PP-541 [Pollination and Bee Flora]
Floral authentication of Cypriot honey based on volatile composition

Mehmet Ali Karagozlu[1], Ozge Ozden[1], Salih Gücel[1], Liberata Liberata Gualtieri[2], Michelina Ruocco[2], Gennaro Di Prisco[2]
[1]Faculty of Agriculture, Near East University, Nicosia, Cyprus
[2]IPSP-CNR Institute for Sustainable Plant Protection, National Research Council, 80055 Portici, Naples, Italy

Consumers greatly value honey's unique organoleptic qualities, which include nutritional and health benefits, in the culinary industry as well as in the pharmaceutical and cosmetic sectors. Honey can be classified by kind or source because its composition differs by location based on the local flora. Geographical origin affected the volatile compounds in honeys from most native bees. The variety of flowers found in a certain habitat unique sugars, acids, and aromatic compounds. It is known that different species of native bees may forage on different plants and this may influence the honey's composition. In this study a total of 74 honey samples from different regions of Cyprus were analysed in this study. The headspace analysis of volatile organic compounds (VOCs) emitted by different honey samples was conducted using proton transfer reaction quadrupole interface time-of-flight mass spectrometry (PTR-Qi-TOF-MS), which enabled the identification of their volatile profiles. This will led us to characterize honey from different location and blooming based on smell by identifying the chemical compound in the volatile fractions.