

# V<sup>th</sup> International Symposium on Postharvest Pathology



From Consumer to Laboratory:  
Sustainable Approaches to Managing  
Postharvest Pathogens

Program

19 – 24 May, 2019

[www.postharvest2019.be](http://www.postharvest2019.be)





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# Organization

## Venue

Université de Liège,  
Academic Hall  
7, Place du 20 Août,  
4000 Liège

## Date

19th to 24th May 2019

## Website

<https://events.uliege.be/postharvest2019/>

## Scientific Committee

Haissam Jijakli – Convenor of 5<sup>th</sup> ISPP – Gembloux Agro-biotech, University of Liège, Belgium

Samir Droby – Chair of the Postharvest Pathology Subject Matter Committee of the International Society of Plant Pathology (ISPP) – Volcani Center, Agricultural Research Organization (ARO), Israel

Antonio Ippolito – Chair of ISHS working group for postharvest pathology – University of Bari, Italy

Michael Wisniewski – United States Department of Agriculture, Agricultural USDA-ARS. Kearneysville, WV)

Kerry Everett – New Zealand Institute for Plant and Food Research, New Zealand

Luis González-Candelas – Departamento de Ciencias de los Alimentos, Instituto de Agroquímica y Tecnología de los Alimentos (IATA-CSIC), Valencia, Spain

Lise Korsten – University of Pretoria, South Africa

Dumitru Macarasin, Food Safety and Applied Nutrition, FDA, College Park, MD, U.S.A.

Davide Spadaro – University of Turin, Italy

Lluís Palou – Valencian Institute of Agrarian Research (IVIA)

Neus Teixido – IRTA Lleida Catalonia, Spain

Leonardo Schena – Mediterranean University of Reggio Calabria, Italy

Shiping Tian – Institute of Botany, The Chinese Academy of Sciences Beijing, People's Republic of China

Chris Watkins – Cornell University, Ithaca, NY, U.S.A.

Hanène Badri – Gembloux Agro-biotech, University of Liège, Belgium

Abdoul Razack Sare – Gembloux Agro-biotech, University of Liège, Belgium

## Welcome note

Dear Colleagues,

It is our great pleasure to welcome you to the V<sup>th</sup> International Symposium on Postharvest Pathology hosted by the International Society for Horticultural Sciences (ISHS) and the International Society for Plant Pathology (ISPP) that will be held in Liège, Belgium from 19 to 24 May 2019.

It is the first time that Belgium will host this prestige symposium. The meeting will address the questions related to postharvest supply chain management. The last symposium held in South Africa in 2017 addressed the next generation innovation and commercial solutions for postharvest pathology to reduce losses. The present conference in Liège, will tackle the postharvest pathology issues from another corner. The meeting will highlight the postharvest chain management, and this will include all the process from pathology detection, prevention and protection till processing and distribution in an attempt to satisfy consumer demands.

To this regard, specialists in the field of plant protection industry and postharvest technologies are invited to address the problems encountered during this process, they will bring a real mirror for problems encountered during the value chain activity (Protection products, Storage, Packaging, Distribution). Innovative technologies of detection and protection will be presented. The symposium will offer the opportunity to exchange advanced technologies, methods, and knowledge towards postharvest disease management of fruits and vegetable. This International Conference will be a forum to bring researchers, academics and industry professionals to share knowledge and research contribution in the evolving technologies related postharvest pathology. Ten renowned speakers are invited to cover the main sessions of the symposium.

Besides the science, we are organizing three social evening events and one guided technical tour. They are used to strengthen and develop collaborations.

We look forward to see your presence with active contribution to make this event successful.

