**
Solange Maria BONALDO (Sinop - BRAZIL)

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P4.1-035 Identification and fungicide sensitivity of xylaria sp. grown on shiitake wood log in Taiwan

Shiang Shiuan YU (Taichung - TAIWAN)

P4.1-036 Efficacy of inorganic chemicals as plant resistance inducer on the control of potato common scab disease

Ching Yi LIN (Chiayi City - TAIWAN)

P4.1-037 An integrated production chain for certified olive, citrus and fig propagation material in Greece

Christina VARVERI (Kifissia, Athens - GREECE)

P4.1-038 Deciphering the influence of co-inoculation timing on antagonistic effects of *Leptosphaeria biglobosa* on *I. maculans*

Evren BINGOL (Hatfield/hertfordshire - UNITED KINGDOM)

P4.1-040 Early blight comes late in Swedish ware potato | Eva EDIN (Västerås - SWEDEN)

P4.1-041 Evaluating the efficacy of phosphite and metalaxyl in *Phytophthora* root rot control in avocado

Jacob JOSE (Brisbane - AUSTRALIA)

P4.1-042 Chemical priming of defence in forest health: oak diseases case of study

Rosa SANCHEZ-LUCAS (Birmingham - UNITED KINGDOM)

P4.1-043 Tomato seed priming with water-soluble polysaccharides from *Jania adhaerens* promotes plant growth and increases plant resistance to soilborne pathogens | Hillary RIGHINI (Bologna - ITALY)

P4.1-044 Study of anthracnose fruit rot & black leaf spot of strawberry in Pakistan and their bio-management using indigenous plants extracts | Nasir MEHMOOD (Rawalpindi - PAKISTAN)

P4.1-045 Monitoring and fungicide resistance allele detection of the wheat blast pathogen in paraná state, Brazil

Adriano CUSTÓDIO (Londrina - BRAZIL)

P4.1-046 Evaluating hard squash cultivars for susceptibility to powdery mildew and fruit rot

Carmen M. MEDINA-MORA (East Lansing - UNITED STATES)

P4.1-047 Identification of defence mechanisms in dormant seeds | Benjamin HUBERT (Angers - FRANCE)

P4.1-048 A weather-based model to predict the population of *aureobasidium pullulans* and to improve grey mold biological control | Odile CARISSE (430 Gouin Bvl. Saint-Jean-Sur-Richelieu - CANADA)

P4.1-049 Mechanism of β -1,3-Glucanase cooperating with hsaF in *lysobacter enzymogenes* to antagonize *Pythium*

Gaoge XU (Nanjing - CHINA)

P4.1-050 Integrated management for controlling vascular-streak dieback on cocoa in Indonesia

Fakhrusy ZAKARIYYA (Jember - INDONESIA)

P4.1-051 Integrated management of insect vectors of pierce's disease in Taiwan | Yaw-Jen DONG (Taichung City - TAIWAN)

P4.1-052 Screening of novel plant activators that promote response to pathogens even under the eutrophic conditions

Tetsutaro NAKAMURA (Yokohama - JAPAN)

P4.1-053 An overview of alternaria blight in broccoli in georgia, USA | Aparna PETKAR (Tifton - UNITED STATES)

P4.1-055 Prevention of stomatal entry as a strategy for plant disease control against foliar pathogenic *Pseudomonas* species

Nanami SAKATA (Tsukuba - JAPAN)

P4.1-056 Genome-wide association mapping of resistance against rice blast strains in South China and identification of a New Pik Allele | Chenggang LI (Changsha - CHINA)

P4.1-057 New sources of resistance and heritability to wilt/root rot complex diseases in kabuli chickpea

Tawffiq ISTANBULI (Zahle - LEBANON)

P4.1-058 Strawberry *Botrytis cinerea* control by plant extracts | Alma VALIUSKAITE (Babta - LITHUANIA)

P4.1-059 Sustainable horticultural crops protection in lithuania | Alma VALIUSKAITE (Babta - LITHUANIA)

P4.1-060 Integrated management to control blast disease of wheat | Salina BANU (Gazipur - BANGLADESH)

P4.1-061 Strawberry *Botrytis cinerea* control by led-light | Neringa RASIUKEVICIUTE (Babta, Kaunas Disrt. - LITHUANIA)

P4.1-062 Strawberry integrated plant protection in Lithuania | Neringa RASIUKEVICIUTE (Babta, Kaunas Disrt. - LITHUANIA)

P4.1-063 Local control case study for fire blight on apples | Wonkwon JUNG (Daegu - REPUBLIC OF KOREA)

P4.1-064 Perspectives on the application of cold atmospheric pressure plasmas in plant protection against soft rot *pectobacteriaceae* | Agata MOTYKA-POMAGRUK (Gdansk - POLAND)

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- P4.1-065** Effects of lime sulfur mixture treatment concentration and time on organic wheat seed disinfection and seedling growth | Kim MIN-JEONG (Wanju - REPUBLIC OF KOREA)
- P4.1-066** Use of oligonucleotides for the control of *Botrytis cinerea* in horticultural crops | Alba LÓPEZ LAGUNA (Málaga - SPAIN)
- P4.1-067** Grapevine endophytic bacteria as potential biocontrol agents against grapevine trunk diseases pathogens | Kálmán Zoltán VÁCZY (Eger - HUNGARY)
- P4.1-068** Evaluation of wildfire disease control effect by variety according to bordeaux mixture treatment in organic soybean seed production | Lee JAE-HYEONG (Wanju - REPUBLIC OF KOREA)
- P4.1-069** Ingadosides A-C, acacic acid-type saponins from *inga sapindoides* with potent inhibitory activity against grapevine downy mildew as potential alternatives to copper fungicides | Thomas OBERHANSLI (Frick - SWITZERLAND)
- P4.1-070** Ozonated water application as an innovative tool for elicitation of plant defense response: the case of *begonia hybrida*-*Botrytis cinerea* pathosystem | Claudia PISUTTU (Pisa - ITALY)
- P4.1-071** Sustainable strategies to manage yellow rust in norwegian spring wheat | Chloé GRIEU (Aas - NORWAY)
- P4.1-072** Temperature impacts the protective efficacy of microbial biocontrol agents | Margot GRIMONPONT (Avignon - FRANCE)
- P4.1-073** Impact of the scn coalition public-private partnership on USA soybean growers | Samuel MARKELL (Fargo - UNITED STATES)
- P4.1-074** Evaluation of fungicide efficacy and timing on phoma black stem of sunflower in the United States | Samuel MARKELL (Fargo - UNITED STATES)
- P4.1-075** Real time adapted canopy vigor application of copper in vineyard | Tito CAFFI (Piacenza - ITALY)
- P4.1-076** Optiplasm: optimisation of the official evaluation of oilseed rape varieties against clubroot (*Plasmodiophora Brassicae*) | Sophie PERROT (Beaucouzé - FRANCE)
- P4.1-077** Actifol: evolution of knowledge on lettuce *Fusarium oxysporum* F. SP. *lactucae* | Isabelle SERANDAT (Beaucouzé - FRANCE)
- P4.1-078** Insights towards the control of ramularia leaf spot - an investigation of the relative roles of barley variety, seed source, fungicide treatment, and geographic location | Rabisa ZIA (Galway - IRELAND)
- P4.1-079** Reduction of *eutypa lata* in cabernet sauvignon wood by biocontrol agents native to Central Chile | Mauricio LOLAS (Talca - CHILE)
- P4.1-080** Influence of soil-borne inoculum of *Plasmodiophora brassicae* measured by qPCR on disease severity of clubroot-resistant cultivars of winter oilseed rape | Ann-Charlotte WALLENHAMMAR (Örebro - SWEDEN)
- P4.1-081** The influence of liquid fertilizers enriched with bioactive compounds on the development and health of selected agricultural crops - project ferti up | Jakub DANIELEWICZ (Poznan - POLAND)
- P4.1-082** Effect of cereal-pulse rotations on *Fusarium avenaceum* pathogenicity | Nora A FOROUD (Lethbridge - CANADA)
- P4.1-083** Repeated applications of potassium bicarbonate suppresses dollar spot on amenity turfgrass | Zoltan BANYAI (Madison - UNITED STATES)
- P4.1-084** Novel plant defense inducers and antimicrobials for managing huanglongbing (citrus greening) and citrus canker diseases | Sanju KUNWAR (Immokalee - UNITED STATES)
- P4.1-085** The effect of slightly acidic electrolyzed water for controlling cucurbits powdery mildew (*Podosphaera Xanthii*) using volatilized method under greenhouse cultivation | Alvian Nur HIDAYAT (Tsuruoka, Yamagata - JAPAN)
- P4.1-086** Preparation of nano sustained release fungicide based on zif-8 materials to control strawberry anthracnose | Yang BI (Beijing - CHINA)
- P4.1-087** Injecting oxytetracycline: an effective approach for managing hlb disease in citrus | Sanju KUNWAR (Immokalee - UNITED STATES)
- P4.1-088** Control of chickpea *Ascochyta* blight using curative fungicide strategies and cultivar resistance | Joshua FANNING (Horsham - AUSTRALIA)
- P4.1-089** Small peptides as potential enhancers of a plant's response to pathogen attack - investigating their uptake into plant cells following exogenous application | Marion WOOD (Auckland - NEW ZEALAND)
- P4.1-090** Fungicide application method impacts on maize grain fill duration, kernel dynamics, and grain yield | Malena BARTABURU (West Lafayette - UNITED STATES)

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P4.1-091 Evaluation of bacterial isolates for biological control of brown spot in rice plants

Akintunde Abiodun AJULO (Goiania - BRAZIL)

P4.1-093 Diversity and virulence differentiation of the pathogens associated with Fusarium crown rot of wheat in China

Honglian LI (Zhengzhou - CHINA)

P4.1-094 Efficacy of a zero-residue strategy against field and postharvest diseases on strawberries

Davide SPADARO (Grugliasco - ITALY)

P4.1-095 Can we predict whether a biocontrol product will be efficient? | Elsa BALLINI (Montpellier - FRANCE)

Development of Molecular Diagnostic Tools for Plant Pathogens in a Globalizing World

P4.2-001 Fusarium species on imported vegetables in the UK | Sylvester AIGBE (Ekpoma - NIGERIA)

P4.2-002 Abundance, diversity, and phylogenetic study of the faba bean foot and root rot disease complex

in the United Kingdom | Basem ATTAR (Newcastle Upon Tyne - UNITED KINGDOM)

P4.2-003 The power of electrochemical biosensors for Botrytis spp. diagnostics and application in idm practices

Rebecca FORD (Brisbane - AUSTRALIA)

P4.2-004 Genome-wide profiling of OSDRB1-associated RNAs using targeted rna editing in rice

Shuai YIN (Wuhan, Hubei, China - CHINA)

P4.2-005 Characterization and diversity of pectobacterium and Dickeya species in the Netherlands

Michiel PEL (Wageningen - NETHERLANDS)

P4.2-006 Early detection of phyllactinia guttata, the causal agent of powdery mildew, through the use of spore hunting and pcr specific primers in European hazelnut (Corylus Avellana L.) orchards

Ernesto MOYA-ELIZONDO (Chillán - CHILE)

P4.2-007 Thermal tolerances and molecular phylogeny of thielaviopsis paradoxa isolates | Abiodun AZEEZ (Helsinki - FINLAND)

P4.2-008 Race-specific detection as the first step in disease management of Fusarium wilt in lettuce

Hanna MESTDAGH (Gent - BELGIUM)

P4.2-009 Metaflora 2.0: an innovative approach to detect pathogenic fungal and bacterial microorganisms in seeds using minion sequencing | Kévin ADAM (Ramonville-Saint-Agne - FRANCE)

P4.2-010 Evaluation of molecular tests for the detection 'Candidatus liberibacter' species associated with huanglongbing disease in citrus: results from an international test performance study and a proficiency test

Tom RAAYMAKERS (Wageningen - NETHERLANDS)

P4.2-011 Fungi species associated with potato aphids in bamenda, northwest region of cameroon

Chia Genevieve KAIN (Bamenda - CAMEROON)

P4.2-012 A new diagnostic tool for the identification of four beet yellows viruses by multiplex RT-QPCR

Mylène RUH (Beaucouzé - FRANCE)

P4.2-013 Maldi-tof ms as an accredited method for rapid and accurate identification of regulated plant pathogenic bacteria

Jeroen VAN DE BILT (Wageningen - NETHERLANDS)

P4.2-014 Practical applications in pathogen detection: strategies and progress of a sensitive surveillance tool for detecting the laurel wilt pathogen | Romina GAZIS (Homestead - UNITED STATES)

P4.2-015 Development of rapid dna-based detection assays for Colletotrichum species causing apple bitter rot in the mid-atlantic U.S.A. Srdjan | G. ACIMOVIC (Winchester, Va - UNITED STATES)

P4.2-016 Diagnosis of bacterial and nematode infection in ryegrass seed through metabolite variations using direct immersion solid-phase microextraction (DI-SPME) with gas chromatography mass spectrometry (GC-MS)

Pushpendra KOLI (Perth - AUSTRALIA)

P4.2-017 Simplified plant pathogens detection with automated nucleic acid extraction and inhibitor resistant QPCR master mixes | Isabelle PROST (Charbonnières Les Bains - FRANCE)

P4.2-018 Harnessing the power of comparative genomics to support distinction of cryptic species within phyllosticta and development of highly specific detection of phyllosticta citricarpa causing citrus black spot by real-time PCR

Jaime AGUAYO (Malzéville - FRANCE)

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- P4.2-019** Development of detection technology for tomato pith necrosis caused by *Pseudomonas mediterranea*
Chia Hsin TSAI (Taichung - TAIWAN)
- P4.2-020** First report of watermelon crinkle leaf-associated virus 1 and 2 (WCLAV-1 and -2) infecting straightneck squash in the United States | Fanny IRIARTE (Quincy, FL - UNITED STATES)
- P4.2-021** Diagnosis of *Fusarium oxysporum* f. sp. *ciceris* causing Fusarium wilt of chickpea using loop-mediated isothermal amplification (LAMP) and conventional end-point PCR | Saidi ACHARI (Bundoora - AUSTRALIA)
- P4.2-022** Development of molecular diagnostic methods for *Agrobacterium* sp. causing root rot diseases
Inyoung HAN (Jinju - REPUBLIC OF KOREA)
- P4.2-023** Diversity of *Colletotrichum* species complexes associated with fruit anthracnose in south Korea and their sensitivity to different fungicides | Taehyun CHANG (Sangju - REPUBLIC OF KOREA)
- P4.2-024** Development of a real-time PCR for the detection of blueberry rust (*thekopsora minima*) and its performance during a UK outbreak | Ashleigh ELLIOTT (York - UNITED KINGDOM)
- P4.2-025** A multiplex real-time PCR assay for the universal detection of orchid fleck virus and differentiation among its four strains infecting multiple hosts | Avijit ROY (Beltsville - UNITED STATES)
- P4.2-026** Development of diagnostic methods for hop viroids | Tanja GUCEK (Alec - SLOVENIA)
- P4.2-027** *Curtobacterium flaccumfaciens* pv. *flaccumfaciens*, a choice of detection targets
Noel KNIGHT (Toowoomba - AUSTRALIA)
- P4.2-029** Comparison between fluorescence imaging techniques and LAMP for early detection of several plant pathogens
Naofel ALJAFER (Plymouth - UNITED KINGDOM)
- P4.2-030** Predicting soilborne disease risk of pulse crops in Montana, United States
Carmen MURPHY (Bozeman - UNITED STATES)
- P4.2-031** A sensitive immuno-dot blot assay for the early detection of *Chondrostereum purpureum* using antibody-conjugated gold nanoparticles | Jaime MEJIAS (Temuco - CHILE)
- P4.2-033** Aradq: an automated disease quantification software for flood-inoculated rosette-type seedlings
Jae Hoon LEE (Seoul - REPUBLIC OF KOREA)
- P4.2-034** Improved reverse transcription-loop-mediated isothermal amplification (rt-LAMP) test for rapid and sensitive detection of yam mosaic virus in seed yam systems | Ruth FESTUS (Kent - UNITED KINGDOM)
- P4.2-035** *Lisianthus* diseases associated with *Fusarium oxysporum* and its population dynamics in fields
Cheng-Chun WU (Taichung - TAIWAN)
- P4.2-036** Multi-phasic identification of fungi causing foliar and pod diseases of African yam bean (*Sphenostylis stenocarpa* Hochst. ex a. rich.) in Nigeria | Olaide OGUNSANYA (Ibadan - NIGERIA)
- P4.2-037** High-resolution melting curve analysis to detect several *Ceratocystis* species in the Latin American clade
Kira LYNN (Pretoria - SOUTH AFRICA)
- P4.2-038** Development of recombinase polymerase amplification assays for specific detection of *Xanthomonas oryzae* pv. *oryzae* and *Xanthomonas oryzae* pv. *oryzicola* | Shefali DOBHAL (Hawaii - UNITED STATES)
- P4.2-041** Ring test provides the basis for harmonization of tobRFV diagnostic protocols for seeds in the Nappo region
Vessela MAVRODIEVA (Laurel - UNITED STATES)
- P4.2-042** Understanding plant responses to pathogen starts with a good protocol | Jiaqi WEI (Birmingham - UNITED KINGDOM)
- P4.2-043** Molecular diagnostics of *Allorhizobium vitis*, the main causative agent of grapevine crown gall in California nurseries
Colin TODD (Riverside - UNITED STATES)
- P4.2-044** Use of metabolomics to diagnose plant diseases and to evaluate potential therapeutics or preventions: a citrus HLB case study | Mitchell MCCARTNEY (Davis - UNITED STATES)
- P4.2-045** Diversity of pathogens of purple seed stain disease on soybean by *Cercospora* spp. in Korea
Jung Wook YANG (Suwon - REPUBLIC OF KOREA)
- P4.2-047** A novel method for accurate detection and quantification of *Ascochyta rabiei* in chickpea (*Cicer arietinum*)
Susie SPRAGUE (Canberra - AUSTRALIA)

