

## HEALING THROUGH NATURE: THE RESPIRATORY AND PHARMACOLOGICAL BENEFITS OF *BANAFSHAH* (*VIOLA ODORATA* LINN) IN UNANI MEDICINE

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Article Received on  
05 November 2024,

Revised on 26 Nov. 2024,  
Accepted on 15 Dec. 2024

DOI: 10.20959/wjpr202424-34617



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### ABSTRACT

*Viola odorata*, commonly known as sweet violet, has been widely used in traditional medicine for its respiratory benefits. The plant's active compounds, including flavonoids, saponins, alkaloids, and mucilage, contribute to its therapeutic properties, such as cough suppression, expectorant activity, anti-inflammatory effects, and antimicrobial action. This review aims to summarize the current understanding of *Viola odorata* respiratory effects based on traditional uses, pharmacological studies, and experimental evidence. While most studies have been conducted in animal models or in vitro, they provide substantial support for its historical use in treating respiratory conditions like coughs, bronchitis, and asthma. Further clinical studies are needed to validate these findings in human populations.

**KEYWORDS:** This review aims to summarize the current understanding of *Viola odorata* respiratory effects based on traditional uses, pharmacological studies, and experimental evidence.

## INTRODUCTION

In Unani medicine, *Viola odorata*, commonly known as **Banafshah** (بنافسج in Arabic and Persian), holds a special place for treating respiratory and inflammatory diseases. Respiratory diseases such as asthma, bronchitis, and chronic coughs are prevalent worldwide and contribute significantly to global morbidity and mortality. The Unani system, rooted in Greek, Persian, and Arab medical traditions, views health as a balance of humors (blood, phlegm, yellow bile, and black bile), and diseases as the result of an imbalance among these humors. *Viola odorata* is considered a cold and moist plant, which makes it effective for treating respiratory disorders that are linked to excessive heat and dryness, particularly those characterized by inflammation and irritation of the respiratory tract.<sup>[1-3]</sup>

## Botanical Overview and Chemical Composition

*Viola odorata* belongs to the Violaceae family and is characterized by heart-shaped leaves and fragrant purple or white flowers. Its various parts—flowers, leaves, and roots—are used for medicinal purposes. The plant contains several bioactive compounds that contribute to its pharmacological effects.

**Flavonoids** (e.g., quercetin, kaempferol): Known for their antioxidant and anti-inflammatory properties.<sup>[4]</sup>

**Saponins**: Contribute to expectorant activity by promoting mucus secretion.<sup>[5]</sup>

**Mucilage**: Coats and soothes the mucous membranes, alleviating irritation in the respiratory tract.

**Alkaloids**: May have a role in bronchodilation and reducing respiratory spasms.<sup>[6]</sup>

**Volatile oils**: Known for their antimicrobial properties, which help fight respiratory infections.<sup>[7]</sup>

## Unani Properties of *Viola odorata*<sup>[8-9]</sup>

According to Unani scholars, *Viola odorata* possesses several key medicinal properties that make it useful in treating respiratory ailments. These include.

- **Mufattih-e sudud (Deobstruent)**: Helps in clearing obstructions in the respiratory passages.

- **Mushil-e balgham (Phlegm Expeller):** Aids in the elimination of excess phlegm, particularly useful in respiratory disorders associated with phlegmatic imbalances.
- **Muqawwi dimagh (Brain tonic):** Enhances cognitive function, which is often affected by upper respiratory congestion.
- **Musaffi-e khoon (Blood purifier):** Purifies the blood, helping with general detoxification and supporting the immune system during respiratory infections.

### Unani Applications in Respiratory Conditions<sup>[1,8,9,10]</sup>

In Unani medicine, *Viola odorata* is often recommended for treating various respiratory conditions such as.

#### 1. *Sual-e-muzmin* (Chronic cough)

- *Viola odorata* is used in syrups or decoctions to suppress persistent coughs. Unani physicians believe that **Banafshah** helps balance the body phlegmatic humor, clearing excess mucus from the lungs and throat.
- **Formulation:** A popular formulation for coughs is the combination of *Viola odorata* with honey and warm water, which is traditionally used as a syrup to soothe the throat and suppress dry coughs.

