



# **GUL-E-SURKH as a potent Hepatoprotective and Liver tonic.**

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## **INTRODUCTION.**

Liver is the largest gland of the body. It has many functions like secretion of digestive juices, bile, metabolism of carbohydrates, fats and protein, removal of toxins etc.

In the UNANI system of medicine, the liver is given great importance because it is considered a source of innate immunity [hararat-e- ghariziya] of the body. It's a prime organ for quwat-e-tabai. It's an organ for the production of akhlat [humour].

According to famous Unani physician IBN-E-SINA, the Human body has three states viz health, disease and intermediate state.

They have three sets of causes which are predisposing, constitutional and external. Out of these, constitutional and predisposing factors depend upon body's structure and temperament.

IBN-E-RUSHD [1126-1198 AD] mention that temperament of organ remains normal when the blood which provide nutrition to the organ remains normal, this is only possible when digestive organ is normal because after maturation of chylos its conversion into humour take place in liver.

Derangement in the temperament of liver causes derangement in akhlat formation which in turn results in the accumulation of mawad-e fasida [toxins] in our body.

In UNANI LITERATURE four vital power of the body

QUWAT-E-JAZIBA [POWER OF ABSORPTION]

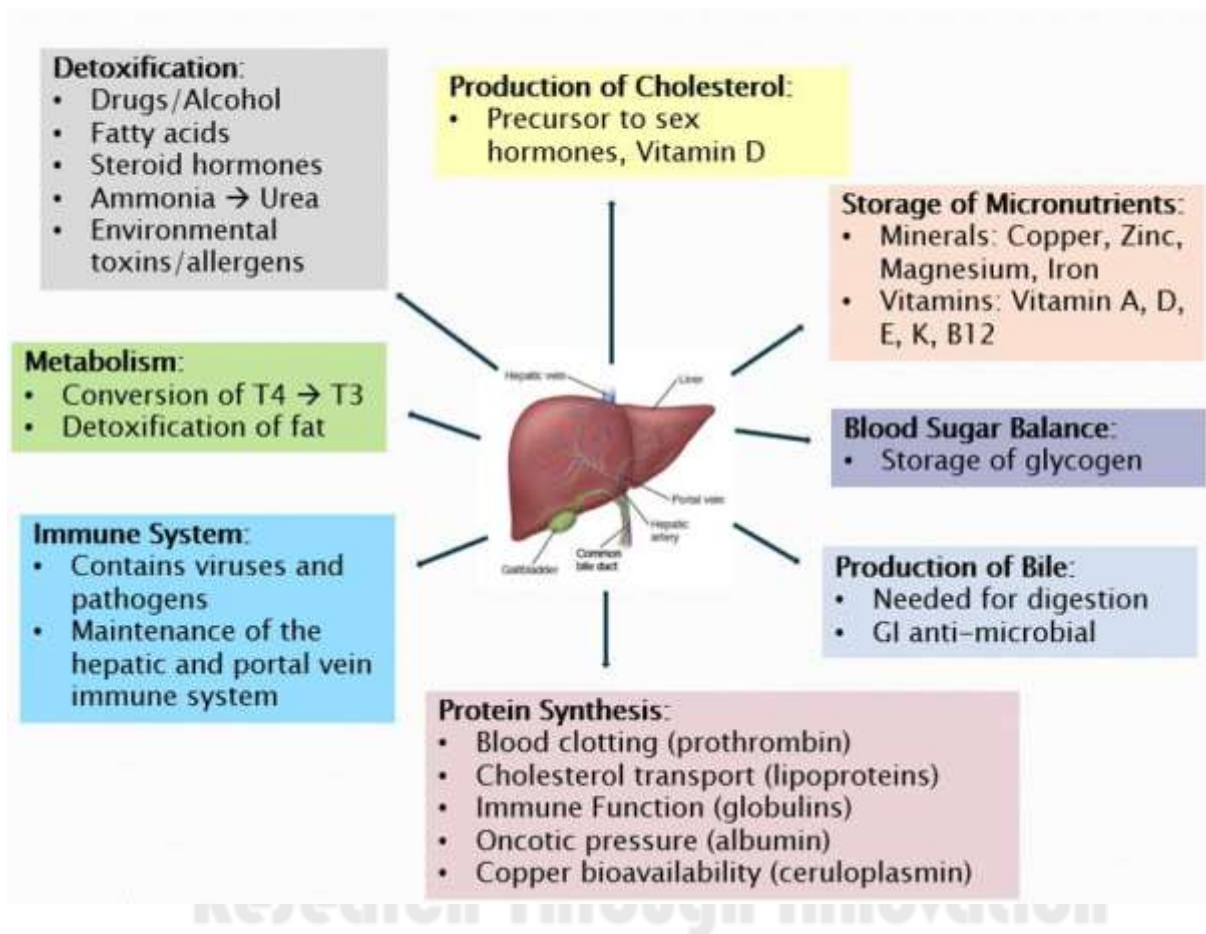
QUWAT-E-HAZIMA [POWER OF DIGESTION]

