

Inhibitory Effect of *Artemisia drancunculus* Essential Oil on the Two Important Species of *Aspergillus*

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Background & Objectives: *Aspergillus spp* are ubiquitous saprophytic fungi that cause a variety of diseases, ranging from hypersensitivity reactions to flu-like pneumonia and life-threatening invasive aspergillosis. Many studies have shown that essential oil of *Artemisia drancunculus* or Tarragon have antibacterial and antifungal activity. The aim of this study is to survey the inhibitory effect of Tarragon essential oil on *Aspergillus fumigatus* and *Aspergillus niger*.

Methods: In this study strains including *Aspergillus fumogatus* and *Aspergillus niger* were used from clinical samples. We prepared serial dilution of the essential including 500, 200, 100, 50, 25 and 12.5 in DMSO solvent. The anti aspergillus effect of this essential oil were assessed separately using broth macrodution methods on these strains. Afterwards, the minimum inhibitory concentration (MIC) and minimum fungicidal concentration (MFC) of essential oil were determined.

Results: Our results showed that *Artemisia drancunculus* essential oil can inhibit growth of *Aspergillus fumigatus* and *Aspergillus niger* that were isolated clinically from patients. MIC of this essential oil from *Aspergillus niger* was 500 mg/ml and that of *Aspergillus fumigatus* was 750 mg/ml.

Conclusion: The finding of this study showed that Tarragon essential oil have fungicidal and antifungal function against *Aspergillus fumigatus* and *Aspergillus niger*. Therefore, this essential oil can be used in medical pharmacology, Veterinary, food industries and health affairs as drug and anti fungal element.

Keywords: Aspergiosis; *Artemisia drancunculus*; Essential Oil