13ᵗʰ International Conference on

Structural and Molecular Biology: Techniques & Market Analysis

October 22-23, 2018 | Ottawa, Canada

Microsatellite DNA in apricot (*Prunus armeniaca* L.) and its use in fingerprinting and testing the cultivars issued from various genetic and environmental resources in Morocco

Jamal Ayour[1,3,4], Imane Elateri[1], Mohammed Alami[2], Abderrahim Alahyane[1], Moha Taourirte[1], Mohamed Najib Alfeddy[3], Jean-Marc Audergon[3], Catherine M G C Renard[3,4] and **Mohamed Benichou[1]**
[1]Cadi Ayyad University, Morocco
[2]Mohammed Vth University, Morocco
[3]INRA, France
[4]University of Avignon, France

The characterization of the available genetic resources is of first importance to manage and optimize their preservation and/or their potential use in breeding programs. Genotypic diversity of 92 apricot germplasms, issued from prospection were characterized with 21 microsatellite markers previously chosen for covering the whole genome and diversity indices, molecular variance analysis, principal component, and cluster analysis were applied to analyze the genetic diversity. The genetic variance explained 3% of the three ecogeographic zones, 10% among the 14 groups and 87% within each genotype group. The structure tests (neighbor-joining tree analysis and PCoA) indicated that the accessions issued from the collection could be separated into two populations (K = 2). The self-compatibility trait could be the main reason for the separation between apricot genotypes. Most of the cultivars issued from cluster I are located in the middle temperate zone (atlas valleys and mountains) of middle and northern of Morocco, while most of the cultivars of subcluster II (47 genotypes) are located in the warm temperate area of south-eastern Morocco highlighting the differential impact in light, and temperature between the two regions on the natural selection process. Information obtained in this study may be useful for apricot breeding improvement programs and it could enable the enlargement of the apricot genotype in the Mediterranean basin scale.

Biography

Jamal Ayour is a PhD student in food technology and biochemistry, from Marrakesh University in Morocco and Avignon University in France. He is 29 years old and his thesis presentation is scheduled for November 19, 2018. He has published his work in reputable journals and he had different participations in international conferences and congresses in the field of technology and food biochemistry.

jamal.ayour@yahoo.fr

Notes: