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## **Ethnopharmacological review of MARZANJOSH (*Origanum vulgare* L.): An important Unani drug**

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### **ABSTRACT**

*Marzanjosh* is botanically known as *Origanum vulgare* L. belongs to the Lamiaceae family, is used in the Unani system of medicine for a long period. It is an annual, perennial, and shrubby herb that is native to the Mediterranean, Euro-Siberian, and Irano-Siberian regions. The glandular trichomes secrete essential oils with a unique flavor, which is mainly due to its major compounds such as carvacrol and thymol. In Unani medicine, *Origanum vulgare* L. is used widely due to its versatile therapeutic properties like Muhallil-e-Awram (Anti-inflammatory), Mulattif (Demulscent), Jali (Detergent), Stimulant, Emmenagogue, Carminative. Recent studies performed with the use of Conventional methods also proved its efficacy. The present review highlights classical literature and medicinal properties as well as phytochemistry, taxonomical, botanical, pharmacological, Pharmacognostical discussion on *Marzanjoosh* and recent studies carried out on this plant.

**Keywords:** *Marzanjosh*, Unani medicine, *Origanum vulgare* L.

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## INTRODUCTION

*Marzanjosh* under the scientific name of *Origanum vulgare* L. of the Lamiaceae family is used in the Unani system of medicine for a long period. It's called Marjolaine of French. The Persian word signifies "mouse ear" a name given to it on account of the greyish rounded shape of the leaves, which is more marked in Persian variety, than in European variety. it is widely known as a very versatile plant with many therapeutic properties.<sup>1,2</sup>

**Vernaculars:**<sup>1,3,4,5,11,12</sup>

<b>Unani:</b>	Aabqar , Samsaq , Marzanjosh
English	Sweet majorana, marjoram
Franch	Marjolaine
Arabic	Mardakusch, Mizunjush, shamsaq, sanqur, habaqul qata
Persian	Marzjosh, Mardqoosh
Urdu	Marzanjosh, Marva khusha
Indian bazar	Marwa



**Aerial parts of *Origanum vulgare***

## I. Description of Drugs:

### A). Ehanobotanical Description

It is an aromatic, branched, perineal, annual plant. Sweet marjoram is a native of Portugal and Palestine, the flower is a favourite of Hindus. It is an annual, perennial, and shrubby aromatic herb and widely found in all European countries (except in the extreme north), Portugal, Spain, Afghanistan, China, Nepal, Pakistan, and extend eastward though Russia, Siberia, and west Asia generally, to the confines of India. In India, it is found in Jammu and Kashmir, Himachal Pradesh, Utter Pradesh and Sikkim. It flowers in august and continues in blossom till late in the autumn. blooming in the month of June to continue up to October.<sup>4,5,6,7</sup>

### B). Pharmacognostic Description:

*Marzanjosh (Origanum vulgare L.)* is a branched and shrubby herb with a creeping elongated giving off short slender stolons. Stem several, erect, 30-60 cm high, more or less pubescent. Leaves are roundish and hairy, having opposite, spreading, stalked the lower ones soon withering away, with short undeveloped leafy branches in the axils, ½- 1 ½ inch long, broadly ovate or rhombic ovate, subacute or obtuse, entire somewhat undulated, pubescent, especially on the prominent veins beneath. The leaves are thick, oblong, ovato rounded. The color of leaves is light brown. The flowers are small and pink. Both have a specific aroma. It is similar to the tulsi (*Ocimum tenuiflorum*). Flowers sessile or nearly arranged in two or three, each with ovate, smooth, large, veined, purple bract at its base, the little opposite cymes on longish stalks densely arranged so as to form short subcylindrical or sub quadrilateral ovoid oblong spikes ¼-1/2 inch long, which are arranged at the extremities of the stem and branches, and form collectively a large corymbose panicule. Fruits are small, cylindrical, nutletes.<sup>8</sup> The flowers are very small, of a light brown colour. The hole drug has a lightish brown colour and strong peculiar, agreeable odor. and a warm, bitterish, aromatic taste both of which properties are preserved when it is carefully dried. The taste is just like lemon. It is pungent first, but after a time it gives a kind of burning sensation to the tongue resembling the taste of Ajama.<sup>8,9,10,11,12,</sup>