Sincerely,

Prof. Haïssam Jijakli  
Convenor of the symposium



# General information

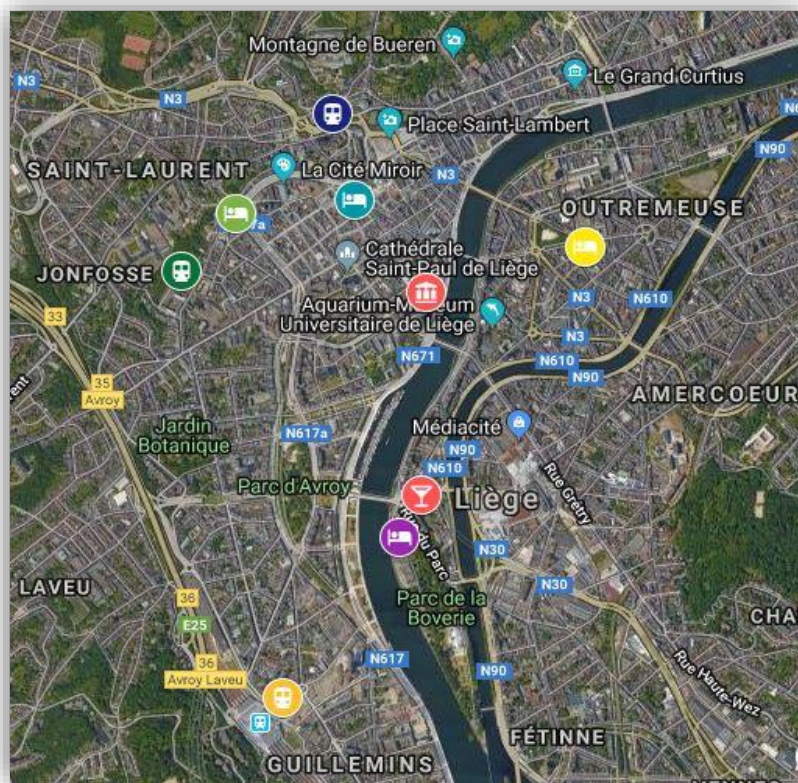
## Desk registration

Participants are invited at the check-in desk to receive their badges and conference documents Sunday 19, from 7 PM at Congress Center (2, Esplanade de l'Europe, 4020 Liège) and Monday 20, from 8 AM at Academic Hall (7, Place du 20 Août, 4000 Liège). They are expected to wear their badges during the scientific sessions and social activities. Admission to all activities is restricted to participants wearing their badges. A wireless network connexion code will be available at that time.

## Certificate of attendance

A certificate of attendance will be provided at the check-in desk.

## City map




 **ACADEMIC HALL**  
Scientific sessions

 **IBIS CENTRE OPERA**  
 **Georges Simenon Youth Hostel**

 **PENTAHOTEL LIEGE**

 **Liège - Carré train station**

 **CONGRESS CENTRE**  
Welcome reception &  
Gala dinner

 **Liège - Guillemins train station**

 **Liège - Saint-Lambert train station**

 **VAN DER VALK LIEGE**

# Presentation guidelines

## Oral presentations

Opening conference keynote speeches will be 45 minutes in length, including questions.  
Opening session keynote speeches will be 30 minutes in length, including 5 minutes of questions. The format of the presentation slides will be in 16:9 (landscape).  
Contributed presentations will be 15 minutes in length, including 3 minutes of questions.  
Please be aware that your presentation must be uploaded onto the conference computer before each speech. To facilitate the organization, we recommend sending your slides to [abdoulrazack.sare@uliege.be](mailto:abdoulrazack.sare@uliege.be), at least one day before your presentation, or find the chair/ co-chair of your session the day of the presentation and make sure that your presentation is uploaded in the conference computer.

## Poster flash presentations

Poster flash presentations offer you the opportunity to present the aim and key result(s) of your research as short oral presentation. Also, this is the time to promote your poster.  
The flash presentation will be 3 minutes in length, and there is no time for question after the presentation. The format of the presentation slides will be in 16:9 (landscape).  
Please be aware that your presentation must be uploaded onto the conference computer before the session starts. To facilitate the organization, we recommend sending your slides to [abdoulrazack.sare@uliege.be](mailto:abdoulrazack.sare@uliege.be) at least one day before your presentation, or find the chair of the session (Abdoul Razack Sare) the day of the presentation and make sure that your presentation is uploaded in the conference computer.

