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Short Communication

Determination of Scientific Name of *Faranjmoshk*: A Traditional Persian Medicinal Plant

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Abstract

Faranjmoshk is one of the seeds that are sold in Iranian herbal markets for various medical purposes including anxiety, spleen disorder and inflammatory bowel disease. For the variety of discussions around different botanical characteristics of *Faranjmoshk* in different references, there is no exactscientific name for these seeds. Moreover, *Faranjmoshk*, basil and lemon balm seeds are incorrectly equaled in some articles. It is important to distinguish between them.The aim of the present study was to determine the exact scientific name of *Faranjmoshk*. For these purpose, purchased seeds from different cities were grown under greenhouse condition up to flower formation. According to morphological analysis of grown plant, available seeds in herbal markets were belonging to *Clinopodium graveolens* (M.Bieb.) Kuntze. Thus, it is different from lemon balm and basil. Since no phytochemical analyses and pharmacological studies have been performed on *Clinopodium graveolens* despite of various medicinal uses in traditional Persian Medicine, it is suggested to design studies to evaluate its phytochemistry and pharmacology.

Keywords: *Faranjmoshk*, *Clinopodium graveolens*, Scientific name, Phytochemistry, Pharmacology

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Introduction

Natural products including plant, animal and mineral derivatives are the main basis of traditional medicine that have been used for various diseases since ancient time. Based on WHO reports, approximately 80% of world population relies on herbal medicines [1]. Plant-derived remedies are still a significant proportion of treatment in developing countries [2] but there are no scientific documents about some of herbal medicines that have been used in many of these countries [3]. Iran has a long history in traditional medicine dating back to Babylonian-Assyrian civilization. The knowledge of tradition-

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al Persian medicine is invaluable heritage of ancestors trying to cure disease [4].Traditional Persian manuscripts are a collection of ancient knowledge; in addition to special scholars'innovations [5]. Nowadays, traditional medicine is widely used in Iran and people use medicinal herbs to cure or prevent disease due to their cultural background. Herbal markets called "*attari*" are found in all cities as well as most villages of Iran. Several herbal medicines are sold in these markets in unpackaged form and sellers have some traditional information about the application of plants for treatment of disease [6]. Some efforts have been made to document information about medicinal plants that are sold in Iranian herbal markets especially in terms of ethnobotany[7]; but there are still considerable samples must be studied in relation to the source and biological properties. Among these medicinal plant seeds, black seeds locally called as *faranjmoshk* have been less studied. Some of traditional healers believed that *faranjmoshk* is the other name of lemon balm; however there is no clear data about the source of *faranjmoshk* seeds. In different references, a series of scientific names have been attributed to *faranjmoshk;* for example, Ghahreman and colleagues recommended *Dracocephalum multicaula* and *Calamintha grandiflora* for these seeds [8]; but the sources have not confirmed those scientific names. Also, there is no exact information about *faranjmoshk* samples existing in herbal markets. The aim of this study was to investigate the exact scientific name of *faranjmoshk.*

Methods

The major Persian traditional manuscripts [9-12] were investigated for various descriptions about *faranjmoshk.* Seeds were purchased from different herbal markets from Tehran, Isfahan and Mashhad. The seeds were grown under green house condition up to flower formation. The plant was authenticated by a taxonomist in the Department of plant sciences, University of Tehran.

Results

Available seeds in herbal markets were belonging to *Clinopodium graveolens* (M.Bieb.) Kuntze and there was no significant number of other species among grown samples (Figure 1). *C. graveolens* is a member of Labiatae family and there are different synonyms for this plant such as: *Acinos graveolens*, *Calamintha graveolens* and *Calamintha exigua* [13].

Discussion

Faranjmoshk seeds are mis identified by herbal medicine sellers and some of researchers. Available samples in medicinal plant market belong to *Clinopodium graveolens.* According to traditional literatures, the main pronunciation is "*faranjameshk*" but it commonly called *faranjmoshk*. Some of Indian scholars have mentioned this herb by name of *faranjmishk* [14-15]. There are various Syrups, powders and electuaries containing these seeds as one of their ingredients in traditional Persian medicine literature. These products administered for a wide range of disease including anxiety, spleen disorder, inflammatory bowel disease and bone and joint pain [11-12]. Leaves and flowers also were administered for liver disease and digestive disorders [10]. According to Persian traditional manuscripts, *faranjmoshk* seeds are prescribed after soaking in rose or Pussy willow distillates. After few minutes, mucilage layer is formed. This mixture mostly prescribed with honey.

As the result of this study, *faranjmoshk* is not related to lemon balm seeds. Also in traditional Persian medicine literature *faranjmoshk* and *Badranjbuye* (Persian name of lemon balm) have been mentioned in two separate mono-

graphs. Herbal mixture formulations mentioned in historical Persian pharmaceutical manuscripts (*Qarabadin*) contain both of them in one prescription. For example, syrup including lemon balm seed, *faranjmoshk* seed, lemon balm leave, Licorice and other ingredients has been mentioned for treatment of melancholy [11]. In addition, *Ocimum basilicum* (*Raihaan*) seed and *faranjmoshk* were incorrectly equated with each other in some references [15]; but these plants have been also described in separate monographs of traditional Persian manuscripts. Based on our study, there are no phytochemical and pharmacological studies about *faranjmoshk* seeds. Analysis of essential oil from aerial part of *Acinos graveolens* (syn of *C. graveolens*) was performed in different countries [1, 10]. Diepieubenol detected as the major constituent of samples from Iran [16]. Another study on samples from south Serbia showed that Germacrene D is the predominant compound and the oil has considerable amount of hydrocarbon sesquiterpenes. This oil has also shown high antifungal and moderate antimicrobial activity [17]. Other constituents like flavonoids and linolenic acid are detected in *Acinos* species [18]. Because of the medicinal importance of this herb and lack of scientific research, *faranjmoshk* can be subjected for future studies. So, it is suggested to design studies to evaluate its phytochemistry and pharmacology.

Conflict of Intrests

None

Figure1. Grown plants from different samples of *faranjmoshk* seed (*Clinopodium graveolens* (M.Bieb.) Kuntze)

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