



# VIII International Postharvest Symposium

21-24 June 2016. Cartagena. Spain

<http://www.postharvest2016.org>



Universidad Politécnica de Cartagena

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DUQUE DE MEDINACELA

Puerto de Cartagena  
Universidad Politécnica de Cartagena

**SéNeCa** (\*)

## E-POSTERS WITH SHORT ORAL PRESENTATION

SESSION 1, Wednesday 22<sup>nd</sup>, 11:00-12:00

### 1.1. PREHARVEST

I.I.S1.1.OP1. Pre-harvest studies of buriti (*Mauritia flexuosa* L.F.), a Brazilian native fruit, for the characterization of the ideal harvest time and ripening stages. Luis Cisneros, Leandro Camargo Neves, Jessica Tosin Milanez, Sergio Ruffo Roberto

I.I.S1.1.OP2. Physiological and metabolic regulation of onion dormancy as influenced by pre-harvest irrigation regime during post-harvest storage. Ikenna C. Ohanenye, María C. Alamar Gavidia, Leon A. Terry

I.I.S1.1.OP3. Effect of photo selective colored anti-hail nets on photosynthesis and fruit quality of apple fruits. Okan Özkaya, Ali Kuden, Burhanettin Imrak, Omur Dundar, Hatice Demircioglu, Nurcan Dolek

I.I.S1.1.OP4. Growth and ripening of jilo (*Solanum gilo*) fruit. Teresa Drumond Correia Mendes, Tania Pires da Silva, Mario Puiatti, Paulo R. Cecon, Fernando Luiz Finger

I.I.S1.1.OP5. Effect of NaCl concentration or UV-B on lettuce crop in hydroponic system. David Vanegas, Mónica Flores, Edmundo Mercado, Víctor H. Escalona

I.I.S1.1.OP6. Effects of pre-harvest aminoethoxyvinylglycine (AVG) treatment on storage life and quality of apple cv. Golden Delicious. Mehmet A. Koyuncu, Cemile Ebru Onursal, Melike Cetinbas, Sinan Butar, Derya Erbas

I.I.S1.1.OP7. The stage of maturity at harvest as a critical factor for postharvest quality in seje fruits. Ángela García, Natalia Cuaita, María S. Hernández, Rafael H. Gutiérrez, J. Pablo Fernández-Trujillo

IX.I.S1.1.OP8. Postharvest and functional behavior of some feijoa genetic materials. Mariana Urraburu, Encarna Aguayo, Roberto Zoppolo, Ana C. Silveira

I.I.S1.1.OP9. Physiological and biochemical characterization of sweet granadilla (*Passiflora ligularis* JUSS) at different locations. M. Soledad Hernández, Diana Espinosa, Luz M. Melgarejo, J. Pablo Fernández-Trujillo, Sandra Melo.

## 1.2. PATHOLOGY

I.II.S1.2.OP1. The mechanism of activation of patulin biosynthesis by ammonia under acid conditions during *Penicillium expansum* fruit colonization. Dov B. Prusky, Eduardo A. Espeso, Shiri Barad

I.II.S1.2.OP2. Postharvest fungal diseases of fresh dates in the palm grove of Elx (Spain). Lluís Palou, Raquel Rosales, Verónica Taberner, José Vilella-Esplá

I.II.S1.2.OP3. Mycobiota and mycotoxins in harvested Brazil nuts from Roraima State, Brazil. K. S. Rodrigues, I.L. Souza, H.E. Lima Primo, D. Aschurt, I. M. Castro, O. Freitas-Silva

I.II.S1.2.OP4. Advanced technologies for controlling postharvest diseases of fruit. Kirsty Bayliss, Shaikh Sharmin Siddique, Giles Hardy

I.II.S1.2.OP5. CATTs technology: phytosanitary control and market expansion of chill sensitive Japanese plums for South Africa. Renate Smit, Mariana Jooste, Shelley Johnson

I.II.S1.2.OP6. Carbon regulation of environmental pH by secreted small molecules that modulate pathogenicity in postharvest pathogens. Dov B. Prusky, Shiri Barad, Fangcheng Bi

## 1.3. MAP AND COATINGS

III.I.S1.3.OP1. Effect edible coatings on postharvest quality of 'Kinnow' mandarin. Asghar Ramezanian, Fereshteh Khorram

III.I.S1.3.OP2. Impact of water rinsing and packaging of leafy green vegetables on the development of off-odour and shift in volatile profile. Oluwafemi J. Caleb, Guido Rux, Martin Geyer, Werner B. Herppich, Pramod V. Mahajan