## Poster presentations

Please, use the materials provided to mount your poster onto panels.  
It is recommended to be close to your poster during the poster sessions.  
Each presenting author is responsible to remove his/ her poster after the poster session, otherwise, posters will be thrown away.  
Posters of the sessions I, II, III and IV will be displayed from 20 to 21 May until end of 2<sup>nd</sup> day/  
Posters of the sessions V, VI, VII and VIII will be hanged and displayed from 23 to 24 May until the end of the symposium.

# Program

## Sunday, 19 May 2019

19:00 - 20:00: Arrival and registration with welcome reception and cocktail: beer, wine and chocolate testing event at Congress palace

## Monday, 20 May 2019

08:00 Arrival, registration and posters I, II III and IV hanging

09:00 **Welcome and Opening** Haïssam Jjakli; Samir Droby; Antonio Ippolito

### Opening session

09:30 **Postharvest treatments today and in the future: perspectives from the plant protection industry** Geoffroy de Chabot-Tramecourt

10:15 **Physiology and pathology: the intersection between postharvest technologies** Christopher B. Watkins

11:00 **Round table: discussion on industry demands** Geoffroy de Chabot-Tramecourt, Christopher B. Watkins, Benito Orihuel led by Antonio Ippolito

11:30 COFFEE BREAK

12:00 **Poster viewing Sessions I, II, III and IV**

13:00 LUNCH

**SESSION I: Smart innovative technologies for detection of postharvest pathogens and toxic metabolites** Chair: Baric Sanja and co-chair: Antonio Ippolito

14:00 **Smart innovative technologies for detection of postharvest fungal pathogens and their toxic metabolites** Simona Marianna Sanzani

14:30 **The application of information technology for diagnosing postharvest diseases of apple** Sanja Baric



Monday, 20 May 2019

- 14:45 Phenotypic characterization of bull's eye rot and bitter rot pathogens in South Tyrol isolated from apple fruits after storage Greice Amaral Carneiro
- 15:00 High Resolution Melting (HRM) as a tool to characterize *Aspergillus* and *Penicillium* populations of pomegranate fruit Annamaria Mincuzzi
- 15:15 Volatiles as biomarker for *Erwinia* infection in Potato Gabriels Suzan

15:30 COFFEE BREAK

SESSION II Innovation in Postharvest Disease Control

Chair: Haïssam Jijakli and  
co-chair: Samir Droby

- 16:00 The next thirty years: Envisioning the future of postharvest disease research Michael Wisniewski
- 16:30 Extension of shelf 'life of *Penicillium digitatum* infected sweet oranges by vapor heat treatment Abiola Aborisade
- 16:45 Round table discussion: Are the market needs in accordance with actual innovative research Simona Marianna Sanzani, Michael Wisniewski, Geoffroy de Chabot-Tramecourt, Christopher B. Watkins, Benito Orihuel leded by Haïssam Jijakli
- 17:30 End of the DAY 1 - Free evening