## II. Unani Description:

### A). Mahiyat-e-Dawa

**Hisase Mustamala (parts used):** Leaves and seeds<sup>13</sup>

*Marzanjosh* is one of the oldest drugs described in Unani system of medicine. *Descoridus* (40-90BC), *Ibn-e-Sina* 1905, *Ibn-e-Baitar*, 1291H and many other ancient Unani physician described in detail in their books. *Marzanjosh* is a kind of Marwa, it is written in Kashful Lughat, that *Marzanjosh* is a Arabic word which derived from Persian word “*Mazangosh*” in Persian Marzah

is known for mouse, and gosh is called as ear, it means ear of mouse. Its plant resembles to the plant of sweet basil (Rehan), its seed is like seed of Rehan, leaves are similar to leaves of *Suddab*. It is cultivated in Jazeera "Urs". Its flowers are in whitish red in colour, it has a very significant smell.<sup>10,11,12</sup>

### B). Mizaj & Darja (Temperament & Degree):

Har 2° yabis 2°<sup>11,12</sup>

Har 2° yabis 1°<sup>13</sup>

Har 3° yabis 2°<sup>14</sup>

C). Muzir (Adverse effect): Kidney Urinary bladder Brain<sup>11</sup>

D). Musleh (correctives): For Kidney *Tukhme khurfa*, (Portulaca oleracea), *Kasni* (*Chicorium intybus* L.), for Brain *Nilofer* (*Nymphaea alba*)<sup>11,13</sup>

E). Badal (substitute): Afsanteen, Barge Chameli, Mirch siyah, Tulsi<sup>11</sup>

F). Miqdare khorak (dose): Powder (Safoof) 9 masha, joshanda 2 toola<sup>11</sup>

6-7 masha<sup>12</sup>

6-8 gm<sup>13</sup>

## III. Pharmacological Action and Therapeutic Uses:

### A). Unani Actions (Afa'al)

Muhallil-e-Awram (Anti inflammatory) <sup>10,11,12,13,14</sup>	Ghani, 2010, Ibne Baitar, 2003, Hakeem, Rafeequddin, 1985, Lubhaya, 1975
Mujaffif <sup>10,12</sup>	Ibne Baitar, 2003, Lubhaya, 1975
Mulattif (Demulscent) <sup>10,11,14</sup>	Ghani, 2010, Ibne Baitar, 2003, Abdul Hkeem, 1922
Jaazib (Desiccant) <sup>10,11,13</sup>	Ghani, 2010, Ibne Baitar, 2003, Rafeequddin, 1985
kasire riyah (carminative) <sup>14</sup>	Hkeem, 1922
Mushtahi (Appetite improve) <sup>11</sup>	Ghani, 2010
Qabiz (Astringent) <sup>13</sup>	Rafeequddin, 1985
Jali(Detergent) <sup>11</sup>	Ghani, 2010
Musakkin <sup>12,13</sup>	Rafeequddin, 1985, Lubhaya, 1975
Dafe khafqan <sup>13</sup>	Rafeequddin, 1985
dafe sarfa <sup>13</sup>	Rafeequddin, 1985
Mufattite Hasat (Lithotriptic) <sup>13</sup>	Rafeequddin, 1985
Muqawwi jigar (liver tonic) <sup>14</sup>	Hkeem 1922
Mufatteh Sudad (Deobstruent) <sup>10,11,13,14</sup>	Ghani, 2010, Ibne Baitar, 2003, Hakeem, 1922
Mudir-e-haiz (emmenagogue) <sup>13,14</sup>	Rafeequddin, 1985
Muqawwi Basar (Eye Tonic) <sup>10,14</sup>	Hkeem, 1922, Ibne Baitar, 2003
Munaffise balgham (expacturant) <sup>10,12</sup>	Ibne Baitar, 2003, Lubhaya, 1975
Muharrik (stimulant) <sup>13</sup>	Rafeequddin, 1985
Munaqqi dimagh <sup>10,13</sup>	Ibne Baitar, 2003, Rafeequddin, 1985
Muqawwi-e-dimagh (Brain tonic) <sup>14</sup>	Hkeem, 1922
Tiryaaq (Antidote) <sup>14</sup>	Hkeem, 1922
muqaawwi-e- qalb <sup>14</sup>	Hkeem, 1922

Musaffi Khoon (blood purifier)<sup>12</sup> Lubhaya, 1975  
 Mudirre-e-baul<sup>10</sup> Ibne Baitar, 2003

