

O-10 (179)**SECONDARY METABOLITE PROFILING IN HORTICULTURAL CROPS, ADVANTAGES AND DISADVANTAGES**

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In the last decades, the development of state of the art instruments such as ultra and high performance liquid chromatography coupled with mass spectrometry and the other hyphenated techniques caused vast opportunities for fast identification of natural product in the plant organs. In the metabolomics studies a primary and secondary metabolite can be identified in order to understand the development and ripening of fruits and other crops along with biodiversity, quality control, screening of some known secondary metabolite specially the phenolics [1]. In this study, the ability of these instruments will be discussed. The importance, application and capability of different mass analyzer including ion trap, orbitrap and time of flight for identification of natural product will be presented. Fragmentation pattern, UV spectra of each compound, will help us to be close to the exact molecule. The importance of configuration such as the stereoisomers for their bioactivity will be explained. Some phenolic compounds show the antiangiogenesis activity while their isomers do not show any activity. In fact, dereplication of extracts in natural product research has been facilitated by the new instruments, databases, libraries and molecular networking, but for unknown valuable compounds, the configuration and exact structure elucidation need some further analysis.

Keywords: Metabolite profiling, Horticultural science, LC/MS, Dereplication, Bioactivity