## Tuesday, 21 May 2019

SESSION III Elucidation of host pathogen interactions/Molecular exploration of host-pathogen interactions		Chair: Davide Spadaro and co-chair: Laura Vilanova Torren
08:00	Arrival	
08:30	From gene expression to the packinghouse: can metal chelation be a possible alternative treatment to control fruit postharvest diseases?	Luis González-Candelas
09:00	Scanning genomes to identify secondary metabolite production by postharvest pathogens	Davide Spadaro
09:15	Whole-genome sequence of the brown rot fungal pathogen <i>Monilinia fructigena</i> Mfrg269 strain isolated in Italy	Lucia Landi
09:30	Exploiting the effector repertoire of <i>Monilinia fructicola</i> as a breeding strategy targeting disease resistance	Laura Vilanova Torren
09:45	A walk-through method for identifying brown rot resistance in stone fruit: methodology development, validation, and application on an interspecific almond × peach population	Núria Baró-Montel
10:00 COFFEE BREAK		
10:30	Understanding the potential of <i>Colletotrichum</i> spp. to cause bitter rot on apple during preharvest and postharvest in the Mid-Atlantic United States	Kari Peter
10:45	Apple Lenticel Rots: State of knowledge about the epidemiology of <i>Neofabraea vagabunda</i>	Michel Giraud
11:00	Role of anthocyanin and flavonoids in resistance of mango fruit to fungal pathogens and chilling injury	Noam Alkan
11:15	General discussion Session III	
12:00	<b>Poster Flash Presentations</b>	Chair : Abdoul Razack Sare
13:00 LUNCH		
14:00	<b>Poster viewing Sessions I, II, III and IV</b>	

**SESSION IV Integrated approaches and new chemistries to reduce postharvest waste** Chair: Neus Teixido and co-chair: Cheryl Lenox

- 15:00 **Antifungal edible coatings for postharvest preservation of fresh fruit** Lluís Palou
- 15:30 Brown rot disease management of peach in Italy (Emilia Romagna Region) Gianni Ceredi
- 15:45 Management of citrus sour rot and green mold in South African pack-houses Cheryl Lennox

**16:00 COFFEE BREAK**

- 16:30 Mechanism responsible for the alleviation of chilling injury of peach fruit by hot water and glycine betaine treatments as determined by transcriptomic and physiological analysis Li Wang
- 16:45 Biological and chemical applications against *Botryosphaeria* during flowering of mango increase fruit count and yield and reduce postharvest decay Noam Alkan
- 17:00 The effect of post-harvest treatments on long term storage of Acorn squash Carmit Ziv
- 17:15 Role of Strbohs in the promotion of wound healing of potato tubers by BTH Yang Bi
- 17:30 Biosecurity risk management of postharvest pathogens on international fruit trade Niranjani Saverimuttu
- 17:45 Study of biological control efficacy of *Yarrowia lipolytica* against postharvest decay of table grape caused by *Penicillium rubens* and its possible mechanisms of action Hongyin Zhang
- 18:00 General discussion Session IV
- 18:30 End of DAY 2
- 20:00 Liégeoise speciality Diner at Congress Palace**

## Wednesday, 22 May 2019

### TECHNICAL TOUR

08:00 Departure from Congress Center

09:00 Visit of PCFruit, Sint-Truiden  
11:00

12:00 LUNCH

13:00 Visit of Gembloux AGRO BIO-TECH, Gembloux  
16:00

16:00 Return to Liege

17:30 Free evening

## Thursday, 23 May 2019

SESSION V Alternative Postharvest Disease Control  
Technologies

Chair: Samir Droby and  
co-chair: Gianfranco Romanazzi

08:00 Arrival

08:30 Alternative means for the management of  
postharvest pathogens on fruits

Neus Teixido

09:00 Isolation and in vivo screening of yeast  
antagonists for the control of *Botrytis cinerea* and  
*Penicillium expansum* of pome fruit

Nokwazi Carol Mbili

09:15 Characterization of Volatiles Organics  
compounds of two biocontrol agents : *Pichia*  
*anomala* strain K and *Candida oelophila* strain O

Hanene Badri

09:30 Volatile organic compounds produced by *Aureobasidium pullulans* inhibit the growth of *Botrytis cinerea* and *Alternaria alternata* Madhupani Yalage Don

09:45 Strawberry fruit decay is affected by plant volatiles Toktam Taghavi

10:00 Alternative postharvest treatment of mango: Potential use of essential oil with thymol to control anthracnose development caused by *Colletotrichum gloeosporioides* Marc Chillet

