Πρόσκληση

**Πέμπτη
25 Μαϊου 2017
ώρα 12:00-13:00**

Αμφιθέατρο 2
Κτήριο Τάσσος Παπαδόπουλος
Τεχνολογικό Πανεπιστήμιο Κύπρου
Θέμιδος και Ιφιγενείας γωνία,
Λεμεσός

Το Τμήμα Γεωπονικών Επιστημών, Βιοτεχνολογίας και Επιστήμης Τροφίμων του Τεχνολογικού Πανεπιστημίου Κύπρου σας προσκαλεί στην ημερίδα με θέμα:

"Integration of *OMICS technologies to improve the modern horticulture: new horizons for apple breeding and postharvest"

Ομιλητής: Fabrizio Costa,
Fondazione Edmund Mach, Research and Innovation Centre, Italy

Πληροφορίες:
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Τεχνολογικό
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Σύντομο Βιογραφικό:

Fabrizio Costa

Fabrizio Costa is a senior scientist at the Biology and Genomics of Fruit Crops Department of the Research and Innovation Centre, Fondazione Edmund Mach. He obtained his MSc. in Plant Science and PhD in Fruit Crop Science at the University of Bologna. During his PhD and PostDoc he has also been a visiting scientist at the Plant Research International of Wageningen University (The Netherlands) and at the Boyce Thompson Institute at Cornell University (USA). Recently he had also an appointment as Adjunct professor at the University of Bolzano, teaching new molecular techniques in fruit science and he is currently serving as Editor for three scientific journals.

The Costa laboratory is oriented towards a comprehensive study of fruit quality, investigating the genetic and molecular mechanism controlling the ripening of fruits. Among the several aspects impacting fruit quality, a particular emphasis is dedicated to deciphering the interplay existing between fruit texture, volatilome and ethylene production. We are mainly interested in the discovery of the fundamental genes involved in these pathways and the development of molecular markers suitable to assist the selection and breeding of valuable novel apple accessions. The tools developed are also used for a better comprehension of the postharvest physiology, in order to improve the performance of fruits during storage. To achieve this goal three main OMICS approaches are employed. Phenomics, for the development and implementation of high-resolution phenotyping device to dissects the fruit texture behavior. QTLomics, for the identification of the genomic loci controlling important agronomical traits through the use of bi-parental QTL mapping, genome-wide association study (GWAS) and Pedigree Based Analysis (PBA). Transcriptomics, with the ad hoc design of microarray platforms and RNA-seq analysis, to investigate the expression pattern of genes related to fruit ripening.

Σύντομη Περίληψη Ομιλίας:

The modern horticulture can nowadays benefit from the integration of different disciplines addressed towards the improvement of the fruit quality and the deciphering of the complex physiological mechanisms behind agronomical important traits and postharvest physiopathy. To this end, novel Phenomics and Genomics tools were employed to phenotypically and genetically dissects relevant aspects considered as principal quality factors, such as fruit texture and aroma. The high-resolution characterization of these phenotypes for apple, coupled with high-throughput and dense genotyping system, allowed a genome-wide QTLome-scan. The comprehension of the genetic control at the base of the phenotypic variation of these two components allowed also to establish the correlation between texture and volatilome, providing to the breeders essential information to drive their effort in the constitution of novel and valuable ideotypes with superior fruit quality features. In the modern horticultural system, the quality of fruits needs to be maintained throughout storage, enabling profitable marketability and a better long-term postharvest management. During this phase, however, severe disorders can occur, as result of important chilling injury phenomenon. In the attempt to provide solutions, a multifaceted study has been initiated, integrating different disciplines to disclose the physiological processes leading to the development of superficial scald in apple.