III.I.S1.3.OP3. Influence of macroperforated film on quality and antioxidant content of artichoke head. Pedro J. Zapata, Fabián Guillén, María José Giménez, Domingo Martínez-Romero, José MaríaRuiz-Jiménez, Alejandra Martínez-Esplá, Daniel Valero, María Serrano

III.I.S1.3.OP4. Effect of plant-based coatings on the volatile profile of 'Pérola' pineapple. George H. Guimarães, Silvanda de Melo Silva, Rosana Silva, Marta Madruga, Alex Sandro Sousa, Alanne Brito, Randolph Beaudry

## 1.4. OMICS AND MOLECULAR TECHNIQUES

II.I.S1.4.OP1. Transcriptional analysis of textural changes during kiwifruit postharvest ripening and softening. Ai-di Zhang, Xue-ren Yin, Kun-song Chen

X.II.S1.4.OP2. The interaction of storage temperature and duration on aroma volatiles in tomato fruit. Charles Forney, Denyse LeBlanc, Clément Vigneault, Vicky Toussaint, Gaétan Bourgeois, Alain Clément, Gregory Bezanson

X.II.S1.4.OP3. Aroma volatile changes in non-climacteric melons with introgression in linkage group X at three stages of maturity. Isabel Canales, J. Pablo Fernández-Trujillo, María C. Bueso, Mohamed Zarid

II.I.S1.4.OP4. Physiological and molecular characterization of kiwifruit postharvest ripening regulation by ozone and 1-methylcyclopropene. Ioannis Minas, Georgia Tanou, Maya Belghazi, Afroditi Krokida, Miltiadis Vasilakakis, Kalliope Papadopoulou, Athanassios Molassiotis

II.I.S1.4.OP5. Involvement of an ethylene response factor (CitERF13) in chlorophyll degradation during citrus fruit degreening. Xiu-lan Xie, Xue-ren Yin, Kun-song Chen

II.I.S1.4.OP6. Molecular cloning of PpOAT and PpP5CS and their expression profile in responses to exogenous GABA in postharvest peach fruit. Yang Zhenfeng

## **SESSION 2. Thursday 23<sup>rd</sup>, 11:30-12:15**

### **2.1. PHYSIOLOGY AND DISORDERS**

VI.I.S2.1.OP1. Effect of ethylene supplementation on abscisic acid metabolism of potato (*Solanum tuberosum* L.) tubers during storage. Sofia Foukaraki, Katherine Cools, Leon Terry

VI.I.S2.1.OP2. Use of dynamic <sup>13</sup>C-isotope labeling experiments for metabolic analysis of apple fruit maturation. Wasiye F. Beshir, Maarten Hertog, Annemie Geeraerd, Bart Nicolaï

VI.I.S2.1.OP3. Pepino dulce (*Solanum muricatum* Ait.): storage potential and ripening physiology of a sweet Solanaceae. Carolina Contreras, Mauricio González-Agüero, Bruno Defilippi

VI.I.S2.1.OP4. Abscisic acid and carotenoid metabolism in tomato during postharvest. Giacomo Cocetta, Alice Trivellini, Giulia Franzoni, Sergio Angeli, Antonio Ferrante

VI.I.S2.1.OP5. Identification of a Golgi localized polyphenol oxidase in cherimoya. Patricio Olmedo, Adrián Moreno, Dayan Sanhueza, Ivan Balic, Reinaldo Campos-Vargas

VI.II.S2.1.OP6. Ascorbic acid redox metabolism in 'Paluma' guava under nitrogen fertilization. Renato Lima, Silvanda de Melo Silva, Ana Dantas, Renato Dantas, Gerciane Silva, Alex Sandro Sousa, Raylson Melo

VI.II.S2.1.OP7. Nitric oxide regulates mitochondrial thioredoxin/glutaredoxin system of peach fruit during cold storage. Shuhua Zhu, Xiaohua Lv, Jie Zhou

VI.II.S2.1.OP8. Cell death due to chilling injury of different mango cultivars during cold storage. Wady Chanasut, Juthamas Jindaluang, Sirorat Techakaew, Wilawan Kumpoun

VI.II.S2.1.OP9. The role of endogenous antioxidants in scald development of 'Beurre D' Anjou' pears under different storage systems. Christian Larrigaudiere, Gabriela Calvo, Ana Paula Candan, Inmaculada Recasens

## **2.2. MINIMAL PROCESSING/1**

V.II.S2.2.OP1. Quality of minimally processed mangosteen stored under different modified atmospheres. Supranee Manurakchinakorn, Umaporn Chamnan, Warapa Mahakarnchanakul