10:15 COFFEE BREAK

10:45 Effects of chitosan coatings on avocado postharvest diseases and expression of phenylalanine ammonia-lyase, chitinase and lipoxygenase genes Chinelo Obianom

11:00 Alternative methods for controlling banana crown rot in an organic production context Olivier Hubert

11:15 Hot water dipping of apple - Not living up to its promise? Matthias Naets

11:30 Development of hot water treatment to control postharvest diseases of carrots Justyna Wieczynska

11:45 Semi-commercial hot water treatments to control apple bull's eye rot (*Neofabraea alba* syn. *Phlyctema vagabunda*) Kerry Everett

12:00 General discussion Session V

12:30 LUNCH

13:30 **Poster viewing session V, VI, VII and VIII**

<b>SESSION VI Microbiota community in postharvest</b>		<b>Chair Leonardo Scena and co-chair Michael Wisniewski</b>
14:30	<b>Engineering the fruit microbiome for biological control of postharvest diseases</b>	Samir Droby
15:00	Impact of primers on metabarcoding analyses of phyllosphere fungal communities	Leonardo Scena
15:15	The apple fruit microbiome: influence of orchard management, variety, storage time and storage atmosphere	Andreas Bühlmann
15:30	The effect of waxing and low-temperature storage on the microbiota of different tissues of apple and the survival of foodborne pathogens	Michael Wisniewski
15:45	Cultivars and geographic location influence the epiphytic microbiota associated with mangoes	Ahmed Taibi
<b>16:00 COFFEE BREAK</b>		
16:30	Exploration of microbial communities associated to fruitlet core rot (FCR) disease in 'Queen' pineapple from Reunion island	Jean-Christophe Meile
16:45	Postharvest and on-field microbial community changes caused by root rot in sugar beet	Peter Kusstatscher
17:00	Functional characterization of apple fruit epiphytic microbiome in Belgium	Abdoul Razack Sare
17:15	Probiotic bacteria and yeasts as novel biocontrol agents of postharvest pathogens	Samir Droby
17:30	Business meeting	
18:30		
20:00	<b>Congress Palace Gala Dinner</b>	



## Friday, 24 May 2019

SESSION VII Postharvest Food safety		Chair: Roboson Machado and co-chair: Lise Korsten
09:15	<i>Listeria monocytogenes</i> in fresh fruits: The occurrence and potential mechanisms of contamination	Dumitru Macarisin
09:45	Behavior of <i>Listeria innocua</i> on cut cantaloupe during sanitization and refrigerated storage	Jennifer Perry
10:00	COFFEE BREAK	
SESSION VIII Advances and applied research in handling, packaging, transport, and distribution to reduce postharvest losses		Chair Dumitru Macarisin and co-chair Mette Goul Thomsen
10:30	Advances in applied research in handling, packing, transport and distribution to reduce postharvest losses - embracing the 4th industrial revolution	Lise Korsten
11:00	Comparison of the shelf life and surface mold population of Hungarian <i>Prunus cerasus</i> cultivars following different pre- and postharvest treatments	Ferenc Takács
11:15	Salicylic acid and chitosan retained strawberry fruit quality and phytochemical contents and decreased decay extension during cold storage	Mohammadreza Asghari
11:30	Pre -and post-harvest factors determining carrot storability	Mette Goul Thomsen
11:45	General Discussion and closure of the Vth ISPP	
12:30	LUNCH	

## Poster sessions

### SESSION I (20-21 May)

P001	Early detection of fungal storage pathogens on pome fruits	Ulrike Persen
P002	Storage spoilage in Swedish apple production and novel ways of predicting storability	Joakim Sjöstrand
P003	Volatile fingerprinting of potato rots during cold storage	Maria Gutiérrez Pozo