QUWAT-E-MASIKA [POWER OF RETENTION]

QUWAT-E-DAFIYA [POWER OF EXCRETION]

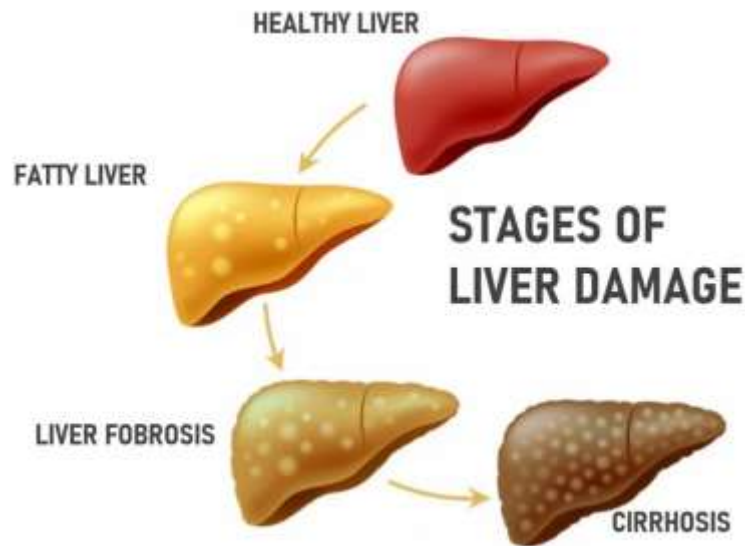
If there is any alteration in the normal quwa of jigar [liver], it will ultimately become the reason for zoaf-e-kabid.

## Functions of the Liver



As per Hakeem Mohammed Kabeer-ud-deen, Zoaf-e-kabid can be seen in three forms

1. Alteration in the temperament of liver or alteration of whole body temperament
2. Alteration in the temperament of associated organs
3. Diseases of the liver



Rose [*Rosa damascena*] is one of the most commonly used ornamental flowers across the globe. It is considered as king of flowers and used since ancient times for many purposes of treatment.

It has various pharmacological properties as it acts as an analgesic, anti-inflammatory, antioxidant, antibiotic, and anti-microbial in nature.

IBN-E-SINA [980-1037] in CANON OF MEDICINE [Al Qanoon Fit-Tib] describe that alteration in liver temperament causes its weakness. He also claims that GUL-E- SURKH is one of the finest drugs for liver ailments.

In Unani literature Rose, Rose water, and Rose oil were given a lot of importance. It helps to open the obstruction of the liver by excessive heat and helps in the removal of toxins apart from the fact that it also acts as hepato-gastro tonic.

It has analgesic and antipyretic action as well. Local paste of gule surkh helps to relieve inflammation, however, RAZI suggested avoiding its uses in persons with hot temperaments, gulkand can be used in such patients.

The dried petal of Gul-e-Surkh can be used on an open wound, it helps it to heal faster because of its QABIZ and DAF-E-UFOONAT properties. Externally it is also used in NUTOOL in cases of SUDAA [headache] and can also be used in AROMA THERAPY for enhancement of mood. When used internally it provides sufficient strength to the liver

and stomach, protecting it from harmful toxins. it can also be used along with dast awar [purgative] medicine for the removal of bile and phlegm and in this way helps in kulli istefragh-e badan.

Nutool of gul-e-surkh with vinegar not only helps in headache and mood enhancement but also used as brain tonic. In oral use it can be helpful in safraweeh dast [bilious dysentery], iltehab-e-meda [gastritis], zoaf-e-jigar[ liver weakness], muqawwi aam[ general tonic]

According to Desqaridoos dried petal of rose can be used as muqawwi [general tonic] mufarraah [refrigerant] and anti-inflammatory.

Whereas hakeem Kabir says the fresh flower of a rose act as cardiotoxic [muqawwi-qalb] and its inhalation results in mood enhancement, however, it should be avoided in patient with low immunity as it can result in cold and coryza. He also simulated that ROSE WATER can be best used for patients suffering from conjunctivitis, and rose oil is useful in cases of otalgia.

#### Vernacular names:

English – Damascus rose

Hindi – Gulab

Urdu – Gulab

Persian – Gul-e-surkh

Tamil – Irosa

Telugu - Irosa

Arabic – Ward-e-ahmer

#### Taxonomy:

Kingdom – Plantae

Phylum – Magnoliophyta



Class – Magnoliopsida

Family – Rosaceae

Genus – Rosa

Species – Rosa damascene

### Description

Gul-e-surkh is the Persian name for Rose, commonly known as king of the flower. It's a shrub which can reach heights up to 6 ft. or 2.2 m approximately. Leaves are pinnate usually 5 rarely 7 leaflets. Macroscopically consists of sepals, petals and stamens attached to the pedicle with the thalamus. Currently, more than 200 species of rose have been identified. These are found in different colours like red, pink, and white. These are cultivated in various places like Arab, Ancient Greek, Roman, Egypt etc. It was also known as Gul-e-Mohammadi in Arab.

