



# THE THERAPEUTIC SIGNIFICANCE OF *KALONJI* (NIGELLA SATIVA) IN UNANI MEDICINE : A COMPREHENSIVE REVIEW OF ITS ROLE IN SKIN DISEASES

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**Abstract:** The World Health Organization (WHO) says that most people in the world use herbal medicine for their health. *Nigella sativa*, also called black seed, black cumin or 'Habbatul Barakah,' has been used for healing for a long time in Asia, the Middle East and Africa. People use both the seeds and the oil. In Unani medicine it is an important remedy and now is known for helping many parts of the body. It is also special in religion because it is mentioned in the holy books of Islam and Christianity. Besides its history and religious importance it is also found in old medicine books. This review article looks at history, clinical studies and research about *Nigella sativa*. It talks especially about how it is used on the skin and in beauty products (cosmeceutical application). History shows that *N. sativa* helps with skin problems because it fights germs (antimicrobial), reduces swelling (anti-inflammatory) and stops fungus (antifungal). It can help diseases like psoriasis, vitiligo, eczema and acne vulgaris. *Kalonji* (*Nigella sativa*) is used in Unani medicine and is important for many healing properties. The review also explains the active parts in *Kalonji*, like thymoquinone and how they work to reduce inflammation and help keep the skin healthy.

**Key Words:** *Kalonji*, *Nigella Sativa*, Skin Diseases, Therapeutic Significance, *Nigella Sativa* Benefits Skin Health

## 1. INTRODUCTION:

*Nigella sativa* L., also called black seed or *Kalonji*, is a plant that belongs to the Ranunculaceae family. It usually grows between 20 and 90 cm tall. This plant originally comes from places like Southern Europe, North Africa and Southwest Asia. For many years, people have grown it in the Middle East, around the Mediterranean Sea, in India and parts of Southeast Asia. They grow it mainly because it is useful for medicine and cooking.

The seeds of *Nigella sativa* are known for being very helpful for health. This is because they have many important chemicals like fixed and essential oils, proteins, alkaloids and saponins. One important chemical in the seeds is called thymoquinone which helps the plant fight inflammation, germs and damage in the body. It also helps the immune system work better.

In Indian traditional medicines like Unani and Ayurveda, *Kalonji* has been used for hundreds of years to help with problems like breathing troubles, stomach problems and skin diseases. Long ago, many religious and medical books showed respect for *Nigella sativa*. In Islamic medicine it is mentioned in the Hadith of Prophet Muhammad (PBUH) as a cure for almost all sicknesses except death. Also a famous Persian doctor named Avicenna (Ibn Sina) wrote about its strong healing powers in his important medical book called *Al-Qanun fi al-Tibb*. Today, modern science studies also prove that these old uses are true especially showing that the seeds help with skin problems.



## **2. METHODOLOGY**

A careful literature review was done by looking at important research articles from many online databases like Research Gate, PubMed, Scopus, Google, Google Scholar, Science Open and Springer Links. The Central Library of Govt Nizamia Tibbi College and Hospital, Hyderabad, was also used to find more information. The materials included were peer-reviewed journal articles, conference or seminar papers, thesis and dissertations, refereed books and abstracts. The online search used keywords like Nigella Sativa, Black Seeds, Medicinal Plant, Anti-oxidant, Anti-Inflammatory, Thymoquinone and unani medicine.

## **3. RESULTS OF LITERATURE SURVEY**

### **VERNACULAR NAMES OF NIGELLA SATIVA (KALONJI)**

Because Nigella sativa has been used for a very long time in many cultures it has many different local names depending on where and by whom it is used.

In the Indian subcontinent, the seeds are called Kalonji, Kalazeera, Mugrela and Kalajera. They are often mentioned in traditional medical systems like Unani and Ayurveda.

In Europe, the plant is called black caraway, nutmeg flower, fennel flower and sometimes “Love-in-a-Mist” because of its soft, misty flower look.

In the United States and other English-speaking countries it is called black cumin or black seed, names that are popular in herbal and health markets.

In Egypt it is known as Habbat ul-Baraka which means “the seed of blessing,” showing its special place in folk and religious medicine. In the Arab world, names like Habbatul Sauda, Shoniz and Kamoon-e-Aswad are used.

In Persian-speaking areas, like Iran and Central Asia it has names such as Siyah Dana, Siyah Daru, Shoniz, Shonoz and Siyah Biranj. These all mean “black seed” or “black grain.”