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- P4.2-048** Onsite detection of cucumber mosaic virus by lateral flow strip-based reverse transcription recombinase polymerase amplification in pepper | Min Jeong KIM (Jeonju - REPUBLIC OF KOREA)
- P4.2-049** Development of lateral flow recombinase polymerase amplification assay for the simultaneous detection of soybean mosaic virus and soybean yellow mottle mosaic virus | Bong Geun OH (Jeonju - REPUBLIC OF KOREA)
- P4.2-050** Simultaneous detection of cymbidium mosaic virus and odontoglossum ringspot virus using lateral flow strip reverse transcription-recombinase polymerase amplification assays | Bong Geun OH (Jeonju - REPUBLIC OF KOREA)
- P4.2-051** Grapevine red blotch disease diagnosis: opportunities and challenges | Achala KC (Central Point - UNITED STATES)
- P4.2-052** Crispr-based approaches for rapid and sensitive detection of pospiviroids
Hanumantha PAPPU (Pullman - UNITED STATES)
- P4.2-053** Testing compost and casing soils for various mushroom pathogens
Jean Martin VAN DER WOLF (Wageningen - NETHERLANDS)
- P4.2-054** Application of rapid nucleic acid extraction method to simplify molecular detection of plant pathogens
Chin Chih CHEN (Taichung City - TAIWAN)
- P4.2-055** Pilot initiative for sharing of post entry plant quarantine and diagnostic services between australia and New Zealand | Julie PATTEMORE (Canberra - AUSTRALIA)
- P4.2-056** Early detection as a tool to stop the spread of diseases: the case of ceratocystis platani in Europe
Alberto SANTINI (Sesto Fiorentino - ITALY)
- P4.2-057** Dna-based soil analysis of aphanomyces euteiches increases sustainable production of legume-based foods
Zahra OMER (Uppsala - SWEDEN)
- P4.2-058** Identification of blackleg pathogens in Swedish winter oil seed rape | Zahra OMER (Uppsala - SWEDEN)
- P4.2-059** Dna barcode identification beyond similarity indices: informative nucleotides of Xanthomonas bacteria on common bean (Phaseolus Vulgaris) | Vladimir GRUJIC (Ljubljana - SLOVENIA)
- P4.2-060** Development of a new lateral flow immunoassay for detection of banana bunchy top virus
Megan VANCE (Brisbane - AUSTRALIA)
- P4.2-061** Pathotracer: a tool for monitoring rice pathogens and resistance genes in Asia
Van SCHEPLER-LUU (Los Banos - PHILIPPINES)
- P4.2-062** Detection and stability of citrus bark cracking viroid (CBCVD) in water | Sebastjan RADIEK (Alec - SLOVENIA)
- P4.2-063** Comparison of reliable and effective pcr-based detection methods for pcn in potato fields
Bart WUIJSTER (Emmeloord - NETHERLANDS)
- P4.2-064** A multi-pronged and genome-informed real-time pcr detection of xylophilus ampelinus, a causative agent of bacterial blight of grapevine | Aleksander BENCIC (Ljubljana - SLOVENIA)
- P4.2-065** Prevalance and distribution of areolate mildew in mississippi cotton
Alejandra JIMENEZ MADRID (Tifton - UNITED STATES)
- P4.2-066** Successful isolation of Xylella fastidiosa subsp. multiplex portuguese strain, in axenic culture, from lavandula dentata | Manca PIRC (Ljubljana - SLOVENIA)
- P4.2-067** Nepodetect - direct detection of plant viruses from vector nematodes | Valeria ORLANDO (York - UNITED KINGDOM)
- P4.2-068** Crispr/cas-based biosensing tool for point-of-care detection of Erwinia amylovora
Ye Ram CHO (Seoul - REPUBLIC OF KOREA)
- P4.2-069** The diversity and pathogenicity of rahnella species isolated from diseased onion bulbs in the United States and South Africa | Fanele MNGUNI (Pretoria - SOUTH AFRICA)
- P4.2-070** Diapason: diagnostic of gray leaf spot by digital PCR | Cécile GRUET (Montpellier - FRANCE)
- P4.2-071** From orchard to storage: diagnose your apples | Cécile GRUET (Montpellier - FRANCE)
- P4.2-072** Presence of Curtobacterium flaccumfaciens in belgian and dutch greenhouse poinsettia production - ruining the christmas spirit? | Jolien VENNEMAN (Merelbeke - BELGIUM)
- P4.2-073** Krisp: a computational pipeline for rapid development of crispr-based molecular diagnostics from raw reads
Zachary FOSTER (Corvallis - UNITED STATES)

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P4.2-074 Risk assessment for trunk diseases in sweet cherry orchards by using spore traps and QPCR

Javier CHILIAN (Chillan - CHILE)

P4.2-075 Enhancing pcr detection of *Xylella taiwanensis* using whole genome sequence information

Jianchi CHEN (Parlier - UNITED STATES)

P4.2-076 Diagnosis of tar spot of corn caused by *Phyllachora maydis* using loop-mediated isothermal amplification (LAMP) and conventional PCR | Wily SIC (West Lafayette - UNITED STATES)

P4.2-077 Implementation of real-time pcr for quantitative diagnosis of cassava common mosaic virus in cassava germplasm (Manihot Esculenta Crantz) | Diana Patricia NIÑO-JIMENEZ (Cali - COLOMBIA)

P4.2-078 Development and validation of a rapid molecular diagnostic tool for the detection of *Phytophthora ramorum* based on recombinase polymerase amplification (RPA) | Bryant DAVENPORT (Elkhart - UNITED STATES)

P4.2-079 Digital droplet pcr provides reference-free high throughput quantification of cereal pathogens in host samples Leon LENZO (Perth - AUSTRALIA)

P4.2-080 Multilocus sequence typing (mlst) and phylogenetic study reveal species delimitation of *Colletotrichum* spp. associated with the dieback of guava | IQRA (Faisalabad - PAKISTAN)

P4.2-081 Two new qpcr assays for detection and quantification of *Aspergillus flavus* clade and *Aspergillus parasiticus* clade in maize kernels | Romain VALADE (Boigneville - FRANCE)

P4.2-083 *Pantoea stewartii* subsp. *stewartii* a molecular diagnostic method and barcoding to prevent the spread of the pathogen through maize trade | Valeria SCALA (Roma - ITALY)

P4.2-084 Validation and development of diagnostic methods for banana wilt associated Phytoplasmas - a biosecurity perspective | Lilia CARVALHAIS (St Lucia - AUSTRALIA)

P4.2-085 Elucidating the source of recurring findings of *pantoea stewartii* subsp. *stewartii* in Europe Tanja DREO (Ljubljana - SLOVENIA)

P4.2-086 Indicants project: innovative diagnostics for banana pathogens surveillance Diane MOSTERT (Stellenbosch - SOUTH AFRICA)

P4.2-088 Current status of prunus necrotic ring spot virus in montenegro | Jelena ZINDOVIC (Podgorica - MONTENEGRO)

P4.2-089 Dispersal patterns of petri disease associated pathogens in rootstock mother vines and impact of pathogens eradication in the production of healthy propagation material | Christos TSOUKAS (Athens - GREECE)

P4.2-090 Immunoassays for diagnosis and detection of boxwood blight | Douglas LUSTER (Ft. Detrick - UNITED STATES)

P4.2-091 Modernising routine diagnostics for the management of viruses for the horticulture industry Flavia BONORA (Brisbane - AUSTRALIA)

P4.2-092 Snp4orphanspecies: a bioinformatics pipeline to isolate molecular markers for studying genetic diversity of orphan species | Cyril DUTECH (Cestas - FRANCE)

P4.2-093 Species-specific pcr reveals the occurrence of the alien fungus *Erysiphe corylacearum* infecting hazel in Hungary Márk NÉMETH Z. (Budapest - HUNGARY)

P4.2-094 Identification and quantification of grapevine trunk and black-foot diseases pathogens in the soil, using real-time PCR coupled with HRM. | Stefanos Gabriel TESTEMPASIS (Thessaloniki - GREECE)

P4.2-095 Bacterial leaf spot of hydrangea: on a "new old" disease and the importance of getting it right in phytodiagnostics Joël F. POTHIER (Wädenswil - SWITZERLAND)

P4.2-096 Development of rapid and affordable virus-mimicking artificial positive controls and their application in diagnostics Ioannis TZANETAKIS (Fayetteville - UNITED STATES)

P4.2-097 Detection of latent infections of apples caused by *neofabraea* spp and *Monilinia* spp fungi using lamp method Monika MICHAŁECKA (Skierniewice - POLAND)

P4.2-098 Specific and sensitive detection tools for *Xanthomonas arboricola* pv. *corylina*, the causal agent of bacterial blight of hazelnut, developed with comparative genomics | Joël F. POTHIER (Wädenswil - SWITZERLAND)

P4.2-099 Current etiology of *Aspergillus* vine canker and sour rot of table grapes in California Marcelo BUSTAMANTE (Davis - UNITED STATES)

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P4.2-100 Major cassava diseases in the tropics: threats to food security and livelihoods from Asia and the Americas

Wilmer CUELLAR (Palmira - COLOMBIA)

P4.2-101 Preventing a world without roses: rt-lamp targeting gene-fragments of rose rosette virus

Francisco OCHOA-CORONA (Stillwater - UNITED STATES)

P4.2-102 Development of a real-time pcr for the detection and quantification of Fusarium equiseti inoculum in soil from lettuce fields | George T. TZIROS (Thessaloniki - GREECE)

P4.2-103 A taqman-based multiplex real-time RT-QPCR for the simultaneous detection of Botryosphaeriaceae species in woody crops | Nieves CAPOTE (Alcalá Del Río, Seville - SPAIN)

Genome evolution in filamentous plant pathogens

P4.3-001 The maize late wilt fungus magnaporthiopsis maydis in israel consists of aggressive strains that can specialize in disrupting growth or plant health | Ofir DEGANI (Kiryat-Shmona - ISRAEL)

P4.3-002 Genome sequencing and comparison of seven strains of tilletia horrida, causal agent of kernel smut of rice

Sabin KHANAL (College Station - UNITED STATES)

P4.3-003 Reoccurring wilt, a new disease of cotton in australia caused by novel eutypella species

Linda SMITH (Brisbane - AUSTRALIA)

P4.3-004 Genome comparisons between eucalyptus leaf- and stem-infecting teratosphaeria species reveal gene family expansion in the absence of repeat gain | Janneke AYLWARD (Pretoria - SOUTH AFRICA)

P4.3-005 Fusarium oxysporum effector clustering version 2 (FOEC2): an updated pipeline to infer host range

Peter VAN DAM (Wageningen - NETHERLANDS)

P4.3-006 Genomic characterization of the mating-type (mat1) locus from seven Sclerotinia species

Sikelela BUTHELEZI (Hatfield Campus Pretoria, 0083 - SOUTH AFRICA)

P4.3-007 Folding features and dynamics of 3D genome architecture in plant fungal pathogens | Chongjing XIA (Beijing - CHINA)

P4.3-008 Is host jumping of Pyrenophora teres leading towards speciation?

Buddhika AMARASIGNHE DAHANAYAKA (Toowoomba - AUSTRALIA)

P4.3-009 Diversity and pathogenicity of Colletotrichum species causing passion fruit anthracnose in Taiwan

Jyh Nong TSAI (Taichung - TAIWAN)

P4.3-010 Comparative secretome analysis of ZymoSeptoria tritici isolates and dothideomycete species to identify conserved secreted effector proteins | Sandra GOMEZ (West Lafayette - UNITED STATES)

P4.3-011 Mating pheromone and receptor genes are generally conserved in the ceratocystidaceae, a group including important plant pathogens with diverse mating strategies | Frances A LANE (Pretoria - SOUTH AFRICA)

P4.3-012 Mat1-1-2 gene knockout reduces the frequency of unidirectional mating-type switching in ceratocystis albifundus

Frances LANE (Pretoria - SOUTH AFRICA)

P4.3-013 Blazing a trail: uncovering the mechanisms that underlie thermotolerance in the post-fire fungus rhizina undulata

Andi WILSON (Pretoria - SOUTH AFRICA)

P4.3-014 Fusarium oxysporum f. sp. fragariae race 2 in California did not evolve through a single mutation in the AVRFW1 avirulence gene | Peter HENRY (Salinas - UNITED STATES)

P4.3-015 Identification of ganoderma species on different host in the northwest region of cameroon

Bih Joan NDEH (Bamenda - CAMEROON)

P4.3-016 Reticulated evolution, hybridization events and gene tree incongruence revealed in the Trichoderma Harzianum complex | Rence Marrion PINEDA (Tokyo - JAPAN)

P4.3-017 Classification and characterization of Colletotrichum species associated with apple bitter rot in Korea

Yongho JEON (Andong-Si - REPUBLIC OF KOREA)

P4.3-018 A multipurpose toolkit offered practical assistance to advanced functional analysis of Phytophthora sojae genes

Qunqing WANG (Taian - CHINA)

P4.3-019 Comparative genomics of ceratobasidium theobromae strains associated with vascular streak dieback of cacao in Asia and red maple in north America | John MCVAY (Gainesville - UNITED STATES)

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P4.3-021 Adaptive evolution in virulence effectors of the rice blast fungus *pyricularia oryzae*

Pierre GLADIEUX (Montpellier - FRANCE)

P4.3-022 Exploring the surprising differences in effector complements of the closely related apple and strawberry powdery mildew pathogens | Thomas HEAVEN (West Malling - UNITED KINGDOM)

P4.3-023 Mini-chromosomes drive large-scale genome rearrangements and horizontal gene transfer in the blast fungus *Magnaporthe oryzae* | Thorsten LANGNER (Norwich - UNITED KINGDOM)

P4.3-024 Novel pipelines for assembling and annotation of genomes for plant pathogenic fungi. application on two major banana pathogens | Emmanuel WICKER (Montpellier - FRANCE)

P4.3-025 Major proliferation of transposable elements in the last 10 million years has shaped the genome of the soybean rust pathogen *phakopsora pachyrhizi* | Sebastien DUPLESSIS (Champenoux - FRANCE)

P4.3-026 Hotspot genomes shed light on *p. oryzae* evolution in sub-saharan Africa | Geoffrey ONAGA (Bouake - COTE D IVOIRE)

The ecology plant viruses and epidemiology of the disease they cause: How fundamental ecological research in natural systems can inform and advance plant pathology

P4.4-001 Characterization of a novel orthospovirus from macadamia in South Africa | David READ (Pretoria - SOUTH AFRICA)

P4.4-002 Incidence and occurrence pattern on kiwifruits in Korea

Hyo Jeong KIM (Jeju Special Self Governing Province - REPUBLIC OF KOREA)

P4.4-003 First viruses infecting cockspur coral tree (*Erythrina Crista-Galli* L.): discovery of a novel capillovirus and a new host for the prune dwarf virus | Dijana KORIC (Zagreb - CROATIA)

P4.4-004 Effects of ten serial passages of tomato severe rugose virus (tosrv) by different hosts on the evolutionary dynamics of the viral population | Camila Geovana FERRO (Piracicaba - BRAZIL)

P4.4-005 A glimpse into the german hop virome | Heiko ZIEBELL (Braunschweig - GERMANY)

P4.4-006 Surveys for the resistance-breaking orthospoviruses in tomato fields in Florida

Ozgur BATUMAN (Immokalee - UNITED STATES)

P4.4-007 Can you resist me? Screening hemp lines for resistance to emerging viruses and viroids utilizing the hemp virome

Laine HACKENBERG (Fort Collins - UNITED STATES)

P4.4-008 Integrated management strategy for thrips-borne disease in Taiwan and implications | Yi-Ju CHEN (Taichung - TAIWAN)

P4.4-009 Viruses are associated with buffalo grass yellowing in Australia | Nga TRAN (Dutton Park - AUSTRALIA)

P4.4-010 Survey of raspberry viruses and recovery of in vitro raspberry cultures in the Czech Republic and Norway

Zhibo HAMBORG (Ås - NORWAY)

P4.4-011 Characterisation of yellow dwarf viruses in cereals and grasses in australia using High Throughput Sequencing

Piotr TREBICKI (Parkville - AUSTRALIA)

P4.4-012 Stronger together: synergy between an emerging monopartite begomovirus and a dna-β component

Alassane OUATTARA (Ouagadougou - BURKINA FASO)

P4.4-013 Impact of plant immunity on virus adaptation: what evolutionary forces should we rely upon in plant breeding?

Benoit MOURY (Montfavet - FRANCE)

P4.4-014 Genetic diversity of barley yellow dwarf virus (bydv) across the UK

Lawrence BRAMHAM (Harpden - UNITED KINGDOM)

P4.4-015 Potato virus y strain characterization, detection and analysis | Jennifer RUSHTON (Fort Collins - UNITED STATES)

P4.4-016 Factors affecting the population dynamics and epidemiology of viruses infecting potato

Christophe LACOMME (Edinburgh - UNITED KINGDOM)

P4.4-017 Emergence of cacao-infecting badnaviral species in the tropical americas and west Africa

Judith K. BROWN (Tucson - UNITED STATES)

P4.4-018 Risk factors associated with cassava brown streak disease dissemination through seed pathways in eastern D.r. Congo | Kwibuka BISIMWA (Bukavu - THE DEMOCRATIC REPUBLIC OF THE CONGO)

P4.4-019 Effects of sowing cmv-infected lentil seed on growth and yield | Piotr TREBICKI (Sydney - AUSTRALIA)

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P4.4-020 Molecular characterization and prevalence of a novel strawberry crinivirus in Iran

Ioannis TZANETAKIS (Fayetteville - UNITED STATES)

P4.4-021 Studying rose rosette emaravirus replication in its vector phyllocoptes fructiphilus

Ioannis TZANETAKIS (Fayetteville - UNITED STATES)

P4.4-022 A novel ampelovirus infects blueberry | Ioannis TZANETAKIS (Fayetteville - UNITED STATES)

P4.4-023 Identification of apple luteovirus (ALV-1) and potential association with dieback of apple trees in northern Italy

Valeria GUALANDRI (San Michele All'adige Trento - ITALY)

P4.4-024 Identification and distribution of viruses associated with bambara groundnut plants in burkina Faso

Aboubié Elisabeth ZONGO (Ouagadougou - BURKINA FASO)

P4.4-025 Evaluation of bambara groundnut accessions for resistance to cowpea mosaic virus (Cabmv) in Burkina Faso.

Aboubié Elisabeth ZONGO (Ouagadougou - BURKINA FASO)

P4.4-026 Prevalence and spatial distribution of badnavirus in the banana (musa spp) major growing areas in Burkina Faso

Bakary OUATTARA (Ouagadougou - BURKINA FASO)

Advances in the use of exotic sentinel trees and novel monitoring programs to detect incipient threats posed by forest pathogens

P4.5-001 Sentinel plants: a strategy to prevent new invasive forest pest and pathogen introductions

Alberto SANTINI (Sesto Fiorentino - ITALY)

P4.5-002 Revealing novel interactions between oak and tubakia species: evidence of the efficacy of the sentinel arboreta strategy | Andrea VANNINI (Viterbo - ITALY)

P4.5-003 Development of on-site quick diagnosis system for detecting Phytoplasma related diseases in South Korea

Sun Keun LEE (Jeju - REPUBLIC OF KOREA)

P4.5-004 Development of markers for identifying spread routes of pine wood nematode in Korea

Heonil KANG (Seoul - REPUBLIC OF KOREA)

P4.5-005 Four years of the European Union reference laboratory (eurl) for fungi and oomycetes

Pedro Pablo PARRA GIRALDO (Malzéville - FRANCE)

P4.5-006 A retrospective of invasive forest pathogens in north america: biogeographic patterns and sentinel trees

Geoffrey WILLIAMS (Lansing - UNITED STATES)

Impact of scientific advances in plant health

P4.7-001 Remote sensing in the contribution to the study of foliar diseases of cereals "approach to the epidemiological study and identification of barley dwarf yellows" in Algeria | Ahmed ZEGRAR (Arzew - ALGERIA)

P4.7-002 Biological and molecular characterisation of citrus viroid VII | Grant CHAMBERS (St Lucia - AUSTRALIA)

P4.7-003 Foxes in charge of henhouses: combatting sugarcane ratoon stunting disease (RSD) and its defenders in Australia

Anthony YOUNG (Gatton - AUSTRALIA)

P4.7-004 Evaluating the oilseed rape growth-status using ndvi and ndyi obtained from uav-based RGB imagery

Nazanin ZAMANI-NOOR (Braunschweig - GERMANY)

P4.7-005 Molecular evolution of chemosensory genes in beetles (COLEOPTERA): implications for their adaptation and speciation | Zedi GAO (Hertfordshire - UNITED KINGDOM)

P4.7-006 Investigating grape sour rot development in a commercial vineyard in Maryland, USA

Mengjun HU (College Park - UNITED STATES)

P4.7-007 Taking a tour inside the kiwifruit microbiome: a study on the etiology of kiwifruit vine disease syndrome (KVDS)

Antonella CARDACINO (Viterbo - ITALY)

P4.7-008 Identification and functional characterization of the immune activation-boosting domain of liliium defense-priming protein LSGRP1 | Chao-Ying CHEN (Taipei - TAIWAN)

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P4.7-009 Occurrence status of national management virus in chungcheongbuk-do province, Korea from 2020 to 2022

Eunsol YEON (Chengju - REPUBLIC OF KOREA)

P4.7-010 Evaluation of the resistance to temporary and continuous water deficits of four varieties and six descendants of sesame (*Sesamum Indicum* L.) grown in Burkina Faso | Badoua BADIÉL (Ouagadougou - BURKINA FASO)

