PP72. Essential oils from the Herba and fruits of *Peucedanum luxurians* and their antituberculosis activity

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The Apiaceae family has been accompanying people for thousands of years, being present in the kitchen, as well as in the pharmacy. Plants belonging to this family are well known as sources of coumarins and essential oils. Essential oils from the Herba, as well as fruits, of *Peucedanum luxurians* Tamamsch. (an endemic umbelliferous plant taxon from Armenia) were obtained by hydrodistillation in a Deryng apparatus for the first time. The GC-MS analyses showed the presence of trans-β-farnesene (16%) and germacrene D (13%) as the most abundant components of the essential oils.

One of the most valuable properties of essential oils is their antimicrobial activity. It is a very desirable feature, especially in the case of some bacteria, which cause huge health problems. A good example is *Mycobacterium tuberculosis*, one of the leading causes of human morbidity and mortality.

The activity of essential oils from different parts of *P. luxurians* was tested for antituberculosis activity. Minimal Inhibitory Concentrations (MIC) values for the essential oils were determined by a 96-well microplate method with alamarBlue (Invitrogen). The inoculum of the reference strain of *Mycobacterium tuberculosis* H37Ra in Middlebrook 7H9 broth (Difco) was 5 \times 10^5 cfu/mL per well, according to CLSI standards. Serial twofold dilutions of essential oils ranged from 8 to 256 µg/mL. As the internal control of the method, serial twofold dilutions of four first-line antibiotics dedicated to tuberculosis treatment: isoniazid (INH), rifampicin (RMP), ethambutol (EMB), and streptomycin (SM) were used [1,2].

**References:**

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