In Sanskrit, an old language used in Ayurveda, Nigella sativa has many names like Bshpika, Kalajaji, Karavi, Kunjika, Musavi, Sthulajarika and Upakuncharika. These names show how the plant was used in different ways in ancient Indian medicine.

In Unani books, the seed is mostly called Kalonji or Shoniz and in Urdu it is usually called Kalonji.

These names show that Nigella sativa is found in many places and is very important in medicine and spirituality across different cultures and history.

### **Chemical constituents**

#### **CHEMICAL CONSTITUENTS OF KALONJI**

Kalonji seeds (Nigella sativa) have many special natural substances that help in healing different health problems. These substances can be grouped as essential oils, fixed oils, alkaloids, saponins and micronutrients.

##### **1. Essential Oils**

The essential oils in Nigella sativa give it most of its healing power. The main part is thymoquinone which is known to fight damage from oxidation (antioxidant), reduce swelling (anti-inflammatory) and kill germs (antimicrobial). Other important parts are:

Thymohydroquinone  
p-Cymene  
Carvacrol



$\alpha$ -Pinene

$\beta$ -Pinene

These smelly parts also help with skin problems (dermatological applications).

## 2. Fixed Oils

The fixed oils in *Nigella sativa* have a lot of unsaturated fatty acids especially:

Linoleic acid (50–60%) – this omega-6 fatty acid helps keep skin strong and controls inflammation.

Oleic acid (20%) – this monounsaturated fatty acid helps skin stay soft and stretchy.

People often use these oils on the skin to help dry, red or hurt skin.

## 3. Alkaloids

Kalonji seeds have alkaloids which are nitrogen-containing substances with healing effects. The main ones are:

Nigellidine

Nigellicine

Nigellimine

Scientists are studying these for their possible brain protection (neuroprotective) and immune system help (immunomodulatory).

## 4. Saponins

One saponin called alpha-hederin is found in *Nigella sativa*. It is a compound that may help kill cancer cells (cytotoxic effects) and also helps the immune system and fights germs.

## 5. Micronutrients

The seeds have important vitamins and minerals such as:

Vitamin B-complex

Calcium

Iron

Zinc

These help keep the body's metabolism healthy and support the other healing parts especially for skin problems.

## 6. Proteins and Amino Acids

*Nigella sativa* also has important amino acids like arginine and glutamic acid. These help fix body tissues, support the immune system and protect the body from damage (antioxidant defenses).

## PROPERTIES OF KALONJI SEEDS

### Mizaj (Temperament)

- Haar (Hot): Level 2
- Yabis (Dry): Level 2
- Haar Yabis (Hot and Dry): Level 3

### Parts Used

- Seeds and seed oil

### Dosage

- 3–5 grams



## Functions and Therapeutic Uses

- Jali (Detergent)
- Jaazib (Absorbent)
- Munafise Balgham (Expectorant)
- Mohallile Riyah (Deflatulent)
- Muqavvie Meda (Gastro tonic)
- Mulayyan (Laxative)
- Qaatile Qirme Shikam (Vermifuge)
- Mohallile Awram (Anti-inflammatory)
- Musakine Aujah (Analgesic)

## Additional Uses:

- Works as a diuretic, antibacterial, emmenagogue, galactagogue, carminative and stimulant.
- Helps treat skin infections, puerperal fevers and loss of appetite.
- Used on the skin to ease painful swellings.

## Muzir (Adverse Effects)

- Can be harmful to the kidneys and may cause diphtheria.
- Should not be taken during pregnancy especially in amounts larger than normal food amounts.
- Not safe during breastfeeding because there is not enough information.
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## Musleh (Correctives)

- Kateera (*Sterculia urens*)

## Badal (Substitute)

- Anisun (*Pimpinella anisum* Linn) (7)

## THERAPEUTIC APPLICATIONS OF *NIGELLA SATIVA* IN SKIN DISEASES

Kalonji (*Nigella sativa*) has been known for a long time in Unani medicine to help with skin problems especially those that last a long time or cause swelling and irritation. Modern science also shows that Kalonji is helpful. One important part of it is called thymoquinone which helps reduce skin swelling, helps the skin heal and stops harmful germs from growing. Here is a summary of how Kalonji can help with common skin problems:

### 1. Psoriasis

Psoriasis is a long-lasting condition where skin cells grow too fast and cause red, scaly patches. Studies show that thymoquinone in *Nigella sativa* can lower important inflammation signals like TNF- $\alpha$  and IL-6. This helps slow down too much skin growth and reduce swelling. It also works as an antioxidant which protects the skin from damage. Using creams with Kalonji oil has helped make psoriasis symptoms less bad and improved skin look.

