

## MS41-P05 | PHYTOCHEMICAL AND BIOLOGICAL STUDIES OF *ANACYCLUS PYRETHRUM* L. FROM IFRANE-MOROCCO

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As part of the Moroccan aromatic and medicinal plants valorization, we were interested in the study of a Moroccan endemic specie, commonly called Tigendest. In this context, we used male and female roots of the *A. pyrethrum* from Ifrane-Morocco to determinate the chemical composition of their extracts and essential oil. We also carried out antioxidant, antimicrobial and insecticidal activities of their hydromethnolic extracts.

The phytochemical screening revealed the presence of alkaloids, polyphenols, flavonoids, sterols and triterpenes. Total phenolic and total flavonoid contents of the extracts were determined respectively by Folin–Ciocalteu method and aluminium chloride colorimetric method.

The antioxidant effect of the extracts was evaluated by the DPPH method. Their antimicrobial activity was carried out on specific microbiological strains. The insecticidal power of *A. Pyrethrum* extract used in different doses showed a significant insecticidal effect on *C. maculatus*; main pest of the stored food of legumes. This indicates that long-lasting, low-cost protection against this pest is possible by using *A. pyrethrum* root extracts, which may represent an interesting alternative to chemical insecticides.

The study of its EO chemical composition by GC-MS showed a quantitative and qualitative variation of its chemical profile: Spathulenol (16.9%), Germacra-4 (15%), 5.10 (14) -trien-1-a-ol (12.28%), Selina-3,11-dien- 6-a-ol (9.24%), Caryophyllene oxide (7.11%).

In perspective, the molecules responsible for the antioxidant and / or insecticidal activity must be separated, purified and identified using spectroscopic methods (UV, FT-IR, NMR and diffraction X-ray) for possible obtaining of a pure and natural active ingredient.