María Teresa GARCÍA LÓPEZ (Córdoba - SPAIN)

P4.7-012 The impacts of plant protection products on primary producers: an overview from the last decades' literature

Annette BERARD (Avignon - FRANCE)

P4.7-013 Characterization of an isolate of the potyvirus passiflora virus y naturally infecting soybean in Brazil

Daniele Maria NASCIMENTO (Botucatu - BRAZIL)

P4.7-014 Identification of two novel brevipalpus-transmitted viruses (btv) and recognition of a kitavirus as the causal agent of the citrus zonate chlorosis disease | Juliana FREITAS-ASTÚA (São Paulo - BRAZIL)

P4.7-015 Nutrients' effect prediction on wheat physiology by using machine learning | Chitaranjan MAHAPATRA (Mumbai - INDIA)

P4.7-016 Phenotyping for quantitative resistance to *Leptosphaeria maculans* in brassica napus (rapeseed): a framework using machine learning and artificial intelligence (MLAI) | Saba RABAB (Canberra - AUSTRALIA)

P4.7-017 Cal poly strawberry center is a model for industry-university partnerships

Gerald HOLMES (San Luis Obispo - UNITED STATES)

P4.7-018 Basic substances as an environmentally friendly alternative to synthetic pesticides for plant protection: the experience of euphresco basics project | Gianfranco ROMANAZZI (Ancona - ITALY)

P4.7-019 Applications of chitosan alone, alternated or combined with copper for grapevine downy mildew management in large scale trials | Gianfranco ROMANAZZI (Ancona - ITALY)

P4.7-020 Metagenomic analysis of russian ampelographic collections | Svetlana VINOGRADOVA (Moscow - RUSSIAN FEDERATION)

P4.7-021 Viral metagenomics for plant virus discovery and detection: a case study of sweepoviruses in Australia

Sharon L. VAN BRUNSCHOT (Brisbane - AUSTRALIA)

P4.7-022 Effect of silicon on plant growth and reducing disease in black pepper (*Piper Nigrum* L.) Siti

Nordahliawate MOHAMED SIDIQUE (Kuala Nerus - MALAYSIA)

WEDNESDAY 23 & THURSDAY 24 AUGUST

POST-HARVEST - Part 1: Interactions of postharvest pathogens with the host and its microbiome

- P2.5-001** Citrus fruit post-harvest fungal pathogens at pakistan's khanpur orchards | Shazia IFTIKHAR (Rawalpindi - PAKISTAN)
- P2.5-002** Using genomics to study the function of the microbiome in the disease process in apple fruit after harvest
Rotem BARTUV (Tel Aviv - ISRAEL)
- P2.5-003** Identification of fungal species associated with diseases of cabbage in the western highlands of Cameroon
Nsah SAMA (Bamenda - CAMEROON)
- P2.5-004** Impact of microbial intervention on the assembly and dynamics of the apple fruit microbiome
V. Yeka ZHIMO (Rishon Lezion - ISRAEL)
- P2.5-005** Identification of fungi associated with mould of pome fruit stems and calyx sepals after ca storage
Cheryl LENNOX (Stellenbosch - SOUTH AFRICA)
- P2.5-006** The importance of a good recovery of the apple microbiota for the analysis of its microbiome
Neus TEIXIDÓ (Lleida - SPAIN)
- P2.5-007** Fungal community diversity in Citrus fruit at different ripening stage | Yanping FU (Wuhan - CHINA)
- P2.5-008** The white-collar component bcwcl2 regulates citric acid secretion to maintain redox homeostasis and full pathogenicity in *Botrytis cinerea* | Pinkuan ZHU (Shanghai - CHINA)
- P2.5-009** Metabolomics approach in post-harvest disease management in grapes using volatile organic compounds from yeast and bacteria | Subbaraman SRIRAM (Bengaluru - INDIA)
- P2.5-010** Symptomatic and pathogenic characterization of alternaria species associated with Citrus postharvest diseases in Morocco | Lamyaa ZELMAT (Kénitra - MOROCCO)
- P2.5-011** Reduce the post-harvest losses in organic beetroot production | Alessio BERNASCONI (Frick - SWITZERLAND)
- P2.5-012** The efficacy of antagonistic yeasts against *Botrytis cinerea* on pomegranate fruits | Pervin KINAY TEKSUR (Izmir - TURKEY)

POST-HARVEST - Part 2: Sustainable managements of postharvest diseases: new technologies and approaches

- P3.3-001** Pre and post harvest diseases of onion is a major threat in onion production and food security in Bangladesh
Mohammad Monirul ISLAM (Gazipur - BANGLADESH)
- P3.3-002** Impact of uv-c irradiation on alternaria leaf spot development in blueberries Carl SCHULENBURG (Pretoria - SOUTH AFRICA)
- P3.3-003** Phytopathogens and postharvest disease management: a sustainable alternative antagonistic yeasts as biocontrol agents in fruit | Daniel FRIMPONG (Kumasi - GHANA)
- P3.3-004** Postharvest use of natamycin, a biofungicide to control postharvest diseases of fresh fruits
Chang-Lin XIAO (Parlier - UNITED STATES)
- P3.3-005** In vitro inhibition of fungi causing postharvest gray and blue molds on fresh horticultural produce by agricultural by-product extracts | Lluís PALOU (Montcada - SPAIN)
- P3.3-006** Growth inhibition of *Colletotrichum musae* using plant essential oils encapsulated in metal organic frameworks nanoporous materials | Johnrell ZUNIEGA (Montpellier - FRANCE)
- P3.3-007** Potential of antagonistic yeasts, botanicals and chemicals for the management of green mould rot of kinnow mandarin caused by *penicillium digitatum* | Harender RAJ (Solani - INDIA)
- P3.3-008** Hot water treatment improves peach fruit cold resistance through pphsfa4c-mediated hsf-hsp and ros pathways
Liangyi ZHAO (Nanjing - CHINA)
- P3.3-009** Shrimp waste extracts: a virtuous example of reuse of wastes to achieve the sustainable management of post-harvest diseases | Federico LA SPADA (Catania - ITALY)
- P3.3-010** Effect of sowing time on disease management to increase quality, quantity and shelf life of tomato
Salina BANU (Gazipur - BANGLADESH)
- P3.3-011** Volatile organic compounds associated with *neonectria ditissima* infection in apples (*malus pumila* cv gala)
Asoo YAJI (Chatham - UNITED KINGDOM)

WEDNESDAY 23 & THURSDAY 24 AUGUST

- P3.3-013** Can onion storage diseases be detected by smell? | Isabella KLEMAN (Alnarp - SWEDEN)
- P3.3-014** Biocontrol efficacy of *wickerhamomyces anomalus* on tomato field diseases and study of the relevant mechanisms via microbiome analysis | Qiya YANG (Zhenjiang - CHINA)
- P3.3-015** Biocontrol ability and action mechanism of *aureobasidium pullulans* s2 against *Botrytis cinerea* in tomato fruit | Hongyin ZHANG (Zhenjiang - CHINA)
- P3.3-016** Native vineyard non-saccharomyces yeast used for biological control of fungal rot in stored table grape | Antonella SALERNO (Turi - ITALY)
- P3.3-017** Physicochemical properties of peach fruit assessed by non-destructive methodology related to the development of *monilinia fructicola* during post-harvest | Heloisa THOMAZI-KLEINA (Curitiba - BRAZIL)
- P3.3-018** Optimization of tragacanth gum nanocapsules impregnated with peppermint essential oil for the extension of shelf life of chilli pepper | Oluwagbenga ADEOGUN (Lagos - NIGERIA)
- P3.3-019** Efficacy of the gras salt sodium metabisulfite to control curatively postharvest fruit decay | Mohamed Bechir ALLAGUI (Ariana - TUNISIA)
- P3.3-020** Plant volatile organic compounds in fruit preservation: microbial inhibition, inductive defense and innovative applications | Zhenbiao LI (Hangzhou - CHINA)
- P3.3-021** Evaluation of chitosan alone or mixed with sodium metabisulfite in controlling postharvest fruit decay | Mouna BEN AMARA (Ariana - TUNISIA)
- P3.3-022** Postharvest fungal diseases of pomegranates in southern Italy | Annamaria MINCUZZI (Bari - ITALY)
- P3.3-023** Exploring the potential of natural and synthetic photosensitizing compounds for eco-friendly management of gray mold in strawberries | Amos Samkumar RAJAN PREMKUMAR (Ås - NORWAY)
- P3.3-024** Efficacy of biofumigation with essential oils in the control of postharvest rots of nectarines | Giulia REMOLIF (Grugliasco (To) - ITALY)
- P3.3-025** Inhibitory activity of commercial essential oils in volatile phase against *Botrytis cinerea* and *Monilinia laxa* | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.3-026** Integration of transcriptomics and proteomics reveals the inhibitory effect of carvacrol on polysaccharides metabolism of the cell wall in *alternaria alternata* causing goji fruit rot | Junjie WANG (Yinchuan - CHINA)
- P3.3-027** Strategies to overcome stem end rot disease in Pakistan mangoes, a major threat in export markets | Abdul REHMAN (Faisalabad - PAKISTAN)
- P3.3-028** Genome-scale phylogenetic and syntenic analyses reveal relationship among *Monilinia fructicola*, *Monilinia laxa* and *Monilinia fructigena* within Sclerotiniaceae | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.3-029** Chitosan and other edible coatings to extend shelf life, manage postharvest decay, and reduce loss and waste of fresh fruits and vegetables | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.3-030** Antifungal activity of natural extracts and essential oils against *Monilinia fructicola* in vitro and as ingredients of pectin-based edible coatings for postharvest preservation of cold-stored nectarines | Laura SETTIER RAMÍREZ (Valencia - SPAIN)
- P3.3-031** Management of guava anthracnose through synthetic fungicides and medicinal plant extracts | Muhammad Faran TAHIR (Faisalabad - PAKISTAN)
- P3.3-032** Innovative sustainable technologies to extend the shelf life of perishable mediterranean fresh fruit, vegetables, and aromatic plants and to reduce waste: the experience of prima stopmedwaste project | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.3-033** Management of postharvest brown rot of peaches and nectarines by natural compounds and biocontrol agents | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.3-034** In vitro antimicrobial activity of chitosan hydrochloride and cos (chito-oligosaccharides)-oga (oligo-galacturonides) on field and postharvest fungal pathogens | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.3-035** Physiological changes induced after ozone treatment on peach fruits | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.3-036** Effects of ozone exposure on brown rot of peach fruits in cold storage | Gianfranco ROMANAZZI (Ancona - ITALY)
- P3.3-037** In vitro and in vivo effect of natural salts to control postharvest Citrus green mold disease caused by *penicillium digitatum* in Morocco | Meriem HAMRANI (Kenitra - MOROCCO)
- P3.3-038** Development of cassava starch-based coatings functionalized with antifungal agents as an alternative postharvest treatment to improve quality and extend shelf life of cavendish bananas | Andrés PINZON (Carepa - COLOMBIA)

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POST-HARVEST - Part 3: Eco-epidemiological perspectives generating new concepts on postharvest diseases and mycotoxins

P4.6-001 Susceptibility to sour rot (*Geotrichum citri-aurantii*) in mandarin and hybrids in association with fruit quality parameters | Elena PEREZ (Salto - URUGUAY)

Modeling and analysis to better understand and predict epidemics

P5.1-001 Genetic variations among commercial varieties and landraces of wheat from Pakistan | Shazia IFTIKHAR (Rawalpindi - PAKISTAN)

P5.1-002 Cross infection of *Botryosphaeria* spp. causing dieback in fruit trees in Chile | Gonzalo DIAZ (Talca - CHILE)

P5.1-003 Role of seed transmission of *Magnaporthe oryzae* pathotype triticum (mot) for the epidemiology of wheat blast | Musrat Zahan SUROVY (Goettingen - GERMANY)

P5.1-004 Population genetics of *Ganoderma boninense*, the causal agent of basal stem rot of oil palm in Malaysia and Indonesia | Hun Jiat TUNG (Semenyih - MALAYSIA)

P5.1-006 Epidemiological characterization of mulberry rust in Brazil | Lilian AMORIM (Piracicaba - BRAZIL)

P5.1-007 Temporal and spatial progress of raspberry late rust in two cropping systems in Brazil | Daiana AZEVEDO (Piracicaba - Sp - BRAZIL)

P5.1-008 Witches' broom disease of acid lime (*Citrus aurantifolia* L.): research findings and future prospects | Abdullah AL-SADI (Seeb - OMAN)

P5.1-009 Monitoring of *Venturia paralias*, a fungal biocontrol agent for the invasive coastal weed sea spurge (*Euphorbia paralias*), reveals patterns of disease establishment and spread in Australia | Gavin HUNTER (Canberra - AUSTRALIA)

P5.1-010 Factors influencing hull rot of almonds in Australia | Tonya WIECHEL (Bundoora - AUSTRALIA)

P5.1-011 Biological resource centers: strategic resources for plant health | Perrine PORTIER (Angers - FRANCE)

P5.1-012 Pathogenic characterization of three *Fusarium* species associated with onion (*Allium cepa* L.) in Burkina Faso | Kouka Hamidou SOGOBA (Ouagadougou - BURKINA FASO)

P5.1-013 Sporulation and dispersal of the biological control agent *Aspergillus flavus* af36 under field conditions in California | María Teresa GARCÍA LÓPEZ (Cordoba - SPAIN)

P5.1-014 Understanding the epidemiology and ecology of carrot viruses in the United Kingdom | Mary MYNETT (York - UNITED KINGDOM)

P5.1-015 Study of chilli anthracnose disease; a potential threat to chilli crop in major chilli producing areas of Punjab, Pakistan | Nasir MEHMOOD (Rawalpindi - PAKISTAN)

P5.1-016 Population genetic relationships of wheat *Puccinia triticina* between Yunnan-Guizhou and Northwest, Central and Eastern China | Wanquan CHEN (Beijing - CHINA)

P5.1-017 Monitoring spore dispersal and early infections of *Diplocarpon coronariae* causing apple blotch using spore traps and a new qPCR method | Clémence BOUTRY (Frick - SWITZERLAND)

P5.1-018 Morphological and pathogenic variability of *Austropuccinia psidii* from guava and rose apple | Thaís R. BOUFLEUR (Piracicaba - BRAZIL)

P5.1-019 Current epidemiological situation of mealybug wilt of pineapple disease in Ecuador | Juan CORNEJO (Guayaquil - ECUADOR)

P5.1-020 Impact of cultivar resistance on *Cercospora beticola* epidemiology on sugar beet | Yixuan YANG (Göttingen - GERMANY)

P5.1-021 Partial resistance to myrtle rust on guava cv. *suprema* expressed by reduction of urediniospore production of *Austropuccinia psidii* | Lucas SALES (Piracicaba - BRAZIL)

P5.1-022 Large-scale ecological surveys across arable landscape to describe the epidemiology of vector-borne phyto-bacterium *Candidatus Liberibacter solanacearum* in the UK | Marco BENUCCI (York - UNITED KINGDOM)

P5.1-023 Inventory of leaf diseases of peanut in Burkina Faso and epidemiological study of associated viruses | Dadjata KERE (Ouagadougou - BURKINA FASO)

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- P5.1-024** Damage to guava plants caused by multiple infections of *Austropuccinia psidii* | Ana Laura SIMÕES (Piracicaba - BRAZIL)
- P5.1-025** Research on meteorological factors related to the incidence of rice false smut
Hyunjoo RYU (Wanju-Gun - REPUBLIC OF KOREA)
- P5.1-026** Gene drift, sexual reproduction, and sexual recombination of *Puccinia striiformis* f. sp. tritici and *Puccinia striiformis* f. sp. hordei | Jie ZHAO (Yangling - CHINA)
- P5.1-027** Ascospore release by *neonectria ditissima* in norway | Dalphy HARTEVELD (Ås - NORWAY)
- P5.1-028** Groundwater as a reservoir for plant pathogenic bacteria: the case of the *Pseudomonas syringae* complex in the alluvial aquifer of avignon | Odile BERGE (Avignon - FRANCE)
- P5.1-029** Epidemiology and genetics of the wheat yellow rust fungus | My LIVBJERG (Slagelse - DENMARK)
- P5.1-030** Potential impacts of climate change on important wheat and maize diseases in egypt
Benjamin RICHARD (Lyon - FRANCE)
- P5.1-031** Detection of *Phytophthora palmivora* causative agent of the disease bud rot in soil and irrigation water in an oil palm plantation in colombia | Leon Franky ZUÑIGA (Bogotá D. C - COLOMBIA)
- P5.1-032** Effect of the trunk shaker harvesting on the dispersion of *venturia oleaginea* spores, the causal agent of olive scab
Juan MORAL (Cordoba - SPAIN)
- P5.1-033** Relative contribution of local and landscape factors on the co-occurrence, diversity and severity of wheat diseases
Anne-Lise BOIXEL (Palaiseau - FRANCE)
- P5.1-034** Epidemiology of cacao mild mosaic virus (cammv) | Alina PUIG (Fort Detrick - UNITED STATES)
- P5.1-035** Analysis of literature data may increase the epidemiological knowledge on grapevine trunk diseases
Irene SALOTTI (Piacenza - ITALY)
- P5.1-036** Re-assessing the susceptibility period of Citrus fruit to *phyllosticta citricarpa* infection in South African orchards
Providence MOYO (Nelspruit - SOUTH AFRICA)
- P5.1-037** Symptoms in immature and ripe apple fruit caused by *Colletotrichum* species isolated from glomerella leaf spot
Louise Larissa MAY DE MIO (Curitiba - BRAZIL)
- P5.1-038** Evaluating the climatic suitability of the mediterranean basin for Citrus black spot (*phyllosticta citricarpa*) through a generic infection model | Elena LÁZARO (Moncada - SPAIN)
- P5.1-040** Modeling the spatial spread of yam mosaic virus (ymv) in seed yam fields in Nigeria
Bolaji OSUNDAHUNSI (Ibadan - NIGERIA)
- P5.1-041** Surveillance and mitigation strategies for wheat based on crop landscapes, trade networks, and the ecological niches of 100 pathogens | Aaron Isai PLEX SULA (Gainesville - UNITED STATES)
- P5.1-042** Exploring the diversity and prevalence of *Pseudomonas syringae* in sweet cherry orchards of new zealand
M. Virginia MARRONI (Lincoln - NEW ZEALAND)
- P5.1-043** Complementary approaches to quantify and characterize inocula dynamics and leaf infection at plot level: case of black leaf streak disease | Marine SEIDEL (Capesterre-Belle-Eau - GUADELOUPE)
- P5.1-044** Grapevine trunk disease pathogens in rootstock mother vines: a potential threat to the South African grapevine industry | Francois HALLEEN (Stellenbosch - SOUTH AFRICA)
- P5.1-045** Epidemiological, evolutionary and economic outcomes associated to the coexistence of monogenic and pyramided resistant cultivars in agricultural landscapes: a case-study with the management of downy mildew in wine growing areas
Frédéric FABRE (Villenave D'ornon - FRANCE)
- P5.1-046** *Colletotrichum* population structure in olive orchards from the region of preveza, greece and effect on olive oil quality | Alike K. TZIMA (118 55 Athens - GREECE)
- P5.1-047** Tracking asian soybean rust in brazil | Claudia GODOY (Londrina - BRAZIL)
- P5.1-048** Economic inefficiencies in private management of epidemics spreading between farms
Gaël THÉBAUD (Montpellier - FRANCE)
- P5.1-049** Model-based characterization of interactions between plum pox virus strains from a field survey
Gaël THÉBAUD (Montpellier - FRANCE)

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P5.1-050 Glomerella leaf spot in apple orchards of south tyrol (Italy) and the development of control strategies

Sabine OETTL (Auer/ora - ITALY)

MOLECULAR ASPECTS: plant-oomycetes interactions

P5.2-001 The infection biology of *Plasmodiophora brassicae*-cause of cruciferous clubroot disease | Lijiang LIU (Wuhan - CHINA)

P5.2-002 *Phytophthora cinnamomi* crn effectors: foot soldiers of *Phytophthora* root rot

Kayla Alexis MIDGLEY (Pretoria - SOUTH AFRICA)

P5.2-003 Host pathogen interaction between European strains of red algae 'bangia' and oomycete *olpidopsis porphyrae* var. *scotiae* | Basem ATTAR (Newcastle Upon Tyne - UNITED KINGDOM)

P5.2-004 *Phytophthora parasitica* "core" rxlr effector proteins induce host defences | Celiwe NXUMALO (Pretoria - SOUTH AFRICA)

P5.2-005 Membrane-associated nac transcription factors - versatile role in plant stress adaptation

Claudia MEISRIMLER (Christchurch - NEW ZEALAND)

P5.2-006 The role of *Phytophthora pluvialis* rxlr effectors during early infection of *pinus radiata*

Sophie ECCERSALL (Christchurch - NEW ZEALAND)

P5.2-008 Phenotypic and genotypic diversity of *Phytophthora infestans* populations in Algeria | Sihem BELKHITER (Blida - ALGERIA)

P5.2-009 *Phytophthora* exploits host trehalose metabolism to acquire carbon as a nutrient source | Yongli QIAO (Shanghai - CHINA)

P5.2-010 Transcriptome analysis of capsidiol-mediated defense in pepper against adapted and non-adapted *Phytophthora* pathogen | Hyun-Ah LEE (Cheonan - REPUBLIC OF KOREA)

P5.2-011 Traffic manipulation: a conserved *Phytophthora* effector targets a host rabgap protein to suppress defense-related secretion | Enoch Lok Him YUEN (London - UNITED KINGDOM)

P5.2-012 Placing the spotlight on the *npr1*-dependent defence response in *persea americana* (mill.): insights from a time course dual rna-sequencing study of both a susceptible and partially resistant rootstock inoculated with *Phytophthora cinnamomi* | Robert BACKER (Pretoria - SOUTH AFRICA)

P5.2-013 Xeg1: a case study on microbial attack and plant immunity in the apoplast | Ye qiang XIA (Nanjing - CHINA)

P5.2-014 Xeg1: a case study of microbial attack and plant immunity in the apoplast | Yuanchao WANG (Nanjing - CHINA)

P5.2-015 A *Phytophthora sojae* rxlr effector impact host defense-oriented transcriptome reprogramming by targeting soybean mediator subunit 21 | Qunqing WANG (Taian - CHINA)

P5.2-016 Understanding the early events of plant infections by oomycetes, at new spatio-temporal scales: from attraction and aggregation of zoospores to host penetration | Agnes ATTARD (Sophia Antipolis - FRANCE)

P5.2-017 Differences in *avr-vnt1* alleles and aggressiveness in three European *Phytophthora infestans* lineages

Mirella LUDWICZEWSKA (Młochów - POLAND)

P5.2-018 Adapting to survive: the key to the success of the biotrophic pathogen *plasmopara viticola*

Giuliana MADDALENA (Milan - ITALY)

P5.2-019 Revealing principles of *Phytophthora* zoospores sensing and motion properties through a bio-physical approach

Carlotta Aurora LUPATELLI (Sophia Antipolis - FRANCE)

P5.2-020 Phase-specific transcriptional patterns of the oomycete pathogen *Phytophthora sojae* unravel genes essential for asexual development and pathogenic processes | Min QIU (Nanjing - CHINA)

P5.2-021 The non-canonical and oomycete-specific bag is essential for the maintenance of proteostasis in *Phytophthora sojae* cyst germination | Maofeng JING (Nanjing - CHINA)

P5.2-022 An ago protein is required for avirulence gene silencing in an oomycete plant pathogen | Han CHEN (Nanjing - CHINA)

P5.2-023 Slims go big: role of short linear motifs (slims) in *phytophthora parasitica* "core" pprxlr1 effector

Jane CHEPSERGON (Pretoria - SOUTH AFRICA)

P5.2-024 Pectin methylesterases inhibitor modulate plant homogalacturonan status in defenses against the *Phytophthora sojae* | Ye qiang XIA (Nanjing - CHINA)

P5.2-025 Investigation of the role in virulence of *Phytophthora infestans* effector pi06099

Hazel MCLELLAN (Dundee - UNITED KINGDOM)

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P5.2-026 Functional divergence of a glycoside hydrolase and its decoy partner in *Phytophthora* evolutionary continuum
Zhenchuan MA (Nanjing - CHINA)

P5.2-027 Screening of alfalfa varieties resistant to *Phytophthora cactorum* and related resistance mechanism
Bo YANG (Nanjing - CHINA)

P5.2-028 Rnaseq vs enrichment sequencing techniques: lifting the lid on the potato-p. infestans interactions
Amanpreet KAUR (Carlow - IRELAND)

P5.2-029 The strawberry-*Phytophthora cactorum* interaction | May Bente BRURBERG (Ås - NORWAY)

P5.2-030 Punching transient small holes into plant plasma membrane: the unique case of an oomycete nlp cytolyisin
Tina SNOJ (Ljubljana - SLOVENIA)

P5.2-031 Rnaseq as a robust tool to identify novel disease resistance genes in wild and cultivated potatoes
Sharma VIKRANT (Dundee - UNITED KINGDOM)

Current and emerging forest pathology issues

P5.3-001 Laurel wilt disease management: current strategies and ongoing lines of research
Romina GAZIS (Homestead - UNITED STATES)

P5.3-002 Extent of *dalbergia sissoo* (shisham) decline in different agro-ecological zones and its integrated management
Muhammad MUSA (Lahore - PAKISTAN)

P5.3-003 Occurrence of cypress canker pathogens on cupressaceae in South Africa | Janneke AYLWARD (Pretoria - SOUTH AFRICA)

P5.3-004 Occurrence of some emerging powdery mildews on ornamental and forest trees in Algeria: a threat to parks, avenues and public recreation areas | Zouaoui BOUZNAD (Algiers - ALGERIA)

P5.3-005 Climatic drivers of *Phytophthora pluvialis* infection and sporulation on *pinus radiata*
Emily MCLAY (Rotorua - NEW ZEALAND)

P5.3-006 Beech leaf disease: a emerging issue of international concern | Pierluigi BONELLO (Columbus, Oh - UNITED STATES)

P5.3-007 Impacts of enhanced co2 on oak defences against powdery mildew
Rosa SANCHEZ-LUCAS (Birmingham - UNITED KINGDOM)

P5.3-008 *Erysiphe lonicerigena* sp. nov., a powdery mildew species found on *Lonicera harae*
Inyoung CHOI (Jeonju - REPUBLIC OF KOREA)

P5.3-009 Early detection methods to prevent the spread of forest pathogens | Alberto SANTINI (Sesto Fiorentino - ITALY)

P5.3-010 Rna viruses in declining mediterranean forests | Julio Javier DIEZ (Palencia - SPAIN)

P5.3-011 *Verticillium* wilt and mortality of *ailanthus altissima* in catalonia (northeastern Spain). disease distribution and pathogen characterization | Júlia CAROL ANDREU (Girona - SPAIN)

P5.3-012 Blast from the past: a study of decades-old fungal cultures resolves a long-standing tree disease mystery
Michael WINGFIELD (Pretoria - SOUTH AFRICA)

P5.3-013 The ophiostomatoid fungi in Korea | Sang-Tae SEO (Seoul - REPUBLIC OF KOREA)

P5.3-014 *Phytophthora* species assemblages in kauri forests: comparing isolation through baiting and metabarcoding
Shannon HUNTER (Auckland - NEW ZEALAND)

P5.3-015 Low genetic diversity in colombia *Fusarium circinatum* population | Brenda WINGFIELD (Pretoria - SOUTH AFRICA)

P5.3-016 Multivariate analysis and modelling of scots pine blister rust distribution in central and northern Sweden
Ke ZHANG (Uppsala - SWEDEN)

P5.3-017 A study of tree disease on st helena | Amy WEBSTER (Birmingham - UNITED KINGDOM)

P5.3-018 Investigating the variation in virulence of *hymenoscyphus fraxineus*, the causal agent of ash dieback
Maia RIDLEY (Braunschweig - GERMANY)

P5.3-019 Insights into the biology, host range and potential pathways of *Phytophthora pluvialis* in Britain
Ana Maria PEREZ SIERRA (Farnham, England - UNITED KINGDOM)

P5.3-020 Chemotyping European and Asian *fraxinus*: understanding host defence mechanisms associated with resistance against the ash dieback pathogen *hymenoscyphus fraxineus* | Beatrice TOLIO (Alnarp - SWEDEN)

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- P5.3-021** Ceratocystis in greece; the expansion | Asimina SMARLAMAKI (Athens - GREECE)
- P5.3-022** The travails of troublesome travelers: distribution of thousand cankers disease complex members into expanded ranges alters the genetic signatures of their populations | Denita HADZIABDIC (Knoxville - UNITED STATES)
- P5.3-023** Brazilian research about sanity in forest seeds | Thiago Costa FERREIRA (Lagoa Seca - BRAZIL)
- P5.3-024** Ganoderma root rot: an emerging threat to eucalyptus plantations in indonesia
Samuel A. SANTOS (Pangkalan Kerinci - INDONESIA)
- P5.3-025** Population studies suggest multiple introductory events of dothistroma pini into France
Irene BARNES (Pretoria - SOUTH AFRICA)
- P5.3-026** Climate determines oomycete plant pathogen biogeography at a continental scale in Europe
Maria CABALLOL (Leida - SPAIN)
- P5.3-027** New insights into date palm inflorescence rot biology and control in Morocco
Eimad Dine Tariq BOUHLALI (Errachidia - MOROCCO)
- P5.3-028** In vitro activity of blad against cork oak pathogens and ectomycorrhizal fungi species
Manuel TRINDADE (Lisboa - Oeiras - PORTUGAL)

New Developments in Fungicide Resistance

- P5.4-001** Resistance of blumeria graminis f. sp. tritici to azole fungicides in China | Fan JIERU (Beijing - CHINA)
- P5.4-002** Molecular characterization of propiconazole resistant tilletia horrida isolates in the United States
Sabin KHANAL (College Station - UNITED STATES)
- P5.4-003** Qoi fungicide resistance in sunflower phomopsis | Febina MATHEW (Fargo - UNITED STATES)
- P5.4-005** Dmi resistance in cercospora beticola is modulated by cyp51 codon bias | Melvin BOLTON (Fargo - UNITED STATES)
- P5.4-006** Location, location, location: the first rule of postharvest epidemiology for locating fungicide resistant blue mold fungi in commercial packinghouses | Johanny CASTRO (Biglerville - UNITED STATES)
- P5.4-008** The in vitro and in vivo phosphite sensitivity of Phytophthora cinnamomi isolates from avocado orchards in Taiwan
Yu-Ping LIANG (Chiayi City - TAIWAN)
- P5.4-009** Detection and characterization of fungicide resistant net blotch pathogen Pyrenophora teres f. teres isolates from estonia | Riinu KIIKER (Jõgeva Alevik - ESTONIA)
- P5.4-010** Proteomic analysis revealed that the oomyceticide phosphite may possess a multi-modal function in an oomycete pathosystem | Kar-Chun TAN (Perth - AUSTRALIA)
- P5.4-011** Mefenoxam sensitivity typing of South African Phytophthora isolates | Heike MÖLLER (Stellenbosch - SOUTH AFRICA)
- P5.4-012** Cross-resistance of clarireedia jacksonii to dmi fungicides | Andrea RETHER (Guelph - CANADA)
- P5.4-013** Fungicide resistance action committee (frac) moa poster | Stefano TORRIANI (Stein - SWITZERLAND)
- P5.4-014** Development of a microplate absorbance assay for assessing fungicide sensitivity of filamentous fungi and comparison to an amended agar assay | Edward MCNAB (Guelph - CANADA)
- P5.4-015** Fungicide resistance occurrence in the cucurbit powdery mildew fungus in the United States
Margaret MCGRATH (Riverhead, Ny - UNITED STATES)
- P5.4-016** Does resistance of winter wheat varieties affect the infection and spread of fungicide-resistant Zymoseptoria tritici mutants? | Beatrice BERGER (Braunschweig - GERMANY)
- P5.4-017** Fungicide sensitivity and fitness profiles of venturia inaequalis: an integrated approach to effective apple scab control | Beatrice LECCHI (Milano - ITALY)
- P5.4-018** Dose responses of reduced sensitive and resistant isolates of Pyrenophora teres f. maculata and p. teres f. teres to demethylase inhibitor and succinate dehydrogenase inhibitor fungicides | Ayalsew ZERIHUN (Bentley - AUSTRALIA)
- P5.4-019** Resistance of Phytophthora colocasiae to azoxystrobin in fujian, China | Fengping CHEN (Fuzhou - CHINA)
- P5.4-020** Geograpy is the main factor behind the distribution of a dmi-fungicide resistance marker in Erysiphe necator
Alexandra PINTYE (Budapest - HUNGARY)

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P5.4-021 Effect of *cyp51* gene expression levels and haplotype diversity on resistance phenotypes of field isolates of *Cercospora beticola* | Séverine FONTAINE (Lyon - FRANCE)

P5.4-022 Naturally occurring propiconazole-tolerant fungal isolates in the phyllosphere of *Agrostis stolonifera* | Tom HSIANG (Guelph - CANADA)

P5.4-023 Differential sensitivity to single-site fungicides may explain why *Ramulariopsis pseudoglycines* is the prevalent *Ramulariopsis* species associated with *Ramularia* leaf spot (RLS) in commercial upland cotton fields in Brazil | Sergio BROMMONSCHENKEL (Viçosa - BRAZIL)

Immune receptors: activation, signaling & evolution

P5.5-001 *Arabidopsis thaliana* cell surface receptor signalling for recognition of elicitors of *Fusarium* spp. | Ralph HÜCKELHOVEN (Freising - GERMANY)

P5.5-002 Find the needle in the haystack - identification of the immune receptors required for the recognition of *Ralstonia solanacearum* effectors in *Nicotiana benthamiana* | Cecile SEGONZAC (Seoul - REPUBLIC OF KOREA)

P5.5-003 Establishing a haplotype-resolved genome for the Cavendish banana | Anthony JAMES (Brisbane - AUSTRALIA)

P5.5-004 High-throughput analysis of *rpi* genes in potato cultivars, breeding lines and wild *Solanum* species | Paulina PALUCHOWSKA (Młochów - POLAND)

P5.5-005 The *i* resistance gene against BCMV and BCMV in common bean: identification of the molecular basis through two independent mutants | Juan Camilo ALVAREZ-DIAZ (Orsay - FRANCE)

P5.5-006 Resistance to *Fusarium* wilt in heirloom cultivar "Earliglow" is conferred by unlinked resistance genes on chromosome 2b in strawberry | Mishi V. VACHEV (Davis - UNITED STATES)

P5.5-007 Presence of homologues of the PVY resistance gene *Ryto* in wild relatives of potato | Zhimin YIN (Młochów - POLAND)

P5.5-008 The soybean (*Glycine max*) LysM receptor kinases *GmNFR5a* and *GmCERK1* mediate chitin oligosaccharides-triggered immunity | Guangzheng SUN (Nanjing - CHINA)

P5.5-009 A novel soybean apoplastic protein triggers resistance to *Phakopsora pachyrhizi* | Jinbin WU (Nanjing - CHINA)

P5.5-010 Birth, death, and persistence in NLR diversity in the *Arabidopsis* immune system | Luisa TEASDALE (Tübingen - GERMANY)

P5.5-011 Atlas of tandem kinase proteins across the plant kingdom | Tamara REVEGUK (Haifa - ISRAEL)

P5.5-012 Dissection of a rapidly evolving wheat NLR resistance gene cluster by long-read genome sequencing facilitated the cloning of *Pm69* | Tzion FAHIMA (Haifa - ISRAEL)

The Potential of Seed Microbiomes

P5.6-001 Exploiting the positive impact of seed-borne fungal endophytes to enhance tomato seed performance under challenging environments | Caroline KUNZ (Paris - FRANCE)

P5.6-002 Inheritance and variability of seed microbiota in rice | Hyun KIM (Seoul - REPUBLIC OF KOREA)

P5.6-003 Analysis of tomato seed microbiome and its biological activities | Kihyuck CHOI (Busan - REPUBLIC OF KOREA)

P5.6-004 Parental inheritance of the seed microbiome in European ash (*Fraxinus excelsior*) | Feng LONG (Copenhagen - DENMARK)

P5.6-005 Impact of some seed-borne pathogens and seed health treatment on soybean and maize cultivation | José CRUZ MACHADO (Lavras - BRAZIL)

Plant pathogens interactions in multi stress conditions (abiotic and biotic stresses): viruses and other pathogens?