V.II.S2.2.OP2. The study of shelf-life and qualities changes of crafted banana leaf and fresh flower garlands. Wady Chanasut, Jomkhwan Suwannarak, Wilawan Kumpoun, Nithiya Rattanapanone

III.I.S2.2.OP3. Overall quality of minimally processed faba bean seeds stored in MAP. Elena Collado, Francisco Artés-Hernández, Encarna Aguayo, Laura Navarro, Francisco Artés, Juan A. Fernández, Perla A. Gómez

V.II.S2.2.OP4. Effect of wounding intensity on total phenolic content and antioxidant activity of fresh-cut red-fleshed radish. Fan Gao, Xiao-an Li, Cong Han, Peng Jin, Yonghua Zheng

V.II.S2.2.OP5. Antimicrobial properties of edible coatings enriched with natural additives on fresh-cut peaches. Natalia Falagán, Francisco Artés, Encarna Aguayo

V.II.S2.2.OP6. Optimization of chitosan and gum arabic coating formulations to physicochemical properties on fresh-cut mango. Peerasak Chaiprasart, Boonsong Sang-on, Nantha Pengnet

## **2.3. AFFORDABLE TECHNOLOGIES AND INNOVATIVE TECHNIQUES**

III.II.S2.3.OP3. High hydrostatic pressure treatments for keeping quality of orange coloured vegetables smoothies. Anna Carolina Formica-Oliveira, Ginés Benito Martínez-Hernández, Vicente Díaz-López, Mariano Otón, Francisco Artés, Francisco Artés-Hernández

III.II.S2.3.OP4. High pressure processing effect on 'Golden' apple polyphenols and antioxidant capacity modulated by growing region. Irene Fernández-Jalao, Concepción Sánchez-Moreno, Lucía Giménez, Begoña De Ancos

III.II.S2.3.OP5. Innovative pre- and postharvest treatments to maintain overall quality of plum fruit during storage. Salvador Castillo, María Serrano, Domingo Martínez Romero, Fabián Guillén, Pedro J. Zapata, Daniel Valero

### **SESSION3. Thursday 23<sup>rd</sup>, 17:15-17:45**

#### **3.1. CONTROLLED ATMOSPHERE AND 1-MCP**

VII.I.S3.1.OP1. RQ-based dynamic controlled atmosphere storage of apple fruit. Niels Bessemans, Pieter Verboven, Bert Verlinden, Bart Nicolaï

VII.I.S3.1.OP3. Balancing between respiration and fermentation. Jelena Boeckx, Maarten Hertog, Annemie Geeraerd, Bart Nicolaï

### **3.2. NONDESTRUCTIVE TECHNIQUES/1**

VII.II.S3.2.OP1. Image analysis as a tool to evaluate the astringency level in persimmon fruit. Cristina Besada, Sandra Munera, Rebeca Gil, Sergio Cubero, Nuria Aleixos, Alejandra Salvador

VII.II.S3.2.OP2. Micro-CT imaging of apple tissue microstructure during shelf life. Zi Wang, Dennis Cantre, Robbe Van Beers, Nghia Nguyen, Wouter Saeys, Pieter Verboven, Bart Nicolaï

VII.II.S3.2.OP3. The use of computed tomography scans to evaluate broken stones in a susceptible Japanese plum cultivar. Imke Kritzinger, Mariana Jooste

VII.II.S3.2.OP4. Upgrading current practices in VIS/NIR spectroscopy for in situ orchard monitoring. Ana Margarida Cavaco, M. Dulce Antunes, Thomas Panagopoulos, Marcia Rosendo, Rosa Pires, António Brázio, Rui Guerra

### **3.3. POSTHARVEST TREATMENTS**

VIII.II.S3.3.OP1. Early market access of crisp and sweet South African Forelle pears, a success story. Ian Crouch, Heleen Bergman, Daniël Viljoen

VIII.II.S3.3.OP2. Behavior of 'Green salt' from *Salicornia ramosissima* and *Sarcocornia perennis* through storage. M. Dulce Antunes, Custódia Gago, Ana Rita Branquinho, Miriam Julião, Adriana Guerreiro, M. Graça Miguel, M. Leonor Faleiro, Thomas Panagopoulos

VIII.II.S3.3.OP3. Effects of pre- and postharvest spermidine treatments on storage life and quality of apricot cv. Aprikoz. Derya Erbas, Mehmet A. Koyuncu, Cemile Ebru Onursal