### SESSION II (20-21 May)

P004	Use of clean technologies to control postharvest diseases and anthracnose incidence in papaya	Carmen Villalobos Rivera
P005	Insights into molecular events controlling LED Blue light-induced resistance against <i>Penicillium digitatum</i> in citrus fruits	Teresa Lafuente
P006	Effect of hyperbaric pressures treatments on cashew peduncle postharvest diseases	Ben-Hur Mattiuz
P007	Preliminary investigations on the effect of low-pressure treatment on in vitro and vivo growth of <i>Penicillium</i> sp. in oranges	John Archer
P008	Dynamic Controlled Atmosphere (DCA): a chance for sustainable storage of fruit, maintaining quality and better volatile profile	Daniel Neuwald
P009	Antioxidant of bamboo leaves controls surface browning in fresh-cut apples	Chen Chen
P010	Organic oils fumigation and ozonated cold storage influence superficial scald disorder and fruit quality in Granny Smith apples	Rahil Malekipoor
P011	Effect of hydrocooling in electrolyzed water on reducing fruit rot diseases and maintaining postharvest quality of rambutan	Pongphen Jitareerat

## SESSION III (20-21 May)

P012	Analysis of changes in the expression of genes belonging to two pectinase families as a potential virulence mechanism of <i>Monilinia laxa</i>	Núria Baró-Montel
P013	PpWRKY33, a key transcription factor, is associated with the host response to <i>Rhizopus stolonifer</i> infection in peach fruit	Nana Ji
P014	cAMP signaling regulates appressorium formation and virulence of <i>Alternaria alternata</i> induced by cuticular wax of pear fruit	Yongcai Li
P015	New insights into griseofulvin biosynthesis by <i>Penicillium griseofulvum</i> , an agent of blue mould on apples	Silvia Valente
P016	Development of <i>Neofabraea vagabunda</i> infection during apple storage: interplay between the pathogen and fruit volatile metabolism	Fiorella Neri
P017	Changes in prevalence of postharvest fungal pathogens after a single orchard incursion by <i>Pseudomonas syringae</i> pv. <i>actinidiae</i>	Kerry Everett
P018	Identification and characterization of <i>Botrytis</i> isolates obtained from blossom blighted flowers and fruits with calyx-end rot in Chile	Enrique Ferrada
P019	<i>Phacidiopycnis washingtonensis</i> , a newly discovered pathogen on apple in Norway	Jorunn Borve
P020	Bull's Eye Rot Development in Stored Apple Fruit in Chile is Related to the Timing of Infection in the Orchard by <i>Neofabraea vagabunda</i>	Mauricio Lolas
P021	Postharvest fungal pathogens of pomegranate fruit in southern Italy	Antonio Ippolito
P022	Survey on <i>Monilinia</i> affecting stone fruits in the Marche region, Central-eastern Italy	Gianfranco Romanazzi
P023	Quince fruit susceptibility to postharvest fungal pathogens	Natasa Duduk
P024	Incidence of postharvest diseases of <i>Brassica napus</i> var. <i>napobrassica</i>	Belachew Asalf
P025	Black mold of stored onion bulbs caused by <i>Aspergillus welwitschiae</i>	Ivana Vico

P026 Evaluation of pink spots on rose petals and their relationship to *Botrytis cinerea* Melissa Munoz

SESSION IV (20-21 May)

P027 Latent postharvest pathogens and their management: from single measures to a systems intervention approach Marcel Wenneker

P028 Exploring the effects of gaseous ozone (O<sub>3</sub>) and 1-Methylcyclopropene (1-MCP) treatments on the development of *Penicillium expansum* and patulin production on apple fruits (cv. Granny Smith) using 'omics' approaches Georgios Karaoglanidis

P029 Traditional and alternative strategies to protect apple fruits against scald Vladimir Gudkovski

P030 Promising technology to control bitter pit and other postharvest physiological diseases Vladimir Gudkovski

