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Phytochemical variability of populations of Aloysia citriodora from Argentina

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Aloysia citriodora Palau (*Verbenaceae*) is one of the most widely used herbs in the Argentine traditional medicine as antispasmodic, sedative and for the treatment of stomachache. Its worldwide use has promoted its cultivation not only in our country but also in several Latin American countries, Europe and Asia. There are official monographs in Argentine (FA) and European Pharmacopoeias (PhEU, as „lemon verbena) for the pharmaceutical quality control. Our working group is devoted to update the respective monograph of the FA, taking in account the detected phytochemical variability of local populations. Parameters for a quality profile of volatile metabolites were previously established [1,2]. At this time we have evaluated the phytochemical variability of several populations using the technique by the European Pharmacopoeia (HPLC), in order to identify the best materials for crops affordable for the pharmaceutical industry. We analyzed 22 populations from 12 regions from Argentina, both in culture and wild materials. Our results show significant differences in the contents of verbascoside: from 0.5 to 4.8%, being 2.5% the minimum accepted value in the PhEu. Other peaks were detected in the HPLC profiles, some of them with similar UV spectra as verbascoside, meanwhile others with polyphenolic UV pattern. Therefore, in vitro assays will be undertaken to determine if the quantity of verbascoside itself affects proportionally the pharmacological activity.

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