

E-ISBN: 978-605-70057-8-6



10th INTERNATIONAL MOLECULAR BIOLOGY & BIOTECHNOLOGY CONGRESS



MOLBIOTECH 10th International Molecular Biology and Biotechnology Congress 04-08 October 2021

Oral presentation

Valorising the Diversity of the Fig Tree, An Ancient Fruit Crop for Sustainable Mediterranean Agriculture – FIGGEN

Ayzin Küden¹, Bilge Yılmaz¹, Selin Akçay², Selim Arpacı³, Songül Çömlekçioğlu¹, Özhan Şimşek⁴, Dicle Dönmez⁵, Sunay Dağ³, Arzu Göçmez³, <u>Yıldız Aka Kaçar^{1,5}</u>, Tommaso Giordani⁶

¹Horticulture Department, Agriculture Faculty, Çukurova University, Adana, Turkey
²Biosystems Engineering Department, Agriculture Faculty, Adnan Menderes University, Aydın, Turkey
³Erbeyli Fig Research Institute, Aydın, Turkey
⁴Horticulture Department, Agriculture Faculty, Erciyes University, Kayseri, Turkey
⁵Biotechnology Research and Application Center, Çukurova University, Adana, Turkey
⁶Department of Agriculture, Food and Environment of Pisa University, Pisa, Italy
*Corresponding author: yildizakakacar01@gmail.com

Abstract

Figgen Project's coordinator is Prof. Tommaso Giordani of University of Pisa (UNIPI). Other partners are - Agencia Estatal Consejo Superior de Investigaciones Científicas (CSIC) Spain, - Centro de Investigaciones Científicas y Tecnológicas de Extremadura (CICYTEX) Spain, - Université de Tunis El Manar (UTM) Tunisia, - Çukorova University (CU) Turkey. FIGGEN aims to evaluate performances and genetic variability of fig varieties integrating new knowledge and technologies in assessing biodiversity with knowledge coming from local farmers and stakeholders. This will be obtained: a) exploring, valorising and evaluating genetic variability of fig genotypes on available Spanish, Tunisian and Turkish fig collections using a genotyping by sequencing approach; b) phenotyping fig genotypes to identify plants with traits wanted by stakeholders and most suitable to be cultivated in drought/salt conditions; c) identifying genomic loci linked to yield and drought/salt adaptation performing Genome Wide Association Study (GWAS) d) disseminating project's products and results to stakeholders to maximize project impact. Selected genotypes will be the best adapted to environmental conditions coming from climate changes and will be introduced within traditional agricultural systems to obtain mixing cropping systems as agroforestry.

Key words: Biodiversity, Ficus carica, GWAS, drought/salt adaptation, climate changes