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Anticandidal Activity and Chemical Composition of the Essential Oils from Aerial Part, Inflorescence, and Roots of Endemic *Prangos abieticola* Aytaç & H.Duman

Esengül Karahisar[a], Yavuz Bülent Köse[b*] Gökalp İşcan[c]
Mine Kürkçüoğlu[c], Osman Tugay[a]
[a]Department of Pharmaceutical Botany, Faculty of Pharmacy, Selçuk University, 42130 Konya, Turkey
[b]Department of Pharmaceutical Botany, Faculty of Pharmacy, Anadolu University, 26470 Eskişehir, Turkey
[c]Department of Pharmacognosy, Faculty of Pharmacy, Anadolu University,26470 Eskişehir, Turkey
*ybkose@gmail.com

Introduction

The present study aimes to analyse the chemical composition and anticandidal activity of essential oils (EOs) obtained by using hydrodistillation from different parts of the *Prangos abieticola*, a recently described endemic in Turkey.

The *Prangos* Lindl. genus, which belongs to the Apiaceae family, known as 'Çakşır' in Turkey, are important medicinal and aromatic plants. The genus *Prangos* comprises approximately 35 species worldwide. The *Prangos* species are used as a herbal remedies in folk medicine for their antioxidant, antibacterial, and abortifacient effects.

Materials and Method

P. abieticola was from Seydişehir, Tınaztepe (Turkey, Konya). Hydrodistillation was used to isolate the EOs, and the chemical analyses were performed by GC and GC/MS. The anticandidal activity was tested by using partly modified CLSI (formerly NCCLS) liquid microdilution method M27-A2 against *Candida albicans, C. utilis, C. tropicalis, C. parapsilosis, C. krusei*

Results

The results of this study are in Table 1.

Table 1	Aerial parts	Inflorescence	Root
Total	59.3%	88.0%	97.8%
Compounds	40	38	20
Major compounds	β-Elemene (8.8%) α-Selinene (11.0%) caryophyllene oxide (7.9%)	α-pinene (10.9%) germacrene D (9.0%) hexadecanoic acid (6.5%)	α-pinene (11.3%) β-pinene (11.7%) δ-3-carene (26.7%) α-phellandrene (7.3%) β-phellandrene (16.6%)
Yields	0.27%	0.25%	1%

All the EOs showed weak activity against tested *Candida* strains.

Conclusion

According to test results, ninety eight constituents were identified in EOs from aerial parts, inflorescence, and roots of *P. abieticola*. Different parts of *P. abieticola* EOs contain β-elemene, α-selinene, caryophyllene oxide, α-pinene, germacrene D, hexadecanoic acid, α-pinene, *β*-pinene, δ-3-carene, α-phellandrene and β-phellandrene. EOs showed weak to moderate effects on the tested *Candida* strains between the MIC values of 125 to 1000 µg/mL. This is the first report on the anticandidal activity of *P. abieticola* EOs.

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