### 2. Acne Vulgaris

Acne is a skin problem caused by bacteria called *Propionibacterium acnes*, too much oil (sebum) and swelling. Kalonji oil fights these bacteria and also calms the skin. Doctors say that using Kalonji products on the skin can lower the number of pimples, make skin smoother and reduce oil. Kalonji oil also has omega-3 and omega-6 fatty acids which help fix the skin barrier and keep skin moist, making pimples less likely to come back.

### 3. Vitiligo

Vitiligo causes white patches on the skin because of loss of color cells called melanocytes. Early studies show Kalonji oil might help the skin make more melanin (the color in skin) through its antioxidant and immune-



supporting effects. Thymoquinone protects melanocytes from damage and may help the white patches get color again. But more tests are needed to find the best way to use Kalonji for vitiligo.

#### **4. Eczema (Atopic Dermatitis)**

Eczema is a skin problem that causes dry itchy skin and flare-ups that come back again and again. Kalonji helps because it reduces swelling, kills bad bacteria and fungi. Using Kalonji oil regularly can stop itching, lower redness and stop infections that happen when skin is broken. It also helps keep the skin moist and fixes the skin barrier which is often weak in eczema.

These healing effects show that *Nigella sativa* works in many ways to help skin problems. Whether used by itself or with other medicines, Kalonji is a good natural choice to help many skin conditions, following Unani medicine ideas.

#### **4. DISCUSSION**

*Nigella sativa* (Kalonji) has been important in Unani medicine for a long time especially for treating many skin problems. Famous Unani scholars like Ibn Sina (Avicenna) and Al-Razi wrote about using it for diseases like vitiligo (Bars), eczema (Saafa), boils (Judri) and psoriasis (Daul Sadf). They often said it helps clean the body and balance humors.

These old ideas match well with what modern science has found about Kalonji's effects.

In Unani medicine, Kalonji's healing power comes from its hot and dry temperament (Mizaj Haar Yabis). This helps break down bad humors (Madda Fāsida) and remove waste from the body. It also works as Mohallil-e-Awram (anti-inflammatory), Musakkin-e-Aujaa (pain reliever) and Jali (detergent/cleansing) which now science explains better.

Modern studies especially about thymoquinone, support these traditional uses. Thymoquinone helps stop harmful inflammation, acts as an antioxidant, fights germs and changes the immune system in a good way. For example it lowers pro-inflammatory cytokines and reduces oxidative stress which helps in skin problems like psoriasis and eczema. Its germ-fighting powers also help treat acne and fungal infections.

Also tests on animals and people show Kalonji helps wounds heal and skin get better. This agrees with Unani recipes where Kalonji is mixed with other herbs (Murakkabat) to make treatment stronger and keep balance.

Even with good results, some limits remain. Many studies are small, with different doses or ways of making Kalonji products. We need more research that matches traditional recipes with modern medical methods. This will help prove Kalonji's safety and effectiveness clearly.

In short, the old Unani knowledge about *Nigella sativa* is now supported by modern science, making it a good choice for combining traditional and modern skin treatments.

#### **5. CONCLUSION**

Kalonji (*Nigella sativa*) is still showing strong healing power in both traditional Unani medicine and modern medical science especially for skin problems. Its active parts—especially thymoquinone—help the skin in many ways, like reducing swelling (anti-inflammatory), fighting germs (antimicrobial), protecting from damage (antioxidant) and helping the skin heal and grow (regenerative actions).

This review shows how old Unani treatments and new scientific proof come together. Skin conditions like eczema, psoriasis, acne vulgaris and vitiligo have been treated with Kalonji in traditional medicine for a long time and now modern research is starting to confirm its benefits.

Even though Kalonji has been used for a long time, to use it more in science-based skin care, we need better clinical



trials, consistent extract preparations and teamwork between Unani doctors and medical researchers.

Also its safety, correct doses and when not to use it (contraindications) should be clearly known to help it become accepted in regular medicine.

In short, Kalonji has great promise as a natural medicine that works on many skin problems. Mixing its old uses with modern research can help create new, complete treatments for skin health.

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