These are commonly cultivated to have their extraction of essential oils which in turn can be used for various dermatological and beauty aspects apart from medicines.

Avicenna who is famous Unani scholar was first to introduce Rose water.



Part used

Flower, Flower bud, Petals, Rose oil, Rose water.

Mizaj [Temperament] :-

Murakkab-ul-quwa

Muslah [Corrective] :-

Anisoon and honey

Badal [Alternative] :-

Banafsha

ACTION –

Mufarreh, Muqawwi Aza-e-Raisa, Muqawwi-e-Badan, Dafa-e-Qabz, Mohallil-e-Auram, Musakkin.

THERAPEUTIC USES –

Qabz [constipation], Ashob-e-Chashm, Warm-e-Jigar [Liver Ailment], Zoaf-e-Jigar [Liver weakness], Zoaf-e-Qalb, Khafqan [Palpitation].

DOSE – 3-5g

IMPORTANT FORMULATION –

Arq-e-Gulab, Majoon Dabid-ul-Ward, Gulqand.<sup>10</sup>

Pharmacological Actions-

Appetizer [ Mushtahi]

Carminative [ Kasir-e-riyah]

Astringent [Qabiz]

Cardio tonic [Muqawwi Qalb]

Laxative [Mulayyan]

Expectorant [Munaffis]

Antipyretic [Dafa-e-Humma]

Analgesic [Musakkin]

Anti- inflammatory [Mohallil-e-auram]

Exhilarant [Muffarrah]

### Pharmacological Studies-

Rosa damascena Mill has many chemical constituents which has many beneficial pharmacological properties, these chemical constituents are phenyl ethyl alcohol, methanol, citronellol, geraniol, hydrosol.

Various clinical and pre-clinical trials has done to prove its action in many pathological conditions. Some of them are listed below.

### Effect of acetaminophen induced oxidative stress-

A study was conducted to examine the hepatoprotective nature of rose at different oral dose of acetaminophen like 250mg/500mg/1gm per kg.

It was seen that the oxidative stress caused by acetaminophen results in alteration of biochemical markers. Values of serum transaminase, lactate dehydrogenase, bilirubin, urea were increased. These values were decreased significantly after using Rose extract.

### Antibiotic and Antimicrobial properties-

The essential oil of gul-e-surkh exhibit antibiotics and antimicrobial properties naturally. As per studies it was found effective against 15 species of bacteria like Enterococcus faecalis, E Coli, Klebsiella, Salmonella typhimurium, Salmonella enteritidis, Pseudomonas etc.

### Analgesic and Anti-inflammatory action.

They also act as analgesic and exhibit anti-inflammatory actions which was proved in rats earlier where inflammation and pain were induced in them experimentally to know

the significant effect of *Rosa damascena*. Result of experiment have shown that ethanol extract of rose has analgesic properties.

#### Anti-diabetic effect and hepato-toxicity with acarbose use-

A study was conducted with an aim to know the efficacy of gul-e-surkh on diabetes. In the experiment their extract were used in mice which later on revealed that methanol extract of this plant lowers the blood glucose level in body similar to alpha glucosidase inhibitors acarbose.

On the other hand it was seen that in several clinical trials, serum enzyme level was elevated with use of acarbose therapy. All these elevations were asymptomatic resolves with stopping of therapy. Liver injury were noted to begin in 2 to 8 months after beginning of acarbose therapy and was associated with hepatocellular pattern of enzyme elevation. In comparison to this methanol extract decreases blood glucose level in dose dependant manner without any liver injury.

#### Non-alcoholic fatty liver disease.

It's a form of chronic liver disease. A wide range of world population suffers from this. However *Rosa damascene* is traditionally used in such cases.

Animal model were used to see its effect where high fat diet were introduced in mice which later on revealed increased lipid level in plasma like increased LDL, decreased HDL and fat accumulation in liver. Gul-e-surkh significantly reduced overall fats

Conflict Of Interest – nil

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## Conclusion-

We are using Rosa damascena mill since ancient time. Numerous experiments were also performed which revealed its hepato-protective nature apart from its significant action as anti-oxidant, analgesic, anti-inflammatory, laxative, anti-biotic, anti-cancerous and many more without having any toxic effect on vital organ of the body.

There are many compound formulation of gul-e-surkh which are available in market with various names like majoon dabidul ward, safoof dabidul ward, arq-e-gulab, gulkand, raughan-e-gul, jawarish zarishk, itrifal shahitra, majoon ushba, safoof mulayyan, majoon musaffi khas, sharbat e ahmed shahi, etc

These are used for various purposes ranging from blood purifier [musaffi dam] stomachic[muqawwi meda], hepato-tonic[ muqawwi jigar] to analgesic[ musakkin-e-alam], antiseptic[ dafi-e-taffun], tonic to vital organ [muqawwi aza-e-raisa] and many more.

Many clinical and pre-clinical trials have already performed for these formulation proving their efficacy in various trials. However further research would also be fruitful.

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