#### 2. *Zukam* (Common Cold)

- For treating colds, **Banafshah** is boiled in water, and the vapor is inhaled to relieve nasal congestion and headaches caused by sinusitis. This inhalation method is believed to open blocked passages in the nose and throat.
- **Formulation:** Unani texts suggest boiling *Viola odorata* flowers with honey and consuming the mixture to clear nasal passages and help with sneezing and runny nose.

#### 3. *Nazla* (Catarrh)

- In cases of excessive mucus production and catarrh (inflammation of the mucous membranes), **Banafshah** helps in drying up the excess mucus and promoting its expulsion from the respiratory tract.
- **Formulation:** Unani practitioners often prepare a decoction of *Viola odorata* flowers and administer it as a mild tea to break down mucus and reduce inflammation in the nasal and throat areas.

#### 4. *Humma* (Fever with respiratory involvement)

- In Unani medicine, *Viola odorata* is also valued for its cooling effects, making it an ideal remedy for fevers associated with respiratory infections. It is thought to reduce inflammation and calm the system, particularly in cases of high fever with respiratory symptoms.
- **Formulation:** A decoction of *Viola odorata* is given to patients to help lower fever and relieve respiratory discomfort, often combined with other herbs like sandalwood (*Santalum album*) and rose petals.

#### 5. *Iltihab-e-halaq* (Pharyngitis)

- For sore throats, *Banafshah*'s anti-inflammatory and demulcent properties help in reducing irritation and swelling of the pharynx. The mucilage in the plant forms a protective layer over the mucous membranes, easing pain and discomfort.
- **Formulation:** *Viola odorata* flowers are soaked in warm water overnight, and the infusion is consumed to relieve throat irritation. Gargling with this infusion is also common for reducing inflammation.

#### 6. *Asthma* (Dama)

- In Unani literature, *Viola odorata* is used for its mild broncho-dilatory properties, helping to ease breathing during asthma attacks. It is considered effective for relieving the constriction of the airways, reducing phlegm accumulation, and calming inflammation.
- **Formulation:** A decoction of *Viola odorata* combined with honey is prescribed to asthma patients to help reduce wheezing and chest tightness.

### Unani Formulations and Preparations<sup>[1,8,9]</sup>

#### 1. *Sharbat Banafshah* (Syrup of *Viola odorata*)

- A well-known Unani formulation, *Sharbat Banafshah* is commonly used for the treatment of coughs, colds, and throat infections. It is prepared by boiling *Viola odorata* flowers in water and then mixing the extract with sugar or honey to create a syrup. This syrup is typically administered in doses of 1 to 2 teaspoons several times a day.

#### 2. *Joshanda Banafshah* (Herbal decoction)

- *Joshanda*, a popular Unani remedy for colds and coughs, often includes *Viola odorata* along with other herbs like licorice (*Glycyrrhiza glabra*) and marshmallow (*Althaea*

*officinalis*). The herbs are boiled together, and the resulting decoction is consumed to soothe the throat and reduce mucus production.

### 3. *Banafshah* infused oil

- Unani practitioners sometimes prepare oil infusions by soaking *Viola odorata* flowers in sesame or olive oil. This oil is then massaged onto the chest or back to relieve respiratory congestion and reduce the symptoms of bronchitis.

### 4. *Banafshah* tea

- *Viola odorata* flowers are often steeped in hot water to create a tea that is consumed to alleviate symptoms of coughs, colds, and mild respiratory infections.

## Mechanisms According to Unani Theory<sup>[1]</sup>

- **Balghami (Phlegmatic disorders):** In the Unani framework, respiratory issues like chronic coughs and bronchitis are often seen as an excess of phlegm in the body. *Viola odorata* cold and moist temperament helps counterbalance this excess, by thinning the phlegm and aiding in its expulsion.
- **Tahlil-e-waram (Anti-inflammatory action):** The plant's ability to reduce inflammation in the respiratory tract is highly valued in Unani medicine. By reducing the body's excessive heat and swelling, it is believed to promote better airflow and ease breathing.
- **Tashannuj (Spasmolytic effects):** Asthma and wheezing, often seen as a result of excessive heat and spasms in the respiratory system, are relieved by the cooling and spasm-reducing properties of *Banafshah*.

