

ISE1-P09 Mixtures of Medicinal Plants used in Navarra (Spain)

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Background: This work provides significant ethnobotanical information on medicinal plant uses in mixtures.

Objectives: To collect, analyze and evaluate the Ethnobotany knowledge about medicinal plants in a northern Iberian region (Navarra, 10421 km², 620377 inhabitants).

Methods: Fieldwork was carried out from 2004 to 2007¹⁰. We performed semi-structured interviews with 667 informants (mean age 72; 56% women, 44% men), identified the plant reported and analyzed the results. The data was analyzed using quantitative indexes.

Results and conclusions: Informants reported 152 plant mixtures, in which 102 different plant species are used. 52% of mixtures were for internal administration and 48% for external use (infusion and ointment are the most employed, respectively). It worth mentioning the 39 mixtures recopilated for dermatological problems; 30 for respiratory tract infections and 22 to treat digestive problems. Pharmacological action from plant mixtures should be attributed to the synergy among all plants more than to individual medicinal properties, so that the recognition of the contribution of each plant to the final effect becomes somehow difficult.

Keywords: Traditional plant Knowledge; Ethnobotany; Medicinal plants.

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References: 1. Akerreta, S., 2009. Etnobotánica farmacéutica en Navarra: del uso tradicional de las plantas medicinales a su evidencia científica. PhD Thesis, Faculty of Science, University of Navarra, 831pp. 1 CD.

ISE1-P10 Antibacterial activity of extracts from endemic "Montado" species against multi-drug resistant pathogens

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Background: The "Montado" is a unique Mediterranean ecosystem, whose importance is related to its huge biological diversity. Medicinal and aromatic plants are an important part of "Montado" flora and it's scientific evaluation will strengthen the interest on their biological applications.

Objectives: The aim of this study was to evaluate the antibacterial activity of several "Montado" plants: *Adenocarpus complicates* ssp. *anisochilus*, *Sanguisorba hybrida*, *Erica lusitanica*, *Quercus faginea*, *Lavandula luisieri* and *Paeonia broteroi* against both sensitive and resistant standard bacteria.

Methods: The minimum inhibitory concentrations (MIC) were determined by using the serial broth microdilution method against *S. aureus* strains (ATCC 6538, 43866 and 106760) and Gram-negative bacteria (*P. aeruginosa*, *S. typhimurium*, and *K. pneumoniae*).

Results and conclusions: 70% of extracts had activity against *S. aureus* sensitive strains (MICs 62-7.5 µg/mL). The active extracts were screened for multiresistant bacteria. 50% and 84% of the extracts showed activity, with MICs values ranging 62-7.5 µg/mL against *S. aureus* methicillin resistant (MRSA) and vancomycin resistant (VRSA), respectively. All extracts of *Sanguisorba hybrida* displayed high activity against both *S. aureus* sensitive and VRSA strains with MICs values of 30-7.5 µg/mL, while the methanol and water extracts had strong activity against the MRSA strains with MIC of 7.5 µg/mL. No activity was detected against Gram negative bacteria.

Keywords: Antibacterial activity; Multiresistant strains; MIC determination; Montado flora.

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