P5.7-001 It's complicated! Linking Ca²⁺ signalling with down-stream responses to osmotic stress and PAMPs in *Arabidopsis thaliana* roots | Claudia ALLAN (Christchurch - NEW ZEALAND)

P5.7-002 Sufficient coumarin accumulation improves apple resistance to *Cytospora mali* under high potassium status | Guangyu SUN (Yangling - CHINA)

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- P5.7-003** How will atmospheric CO₂ concentration impact the viral susceptibility/resistance? : phaseolus vulgaris as a model plant | Tiffanie SCANDOLERA (Gif-Sur-Yvette - FRANCE)
- P5.7-004** Coronatine orchestrates ab_i1-mediated stomatal opening to facilitate bacterial pathogen infection | Ning XU (Beijing - CHINA)
- P5.7-005** Identification of heat-tolerant blast resistance genes in rice | Hong-Hua CHEN (Taipei - TAIWAN)
- P5.7-006** Effect of drought on grapevine wood fungal pathogen communities using a metatranscriptomics approach | Marie CHAMBARD (Villenave D'ornon - FRANCE)
- P5.7-007** Strategies for biotic stress management in pulses under changing climate | Mamta SHARMA (Hyderabad - INDIA)
- P5.7-008** Role of shared intergenic regulatory elements in enhanced resistance to combined stresses in rice | Federico MARTIN (Fort Collins, Co - UNITED STATES)
- P5.7-009** Understanding the impacts of heat stress on bacterial blight resistance genes in rice | Jennifer SHIPP (Fort Collins - UNITED STATES)
- P5.7-010** Raspberry physiology and late leaf rust severity in plants under water stress after the pathogen infection | Lucas BARBOSA (Piracicaba - BRAZIL)
- P5.7-011** Apoplastic metabolic and proteomic contents are affected by abiotic stress and control pathogen virulence | Mathilde FAGARD (Versailles - FRANCE)
- P5.7-012** Effects of combined abiotic and pathogen stress in pomegranate (punica granatum L.) | Silvio TUNDO (Legnaro - ITALY)
- P5.7-013** Analyzing the genomic variations in the pathogenic population under host genotype x environment x pathogen interactions | Amanpreet KAUR (Auburn - UNITED STATES)

PROGRESS IN DISEASE CONTROL - Part2

- P6.1-001** Efficacy of foliar fungicides for the management of Fusarium head blight of wheat and mycotoxin accumulation in wheat grain | Lindy ROSE (Cape Town - SOUTH AFRICA)
- P6.1-002** Effects of seed pretreatments with mixed bioproducts for improving disease tolerance and growth of pepper seedlings | Cristina PETRISOR (Bucharest - ROMANIA)
- P6.1-003** Virulence and azoxystrobin sensitivity analysis of the strawberry neopestalotiopsis crown rot pathogens from China | E-Jiao WU (Nanjing - CHINA)
- P6.1-004** Dynamics of total, viable and culturable states of two bacterial biological control strains applied to grapevine and fruit-tree crops | Anna BONATERRA (Girona - SPAIN)
- P6.1-005** Potential of an experimental Bacillus velezensis strain as a biocontrol agent to control grapevine black rot disease | Robin RAVEAU (Villenave D'ornon - FRANCE)
- P6.1-006** Effects of flubeneteram on inhibiting the development of Puccinia striiformis f. sp. tritici in wheat leaves | Gangming ZHAN (Yangling - CHINA)
- P6.1-007** Evaluation of fungicides and fungicide application methods to manage Phytophthora blight of pigeonpea | Ramanagouda GAVIYAPPANAVAR (Hyderabad - INDIA)
- P6.1-008** Controlling cucumber powdery mildew and anthracnose by Bacillus velezensis strain tcb43 | Chien-Chih KUO (Changhua - TAIWAN)
- P6.1-009** Teach me how to protect you: the grapevine lesson on downy mildew control | Silvia Laura TOFFOLATTI (Milano - ITALY)
- P6.1-010** Bismuth subsalicylate, a fungistatic compound and plant defence stimulator with potential for management of grapevine trunk diseases | Loriane MERLEN (Colmar - FRANCE)
- P6.1-011** Combined effect of abiotic parameters on Trichoderma sp. growth with biocontrol potential on stored grain phytopathogens | Roxana ZAHARIA (Bucharest - ROMANIA)
- P6.1-012** Biocidal activity of plant by-products to control plant diseases using foliar applications | Mahyar MIRMAJLESSI (Ghent - BELGIUM)
- P6.1-013** Improving blast resistance of the rice cultivar 'kaohsiung 145' using multiline variety and gene pyramiding strategies | Yu-Hsin HUANG (Taipei City - TAIWAN)

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- P6.1-014** Effect of nano zinc loaded pgpr bioactive formulation on physiochemical properties and its release efficiency against *rhizoctonia solani* kuhn | Vijayreddy DUMPAPENCHALA (Umiam - INDIA)
- P6.1-015** The effect of soil microbial inoculants on the susceptibility of grapevine to plasmopara viticola infection
Othmane TAIBI (Piacenza - ITALY)
- P6.1-016** Efficacy and compatibility of biological agents and chemical fungicides for the management of *Sclerotinia sclerotiorum* on soybean | Natasha Akemi HAMADA (Palmas - BRAZIL)
- P6.1-017** Use of copper-based fungicides in organic agriculture in twelve European countries | Lucius TAMM (Frick - SWITZERLAND)
- P6.1-018** Evaluation of mycoparasitic fungi as potential biological control agents for wattle rust (*uromykladium acaciae*)
Nonkululeko POSWA (Pietermaritzburg - SOUTH AFRICA)
- P6.1-019** Antifungal activity of bioactive molecules isolated from agricultural waste against rice blast fungus
Sharmila GHOSH (Milan - ITALY)
- P6.1-020** Efficacy of in-furrow fungicide application to manage southern blight in mississippi peanut fields
Subina TRIPATHI (Stoneville - UNITED STATES)
- P6.1-021** Arabinogalactan protein-like proteins from *ulva lactuca* activate immune responses and plant resistance in an oilseed crop | Eric NGUEMA-ONA (Saint-Malo - FRANCE)
- P6.1-022** Biotechnologically produced bioactive compounds of plant origin to exploit in plant protection
Emmanouil TRANTAS (Heraklion - GREECE)
- P6.1-023** *Psa3* virulence reduction by natural molecules: insights on subtle regulation mechanisms | Davide DANZI (Verona - ITALY)
- P6.1-024** Spectroscopic detection of crop and forest diseases | Lorenzo COTROZZI (Pisa - ITALY)
- P6.1-025** Biochemical changes in *Vitis vinifera* leaves and responses to *Botrytis cinerea* infection after the application of a yeast extract formulate | Giulia SCIMONE (Pisa - ITALY)
- P6.1-027** Diversity of strains of *Ralstonia solanacearum* species complex in benin in west Africa
Sanju KUNWAR (Gainesville - UNITED STATES)
- P6.1-028** Integrated management to control barley diseases | Neil D HAVIS (Edinburgh - UNITED KINGDOM)
- P6.1-029** New fungicide alternatives to fumigation for managing potato early die | Katie MALEK (Aberdeen - UNITED STATES)
- P6.1-030** Evaluation of fungicide programs for the management of aerial stem rot in potato
Alan MALEK (Aberdeen - UNITED STATES)
- P6.1-031** Adaptive melanisation and tolerance under uv-c light | Crystal TURNBULL (Ås - NORWAY)
- P6.1-032** A new plant protection concept based on the autocidal control of fungi | Bruno LE CAM (Beaucouze - FRANCE)
- P6.1-033** Managing tomato health: comparing the efficacies of aqueous extracts of neem tree (*azadirachta indica* juss) parts and furadan 5g on root knot nematodes infecting tomatoes (*lycopersicon esculentum*) in ishiagu, southeast Nigeria
Solomon Ifeayoluchi OGWULUMBA (Ishiagu - NIGERIA)
- P6.1-034** Cross-protection in plant viruses: how closely related do protecting and challenging viruses need to be?
Anne SICARD (Colmar - FRANCE)
- P6.1-035** Management of white rust (*albugo candida*) disease of red amaranth for seed production
Abu Noman Faruq AHMMED (Dhaka - BANGLADESH)
- P6.1-036** Comparative evaluation of chemical fungicides against sheath blight disease of rice in aman season
Abu Noman Faruq AHMMED (Dhaka - BANGLADESH)
- P6.1-037** Cross-protection, a viable method to fight fanleaf degeneration? study of 14-year-old primary-infected vines in a vineyard plot | Julie KUBINA (Colmar - FRANCE)
- P6.1-038** Side effects of d-limonene on the mealybug destroyer, *cryptolaemus montrouzieri* mulsant (coleoptera: coccinellidae) | Mohamed EL AALAOUI (Settat - MOROCCO)
- P6.1-039** Working efficacy of green synthesized silver and copper nanomaterials on the components of antioxidant defense system of chilli plant attacked by *Fusarium oxysporum* f.sp. *capsici* | Muhammad USMAN (Faisalabad - PAKISTAN)
- P6.1-040** Nanoparticles as hammer of thor against *Pseudomonas syringae* causing apical necrosis in mango
Asif Mahmood ARIF (Faisalabad - PAKISTAN)

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- P6.1-041** Development of an *Ascochyta* blight screening system for the selection of resistant pea (*Pisum sativum* L.) accessions
Thomas OBERHAENSLI (Frick - SWITZERLAND)
- P6.1-042** Phyto-biopolymers for inducing resistance against pearl millet downy mildew disease and transcript profiling of defense gene expression | Niranjan Raj SATHYANARAYANA (Mysuru - INDIA)
- P6.1-043** The potential of African nightshade as a 'dead end trap crop' for management of potato cyst nematodes
Miriam KUNGU (Nairobi - KENYA)
- P6.1-044** Efficiency of elicitors on induced resistance against cassava root rot disease
Chanon SAENGCHAN (Nakhon Ratchasima - THAILAND)
- P6.1-045** Use of agricultural waste and indigenous antagonistic fungi for controlling root knot nematodes (*Meloidogyne* spp.) on potato in north Sumatra, Indonesia | Lisnawita LISNAWITA (Medan - INDONESIA)
- P6.1-046** Eugenol, isoeugenol, thymol, carvacrol, and ester derivatives as an ecofriendly option to control *Colletotrichum chrysophilum* and *Colletotrichum nymphaeae* | Louise Larissa MAY DE MIO (Curitiba - BRAZIL)
- P6.1-047** *Heteromurus nitidus* (Collembola) grazes the wheat pathogenic fungus *Zymoseptoria tritici* on infected tissues: opportunities and limitations for bioregulation | Thomas BOURGEOIS (Brunoy - FRANCE)
- P6.1-048** The occurrence of *Alternaria* species involved in dieback of *Pinus pinea* in Tunisia | Sawssen HLAIEM (Ariana - TUNISIA)
- P6.1-049** Modeling multiple pests for agroecological protection of rice in Cambodia | Mathilde DIONISI (Montpellier - FRANCE)
- P6.1-050** Rethinking strategies for monitoring plant pathogens virulence diversity and their corresponding sources of resistance to move towards a more effective disease control | Fred KATO (Kampala - UGANDA)
- P6.1-051** A plant-based compound as a non-chemical nematocide of Citrus nematode *Tylenchulus semipenetrans*
Farhad SAEIDI NAEINI (Tehran - IRAN (ISLAMIC REPUBLIC OF))
- P6.1-052** Encapsulated fungus-based compound of *Pochonia chlamydosporia* against root-knot nematode of olive
Farhad SAEIDI NAEINI (Tehran - IRAN (ISLAMIC REPUBLIC OF))
- P6.1-053** Changes in the activity of some antioxidant enzymes in wheat plants under the influence of virus infection and liposomal forms of glycans | Anhelina KYRYCHENKO (Kyiv - UKRAINE)
- P6.1-054** Microcarbon plant-based nematocide Promax® against *Meloidogyne javanica* on greenhouse cucumber
Farhad SAEIDI NAEINI (Tehran - IRAN (ISLAMIC REPUBLIC OF))
- P6.1-055** Efficacy of fungicide rotation on potato late blight (*Phytophthora infestans*, (Mont.) management
Basistha ACHARYA (Kathmandu - NEPAL)
- P6.1-056** Studies on the pathogenicity of *Metarhizium anisopliae* var. *acridum* against desert locust, *Schistocerca gregaria* (Orthoptera: Acrididae) nymphs and adults | Fazal SAID (Mardan - PAKISTAN)
- P6.1-057** Effect of plant extracts against some seed-borne pathogens in vitro | Oksana AFANASIEVA (Kyiv - UKRAINE)
- P6.1-058** The performance of the bactericidal and plant defence elicitor peptide bp178 in different plant host pathosystems
Anna BONATERRA (Girona - SPAIN)
- P6.1-059** Antibacterial activity of some substances against Citrus bacterial canker caused by *Xanthomonas citri* pv. *citri* in Burkina Faso | Kevin Ben Fabrice ZERBO (Bobo Dioulasso - BURKINA FASO)
- P6.1-060** Silicon delays the spread of vascular streak dieback of cocoa | Frederick Osei ASAMOAH (Kuala Terengganu - MALAYSIA)
- P6.1-061** Characterization of the capacity of yeast cell wall extracts to induce grapevine tolerance to drought and pathogens
Silvio TUNDO (Legnaro - ITALY)
- P6.1-062** Integrated pest management smart technologies to precisely detect and control plant diseases
Dimitrios TSITSIGIANNIS (Athens - GREECE)
- P6.1-063** An investigation of ways to reduce phytotoxicity caused by copper-based fungicides in Citrus
Tamilarasan THANGAVEL (Bundaberg - AUSTRALIA)
- P6.1-064** Evaluating histone acetyltransferases in *Parastagonospora nodorum* to develop novel fungicides
Anjana SHARMA (Bentley - AUSTRALIA)
- P6.1-065** Impact of fungicide tank-mixing on *Cercospora* leaf spot of sugarbeet and genetic diversity of *Cercospora beticola*
Ashok Kumar CHANDA (St. Paul - UNITED STATES)

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P6.1-066 Influence of sowing time on the occurrence of alternaria leaf spot and rust on sunflower

Ioan RADU (Bucharest - ROMANIA)

P6.1-067 Antagonistic properties of rhamnolipid biosurfactant of *Pseudomonas aeruginosa* rs6 against pathogenic fungi of cucumber and melon | Adieya Atyrrah ADNAN (Serdang - MALAYSIA)

P6.1-068 How to improve the performance of mineral oil to control potato virus Y in seed potato production?

Mounia KHELIFA (Paris - FRANCE)

P6.1-069 Strategies for copper reduction in grapevine, apple, roses and vegetables by using alternative experimental products

Lucius TAMM (Frick - SWITZERLAND)

P6.1-070 Transcriptional reprogramming of lettuce roots in response to chitin soil amendment, effect on plant growth, rhizobiome composition and disease resistance | Joël F. POTHIER (Wädenswil - SWITZERLAND)

P6.1-071 Multicriteria analysis, a powerful tool to select control methods and design a containment strategy against the plane tree canker disease | Emmanuel GACHET (Angers - FRANCE)

P6.1-072 Evaluating bio-products, fungicides and SAR chemicals in integrated management of alternaria branch rot of carnation

Sunita CHANDEL (Solan - INDIA)

P6.1-073 Courgette genetic background modulates defense mechanisms induced by Regalia® against the fungal pathogen *Podosphaera xanthii* | Theoni MARGARITOPOULOU (Kifissia - GREECE)

P6.1-074 Management of cotton leaf curl virus through medicinal phytoextracts and its impact on agronomic parameters

Muhammad ATIQ (Faisalabad - PAKISTAN)

P6.1-075 Strategies for the integrated management of Fusarium head blight of wheat while minimizing deoxynivalenol and fungicides residues in grains | Silvia PEREYRA (Colonia - URUGUAY)

P6.1-076 Management of Citrus gummosis in vitro and under field conditions through different chemicals

Shahid IQBAL (Faisalabad - PAKISTAN)

P6.1-077 Steaming can disinfect soil and onion waste contaminated with *Stromatinia cepivora* causal agent for white rot of onion and garlic | Belachew ASALF (Ås - NORWAY)

P6.1-078 Differential induction of defense mechanisms by commercial biopesticides in carrot varieties against the phytopathogenic fungus *Alternaria dauci* | Dimitrios TSITSIGIANNIS (Athens - GREECE)

P6.1-079 Development of an infectious clone of blackberry chlorotic ringspot virus

Andrea SIERRA MEJIA (Fayetteville - UNITED STATES)

P6.1-080 Safe chemical use for effective management of *Pseudocercospora* leaf and fruit spot in Uganda

John ADRIKO (Kampala - UGANDA)

P6.1-081 Chemo-enzymatic functionalization of phenolic compounds and evaluation of their potential for biocontrol in rapeseed | Sylvain CORDELIER (Reims - FRANCE)

P6.1-082 Monitoring *Erwinia amylovora* spread in apple orchards: development of a detection protocol from corbicular pollen

Bianca VICELLI (S. Michele All'adige - ITALY)

P6.1-083 Characterization of the physical mode of action of an essential oil-based product against grapevine downy mildew caused by *Plasmopara viticola* | Tito CAFFI (Piacenza - ITALY)

P6.1-084 N-acetylcysteine use for bacterial wilt of potatoes and bacterial canker of grapevine

Simone PICCHI (Cordeiropolis - BRAZIL)

P6.1-085 Identification and characterization of fungi associated with lemon wood rot in Arizona

Jiahuai HU (Tucson - UNITED STATES)

P6.1-086 New evidence on advanced techniques for the early detection of plant diseases on *Solanum lycopersicum* and *Capsicum annuum* | Alessia Regina Vera FOLLADOR (Milano - ITALY)

P6.1-087 Biocontrol of *Rhizoctonia solani* on strawberry in greenhouse by experimental antagonists

Massimo PUGLIESE (Grugliasco - ITALY)

P6.1-088 Cranberry fruit rot: characterization and novel management | Leela UPPALA (East Wareham - UNITED STATES)

P6.1-089 Integrated and biological protection strategies against powdery and downy mildews on grape: recent results from trials carried out in Italy | Massimo PUGLIESE (Grugliasco - ITALY)

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- P6.1-090** Cellulose nanocrystals as an innovative tool to control *x. perforans* | Daniele SCHIAVI (Viterbo - ITALY)
- P6.1-091** Study on efficacy of ethanedinitrile against *Plasmodiophora brassicae*, the causal agent of clubroot disease of crucifers | Usha Rani PATAR (Prague - CZECH REPUBLIC)
- P6.1-092** Application prospects for three bacterial endophytes against soil borne diseases and crop yield improvements in organic production of vegetables | Margaret MMBAGA (Nashville - UNITED STATES)
- P6.1-093** Mitigation of grey mould disease in strawberry plants through exogenous application of phytohormones
Chiara MURENA (Porto - PORTUGAL)
- P6.1-094** *Burkholderia* sp. ssg - a powerful new management tool for crop health and production
Chuan HONG (Virginia Beach - UNITED STATES)

High Throughput Sequencing approaches for the detection of pathogens

- P6.2-001** Identification of viruses infecting horticultural crops in Korea by nanopore sequencing
Hyo-Jeong LEE (Gwangju - REPUBLIC OF KOREA)
- P6.2-002** Endophytic mycobiome characterization in cowpea (*vigna unguiculata*) using illumina sequencing
Lilian Zemenjuh MOFORCHA (Buea - CAMEROON)
- P6.2-003** Ancient powdery mildew DNA from reference collections: the effect of a century on powdery mildew DNA preservation | Reannon SMITH (Bundoora - AUSTRALIA)
- P6.2-004** Tobacco ringspot virus: a new emerging virus infecting cotton (*gossypium hirsutum* L.) in the United States
Akhtar ALI (Tulsa - UNITED STATES)
- P6.2-005** Metagenomic analysis of viruses infecting grapevine (*Vitis vinifera*) in Mexico
Alfredo DIAZ-LARA (Santiago De Querétaro - MEXICO)
- P6.2-006** Complete genome of an Italian tomato brown rugose fruit virus isolate following a new target-specific nanopore sequencing approach | Serafina Serena AMOIA (Bari - ITALY)
- P6.2-007** Sequencing draft genomes of cyst nematode species endemic to Australia | Akshita JAIN (Melbourne - AUSTRALIA)
- P6.2-009** The diversity of alfalfa pathobiome | Lev NEMCHINOV (Beltsville - UNITED STATES)
- P6.2-010** High-Throughput Sequencing for pathogen indexing to safeguard the international movement of clonal crops
Stephan WINTER (Braunschweig - GERMANY)
- P6.2-011** Metaviromics reveals the presence of novel viral diversity associated with cultivated olives in South Africa
David READ (Pretoria - SOUTH AFRICA)
- P6.2-012** Novel viral diversity associated with *Helianthus annuus* L. in South Africa | David READ (Pretoria - SOUTH AFRICA)
- P6.2-013** Virome analysis of multiple sample types brings extended insights into the plant virus presence in the ecosystem
Maja RAVNIKAR (Ljubljana - SLOVENIA)
- P6.2-014** Antique olives have antique viruses that are still new to us? | Denis KUTNJAK (Ljubljana - SLOVENIA)
- P6.2-015** Application of minion sequencing for the detection of viruses in seed yam systems
Ruth FESTUS (Kent - UNITED KINGDOM)
- P6.2-016** Double-stranded rna: a universal template for virome (virus and viroid) characterization using second and third-generation sequencing technologies | Mamadou Lamine FALL (Saint-Jean-Sur-Richelieu - CANADA)
- P6.2-017** Evidances: a quality management-friendly bioinformatics pipeline for virus detection in plants
Benoit REMENANT (Angers - FRANCE)
- P6.2-018** Pathobiome analyses in vegetable food products | Anne-Laure BOUTIGNY (Angers - FRANCE)
- P6.2-020** Monitoring plant and soil health by assessing biodiversity using high-Throughput Sequencing
Annelies HAEGEMAN (Melle - BELGIUM)
- P6.2-021** Assessing the risk of viruses from niche tuber crops of Andean origin | Morgan WODRING (York - UNITED KINGDOM)
- P6.2-022** Rna-full the pipeline for full length genome sequencing of plant rna viruses | Victor GOLYAEV (Heverlee - BELGIUM)
- P6.2-023** Revisiting high Throughput Sequencing data used for plant virus detection in order to find evidence of non-viral plant pathogens and pests | Annelies HAEGEMAN (Melle - BELGIUM)