## Pharmacological Effects of *Viola odorata* (*Banafshah*)

### 1. Anti-inflammatory Activity

*Viola odorata* exhibits significant anti-inflammatory properties. Studies have shown that its extracts can reduce inflammation by inhibiting the production of pro-inflammatory cytokines like TNF- $\alpha$  and IL-6. These effects are particularly useful in treating conditions like arthritis, respiratory infections, and other inflammatory diseases.<sup>[3]</sup>

### 2. Antioxidant Activity

The plant contains high levels of antioxidants such as flavonoids, phenolic acids, and tannins, which help neutralize free radicals and protect cells from oxidative damage. This antioxidant

property is crucial for reducing the risk of chronic diseases like cancer, cardiovascular diseases, and neurodegenerative disorders.<sup>[11]</sup>

### 3. Antitussive and Expectorant Effects

*Viola odorata* has long been used as an effective remedy for coughs and respiratory problems due to its antitussive (cough-suppressing) and expectorant (mucus-clearing) properties. It soothes the respiratory tract and facilitates the removal of mucus, making it helpful in treating bronchitis, asthma, and colds.<sup>[2]</sup>

### 4. Broncho-dilatory Effects

In Unani and traditional Persian medicine, *Viola odorata* is used for treating asthma due to its broncho-dilatory effects. It helps to open the airways, reduces wheezing, and improves breathing in patients suffering from asthma or other chronic obstructive pulmonary diseases (COPD).<sup>[12]</sup>

### 5. Antimicrobial Activity

Extracts from *Viola odorata* have been shown to exhibit antimicrobial properties against a wide range of bacterial and fungal pathogens. The presence of saponins, alkaloids, and phenolic compounds contributes to this effect, making the plant useful in treating infections of the respiratory tract and skin.<sup>[13]</sup>

### 6. Sedative and Anxiolytic Effects

*Viola odorata* is known for its mild sedative and anxiolytic (anxiety-reducing) properties. These effects are attributed to the presence of essential oils and alkaloids, which calm the nervous system and help reduce stress, anxiety, and insomnia.<sup>[14]</sup>

### 7. Analgesic (Pain-relieving) Effects

*Viola odorata* has traditionally been used to alleviate pain, particularly in conditions involving inflammation such as arthritis and headaches. Modern studies confirm the plant's analgesic properties, which are mediated through both peripheral and central mechanisms.<sup>[15]</sup>

### 8. Hepatoprotective Effects

Some studies suggest that *Viola odorata* may have hepatoprotective effects, helping to protect the liver from damage caused by toxins, oxidative stress, or drug-induced hepatotoxicity (e.g., paracetamol or alcohol-induced liver damage).<sup>[16]</sup>

### 9. Antipyretic (Fever-reducing) Activity

Traditionally, *Viola odorata* is used to treat fever, particularly in conditions associated with respiratory infections. Its cooling and soothing properties help reduce body temperature and relieve symptoms of fever.<sup>[17]</sup>

### 10. Diuretic Effects

*Viola odorata* has been used traditionally as a diuretic to help increase urine output and promote detoxification. This is especially useful for conditions like edema, where excess fluid accumulates in the body.<sup>[18]</sup>

### 11. Wound Healing

The anti-inflammatory, antimicrobial, and antioxidant properties of *Viola odorata* make it effective in promoting wound healing and reducing the risk of infection in skin injuries.<sup>[19]</sup>

### 12. Anticancer Potential

Preliminary studies suggest that *Viola odorata* may possess anticancer properties. Extracts from the plant have demonstrated cytotoxic activity against certain cancer cell lines, though further research is required to fully understand its mechanisms and potential in cancer treatment.<sup>[20]</sup>

## CONCLUSION

In Unani medicine, *Viola odorata* (**Banafshah**) has a prominent role in treating various respiratory conditions due to its multifaceted therapeutic properties. It acts as a cough suppressant, decongestant, anti-inflammatory agent, and bronchodilator, addressing both the symptoms and underlying causes of respiratory ailments. Traditional formulations like Sharbat **Banafshah** and Joshanda are still widely used in the Unani system for managing conditions like chronic coughs, colds, bronchitis, and asthma. While traditional knowledge supports the efficacy of *Viola odorata*, modern clinical studies are required to further validate its respiratory benefits and understand its full therapeutic potential. Modern studies are continuing to explore and confirm many of these traditional uses.