P031 Efficacy of postharvest fungicides against Bull's eye rot of apple Cheryl Lennox

P032 Selecting an isolate of *Penicillium digitatum* resistant to Imazalil from 'W. Murcott' and 'Nova' mandarin fruits Liliana Aragon

P033 Salicylic acid enhances the positive effects of a chitosan-based edible coating in extending the postharvest life of harvested grapes Mohammadreza Asghari

P034 Preharvest and postharvest fungicide applications for the control of gray mold on postharvest decay of strawberries, and fungicide residues on the fruit Gianfranco Romanazzi

P035 Effect of precooling with sodium carbonate on fruit rot and physiological changes in organic netted melon Pongphen Jitareerat

P036 Acetylsalicylic Acid treatment reduces Fusarium rot development and neosolaniol accumulation in muskmelon fruit Huali Xue

P037 Pomegranate decay fungi occurring in South Africa and their control Elrita Venter

P038 Fludioxonil: a potential alternative for postharvest disease control in mango fruit Noam Alkan

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|------|---|--------------------------|
| P039 | Combined efficacy of hot vapor, sodium chlorite, and PVC film on postharvest decay and browning of trimmed aromatic coconut | Pongphen Jitareerat      |
| P040 | Control of postharvest anthracnose in papayas ( <i>Carica papaya</i> L.) by hot water and chitosan                          | Silvia Valencia Chamorro |
| P041 | Effect of ascorbic acid and modified atmosphere packaging on browning of fresh-cut eggplant                                 | Wenzhong Hu              |

## SESSION V (23-24 May)

P042	In vitro and in vivo screening of yeast isolates on <i>Penicillium digitatum</i> and <i>Galactomyces citri-aurantii</i> of citrus	Nokwazi Carol Mbili
P043	Screening of biological control agents against <i>Alternaria alternata</i> causing postharvest black spot of persimmon	Neus Teixidó
P044	Biocontrol of mango anthracnose: isolation of new bacterial antagonists of <i>Colletotrichum</i> from mango surface	Ahmed Taibi
P045	Antifungal effect of <i>Bacillus subtilis</i> B6 strain on <i>Monilinia fruticola</i>	Jovana Hrustic
P046	Efficacy of <i>Bacillus amyloliquefaciens</i> cyclic lipopeptide supernatant to control pomegranate blue mould fungi in vitro	Cheryl Lennox
P047	Lipopeptides, fengycin and iturin A, from <i>Bacillus amyloliquefaciens</i> as postharvest fungicides on pome	Cheryl Lennox
P048	Antifungal activity of <i>Pseudomonas</i> sp. BM14 for the biocontrol of apple blue mold rot and initial study of mechanisms of action	Wenwei Zhang
P049	Investigating the protein expression profile and transcriptome characterization of <i>Penicillium expansum</i> induced by <i>Meyerozyma guilliermondii</i>	Qiya Yang
P050	<i>Aureobasidium pullulans</i> strain Ach1-1 : a potential biocontrol agent of postharvest diseases of apples	Hanene Badri
P051	Verifying the potential of novel film-forming formulations of the biocontrol agent <i>Candida sake</i> CPA-1: influence of abiotic factors and efficacy on different hosts	Rosario Torres
P052	Ecological niches and environmental resilience of different formulations of the biocontrol agent <i>Candida sake</i> CPA-1 using the Bioscreen C	Neus Teixidó
P053	Strategies to enhance the efficacy of biological control organisms against wound pathogens causing storage diseases on apples	Wendy Van Hemelrijck