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- P6.2-024** Plant viruses diagnostic from High-Throughput Sequencing (hts) data using viroscope: a field-scale pilot study to implement hts for fast-track quarantines | Bernardo POLLAK (Santiago - CHILE)
- P6.2-025** Characterization of the soil, rhizosphere and root microbiome associated to kiwifruit vine decline syndrome in Italy
Davide SPADARO (Grugliasco - ITALY)
- P6.2-026** Virtab: assessing the risk of whitefly-transmitted viruses for belgian crops | Fauve MAERTENS (Merelbeke - BELGIUM)
- P6.2-027** Tracking bunt and snow mold pathogens in switzerland using soil monitoring | Karen SULLAM (Zürich - SWITZERLAND)
- P6.2-028** Surveillance of crop-associated microbes using High-Throughput Sequencing of environmental and seed samples
Émilie D. TREMBLAY (Ottawa - CANADA)
- P6.2-029** Tiled amplicon pcr as a virology diagnostic tool for post-entry quarantine testing in new zealand
Luciano NUNES LEITE (Auckland - NEW ZEALAND)
- P6.2-030** Comparing short- and long-read High-Throughput Sequencing methods with traditional plating for the characterization of tree seed mycobionemes | Iva FRANIC (Alnarp - SWEDEN)
- P6.2-031** Fast high-resolution plant pathogen identification through multiplexed pcr and hts
Rob TAYLOR (Auckland - NEW ZEALAND)
- P6.2-032** Assessment of ont sequencing (minion) for plant virus detection and comparison with illumina-based sequencing
Kris DE JONGHE (Merelbeke - BELGIUM)
- P6.2-033** Multilocus genes and whole genome sequencing to identify agrobacterium arsenijevecii, causal agent of crown gall disease in raspberry plants | José Eduardo GODÍNEZ-ALEMAN (Texcoco - MEXICO)

MOLECULAR ASPECTS: plant-nematode interactions

- P6.3-001** Biocontrol agents as substitutes to chemical nematicides | Ahmed ISMAIL (Giza - EGYPT)
- P6.3-002** The Incrna6155-mir169f-hap2c module regulates rice immunity against the root-knot nematode (rkn), meloidogyne graminicola (mg) | Xing XU (Gent - BELGIUM)
- P6.3-003** Occurrence and distribution of root-lesion nematode pratylenchus coffeae in China | Honglian LI (Zhengzhou - CHINA)
- P6.3-004** Understanding the hypervariability of hyp effectors in potato cyst nematodes
Unnati SONAWALA (Cambridge - UNITED KINGDOM)
- P6.3-005** A small cysteine-rich meloidogyne javanica effector (mjcrsp) modulates plant immunity to promote nematode parasitism | Teresia MACHARIA (Pretoria - SOUTH AFRICA)
- P6.3-006** Development of real-time diagnosis technology using pna probe of burrowing nematodes
Hwa-Yeon YU (Daejeon - REPUBLIC OF KOREA)
- P6.3-007** Genetic diversity analysis of four cyst nematodes isolated in Korea using mig-seq analysis
Seon-Kyeong SONG (Namyangju - REPUBLIC OF KOREA)
- P6.3-008** Changes in the rhizosphere microbiome of winter wheat lines with varying response to root lesion nematode infections | Erika CONSOLI (Bozeman - UNITED STATES)
- P6.3-009** Ai-powered holistic and dynamic plant-pathology to deliver new sources of resistance
Siyuan WEI (Cambridge - UNITED KINGDOM)
- P6.3-010** Assessment of some soybean cultivars and lines to soybean cyst nematode, heterodera glycines
Zahra MAJD TAHERI (Tehran - IRAN (ISLAMIC REPUBLIC OF))
- P6.3-011** First report of the cereal cyst nematode (heterodera filipjevi) on wheat in idaho, USA
Juliet MARSHALL (Idaho Falls - UNITED STATES)
- P6.3-012** Nematotoxic potential obtained from different accessions of the same solanaceae specie effective in control of meloidogyne incognita | Paula FERREIRA (Brasília - BRAZIL)
- P6.3-013** Characterization of parasitic nematodes of papaya (carica papaya l.) in Burkina Faso and histological analysis of meloidogyne javanica life cycle in roots | Laetitia COULIBALY (Ouagadougou - BURKINA FASO)

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P6.3-014 Development and standardization of a rapid, high throughput pcn resistance screening protocol

Newton NYAGAH (Nairobi - KENYA)

P6.3-015 The lay of the land: tissue-specific transcriptomics reveals a comprehensive “effectome” of a plant-parasitic nematode

I Beth MOLLOY (Cambridge - UNITED KINGDOM)

P6.3-017 Getting to the root of phytonematode disease: toward the understanding of parasitism regulation in meloidogyne spp

Caroline BOURNAUD (Villeurbanne - FRANCE)

P6.3-018 Novel cotton (*Gossypium hirsutum*) promoters with biotechnological potential for phytonematode and insect pest control

Isabela TESSUTTI (Brasília - BRAZIL)

Particle based delivery of biomolecules for crop protection

P6.4-001 Effect of different concentration of *sio2*, *tio2* and *zno2* nanoparticles on germination percentage, vigour and seed health parameters of chickpea seeds

Anubhav THAKUR (Palampur - INDIA)

P6.4-002 The effect of sodium chloride aqueous solution on the growth and development of sunflower plant (*Helianthus annuus* L.) after the seed germination stage inside the greenhouse

Maamar BOUKABCHA (Abou El Hassen - ALGERIA)

P6.4-003 Cost-effective *rnai* biopesticide for potato virus management

Omnia ELSHORBAGY (Newcastle Upon Tyne - UNITED KINGDOM)

P6.4-004 A novel phyto-fumigant volatile formulation unveils the suppressive nature of damping off and fusarial wilt pathogens in tomato

Praveen THANGARAJ (Coimbatore - INDIA)

P6.4-005 Development of a reproducible system for assessment of *Botrytis* bunch rot disease in grapevines and the impact of biocontrol *rnai* technology on disease incidence

Victoria CLARKE (Hobart - AUSTRALIA)

P6.4-006 Chalcones, a new alternative of biocontrol against the root rot caused by *Phytophthora cinnamomi*

Juan MORAL MORAL (Córdoba - SPAIN)

P6.4-007 Alleviation of biotic and abiotic stress on plants by treatment of a cyclic dipeptide (L-proline-L-glycine) from *Bacillus velezensis* bs07m

Soh-Young OH (Ansung - REPUBLIC OF KOREA)

P6.4-008 Multiomics identifies key antifungal compounds and biosynthetic gene clusters during liquid-state fermentation of a biocontrol *Streptomyces*

Marta GALLART (Canberra - AUSTRALIA)

P6.4-009 Topical application of *rna* interference to improve grain crop health against the fungal pathogen *Fusarium graminearum*

Pratyush RAVICHANDER (Brisbane - AUSTRALIA)

P6.4-010 A novel nanoparticle-based formulation for the management of kiwifruit bacterial canker and olive knot while boosting the hosts innate immunity

Daniele SCHIAVI (Viterbo - ITALY)

P6.4-011 *Rnai* as a green bio-fungicide to manage *Botrytis* grey mould in chickpea

Prabhakaran THANJAVUR SAMBASIVAM (Nathan, Queensland - AUSTRALIA)

P6.4-012 Forgotten nutrient that enhances the passive defence pathway, so reducing disease levels?

Avice HALL (Hatfield - UNITED KINGDOM)

Soil-borne plant viruses

P6.5-001 Viruses transmitted to rice by *Polymyxa graminis*: a tripartite interaction

Emma-Louise JAFFRÉ (Montpellier - FRANCE)

P6.5-002 Diversity of *Polymyxa graminis* associated with rice stripe necrosis virus infested soils, and host range of *Polymyxa graminis* f. sp. *colombiana*

Issiaka BAGAYOKO (Montpellier - FRANCE)

P6.5-003 Soil tripartite interactions between host plants, viruses and the protist vectors *Polymyxa*

Margaux GENARD (Louvain-La-Neuve - BELGIUM)

P6.5-004 Potato mop-top virus shapes a defence-related transcriptome through suppression of chloroplast-mediated immunity genes

Shweta ROY (Uppsala - SWEDEN)

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- P7.1-002** Identification of effector genes in *phellinus noxius*, the cause of brown root rot disease | Jen-Chun HSU (Taipei - TAIWAN)
- P7.1-003** Dual transcriptomic analyses unveil the interaction between *phellinus noxius* and *populus trichocarpa* | Zong-Chi WU (Taipei - TAIWAN)
- P7.1-004** Stripe rust fungal conserved effectors *pstgsre1* and *pstgsre4* disrupt the wheat *ros*-induced immunity to facilitate *pst* infection | Jia GUO (Yangling - CHINA)
- P7.1-005** In search of candidate genes for resistant to *venturia oleaginea* in olive (*olea europaea* subsp. *europaea*) | Juan MORAL (Cordoba - SPAIN)
- P7.1-006** *Mta1*-mediated rna m6a modification regulates autophagy and is required for infection of the rice blast fungus | Chen XIAOLIN (Wuhan - CHINA)
- P7.1-007** Identification of fungal effector targets involved in susceptibility of bread wheat to *Fusarium* head blight | Shimlal AYILALATH (Clermont-Ferrand - FRANCE)
- P7.1-008** Construction of sexual hybrid population of *Puccinia striiformis* f. sp. *tritici* and candidate genetic interval of *avryr10* and *avryr26* | Jie ZHAO (Yangling - CHINA)
- P7.1-010** Investigation on high polyphenolic wheat genotypes resistance to *Fusarium* head blight (*fhb*) | Linda FELICI (Viterbo - ITALY)
- P7.1-011** *Lecanosticta acicola* modulates its proteomic profile depending on *pinus* innate resistance to brown-spot needle blight disease | Pedro Emanuel MONTEIRO (Aveiro - PORTUGAL)
- P7.1-012** *Osmbr*, a putative receptor of *Magnaporthe oryzae* *snodprot 1 (msp1)*, overexpression confers resistance to rice blast disease in rice | Jeong Woo JANG (Miryang - REPUBLIC OF KOREA)
- P7.1-013** Perception and signalling of mycorrhiza induced resistance in tomato plants against *Botrytis cinerea* | Maria MANRESA-GRAO (Castelló De La Plana - SPAIN)
- P7.1-014** Detection of genes for resistance to the wheat blast fungus in oats and their corresponding avirulence genes | Yuna TATEMATSU (Kobe - JAPAN)
- P7.1-015** Basidiomycetes in *esca* complex of diseases: phenotypical characteristics and degradation capabilities with a focus on the non-enzymatic pathway | Alessandro PUCA (Florence - ITALY)
- P7.1-016** Attenuated isolate *gibellulopsis nigrescens vn-1* enhances resistance against *Verticillium dahliae* in potato | Jianxiu HAO (Hohhot - CHINA)
- P7.1-017** Detecting genetic sources of resistance to chocolate spot in faba bean: detached-leaf screening of a diverse population | Jamie-Leigh CARTER (Carlow - IRELAND)
- P7.1-019** Whole genome sequencing and comparative genomics of *Colletotrichum fioriniae* and *Colletotrichum acutatum* isolated from olive fruits in central Italy | Federico BRUGNETI (Viterbo - ITALY)
- P7.1-020** Transcriptomic and functional approaches to study host-pathogen interactions underlying dutch elm disease | Louis BERNIER (Québec - CANADA)
- P7.1-021** Chromosome-level genome resource for cacao identifies the genetic basis for resistance to vascular streak dieback | David GUEST (Camperdown - AUSTRALIA)
- P7.1-022** Molecular insights into high-temperature seedling plant resistance against *Puccinia striiformis* f. sp. *tritici* in xiaoyan 6 wheat cultivar | Yuxiang LI (Yangling - CHINA)
- P7.1-023** Evolution of the wheat blast fungus through stepwise losses of function of avirulence genes partially accompanied by inter-chromosomal translocations | Soichiro ASUKE (Kobe - JAPAN)
- P7.1-024** Detection of *rmg8*, a gene for resistance to the wheat blast fungus, in *aegilops umbellulata* | Mai SHIBATA (Kobe - JAPAN)
- P7.1-025** Terpenoids are involved in expression of systemic induced resistance in Austrian pine | Pierluigi BONELLO (Columbus, Oh - UNITED STATES)

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- P7.1-026** Uncovering fungal microbiome associated with winter pea nodules | Svetlana YURGEL (Prosser - UNITED STATES)
- P7.1-027** Re-emergence of a pathogen: sequential breakdown of cf-9, the most commonly deployed leaf mould resistance locus in commercially cultivated tomato by *Fulvia fulva* (syn. *Cladosporium fulvum*)
Christiaan R. SCHOL (Wageningen - NETHERLANDS)
- P7.1-028** Pathogenicity of *Fusarium graminearum* and *F. poae* causing *Fusarium* head blight in barley under controlled conditions | Raja KHANAL (Ottawa - CANADA)
- P7.1-029** Identification and characterization of a large multigene family of cooperating effector genes facilitating cell-to-cell mobility conserved in dothideomycetes and sordariomycetes | Isabelle FUDAL (Palaiseau - FRANCE)
- P7.1-030** Volatile organic compounds as biomarker to assess the phenotype of susceptible and resistant apple cultivars
Pratibha PRATIBHA (Haridwar - INDIA)
- P7.1-032** Significance of wheat resistance gene(s) located on chromosome 1ds as a host barrier to non-adapted pathotypes of *Puccinia oryzae* | Reina TSUCHIYA (Kobe - JAPAN)
- P7.1-033** Induction of ginsenosides using fungal endophytes isolated from mountain-simulated ginseng
Hanhong BAE (Gyeongsan - REPUBLIC OF KOREA)
- P7.1-034** Development of a novel assay for the study of hyphal constriction and its genetic basis in the rice blast fungus, *Magnaporthe oryzae* | Eunbyeol CHO (Gyeongsan - REPUBLIC OF KOREA)
- P7.1-035** Study of nucleolar dynamics using a nucleolar marker monop1 in the rice blast fungus, *Magnaporthe oryzae*
Eunbyeol CHO (Gyeongsan - REPUBLIC OF KOREA)
- P7.1-036** Jmj2 gene encoding a histone demethylase is required for fungal development and pathogenicity through transcriptional regulation of ribosomal DNA and nuclear genes in the rice blast fungus
Song Hee LEE (Gyeongsan - REPUBLIC OF KOREA)
- P7.1-037** Investigating the cell biology of plant infection by the rice blast fungus *Magnaporthe oryzae*
Berlaine QUIME (Norwich - UNITED KINGDOM)
- P7.1-038** Virulence diversity of *Puccinia graminis* f. sp. *tritici* uncovered in a sexual population | Yue JIN (St. Paul - UNITED STATES)
- P7.1-039** A nucleus-targeting effector of stripe rust disturbs the plant phase separation to manipulate host immunity
Wang XIAOJIE (Yangling - CHINA)
- P7.1-040** Three *avrpm60d* candidate genes have been achieved from the high-density linkage mapping method
Shi WENQI (Wuhan - CHINA)
- P7.1-041** Novel *Trichoderma asperelloides*-nt33 alleviate water deficit stress in susceptible tomato genotypes
Ranjana RAWAL (Lalitpur - NEPAL)
- P7.1-042** Ancient variation in avirulence effectors underlies the rapid resistance breakdown of two introgressed rye resistance genes in wheat | Marion MÜLLER (Freising-Weihenstephan - GERMANY)
- P7.1-043** The ectomycorrhiza fungus promotes growth of scots pine seedlings and mitigates negative effects of conifer root pathogen | Zilan WEN (Helsinki - FINLAND)
- P7.1-044** A secreted leucine-rich repeat effector suppresses plant immunity | Eli THYNNE (Kiel - GERMANY)
- P7.1-047** Profiling degs post inoculation by stripe rust (*Puccinia striiformis* f. sp. *tritici*) in wheat using an rna-seq approach
Molemi RAUWANE (Port Elizabeth - SOUTH AFRICA)
- P7.1-048** Distribution of wheat blast resistance genes in tetraploid wheat | Yoshino TAKAHASHI (Kobe - JAPAN)
- P7.1-050** Metabolome reprogramming and phenome characterization on basil after the infection by *Fusarium* and its interaction with *Trichoderma atroviride* antagonist under saline and non-saline conditions | Gorka ERICE (Tarragona - SPAIN)
- P7.1-051** Pwl2 modulates pamp-triggered immunity through interaction with a host isoprenylated hma
Vincent WERE (Norwich - UNITED KINGDOM)
- P7.1-052** Giant transposons facilitate horizontal gene transfer of the necrotrophic effector *toxa* in fungal wheat pathogens
Megan MCDONALD (Birmingham - UNITED KINGDOM)
- P7.1-053** Comparative transcriptomics reveals tissue and genotype gene expression pattern differences in near-isogenic tomato lines differing in *Verticillium* wilt resistance | Yeonyee OH (Raleigh - UNITED STATES)

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P7.1-054 Identification and characterization of candidate effectors in the resistance-breaking pathotype 3a of *Plasmodiophora brassicae* | Emilee STORFIE (Edmonton - CANADA)

P7.1-055 Cell wall associated immunity against *Fusarium oxysporum* in arabidopsis bam3 mutant
Eleni KALOGEROPOULOU (Kifissia - GREECE)

P7.1-056 New quantitative trait loci (qtl) for resistance to tar spot in maize | Raksha SINGH (Westlafayette - UNITED STATES)

P7.1-057 Transcriptomic and metabolomic responses in arabidopsis bam3 mutant to *Fusarium oxysporum* infection
Eleni KALOGEROPOULOU (Kifissia - GREECE)

P7.1-058 Identification and characterization of novel effector proteins regulated by the map kinase pmk1 during cell-to-cell movement of the rice blast fungus *Magnaporthe oryzae* | Mark Jave BAUTISTA (Norwich - UNITED KINGDOM)

P7.1-061 Phosphorylation landscape of early appressorium morphogenesis reveals novel virulence determinants during rice blast disease | Neftaly CRUZ MIRELES (Norwich - UNITED KINGDOM)

Plant protection potential of persistent (cryptic) viruses in fungi, plants and insect vectors of plant disease

P7.2-001 The diversity of viral community in aphids, vectors of the barley yellow dwarf virus, revealed by metatranscriptomics
Sung-Woong KIM (Gwangju - REPUBLIC OF KOREA)

P7.2-002 Investigating mycovirus-mediated systemic resistance in oilseed rape | Jacob LOCKE-GOTEL (Hatfield - UNITED KINGDOM)

P7.2-004 Expanding the spectrum of hosts for *Fusarium poae* virus 1 to other *Fusarium* species | Xiushi SONG (Nanjing - CHINA)

P7.2-005 Differences in mycoviral content underlie phenotype and virulence changes in *Botrytis cinerea* isolates
María A. AYLLÓN (Pozuelo De Alarcón (Madrid) - SPAIN)

P7.2-006 Relevance of capsid protein on *Botrytis* virus f replication and dispersion inside the host
María A. AYLLÓN (Pozuelo De Alarcón (Madrid) - SPAIN)

P7.2-007 Molecular characterization of the first partitivirus from a causal agent of salvia miltiorrhiza dry rot
Ying ZHAO (Zhengzhou - CHINA)

P7.2-008 Engineering of the cannabis cryptic virus: first successful cloning of a dsrna virus in a plant system
Niccolo' MIOTTI (Milan - ITALY)

P7.2-009 The gene function of bdcv1-derived srna5636 in *botrosphaeria dothidea* with mycoviruses
Liping WANG (Wuhan - CHINA)

P7.2-010 Mycoviruses in *Fusarium graminearum* - host transition of *Fusarium poae* virus 1 | Simon SCHIWEK (Brunswick - GERMANY)

P7.2-011 Investigating the adaptation mechanisms of mitovirus-infected chenopodium quinoa plants to biotic and abiotic stress | Massimo TURINA (Torino - ITALY)