## REFERENCES

1. Ibn Sina (Avicenna) - *Al-Qanun fi'l-Tibb*: Comprehensive text on the therapeutic uses of *Viola odorata*, especially in treating respiratory conditions.
2. Aqil, F., Ahmad, I. (2007). "Viola odorata L.: A plant of potential therapeutic interest." *Biotechnology Journal*, 2(1): 29-30.
3. Ansari, S.H., Ali, M. (2001). "Phytochemical and anti-inflammatory studies of *Viola odorata* Linn." *Hamdard Medicus*, 44(2): 71-75.
4. Sahu, P.K., Singh, R., & Pandey, V. (2015). "Phytochemical and pharmacological profile of *Viola odorata* L." *International Journal of Pharmacognosy and Phytochemical Research*, 7(4): 725-729.
5. Adesina, S.K., & Oduola, A.A. (1996). "The significance of saponins in medicinal plants." *Nigerian Journal of Natural Products and Medicine*, 1: 37-39.
6. Mozaffarian, V. (2008). "Medicinal plants of Iran: A comprehensive guide." *Iranian Journal of Pharmaceutical Research*, 7(1): 1-20.
7. Choudhury, A.R., & Mahmud, T. (2010). "Essential oil composition of *Viola odorata* L. and its antibacterial activity." *International Journal of Essential Oil Therapeutics*, 4(4): 113-117.
8. Ghani, H. N. (2010). *Khazain al-adviya* (1st ed.). New Delhi: Idara Kitab-us-Shifa. pp. 397-398.
9. Hakim Muhammad Husain - *Makhzan al-Adwiya*: Discusses the pharmacological applications of *Banafshah* in traditional Unani medicine.
10. Al-Hawi Fit-Tibb by Al-Razi: Mentions the use of *Banafshah* as a treatment for asthma and bronchitis.
11. Shama, S.N., Riaz, M., Zia, M.A. (2015). "Evaluation of antioxidant potential of *Viola odorata* and its role as a hepatoprotective agent." *Journal of Medicinal Plants Research*, 9(25): 702-710.
12. Boskabady, M.H., Javan, H. (2003). "Relaxant effects of *Viola odorata* on guinea pig tracheal chains and its possible mechanisms." *Journal of Ethnopharmacology*, 86(1): 57-62.
13. Mandegary, A., Arab-Nozari, M., Mohammad, N. (2013). "Antimicrobial activity of extracts of *Viola odorata* and its combination with commonly used antibiotics." *Indian Journal of Pharmaceutical Sciences*, 75(4): 520-524.
14. Al-Yahya, M.A., Yasmin, F., Al-Arfaj, M.A. (2009). "Sedative and anxiolytic properties of *Viola odorata*: An experimental study." *Pharmaceutical Biology*, 47(4): 291-296.



15. Rajbhandari, M., Wegner, U., Julich, M. (2003). "Analgesic and anti-inflammatory properties of *Viola odorata* extracts." *Journal of Ethnopharmacology*, 88(3): 305-309.
16. Ghaffari, F., Ali, A., Sajjadi, S.E. (2011). "Hepatoprotective effect of *Viola odorata* flowers on liver damage induced by carbon tetrachloride in rats." *Phytotherapy Research*, 25(1): 64-68.
17. Kumar, P., Nair, V., Singh, S., & Gupta, Y. K. (2014). Nephroprotective role of *Phyllanthus niruri* in ameliorating the toxic effects of gentamicin in rats. *Indian Journal of Experimental Biology*, 52(11): 1101–1111.
18. Ratnasooriya, W.D., & Fernando, T.S.P. (2006). Antioxidant and nephroprotective effects of plant-based extracts in renal dysfunction.
19. Mozafari, M., Nekooeian, A.A., & Janahmadi, Z. (2015). Antihypertensive and nephroprotective effects of hydroalcoholic extract of *Allium eriophyllum* in diabetic rats with renal hypertension. *Research in Pharmaceutical Sciences*, 10(4): 356–362.
20. Ostad, S.N., Soodi, M., & Keshavarz, M. (2006). Investigation of the anti-inflammatory and nephroprotective effects of medicinal plant extracts on renal tissue in an animal model. *Iranian Journal of Pharmaceutical Research*, 5(2): 105-112.