P054	Antifungal activity of sage ( <i>Salvia triloba</i> L.) essential oil against key postharvest pathogens	Nikolaos Tzortzakis
P055	Screening of essential oil as potential postharvest biofungicide	Simon Dal Maso
P056	Exposure to volatiles of essential oils to control gray mold disease of strawberry	Claudia Mattiuz
P057	Improved quality of washed carrots by use of essential oils	Justyna Wieczynska
P058	Antifungal activity of essential oils and their combinations against postharvest fruit pathogen	Josemar G. de Oliveira Filho
P059	Antifungal activity of <i>Zingiber officinale</i> Roscoe (ginger) extracts on postharvest pathogen	Marcela Miranda
P060	In vitro antifungal activity of lemon ( <i>Citrus limon</i> L.) waste extracts against <i>Alternaria alternata</i> and <i>Alternaria citri</i>	John Golding
P061	Transcriptomic response of orange fruit to a pomegranate peel extract	Imen Belgacem
P062	Physical and antifungal characterization of starch-based-edible film containing Fennel oil	Hai-tao Long
P063	Effect of carnauba wax nanoemulsion coating on postharvest papaya quality	Marcos David Ferreira
P064	Effects of carnauba wax and chitosan bilayer edible coating on the shelf life of fresh-cut apple	Marcos David Ferreira
P065	Postharvest quality of papaya fruit wrapped with polyvinyl chloride film added with silver	Marcos David Ferreira
P066	Eliciting, antimicrobial and film-forming properties of chitosan on postharvest decay of fruit and vegetables	Gianfranco Romanazzi
P067	Preharvest chitosan sprays promote epidermal lignification of harvested potato tubers	Yan Zhu
P068	Salicylic acid dipping promotes wound healing of potato tubers	Yi Wang
P069	Effect of wound-healing strategies on postharvest disease development in carrot ( <i>Daucus carota</i> subsp. <i>Sativus</i> )	Pia Heltoft
P070	Foliage sprays of calcium during cultivation to control postharvest gray mold rot of bell peppers	Carmit Ziv

P071	Preliminary evaluations of postharvest organic treatments against <i>Monilinia</i> and <i>Botrytis</i> cherry decay	John Golding
P072	Effect of hot water dip treatment on postharvest control of <i>Penicillium expansum</i> and <i>Botrytis cinerea</i> on apples	Nokwazi Carol Mbili
P073	Ozone as an alternative method to control postharvest diseases on apples	Séverine Gabioud Rebeaud
P074	Infectivity of Cashew pseudo-apple by <i>Gilbertella persicaria</i> exposed to Ultraviolet-B	Abiola Aborisade

#### SESSION VI (23-24 May)

P075	Postharvest microbiome dynamics of mango fruit stem-end	Noam Alkan
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#### SESSION VII (23-24 May)

P076	Evaluation of a food safety training for farmers in the U.S	Robson Machado
P0777	Safety assessment in a recirculating hydroponic system and packaged lettuces	Robson Machado
P078	Expiring date limitations is a challenge for storage and safety of ready-to-eat salads in different seasons and vegetable type	Antonios Chrysargyris
P079	Application of Ultraviolet C light as alternative sanitation technology for keeping safety of fresh raspberries	Carmen Villalobos Rivera
P080	Antioxidant capacity of fermentation broth of fresh-cut fruits and vegetables scraps and its application as a detoxifying agent	Aili Jiang

## SESSION VIII (23-24 May)

- |      |  |                |
|------|--|----------------|
| P081 | Good post-harvest practices for better control of banana fungal diseases   | Pierre Brat    |
| P082 | Hot water treatment and modified atmosphere packaging reduce decay of 'tainung no.2' papaya ( <i>Carica papaya</i> L.) fruits during low temperature Storage | Jeng-Jung Shyr |
| P083 | Comparison of sanitation systems on air and fruit quality during cold storage of white currant, red currant and blueberry                                    | Dario Angeli   |
| P084 | Aqueous ozone treatment decreased degradation of cell-wall polysaccharides in fresh-cut apple during cold storage  | Chenghui Liu   |
| P085 | Apple fruit deterioration by fungal decay as a function of temperature during post-storage period  | Luiz Argenta   |

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