PP60. SYNERGISTIC POTENTIAL OF *PINUS NIGRA* J.F. ARNOLD AND *THYMUS* L. ESSENTIAL OILS AGAINST DIFFERENT HUMAN PATHOGENS

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In this study, it is aimed to evaluate the *in vitro* antimicrobial effects of *Pinus nigra* J.F. Arnold and *Thymus serpyllum* L., *T. capitatus* Hoffmans. & Link, and *T. vulgaris* L. essential oils individually and in combination. The composition of the commercial essential oils was confirmed using by simultaneous Gas Chromatography-Mass Spectrometry (GC-MS) and Gas Chromatography/Flame Ionization Detector (GC/FID) analyses. The major component of *P. nigra* essential oil was α-pinene (73.8 %), while the major constiutents of *T. capitatus, T. serpyllum, T. vulgaris* oils were carvacrol (65.8%), geraniol (19.3%) and thymol (31.1%), respectively. *In vitro* antimicrobial evaluation of commercial essential oils against *Streptococcus aureus, Moraxella catarrhalis, Escherichia coli* were performed using a broth microdilution assay. The synergistic or antangonistic effects of *P. nigra* and *Thymus* sp. essential oils were evaluated using the checkherboard method, where the fractional inhibitory concentration (FIC) and fractional inhibitory concentration index (FICI) values were calculated. According to the initial results, the FICI of *P. nigra* + *T. capitatus* essential oil combinations against *M. catarrhalis* showed synergic effect, while *P. nigra* +*T. serpyllum* oil combinations showed antagonism. To the best of our knowledge, this is the first study for *P. nigra* + *Thymus* essential oil combinations against selected human pathogenic microorganisms.

Keywords: *Pinus, Thymus,* essential oil, antimicrobial activity, combinations.
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