P7.2-012 *Diplodia sapinea* is hosting multiple mycoviruses | Fanny ROBLEDO-GARCIA (Bordeaux - FRANCE)

At the heart of disease emergence: Determinants and consequences of host range contours of plant pathogens

P7.3-002 The pathogens of *Fusarium solani* species complex (fssc) causing collar rot and fruit rot of passion fruits in Taiwan
Pei-Hsin LO (Changhua - TAIWAN)

P7.3-003 Diversity of *Colletotrichum* species causing apple bitter rot in virginia | Srdan ACIMOVIC (Winchester, Va - UNITED STATES)

P7.3-004 Virulence and pathotypes of *Plasmodiophora brassicae* in central Europe and Sweden
Nazanin ZAMANI-NOOR (Braunschweig - GERMANY)

P7.3-005 Diversity and characterization of *Fusarium oxysporum* species complex (fosc) and *Fusarium solani* species complex (fssc) causing orchid diseases in Taiwan | An CHANG (Taichung - TAIWAN)

P7.3-006 Biology of pentastiridius leporinus and approaches to monitor the main vector of the syndrome 'basses richesses' in sugar beet | Mark VARRELMANN (Göttingen - GERMANY)

P7.3-007 Genomes and pathotypes of *Plasmodiophora brassicae* in poland | Malgorzata JEDRYCZKA (Poznan - POLAND)

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P7.3-008 First report of rhizobium rhizogenes causing crown gall on in Chile | Paz MILLAS (Chillán - CHILE)

P7.3-009 A comprehensive survey of prevalence of root-knot nematodes and cultivar resistance associated with peppers in Hainan, China | Yuan CHEN (Haikou - CHINA)

P7.3-010 Disease emergence scenarios linked to spatial distribution of a novel crop | Olufemi AKINSANMI (Brisbane - AUSTRALIA)

One health: impact of resistance to antibiotics and fungicides in plant pathogens

P7.4-001 Dmi sensitivity of baseline and fungicides exposed isolates of alternaria alternata from tangerines

Silvia LOURENÇO (Piracicaba - BRAZIL)

P7.4-002 Temperature and host-dependent fungicide efficacy | Jiasui ZHAN (Uppsala - SWEDEN)

P7.4-003 Effects of fungicide and host resistance on control of Leptosphaeria maculans and I. biglobosa

Yongju HUANG (Hatfield - UNITED KINGDOM)

P7.4-004 In vitro sensitivity to some fungicides of Monilinia laxa | Dudu DEMIR (Isparta - TURKEY)

P7.4-005 Determination of in vitro antifungal efficiencies of some fungicides against the Diplodia bulgarica as a new pathogen of apple in türkiye | Kardelen CAGLAYAN (Isparta - TURKEY)

P7.4-006 Antibiotic resistance of klebsiella spp. isolated from agricultural products and agricultural environments in Korea

Mi Kyung KWON (Yesan-Gun, Chungcheongnam-Do - REPUBLIC OF KOREA)

P7.4-007 Occurrence of antibiotics resistant Pseudomonas spp. isolated from vegetables and agricultural environments in south Korea | Jeong A HAN (Hwaseong-City, Gyeonggi-Do - REPUBLIC OF KOREA)

Pathovars of Pseudomonas and Xanthomonas spp.: do they really exist?

P7.5-001 Peltigera lichens in iceland: yet another reservoir of the plant pathogen Pseudomonas syringae?

Natalia RAMIREZ (Akureyri - ICELAND)

P7.5-002 Evaluation of pcr primers derived from four protein-coding genes against Xanthomonas species to expand < multi-locus sequencing studies | Seong Hwan KIM (Cheonan - REPUBLIC OF KOREA)

P7.5-003 A new bacterial disease of oleander | Attila FODOR (Budapest - HUNGARY)

P7.5-004 Characterization of Xanthomonas arboricola pv. juglandis isolates in Hungary | Fodor ATTILA (Budapest - HUNGARY)

P7.5-005 First report of Pseudomonas syringae pv. syringae causing a leaf spot disease on watermelon plants in greece

Dimitrios GOUMAS (Heraklion - GREECE)

P7.5-006 The genomic changes that may have contributed to the adaptation of Xanthomonas vasicola pv. vasculorum to eucalyptus grandis | Nomakula ZIM (Pretoria - SOUTH AFRICA)

P7.5-007 Inoculation techniques of the agents of common bacterial blight in phaseolus vulgaris | Angelo GAITI (Milano - ITALY)

Social and cultural dimensions of international forest health

P7.6-001 M?tauranga - an indigenous response to myrtle rust | Alby MARSH (Palmerston North - NEW ZEALAND)

P7.6-002 Indigenous framework to recognise and give effect to cultural and data sovereignty to elevate indigenous peoples into science and biosecurity systems | Waitangi WOOD (Northland - NEW ZEALAND)

Botryosphaeria dieback: which hosts are affected, what we know and how to fight

P8.1-001 Fungal trunk diseases of fruit trees in Europe: pathogens, spread and future directions

Vladimiro GUARNACCIA (Grugliasco - ITALY)

P8.1-002 Role of six effectors with arsenic affinity on the pathogenicity of neofusicoccum parvum | Alexia GRAU (Colmar - FRANCE)

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- P8.1-003** Genome sequencing of *neofusicoccum parvum* (teleomorph: *botryosphaeria parva*) from hemp (*cannabis sativa*) offers clues into molecular mechanisms of pathogenesis | Hannah ZIMA (Fayetteville - UNITED STATES)
- P8.1-004** Botryosphaeriaceae involved in recent walnut dieback in France and level of their populations diversity | Marie BELAIR (Plouzané - FRANCE)
- P8.1-005** Emerging pecan leaf dieback disease caused by *neofusicoccum caryigenum*: research update and implications for management | Young-Ki JO (College Station - UNITED STATES)
- P8.1-006** Incidence and severity of mango trees decline in côte d'ivoire and characterisation of *lasiodiplodia* species associated | Yéfounngnigui Souleymane YEO (Abidjan - COTE D IVOIRE)
- P8.1-007** Diversity of *lasiodiplodia* species associated with mango (*mangifera indica* L.) decline in Burkina Faso and influence of climatic factors | Zoéyandé Oumarou DIANDA (Bobo-Dioulasso - BURKINA FASO)
- P8.1-008** Statistical image segmentation of vines' wood colonized by *neofusicoccum parvum* in fluorescence microscopy | Romain PIERRON (Colmar - FRANCE)
- P8.1-009** Botryosphaeria dieback in walnut orchards in australia | Stella ANTONY (Wagga Wagga - AUSTRALIA)
- P8.1-010** Fungal trunk pathogens in hazelnut orchards in Chile | Daina GRINBERGS (Chillan - CHILE)
- P8.1-011** Differential carbohydrate-active enzymes and secondary metabolite productions by the grapevine trunk pathogen *neofusicoccum parvum* bt-67 grown on a host and non-host biomass | Florence FONTAINE (Reims - FRANCE)
- P8.1-012** How to manage *neofusicoccum parvum* in protecting grapevine: combining the beneficial effects of *Bacillus subtilis* pta-271 and *Trichoderma atroviride* sc1 | Florence FONTAINE (Reims - FRANCE)
- P8.1-013** Management of botryosphaeria dieback pathogens in grapevine propagation material combining *Bacillus subtilis* pta-271 and *Trichoderma atroviride* sc1 | Florence FONTAINE (Reims - FRANCE)

Emerging Phytophthora's: Tackling Global Outbreaks that Impact Food security

- P8.2-002** Impact of climatic factors on growth and development of *Phytophthora infestans* causing potato late blight in mauritius | Sandhya Devi TAKOOREE (Moka - MAURITIUS)
- P8.2-003** Impressive taxonomic variability of *Phytophthora* spp. in commercial nursery stock | Francesco PECORI (Sesto Fiorentino - ITALY)
- P8.2-004** Evidence for increased sexual reproduction of *Phytophthora infestans* under global warming | Li-Na YANG (Fuzhou - CHINA)

Latest advancements in knowledge and management of *Ralstonia* species

- P8.3-001** Contribution of the quorum sensing of *Ralstonia pseudosolanacearum* strain oe1-1 to its infection in tomato roots and virulence | Yasufumi HIKICHI (Nankoku - JAPAN)
- P8.3-002** Plant signals that induce the hrp regulon in *Ralstonia solanacearum* and the cognate r. solanacearum receptors | Ohnishi KOUHEI (Kochi - JAPAN)
- P8.3-003** Coexpression network analysis to understand the quorum sensing-dependent gene regulation mechanism in *Ralstonia pseudosolanacearum* strain oe1-1 | Masayuki TSUZUKI (Kochi - JAPAN)
- P8.3-004** The tomato p69 serine proteases play a role in resistance to bacterial wilt | Weiqi ZHANG (Cerdanyola Del Vallès - SPAIN)
- P8.3-005** Ferric uptake regulators, fur1 and fur2, affect the expression of quorum sensing-regulated genes in the conditions with and without ferrous iron in *Ralstonia pseudosolanacearum* strain oe1-1 | Sora TATEDA (Kochi - JAPAN)
- P8.3-006** Selective isolation of *Ralstonia solanacearum* on msmsa in a saprophytic context | Maria BERGSMA-VLAMI (Wageningen - NETHERLANDS)
- P8.3-007** Comparison of rhizospheric bacterial communities of potato genotypes with diverse defense responses against *Ralstonia solanacearum* | Virginia FERREIRA (Montevideo - URUGUAY)
- P8.3-008** Application of recombinant internal control for increasing qpcr reliability in the quantitative detection of *Ralstonia solanacearum* species complex (rssc) in soil samples | Li-Qun ZHANG (Beijing - CHINA)

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P8.3-009 First report of *Ralstonia pseudosolanacearum* on *boesenbergia rotunda* from thailand

Andrew ASPIN (Sand Hutton - UNITED KINGDOM)

P8.3-010 Variety of pathogenicity of *Ralstonia solanacearum* strains | Włodzimir PRZEWODOWSKI (Bonin - POLAND)

Re-emergence of tobamoviruses threatening global vegetable production

P8.4-001 African eggplant-associated virus: characterization of a novel tobamovirus identified from *solanum macrocarpon* and assessment of its potential impact on tomato and pepper crops | Anne GIESBERS (Wageningen - NETHERLANDS)

P8.4-002 Diagnosis and characterization of seed borne viruses in cucurbitaceous crops: hidden threat for global crop productions and seed industries | Mahesha BASAVARAJU (Bangalore - INDIA)

P8.4-003 Remote real-time rt-pcr for monitoring and early detection of tomato brown rugose fruit virus in tomato crops in sicily | Andrea Giovanni CARUSO (Palermo - ITALY)

P8.4-005 Latent infection by tobamoviruses | Rabia ILYAS (Braunschweig - GERMANY)

P8.4-006 Searching for a mild isolate to use in cross-protection studies for tobfrv Mareike Johanna ROHDE (Braunschweig - GERMANY)

P8.4-007 The ability of elisa, real-time rt-pcr, and bioassay in the quantification of the virucidal efficacy using menno florades disinfectant and tomato brown rugose fruit virus as an example | Shaheen NOURINEJHAD ZARGHANI (Berlin - GERMANY)

Controlling Globally Developing Disease Threats of Banana

P8.5-001 Unravelling the plant defense mechanisms of different banana cultivars against *Fusarium wilt tr4*, including responses to elicitor application | Sijun ZHENG (Kunming - CHINA)

P8.5-002 Molecular diagnosis and vegetative compatibility group analysis of *Fusarium wilt* of banana in nepal Sijun ZHENG (Kunming - CHINA)

P8.5-003 Securing the future of Ecuadorian bananas: an integrated approach to mitigating *Fusarium wilt tr4* Freddy MAGDAMA (Guayaquil - ECUADOR)

P8.5-004 Investigating the potential of *Trichoderma asperellum* against *Fusarium wilt* disease in banana plants Maitreyee SARMA (Leuven - BELGIUM)

P8.5-005 Current status of banana bunchy top disease in indonesia and its alternative control strategy Sri HIDAYAT (Bogor - INDONESIA)

P8.5-006 The vulnerability of the cuban banana production to *Fusarium wilt* caused by tropical race 4 Einar MARTÍNEZ DE LA PARTE (Wageningen - NETHERLANDS)

P8.5-007 Unravelling the etiology of banana wilt diseases in venezuela: the incursion of the tropical race 4 variant of *Fusarium oxysporum f.sp. cubense* and its implications for banana production and food security | Edgloris MARYS (Caracas - VENEZUELA)

P8.5-008 Anaerobic soil disinfestation for *Fusarium wilt* disease control in banana | Shunsuke NOZAWA (Machida - JAPAN)

P8.5-009 *Fusarium musae*, a pathogen crossing "borders" | Valeria TAVA (Milan - ITALY)

P8.5-010 Diversity of *Fusarium* species associated with the cavendish banana wilt disease in Davao region, Mindanao Island, Philippines | Dan Charlie Joy C PANGILINAN (Machida - JAPAN)

P8.5-011 Emergency response action to contain the banana bunchy top virus outbreak in east Africa George MAHUKU (Kampala - UGANDA)

P8.5-012 Evaluation of the biocontrol capacity of native microorganisms against *Fusarium oxysporum f. sp. cubense* Liliana ARAGON (Lima - PERU)

P8.5-013 A polyphasic approach reveals novel genotypes and updates the genetic structure of the banana *Fusarium wilt* pathogen | D. MOSTERT (Stellenbosch - SOUTH AFRICA)

P8.5-014 Advances in plant virus disease management in sub-saharan Africa - the case of bunch top disease Lava Kumar PULLIKANTI (Ibadan - NIGERIA)

P8.5-015 The new proposal for a diagrammatic scale to black leaf streak disease assessment for banana Andres Mauricio Pinzon Nunez (Carepa-Antioquia - COLOMBIA)

WEDNESDAY 23 & THURSDAY 24 AUGUST

From the deciphering of host pathogen interactions to disease management: the *Leptosphaeria maculans* /rapeseed case study

P8.6-001 *Plenodomus* (*Leptosphaeria*) species significantly differ with extracellular polymeric substances and siderophore production | Malgorzata JEDRYCZKA (Poznan - POLAND)

P8.6-002 Advances in studying *Leptosphaeria maculans* complex species causing blackleg disease of oilseed rape (brassica napus L.) in Tunisia | Essia MAGHREBI (Tunis - TUNISIA)

P8.6-003 Characterisation and management of *Leptosphaeria* spp. causing blackleg of canola in South Africa
D. MOSTERT (Stellenbosch - SOUTH AFRICA)

P8.6-004 Chilling stress modifies oilseed rape resistance to *plenodomus lingam* | Lenka BURKETOVA (Prague - CZECH REPUBLIC)

Raising awareness of plants and ways of teaching plant pathology

P8.7-001 Farmer field schools as a means of enhancing farmer knowledge in common bean production and diseases management in Uganda | Pamela PAPARU (Kampala - UGANDA)

P8.7-002 Addressing the global gap in seed pathology education | Lindsey DU TOIT (Mount Vernon - UNITED STATES)

P8.7-003 Don't risk it! - an EPPO communication campaign to raise awareness of international travellers about the risks of carrying plants in their luggage | Valérie Grimault (Paris - FRANCE)

P8.7-004 One health perspectives on smallholder cocoa production and poverty | David GUEST (Camperdown - AUSTRALIA)

CRISPR crops: plant Genome Editing Toward Disease Resistance

P9.1-001 Contribution of disease resistant crops derived from gene editing and cisgenesis to EU sustainability objectives
Emilio RODRIGUEZ-CEREZO (Sevilla - SPAIN)

P9.1-002 Targeted and untargeted epigenetic modifications to control plant pathogens | Khalid AMARI (Quedlinburg - GERMANY)

P9.1-003 Editing lady finger bananas for *str4* resistance using *crispr-cas9* | Georgie STEPHAN (Brisbane - AUSTRALIA)

P9.1-004 An iterative gene-editing strategy broadens *eif4e1* genetic diversity in *solanum lycopersicum* and generates resistance to multiple potyvirus isolates | Kyoka KUROIWA (Avignon - FRANCE)

P9.1-005 Salicylic acid is required for broad-spectrum disease resistance in rice | Zejian GUO (Beijing - CHINA)

P9.1-006 The in-frame-deletion allele-encoded *eif4e* protein confers resistance to cucumber mosaic virus by inhibiting 2b in tomato | Sozib GHOS (Sapporo - JAPAN)

P9.1-007 Employing molecular techniques to confer resistance against *Phytophthora infestans* in potato
Jeny JOSE (Martonvásár - HUNGARY)

P9.1-008 Identification and functional characterization of a *udp-arabinopyranose mutases* gene *taum1* in wheat
Xueling HUANG (Yangling - CHINA)

P9.1-009 Generation of *rymv*-resistant *oryza sativa* lines by edition of susceptibility factors | Laurence ALBAR (Montpellier - FRANCE)

P9.1-010 Development of broad-spectrum resistance by introgression of sextuple sweet ebe mutations and major resistance genes in African rice cultivars | Yugander ARRA (Dusseldorf - GERMANY)

P9.1-011 Genome editing of banana for resistance to bacterial wilt disease | Leena TRIPATHI (Nairobi - KENYA)

P9.1-013 Genetic editing of *cml* genes in potato *solanum tuberosum* | Tetiana KYRPA (Kyiv - UKRAINE)

Necrotrophic plant pathogens

P9.2-001 Incidence, diversity and pathogenicity of *diaporthe* species associated with soybean seeds in South Africa
Gugulethu Joy MAKHATHINI MKHWANAZI (Stellenbosch - SOUTH AFRICA)

P9.2-002 Characteristics and fungicides sensitivity of *Fusarium incarnatum-equiseti* species complex (*fiesc*) causing muskmelon fruit rot disease in Taiwan | Chao-Jen WANG (Changhua - TAIWAN)