### B). Clinical Uses (Istemalat-e-Ilaji):

Sudae-e-reehi (Headache due to excessive production of gases) <sup>11</sup> shaqeeqa (migrain) <sup>10,11,12</sup>	Ghani, 2010 Ghani, 2010, Ibne Baitar, 2003, Lubhaya, 1975
Sudae-e-Balghami (Phlegmatic headache) <sup>11</sup>	Ghani, 2010
Sudae-e-Barid (headache due to excessive cold) <sup>10,11,12</sup> Zofe jigar <sup>11,14</sup> Khafqan (Palpitation) <sup>11,13,14</sup>	Ibne Baitar, 2003, Ghani, 2010, Lubhaya, 1975 Ghani, 2010, Hkeem, 1922 Ghani, 2010, Hkeem, 1922, Rafeequddin, 1985
Nuzolul ma'aa <sup>11</sup> zoefe basar <sup>11</sup> Wajau's Sadr (Chest pain) <sup>11,13</sup> Zeequn Nafas (asthma) <sup>11</sup>	Ghani, 2010 Ghani, 2010 Ghani, 2010, Rafeequddin, 1985 Ghani, 2010
Nazla wa Zukam (coryza and catarrh) <sup>10,11,12</sup>	Ibne Baitar, 2003, Ghani, 2010, Lubhaya, 1975
Malankhuliya Miraqi (psychoneurosis) <sup>11</sup> Sara (epilepsy) <sup>11,12</sup> Laqwa (facial palsy) <sup>10,11,13</sup>	Ghani, 2010 Ghani, 2010, Lubhaya, 1975 Ibne Baitar, 2003, Ghani, 2010, Rafeequddin, 1985
Khidr <sup>12</sup> Tahabbuje reehi wa balghami <sup>10,11</sup> Usrul bawl (Dysuria) <sup>10</sup> wajaul uzn (ear ache) <sup>12,13</sup> Mufatteh-e-sudad-e-dimagh (Deobstruent of Brain) <sup>11</sup> Falij (Paralysis) <sup>13</sup> Istisqa <sup>10,11</sup> Kuzaz (Tetanus) <sup>11</sup>	Lubhaya, 1975 Ibne Baitar, 2003, Ghani, 2010 Ibne Baitar, 2003 Rafeequddin, 1985, Lubhaya, 1975 Ghani, 2010 Rafeequddin, 1985 Ghani, 2010, Ibne Baitar, 2003 Ghani, 2010

### C). Ethnobotanical Actions & Uses:

Stimulant <sup>8,9,15</sup>	Henry, 1983, Khory, 2008, Sharma, 2003
Carminative <sup>4,8,9</sup>	Henry, 1983, Sharma, 2003, Caius, 2003
Tonic <sup>8,9,15</sup>	Henry, 1983, Khory, 2008, Sharma, 2003
Diaphoretic <sup>8,9,15</sup>	Henry, 1983, Khory, 2008, Sharma, 2003
Emmenagogue <sup>4,8,9,15</sup>	Henry, 1983, Khory, 2008, Sharma, 2003, Caius, 2003
Local irritant <sup>8</sup>	Henry, 1983
Stomachic <sup>4,9</sup>	Sharma, 2003, Caius, 2003
Diuretic <sup>9</sup>	Sharma, 2003
Chronic rheumatism <sup>3,9</sup>	Sharma, 2003, Basu, 2012
Toothache <sup>9</sup>	Sharma, 2003
Earache <sup>3,9</sup>	Sharma, 2003, Basu, 2012
Bronchitis <sup>3</sup>	Basu, 2012
Asthma <sup>3</sup>	Basu, 2012
Dysmenorrhoea <sup>15</sup>	Khory, 2008

Indigestion <sup>16</sup>	Singh, 2018
Bloating <sup>16</sup>	Singh, 2018
urinary problem <sup>16</sup>	Singh, 2018
Headache <sup>16</sup>	Singh, 2018
Vomiting <sup>16</sup>	Singh, 2018
Jaundice <sup>16</sup>	Singh, 2018
Fever <sup>16</sup>	Singh, 2018
Spasms <sup>3</sup>	Caius, 2003
Colicky pain <sup>3</sup>	Caius, 2003

