Gabigaj: A Persian Herb for Protecting Manuscripts against Fungies and Insects from Safavid Era (1501-1722AD)

Abstract
Keeping old documents from damage is of considerable points in protecting national resources. Recently, some studies performed to find out ways of protecting manuscripts from defecting of some biologic or chemical factors. Searching through the Iranian manuscripts remain from 15th century (AD) until about the second decade of 17th century (AD), which was Contemporary with the rule of Safavid government, demonstrate a word written frequently by the writer in several parts of documents and in different forms, as “Gabigaj”, which is the name of a Persian plant belonging to Ranunculaceae family.

Historical studies show that prevalence of magic in different aspects of life through Safavid era in Iran, especially in the case of the magic usage of some plants. In this study we discuss about the magic usage of the name of the plant of “Gabigaj” in Safavid era, to protect manuscripts against fungies and insects.

Key words: Traditional medicine, Persian medicine, Herbal medicine, industrial fungicides

Received: 26 Nov 2019; Accepted: 1 Jan 2020; Online published: 29 Feb 2020

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Citation:
Mahlooji K, Abdoli M, Zargaran A.
Gabigaj: A Persian Herb for Protecting Manuscripts against Fungies and Insects from Safavid Era (1501-1722AD).
Introduction
Protecting manuscripts and books are always one of the main concerns to keep them safe during time. There are many factors that can damage the manuscripts; like physical factors such as temperature and humidity; chemical and photochemical agents such as light and air pollution, Ozone and Nitrogen oxides, as well as some biologic agents such as funguses and insects. Therefore, there are some organizations in the world, which are specially organized to work on keeping the manuscripts safe from various damaging factors. Some of these protecting methods can be listed as keeping the manuscripts in microfilms, special boxes or acid free covers, encapsulating by polyester covers, de-asid the asid manuscripts, and autoclaving the infected ones or using microwave.

But, it seems that this concern has a long history in Persian medicine (PM). PM was a humoral system of medicine dating back to at least 7000 years ago. It was flourished during early medieval era (9-12th centuries AD) and continued to 20th century when replaced completely by current medicine in Iran. But, it is still used as traditional medicine nowadays. There are about 17000 remained manuscripts of PM. It seems that there were some methods to protect them against harmful factors. One of the methods used by Persians to protect these books was using a plant which was called as Gabigaj in Persian language at least from Safavid Era (1501-1722AD).

Safavid era (1501-1722AD)
Safavid dynasty, ruled Persia (Iran) for more than two centuries, is considered as one of the most important historical periods of Islamic age of Persia. Over nine hundred years of the Sassanid Empire destruction by the Arabs in 637AD, Iran experienced a long unstable period without any stable long period national government. During the Safavid Era; science, technology and art were flourished, especially during the reign of Shah Abbas I (the king of Safavid dynasty). In this period of time, forming an expanded relationship between Iran and European societies was started, and it was such a turning point for international exchanges. Pharmacy was one of the medical fields that was progressed and developed during this time. Also, using herbs as well as magic were common for various aims by various ways.
Gabigaj; the magical and medicinal herb to protect the manuscripts

Gabigaj or Persian buttercup (Ranunculus asiaticus L.) is a Persian plant belonging to Ranunculaceae family. There are some evidences of using leaves of this plant among the pages of the manuscripts belongs to 16th century and later. Also, at the first page of many of these manuscripts, there is a benedictory phrases like “Ya Gabigaj” (Figure 1), “ya Mahmood ya Gabigaj” (Figure 2), “ya Gabigaj ya Hefz” (Figure 3), or an imperative sentence, “Ehfez Gabigaj” and mostly use of “Gabigaj” (Figure 4). In these phrases, ya is a word for calling a person or something aiming to recourse; Mohammad means admired (the prophet of Islam), hefz means protection, Ehfez means protect (as verb). Some of these phrases were written in the form of magic triangle shape (Figure 5). It seems that these phrases were used as amulet to protect of the manuscripts.

Figure 1. Manuscript of al-Mukhtarat, by al-jamali, 931/1525, kept in Leiden university library

Figure 2. Manuscript of Tahzib al-ahkam, by Tusi, kept in National Library and Archives I. R. of Iran

7. al-jamali, 1525, No. 931/1525.
8. Tusi, 17th Century: 3.
10. al-Kattani, 1814, No. 1229/1814.
By looking at historical manuscripts, the oldest ones that
have such phrases; or the herb of Gabigaj was used in them date back to Safavid era; therefore it seems that this tradition was started from that time

**Gabigaj in PM documents**

This herb has been mentioned from ancient times. In the book of Al-Hashayesh (De Materia medica); written by Dioscorides (an ancient Greek physician, 54-68 AD), this plant was named as “BetraKhor”14. After that, in Persian Medicine text books, Gabigaj was used for different therapeutic effects, such as facilitate delivery, tooth pain relief, elimination of eye and skin diseases and it seems to be an pruritus herb15, 16.

**Current findings**

Gabigaj (Persian buttercup) is a native plant to the eastern Mediterranean region in southwestern Asia, southeastern Europe, and northeastern Africa. It grows to 45 cm tall, with simple or branched stem. The basal leaves are three-lobed, and the flowers are 3-5 cm diameter, variably red to pink, yellow or white with one to several flowers on each stem17. It contains Anemonin that is identifiable immediately after bursting the flowers, with a strong toxic effect and extensive use in pharmaceutical industry18. Current Findings show that R.asiaticus has a fungicidal activity against Fusarium Oxy- sporum f.sp. lycopersici19, Cladosporium spp. and Penicillium spp. Its efficacy to prevent fungal contamination of the manuscripts was also shown in a study20.

**Conclusion**

According to explanations above, it is evident that, from ancient times up to around 16th century, Gabigaj mentioned only for treatment, and for its protective effects, had traditionally used from Safavid era. And the magic usage of this herb that has been mentioned by some researchers matches the findings of scientific studies. Probably this herb has been used in the production of papers and ink and if it becomes prove, a giant mutation will occur in the cognition of this productions proses.

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*Res Hist Med* 2020; 9(1)
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