VIII.II.S3.3.OP4. Effect of hot water combined with glycine betaine alleviates chilling injury in cold-stored loquat fruit. Peng Jin

VIII.II.S3.3.OP5. Compression forces on apples during packinghouse operations. Renar Joao Bender, Ivan Muller

### **3.4. MINIMAL PROCESSING/2**

V.II.S3.4.OP1. Screening of fresh-cut potato browning related genes and their preliminary function analysis. Shiyang Liu, Xiaohui Yang, Yu Yang, Xiao Guo, Guangcun Li, Qingguo Wang

V.II.S3.4.OP2. Pectin-based edible coatings formulated with pomegranate peel extracts and other antibrowning agents to extend shelf life of fresh-cut persimmon cv. RojoBrillante. Verónica Taberner, Elena Sanchís, Milagros Mateos, Lluís Palou, María B. Pérez-Gago

V.II.S3.4.OP3. The effect of thyme (*Thymus vulgaris*) and peppermint (*Mentha piperita*) essential oil on quantitative and qualitative characteristics of pomegranate (*Punica granatum* L. cv. Kondazi) arils. Asghar Ramezanian, Mohammad E. Nasrabadi, Ali Akbar Ghasemi, Mohammad J. Saharkhiz

V.II.S3.4.OP5. Aqueous ozone treatment to extend the shelf life and maintain quality of fresh-cut strawberries. C.C.S. Coelho, O. Freitas-Silva, L.M.C. Cabral.

#### **SESSION 4. Friday 24<sup>th</sup>, 11:15-11:45**

##### **4.1. NUTRITION**

IX.I.S4.1.OP2. Brief exposure of mature-green tomato fruit to hot water enhances tissue antioxidant capacity of ripe fruit. Francisco E. Loayza, Jeffrey K. Brecht, Amarat H. Simonne, Anne Plotto, Elizabeth A. Baldwin, Jinhe Bai, Elena E. Lon Kan

IX.I.S4.1.OP3. Bioactive compounds changes of a green vegetable smoothie after thermal treatments and during shelf life. Noelia Castillejo, Ginés Benito Martínez-Hernández, Perla A. Gómez, Encarna Aguayo, Javier Bernabéu, Francisco Artés, Francisco Artés-Hernández

IX.I.S4.1.OP4. Potential of strawberry tree fruit (*Arbutus unedo* L.) for fresh consumption and its behavior through storage. M. Dulce Antunes, Adriana Guerreiro, Custodia Gago, Graça Miguel, Leonor Faleiro, Thomas Panagopoulos

IX.I.S4.1.OP5. An alternative use of horticultural crops: Stressed plants as biofactories of bioactive glucosinolate and phenolic compounds. Daniel Jacobo-Velázquez, Luis Cisneros-Zevallos

##### **4.2 MODELLING /TRANSPORT/POSTHARVEST CHAIN**

IX.II.S4.2.OP1. Phase diagrams. An innovative proposal for the diagnosis and characterization of the cold chain. Eva C. Correa, Belén Diezma, Javier García, José I. Robla, Tatiana Jiménez, Miguel Gómez, Ana C. Silveira, Víctor H. Escalona, F. Javier Arranz, Pilar Barreiro

VIII.I.S4.2.OP3. Responses of apple fruit to high shelf life temperatures. Matt Punter, Agam Nangul, Bridie Carr, Jason W. Johnston

##### **4.3. NONDESTRUCTIVETECHNIQUES/2**

VII.II.S4.3.OP1. On-tree maturity control of peach and nectarine: comparison between destructive and nondestructive harvest indices. Domingos Almeida, Rita Gonçalves, João Couto

VII.II.S4.3.OP2. Fluorescence spectral study in grapes Benitaka variety to different solid soluble values. Bárbara Teruel, Rodolpho Tinini, Caio Wetterich, Luis Marcassa, Wesley Esdras

VII.II.S4.3.OP3. Assessing shelf life potential of butter-head lettuce at harvest using fluorosensing. Bert Verlinden, Bert Jacobs, Joris Van Lommel, Isabel Vandevelde, An Decombel, Peter Bleyaert, Wouter Saeys, Bart Nicolaï

VII.II.S4.3.OP4. Apple optical properties nondestructively assessed during growth in the orchard by means of time-resolved reflectance spectroscopy. Lorenzo Spinelli, Dominique Fleury, Jeanne Giesser, Reynald Pasche, Jana Kaethner, Manuela Zude, Maristella Vanoli, Alessandro Torricelli