WEDNESDAY 23 & THURSDAY 24 AUGUST

- P9.2-003** Molecular and physiological characterization of *Fusarium oxysporum ciceri* isolates from different chickpea areas in Ikr, Iraq | Emad AL-MAAROOF (Sulaimani - IRAQ)
- P9.2-004** Ros is essential for the normal mycelia growth in *Fusarium graminearum* | Taியing LI (Busan - REPUBLIC OF KOREA)
- P9.2-005** Deciphering host-pathogen and fungal-fungal interactions within the latent fruit rot of winterberry pathosystem: from the field to the biochemistry | Francesca HAND (Columbus - UNITED STATES)
- P9.2-006** In *Dickeya dadanti*, the type ii secretion system (t2ss) is covalently attached to the bacterial cell wall | Xavier NICOLAI (Villeurbanne-Lyon - FRANCE)
- P9.2-007** Interactions of the species of the *Ascochyta* blight disease complex and host resistance | Emmanuel ANNAN (Bozeman - UNITED STATES)
- P9.2-008** Global diversity and distribution of necrotrophic effectors in a global collection of *Pyrenophora tritici repentis*, causal agent of tan spot of wheat | Shaikat ALI (Broomings - UNITED STATES)
- P9.2-009** Diversity and pathogenicity of globoconidium and pythium spp. associated with pyrethrum in Australia | Yuzhu LIU (Parkville, Melbourne - AUSTRALIA)
- P9.2-010** Novel *Harzia ixtarensis* fungus on *Annona cherimola* fruit in Mexico | María De Jesús YÁÑEZ-MORALES (Montecillo-Texcoco - MEXICO)
- P9.2-011** Assessment of apple and pear cultivar tolerance and aggressiveness of fungi isolated from cankers and fruit rots on trees | Inga MOROCKO-BICEVSKA (Dobele - LATVIA)
- P9.2-012** Pr1-like proteins from *Cytophora chrysosperma* share common and distinct roles in fungal virulence and plant susceptibility | Zhu HAN (Beijing - CHINA)
- P9.2-013** Proteomic analysis of *Penicillium expansum* infecting postharvest apples based on label-free and parallel reaction monitoring (prm) techniques | Kaili WANG (Zhenjiang - CHINA)
- P9.2-014** The biological function of DNA methyltransferases in the necrotrophic fungus *Botrytis cinerea* | Zhanquan ZHANG (Beijing - CHINA)
- P9.2-015** Biodiversity of bacterial plant pathogens from the *Pectobacteriaceae* family in Polish waterways | Weronika BABINSKA-WENSIERSKA (Gdansk - POLAND)
- P9.2-016** Identification and characterization of *Alternaria* spp. associated with cherry fruit black rot during preharvest in the Maule region, Chile | Gonzalo DIAZ (Talca - CHILE)
- P9.2-017** Secreted protein Focubl is essential for full virulence of *Fusarium f. sp. cucumerinum* on cucumber | Xiaohong LU (Beijing - CHINA)
- P9.2-018** Characterization of *Fusarium* spp. associated with strawberry root rot in China | Xuehong WU (Beijing - CHINA)
- P9.2-019** Occurrence of some *Phoma*, *Ascochyta* and *Didymella* species on forage and food fabaceae in Algeria: evaluation of their pathogenicity and host range | Naouel GHIAT (Algiers - ALGERIA)
- P9.2-020** *Colletotrichum* spp. in Hungary: significance of new species and new hosts | Lilla SZENDREI (Budapest - HUNGARY)
- P9.2-021** *Alternaria* species associated with leaf spot disease of *Dracaena* spp. in Oman > | Thamodini KARUNASINGHE (Muscat - OMAN)
- P9.2-022** Role of non-programmed cell death inducing effectors of *Parastagonospora nodorum* in infection process | Gayan KARIYAWASAM (Fargo, Nd - UNITED STATES)
- P9.2-023** Exploring a novel putative fungal ribosomally synthesised and post-translationally modified peptide from the wheat pathogen *Zymoseptoria tritici* | Rosie FORD (Bristol - UNITED KINGDOM)
- P9.2-024** Virulence regulatory network of *Dickeya dadantii*: what is the role of post-transcriptional regulation? | Sara MOUTACHARRIF (Villeurbanne - FRANCE)
- P9.2-025** Host and pathogen genetics reveal an inverse gene-for-gene association in the *P. teres f. maculata* - barley pathosystem | Ryan SKIBA (Fargo, North Dakota - UNITED STATES)
- P9.2-026** The viability of *Sclerotinia sclerotiorum* sclerotia exposed to dry heat temperatures and the rumen of cattle | Lisa ROTHMANN (Bloemfontein - SOUTH AFRICA)
- P9.2-027** Searching for putative virulence factors in the *Pyrenophora teres f. teres* genome | Anke MARTIN (Toowoomba - AUSTRALIA)

WEDNESDAY 23 & THURSDAY 24 AUGUST

- P9.2-028 High humidity or aba compensates for t3ss and dspe mutations in *Pectobacterium carotovorum***
Amy CHARKOWSKI (Fort Collins - UNITED STATES)
- P9.2-029 The infection process of *Phellinus noxius* in woody plants** | Yi-Chun KO (Taipei - TAIWAN)
- P9.2-030 A novel *Parastagonospora nodorum* necrotrophic effector *sntox8* interacts with wheat corresponding receptor gene *snn8*** | Huyen Tt PHAN (Perth - AUSTRALIA)
- P9.2-031 Genetic and regulatory mechanisms of lipase activity in the plant pathogenic fungus *Fusarium graminearum***
Hokyong SON (Seoul - REPUBLIC OF KOREA)
- P9.2-032 Consortium of endophytic bacteria and arbuscular mycorrhiza fungi protect tomato plant against *Botrytis cinerea***
Marta ORERO-BAYO (Castellón - SPAIN)
- P9.2-033 Pectinolytic *Bacillus pumilus* new pathogen of potato in Tunisia** | Ewa LOJKOWSKA (Gdansk - POLAND)
- P9.2-034 Histopathology of rhizoctonia root and crown rot of sugar beet** | Douglas H. MINIER (East Lansing - UNITED STATES)
- P9.2-035 The role of oxalic acid in *Cladonia jacksonii* pathogenesis on amenity turfgrass**
Daowen HUO (Madison - UNITED STATES)
- P9.2-036 Roles of anaerobic respirations of carbon sources for the adaptation and survival of *Dickeya dadantii***
Clara BLONDE (Villeurbanne - FRANCE)
- P9.2-037 First report of cherrille wilt caused by new species of *Colletotrichum* in the Philippines** | Yoshiki TAKATA (Tokyo - JAPAN)
- P9.2-038 Defence of brassica napus to rhizoctonia solani ag2-1 and host-pathogen interactions in the soil environment**
Rumiana RAY (Sutton Bonington - UNITED KINGDOM)
- P9.2-039 *Colletotrichum* species associated with pre-harvest Citrus anthracnose in South Africa**
Francois HALLEEN (Stellenbosch - SOUTH AFRICA)
- P9.2-040 The etiology of alternaria brown spot and alternaria core rot of Citrus in South Africa**
Francois HALLEEN (Stellenbosch - SOUTH AFRICA)
- P9.2-042 Efficient isolation and transformation protocol of *Zymoseptoria tritici* protoplast from the global reference strain ip0323** | Michael CHOI (Birmingham - UNITED KINGDOM)
- P9.2-043 Genomic and phenotypic characterization of a new genus of the *Pectobacteriaceae* family and rectification of the outline of this family** | Nicole HUGOUVIEUX-COTTE-PATTAT (Villeurbanne - FRANCE)
- P9.2-044 Exosome trafficking during the asymptomatic phase in *Botrytis cinerea*** | Ines TGUAFAITI (Villeurbanne - FRANCE)
- P9.2-045 Tan spot severity in the field is explained only partially by known necrotrophic effectors of *Pyrenophora tritici-repentis* in nordic spring wheat** | Annika JOHANSSON (Helsinki - FINLAND)
- P9.2-046 Rhythmic patterns: evidences towards a bi-sinusoidal dynamic of apical secretion in *Botrytis cinerea***
Adrien HAMANDJIAN (Villeurbanne - FRANCE)
- P9.2-047 In vitro germination of *Phaeocystroma sacchari* conidia, the causal agent of stalk rot disease of sugarcane (*saccharum* spp.)** | Laudecir RAIOL-JUNIOR (Jaboticabal, São Paulo - BRAZIL)
- P9.2-048 Sugarcane stalks rot: resurgence disease** | Ivan Antônio ANJOS (Ribeirão Preto - Sp - BRAZIL)

Endophytes and diseases

- P9.3-001 Bio-fumigant properties of volatile metabolites from endophytes in post-harvest disease management**
Hiran Kanti SANTRA (Midnapore - INDIA)
- P9.3-002 How plant immunity shapes the coexistence of pathogenic and commensal strains during early leaf infection**
Julien LUNEAU (Lausanne - SWITZERLAND)
- P9.3-004 Comparison of the soybean endophytes bacterial community of healthy and unhealthy to identified functional core microbe** | Da-Ran KIM (Jinju - REPUBLIC OF KOREA)
- P9.3-005 Structural and functional properties of endosphere microbiota community and core taxa in apple tree**
Yejin LEE (Jinju - REPUBLIC OF KOREA)
- P9.3-006 Metagenome analysis of bacteria present in storage onion bulbs in the USA** | Teresa COUTINHO (Pretoria - SOUTH AFRICA)

WEDNESDAY 23 & THURSDAY 24 AUGUST

- P9.3-007** The potential of endophytic bacteria of *Paspalum* spp. and silica nanoparticles for plant growth promotion and biocontrol | Paulo Texeira LACAVA (São Carlos - BRAZIL)
- P9.3-008** Characterization of endophytic fungi on banana plants grown in soil from the rhizosphere of plants with and without symptoms of panamá disease | Raquel CORREA-DELGADO (San Cristóbal De La Laguna - SPAIN)
- P9.3-009** Fighting fungi with fungi: the biocontrol potential of *Trichoderma* against *Armillaria* root rot
Morgan MILLEN (Bristol - UNITED KINGDOM)
- P9.3-010** Diversity of endophytic fungi associated with *Citrus* species in India and their biocontrol potential against *Phytophthora* root rot disease | Ashis Kumar DAS (Nagpur - INDIA)
- P9.3-011** Preliminary analysis of *Fusarium oxysporum* f. sp. *cubense* (foc) in banana plants with symptoms of panamá disease in Madeira (Portugal) | Patrícia BRITO LÓPEZ (San Cristóbal De La Laguna - SPAIN)
- P9.3-012** Investigating the mechanism of *Chlorella fusca* chk0059 in relation to the strawberry microbiota community
Hwa-Jung LEE (Jinju-Si - REPUBLIC OF KOREA)
- P9.3-013** Terroir, season, and vintage effects on the grapevine pathobiome | Carla MOTA LEAL (Eger - HUNGARY)
- P9.3-014** Temporal succession of plant pathogenic fungal communities in grapevine leaves under organic and conventional management | Carla MOTA LEAL (Eger - HUNGARY)
- P9.3-015** Exploring the microbial connections between grapevine and nearby wild and cultivated woody rosaceae species in Eger wine region in Hungary | Anna MOLNÁR (Eger - HUNGARY)
- P9.3-016** Grapevine cultivar, physiology, and chemical parameters influence leaf and berry mycobiome
Anna MOLNÁR (Eger - HUNGARY)
- P9.3-017** Relationship between fungal endophytes and plant disease? | Birgit JENSEN (Frederiksberg C - DENMARK)
- P9.3-018** Dna metabarcoding study reveals greater effect of microhabitat and vintage on grapevine mycobiome than cultivar, season or health state | Adrienn GEIGER (Godollo - HUNGARY)
- P9.3-019** Endophytic fungi and bacteria from nurseries and orchards of avocado plants related with diseases caused by *Botryosphaeriaceae* | David HERNÁNDEZ HERNÁNDEZ (San Cristóbal De La Laguna - SPAIN)
- P9.3-020** Investigating an integrated approach to controlling postharvest pathogens of avocado
Wonroo Bernice Armelle BANCOLE (Pietermaritzburg - SOUTH AFRICA)
- P9.3-022** A proteomic study of the tripartite interaction of wheat, *Fusarium graminearum* and an endophytic streptomycete during normal and drought conditions | Valerio MATTEI (Milano - ITALY)
- P9.3-023** Genomic insights into latent fungal pathogen life-styles in the *Botryosphaeriaceae*
Bernard SLIPPERS (Pretoria - SOUTH AFRICA)
- P9.3-024** Endophytic fungi and bacterial diseases of hazelnut | Rosario NICOLETTI (Caserta - ITALY)
- P9.3-025** Diversity of wood inhabiting fungi in olive cultivars susceptible to *Xylella fastidiosa* subsp. *pauca* st53 in Apulia
Mariangela CARLUCCI (Bari - ITALY)
- P9.3-026** Endophytic bacteria from olive drupes as plant defence inducers against *Colletotrichum acutatum* in olive tree
Dimitrios TSITSIGIANNIS (Athens - GREECE)
- P9.3-027** Etiology of branch dieback and canker disease of apples in California | Karina EL FAR (Davis - UNITED STATES)
- P9.3-028** Selection of *Bacillus* strains as potential candidate against pathogenic *Fusarium* | Mario MASIELLO (Bari - ITALY)

The future of disease surveillance and prediction: Beyond the usual suspects.

- P9.4-001** Asco dashboard - an online interactive tool for exploring and investigating *Ascochyta rabiei* in Australia
Ido BAR (Nathan - AUSTRALIA)
- P9.4-002** The French epidemiological plant health surveillance platform : an innovative approach to improve surveillance efficiency | Anne QUILLÉVÉRÉ-HAMARD (Lyon - FRANCE)
- P9.4-003** Prediction of *Sclerotinia sclerotiorum* occurrence using smartphones and an image analysis program
Eunji LEE (Yesan - REPUBLIC OF KOREA)

WEDNESDAY 23 & THURSDAY 24 AUGUST

- P9.4-004** using 'sentinel' plants to improve early detection of invasive plant pathogens: *Xylella fastidiosa* in *olea europaea* as a case study | Francesca LOVELL-READ (Oxford - UNITED KINGDOM)
- P9.4-005** Pairing high resolution satellite imagery and terrestrial robotics to detect and monitor grapevine downy mildew epidemics | Kathleen KANALEY (Geneva - UNITED STATES)
- P9.4-008** Validation of the Sclerotinia stem rot forecasting model (skleropro) utilizing sclerotia-depots
Nazanin ZAMANI-NOOR (Braunschweig - GERMANY)
- P9.4-009** Predicting stress caused by grapevine powdery mildew with nasa airborne imaging spectroscopy in napa valley, California | Jaclyn ELLER (Geneva, Ny - UNITED STATES)
- P9.4-010** Uav-based multispectral imagery for rapid detection of huanglongbing in Citrus nepal
Ram B. KHADKA (Lalitpur - NEPAL)
- P9.4-011** Simple models for complicated epidemics: exploring the use of epidemiologically relevant parameters in parsimonious models to inform early detection surveillance | Thomas TAYLOR (Salford - UNITED KINGDOM)
- P9.4-012** Estimating stripe rust severity in wheat using rgb and thermal imaging with machine learning models
Rn SINGH (Pune - INDIA)
- P9.4-013** Hyperbird: automated, high-throughput hyperspectral quantification of fungicide residue levels in grape leaves
Saeed HOSSEINZADEH (Geneva - UNITED STATES)
- P9.4-014** Oilseed rape with Sclerotinia stem rot symptoms can be effectively phenotyped using laser scanning method (lidar)
Malgorzata JEDRYCZKA (Poznan - POLAND)
- P9.4-015** Disease spread dynamics from monitoring at different spatial and temporal scales
Rebecca CAMPBELL (Motueka - NEW ZEALAND)
- P9.4-016** Efficiency of anti-sharka control strategies | Norman DAURELLE (Montpellier - FRANCE)
- P9.4-017** Understanding the use of multispectral uav data and deep learning for quantitative resistance and disease control: case of cercospora leaf spot in sugar beet | Abel Andree BARRETO ALCANTARA (Göttingen - GERMANY)
- P9.4-018** Case study: indigenous knowledge and values informing better surveillance | Waitangi WOOD (Northland - NEW ZEALAND)
- P9.4-019** Pathogen isolation rate of sesame wilt disease and quantitative resistance evaluation of *macrophomina phaseolina*
Jiwon DO (Goesan - REPUBLIC OF KOREA)
- P9.4-020** Cloud-native, machine learning based detection of grapevine leafroll virus in *Vitis vinifera* with nasa imaging spectroscopy in California, USA | Fernando ROMERO GALVAN (Ithaca - UNITED STATES)
- P9.4-021** Potential use of unmanned aerial vehicles to monitor experimental fields for testing the resistance of sugar beet varieties to *rhizoctonia solani* using artificial intelligence and optical sensors
Facundo Ramón ISPIZUA YAMATI (Göttingen - GERMANY)
- P9.4-022** New tools and e-traps for recording, counting and classifying aphids in flight and the prospect of embedding them in moving platforms | Ilyas POTAMITIS (Heraklion - GREECE)
- P9.4-023** A modelling approach to map the risk of hlb in the iberian peninsula | John ELLIS (Cambridge - UNITED KINGDOM)
- P9.4-024** Are avocados toast? a framework to analyze decision-making for emerging epidemics, applied to laurel wilt
Berea ETHERTON (Gainesville - UNITED STATES)
- P9.4-025** Development of bioaerosol monitoring techniques in greenhouses using High Throughput Sequencing and qpcr
Viola KURM (Wageningen - NETHERLANDS)
- P9.4-027** Estimating the sensitivity and specificity of citizen scientists for early detection of plant pests and diseases
Matt COMBES (Wellesbourne, Warwick - UNITED KINGDOM)
- P9.4-029** Early diagnostics and genetic polymorphism of peach leaf curl fungus *taphrina deformans* in Greek peach orchards
Dimitrios TSITSIGIANNIS (Athens - GREECE)
- P9.4-030** Combining convolutional neural network (cnn) with the stromata contour detection algorithm (scda v1.0) to detect and quantify tar spot of corn | Da-Young LEE (Pohang - REPUBLIC OF KOREA)
- P9.4-031** High-throughput monitoring of plant-pathogen interactions based on low-cost imaging
Mathis CORDIER (Angers - FRANCE)
- P9.4-032** Successful modeling relies on better data: the potential of data sharing and standardization to boost crop disease modeling, with an application to soybean sds in the us midwest | Sagi KATZ (Ramat Gan - ISRAEL)

WEDNESDAY 23 & THURSDAY 24 AUGUST

- P9.4-033** Exploring leaf spectral reflectance as a tool for early detection of infected kiwifruit plants with *Pseudomonas syringae* pv. *actinidiae* | Miguel Gomes SANTOS (Vila Do Conde - PORTUGAL)
- P9.4-034** Heightened concern of *Verticillium* stripe of canola in western Canada | Courtney BOYACHEK (Winnipeg - CANADA)
- P9.4-035** The *Fusarium* root rot complex of soybean, dry bean and field pea in Manitoba, Canada
Yong Min KIM (Brandon - CANADA)
- P9.4-36** Now you see me: uv light reveals hidden symptoms of lettuce downy mildew
Guido VAN DEN ACKERVEKEN (Utrecht - NETHERLANDS)
- P9.4-37** Deep learning based identification of cucurbit diseases at the microimaging scale with explainable saliency analysis
Sruthi SENTIL (Quincy - UNITED STATES)
- P9.4-38** A remote plant health diagnostic platform to promote real time diagnosis and sustainable crop protection approaches in eastern and western Africa | Safa OUFENSOU (Sassari - ITALY)

Forest pathogenic fungi interacting with insect pests: research fronts and perspectives

- P9.5-001** The role of microhabitat conditions and substrate quality on diversity and composition of invertebrates inhabiting *Heterobasidion* spp. fruitbodies on decayed wood of *Picea abies* | Liva LEGZDINA (Salaspils - LATVIA)
- P9.5-003** Forest pathogen spores carried by insects versus airborne spores | Jean BERUBE (Quebec City - CANADA)
- P9.5-004** Fungi associated with the pine tortoise scale *Toumeyella parvicornis* | Rosario NICOLETTI (Caserta - ITALY)
- P9.5-005** An ambrosia beetle recently introduced in Europe shows specific association with a yeast fungus
Cécile ROBIN (Bordeaux - FRANCE)

Synergism/antagonism between microbial pathogens and disease complexes: implications in epidemiology and management

- P9.6-001** How multiple infections affect the dynamics of rice pathogen populations in Burkina Faso?
Charlotte TOLLENAERE (Montpellier - FRANCE)

ACKNOWLEDGEMENTS

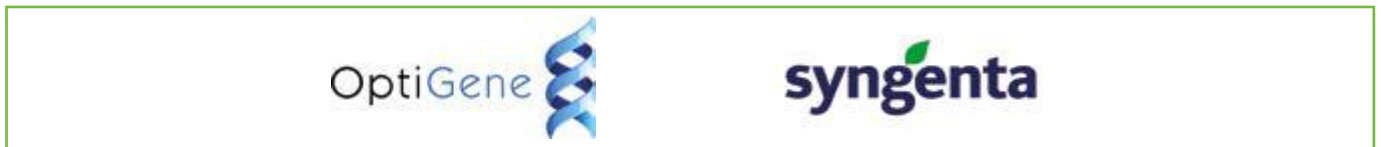
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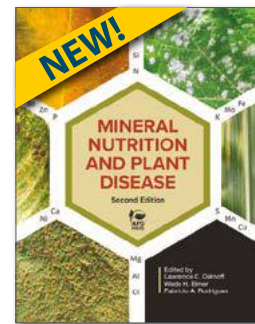
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