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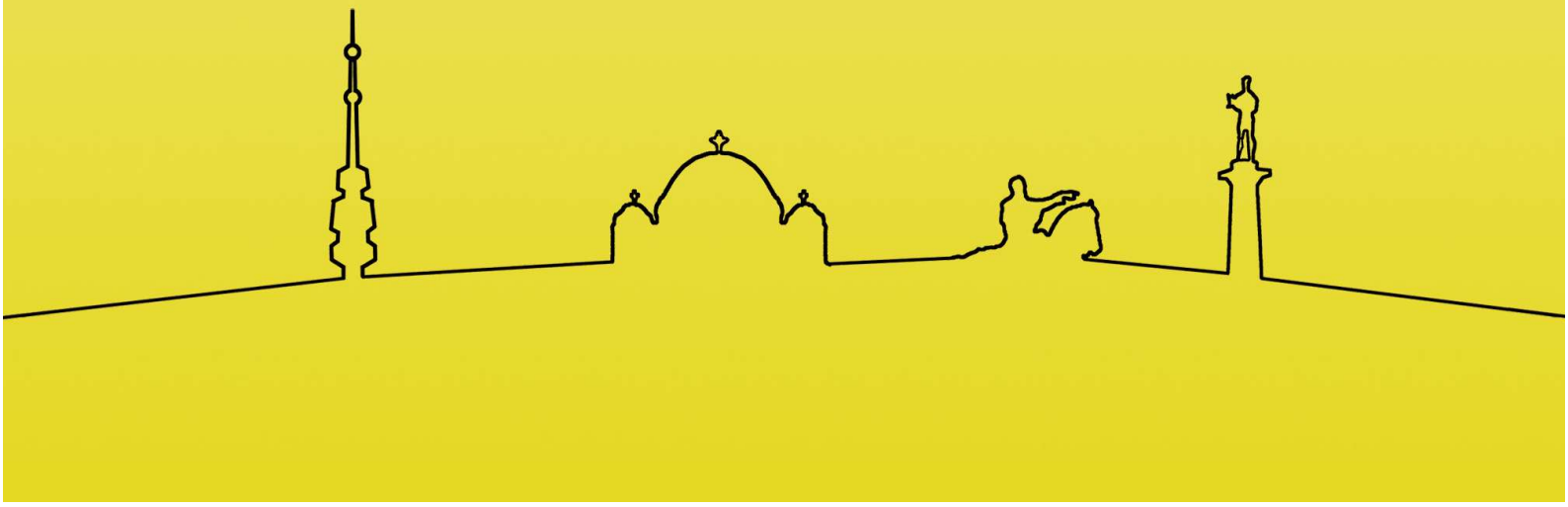

POSTERS

INCENSE HONEY (*PITTOSPORUM UNDULATUM*) IN THE AZORES: BOTANICAL AUTHENTICATION BY USING REAL-TIME PCR APPROACH

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Honey is a widely consumed food and much appreciated for its nutritional, organoleptic, and health properties. The honey produced in the Azores archipelago can be categorised as incense honey or multifloral honey. Incense honey classification should account with >30% from *Pittosporum undulatum* pollen grains and it is generally perceived as a unique and high-quality product and, consequently, susceptible to be adulterated through incorrect labelling or admixing with low-cost and low-quality honeys. Therefore, assessing the authenticity of such highly appreciated honey is a key issue for its valorisation. In this work, a real-time PCR method targeting the ITS region was proposed for the first time to detect *P. undulatum* species. To that end, the DNA extracted from the leaves of *P. undulatum* and from other endemic species (e.g. *Eucalyptus* spp., *Acacia* spp., *Trifolium* spp., *Castanea sativa* Mill., *Hydrangea macrophylla*, *Rhododendro indicum*, *Hedychium gardnerianum*, *Pericallis malvifolia*) of the Azores and mainland Portugal was used to test the cross-reactivity of the ITS primers by qualitative PCR, revealing full specificity for *P. undulatum*. Posteriorly, a real-time PCR approach was proposed, exhibiting high analytical performance (PCR efficiency = 97.4 ± 6.4%, R^2= 0.991 ± 0.003) and a limit of quantification of 0.01 pg of incense DNA. The method was successfully applied to the 22 honey samples, from which incense was detected in all 9 monofloral incense honeys and in 5 out of 10 multifloral samples from the Azores. Generally, the quantitative results for incense DNA were in good agreement with the melissopalynological data, showing that all samples, except two, were according to their labelled statements. Herein, a new, simple, cost-effective and reliable molecular approach was proposed to authenticate and valorise the Azores honey.

Keywords: Incense, honey, authentication