#### IV. Phytochemistry:

Herb contains about 3% volatile oil, flavonoids and triterpenoids. Sabinene hydrate caffeic acid Sabinene ursolic acid linalool oleanolic acid carvacro sterols estrogole diosmetin terpens vitexin luteolin-7-glucosidea orientin diosmetin-7-glucoside geranyl acetate apigenen-7-glucoside P-cymen rosmarinic acid Terpinene,  $\beta$ -sitosterol, triacontanol. The principal constituents of *origanum* are volatile oil tannic acid and a bitter principle. The volatile oil was formerly official in the London and Dublin pharmacopeia, but Hanbury proved some years since, that the oil commonly sold as oil of origanum was oil of thyme.<sup>17</sup> The true oil of origanum, which may be obtained by submitting the herb to distillation with water, may be distinguished, according to Hanbury, from oil of thyme, by the following characters

1. Its odour is entirely dissimilar, being somewhat analogous to oil of peppermint.
2. The colour, which in oil of origanum is bright yellow, is more or less deep reddish brown in the ordinary kind of oil of thyme. Its specific gravity is .8854. true oil of origanum is rarely or ever found in commerce.<sup>6,17,18</sup>

The above ground part of the plants contain essential oil, which is aromatic and spicy and the color is like that of basil. Fresh herbes yield 0.10 to 0.20 percent of oil, and dried herb give 0.20 to 0.40 percent of oil. The Oil contains thymol, carvacrol, alcohols, easters and bicylic sesquiterpene. On distillation, of dried flouring herbs 1.00 to 1.25 percent of volatile oil is obtained. The chemical constituents in the oil are p- cymene, dipentine, thymol, terpene, and sesquiterpene.<sup>7</sup>

#### Clinical Report

1. A Randomized Controlled Trial was done by Einollah Valizadeh et al. (2017) on four traditional medicinal plants including *Oreganum vulgariae*, *Ruta graveolens*, *Carum carvi*, and *Trachyspermum copticum*. This study showed body weight, body mass index (BMI) significantly lower in the intervention group than in the control group. Moreover, there

were significant reductions in total cholesterol, Triglyceride, low-density lipoprotein cholesterol, (LDL) and in the intervention group in comparison with the control group.<sup>19</sup>

2. A randomized single blind standard-controlled study<sup>7</sup> was conducted at Ajmal Khan Tibbiya College Hospital, Faculty of Unani medicine AMU Aligarh on a sample size of 30 in each group by Arshad, M (2021) studied that Marzanjoosh along with Luk and Sundrus was found effective in reducing the triglycerides, TC, LDL, and results were found as effective as control drug Rosuvastatin.<sup>20</sup>
3. An interventional study conducted at NIUM Hospital Bangalore on a sample size of 30 by Alam I *et al.* (2017) on Hot Bath with vapours of marzanjoosh showed significant improvement in ADL of post stroke survivors at the end of treatment.<sup>21</sup>

### Pharmacological Reports

1. Anti-diabetic and anti-dyslipidemic nature of carvacrol, a monoterpenic phenol studied in high-fat -fed and low-dose streptozotocin-induced experimental diabetic rats was done for 30 days by Umasankar K *et al.* (2015). This study showed that carvacrol has significant anti-hyperlipidemic and anti-hyperglycemic effects in HFD/STZ-induced type 2 diabetic rats.<sup>22</sup>
2. A subchronic 90-day oral toxicity study of *Origanum vulgare* essential oil in rats was done by M. Llana-Ruiz-Cabello *et al.* (2017). This study suggests that the oral no-observed-adverse-effect level of this oregano essential oil in Wistar rats.<sup>23</sup>
3. The Antihyperglycaemic Effect of the Aqueous Extract of *Origanum vulgare* Leaves in Streptozotocin-Induced Diabetic Rats was done by Nema A. Mohamed *et al.* (2012) Oral administration of the aqueous OV extracts significantly decreased in blood glucose levels in STZ diabetic rats.<sup>24</sup>
4. In an animal study conducted on 36 Albino Wistar rats by Siddiqui U (2022) at Ajmal Khan Tibbiya College, Faculty of Unani medicine AMU Aligarh concluded Antihyperlipidemic and anti-obesity effect of Marzanjoosh along with other drugs.<sup>25</sup>

### Pharmacognostical Report

Coccimiglio *et al.* (2016) studied that oregano extract has cytotoxic, antioxidant, and antibacterial activities mostly attributed to carvacrol and thymol.<sup>26</sup>

### CONCLUSION

The present review has brought out over all details of *Marzanjoosh* regarding its characteristics, production, distribution, medicinal uses and clinical and pharmacological reports carried out till date on modern conventional parameters suggest that *Marzanjoosh* is an effective herbal medicine

used by ancient physicians since centuries and its effectiveness is also well proven in current scenario.

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