ASSESSMENT OF ANTIBACTERIAL AND CYTOTOXIC PROPERTIES FOR *THYMUS VULGARIS*, *SALVIA OFFICINALIS*, *MENTHA PIPERITA*, *ROSMARINUS OFFICINALIS*, *LAVANDULA ANGUSTIFOLIA* AND *MELLISA OFFICINALIS* EXTRACTS

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**SUMMARY**

A multitude of phytopharmacological studies have pointed out the extraordinary biological potential owned by some herbal extracts (Ncube et al.; 2008). To establish the delimitations for their therapeutical use; the cytotoxic effect must be also taken into consideration (Gerald Müller and Axel Kramer; 2008).

The aim of present research was to assess both the antimicrobial and cytotoxic properties of essential oils obtained from *Thymus vulgaris*; *Salvia officinalis*; *Mentha piperita*; *Rosmarinus officinalis*; *Lavandula angustifolia* and *Mellisa officinalis*. By determing the antibacterial activity (broth microdilution method) against the reference strain *Staphylococcus aureus* ATCC 25923 and; in parallel; the cytotoxicity on cultured canine leukocytes (viable cells count using Trypan Blue exclusion test); the biocompatibility index (BI) was established for each tested herbal extract. BI was defined as the ratio of the concentration at which 50% of the canine leucocytes were damaged and the minimum bactericidal concentration (MBC). All herbal extracts displayed antibacterial potential; but also some of them proved to be highly cytotoxic to the canine leukocytes as a significant decrease in the final number of viable cells was observed. Still; in case of *Mellisa officinalis* and *Rosmarinus officinalis* essential oils; the cytotoxic effect was absent for all the tested concentrations; indicating that these two essential oils could be used for their antimicrobial activity. However; further tests should be performed on their efficacy and side effects.

**BIBLIOGRAPHY**


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