

## PHARMACOLOGICAL PROPERTIES OF ZIZIOPHOR PLANT

**Shamsiyeva Tursunoy Toshpo'lotovna**

*Bukhara State Medical Institute, Bukhara, Republic of Uzbekistan*

*electronic mail :tursunoy8588@gmail.com, tel . +998973686644*

**Abstract:** *This article discusses the indications for the use of diuretics in modern use and their use in medicine.*

**Keywords:** *Ziziophora , Antiviral effect, Antibacterial effect, Rosmarinic acid, caffeic acid*

### INTRODUCTION:

Ziziophora , a plant in the Lamiaceae family , is also known as sweet thyme or clover thyme. This plant is mainly found in Central Asia, Southern Europe and Central Asia. Ziziophora has been widely used in traditional medicine, and modern scientific research reveals its pharmacological properties. This article discusses the main pharmacological properties of the Ziziophora plant .

Chemical composition :

The chemical composition of the Ziziophora plant is rich and includes the following main components:

Essential oils: Thymol, carvacrol , linalool , pinene and other essential oils.

Flavonoids: Apigenin, luteolin and other flavonoids.

Phenolic compounds: Rosmarinic acid, caffeic acid and other phenolic compounds.

Organic acids: Ascorbic acid and other organic acids.

Pharmacological properties

Antibacterial action

Essential oils such as thymol and carvacrol have strong antibacterial effects. Research shows that these substances are effective against gram-positive and gram-negative bacteria. Therefore, Zysiophora extracts can be used as a natural antibacterial agent to treat infections.

Antiviral effect: Zysiophora extracts are active against some viruses. Flavonoids and phenolic compounds can inhibit the proliferation of viruses, which helps prevent viral infections.

Antifungal : Zysiophora essential oils inhibit the growth of fungi, making this plant effective for treating fungal infections.

Anti-inflammatory effect: Flavonoids and phenolic compounds contained in Ziziophora have an anti-inflammatory effect. These substances inhibit prostaglandin synthesis, reducing inflammation. Therefore, Ziziophora may be useful in the treatment of arthritis, rheumatism and other inflammatory diseases.

Antioxidant Action: Flavonoids and phenolic compounds of Ziziophora have strong antioxidant properties. These substances protect cells from oxidative stress, slowing down the aging process and preventing chronic diseases.

**Antispasmodic effect:** Essential oils of *Ziziphora* have an antispasmodic effect, that is, they eliminate muscle spasms. This property helps in the treatment of diseases of the gastrointestinal tract and respiratory tract.

#### Sedative effect

Essential oils and flavonoids of *Ziziphora* have a sedative, that is, calming effect. This property can help with stress, anxiety and insomnia. Research shows that *Zysiphora* extracts affect the central nervous system, providing a calming effect and improving sleep quality.

**Antihypertensive effect:** Some components of *Zysiphora* help lower blood pressure. This antihypertensive effect is carried out mainly due to flavonoids and essential oils. Studies have shown that *Ziziphora* extracts help dilate blood vessels and lower heart rate, which helps manage high blood pressure.

**Hepatoprotective effect:** *Ziziofora* has hepatoprotective , that is, protecting the liver, effect. Phenolic compounds and antioxidants protect liver cells from damage caused by free radicals and toxins. This property may be useful in the prevention and treatment of liver diseases such as hepatitis and cirrhosis.

**Antispasmodic effect:** *Zysiphora* essential oils have an antispasmodic effect, that is, they help eliminate muscle spasms. This property is used to treat spasms of the gastrointestinal and respiratory tract. For example, tea or tinctures from *Ziziphora* help reduce stomach pain and colic.

**Anti-diabetic effect:** *Ziziphora* helps lower blood sugar levels. Flavonoids and phenolic compounds have antidiabetic effects by controlling blood glucose levels and increasing insulin sensitivity. This property may help in managing type 2 diabetes.

**Immunomodulatory effect:** *Ziziofora* has an immunomodulatory effect, that is, it strengthens the immune system. Saponins and flavonoids help regulate the immune system, which supports the body in fighting infections and diseases. This property may be beneficial in improving overall health and increasing disease resistance.

**Areas of application:** Traditional medicine: In traditional medicine, *Ziziphora* is used to treat diseases of the gastrointestinal tract, respiratory tract infections and inflammatory diseases.

**Pharmaceuticals:** Extracts and essential oils of *Zysiphora* can be used in the pharmaceutical industry as part of antibacterial, antiviral and anti-inflammatory drugs.

**Cosmetology:** Due to its antioxidant and anti-inflammatory properties, *Ziziphora* extracts are used in skin care products.

#### Conclusion

*Ziziphora* plant has many pharmacological properties, such as antibacterial, antiviral, antifungal, anti-inflammatory, antioxidant and antispasmodic effects. These properties can be widely used in modern medicine. Studying the beneficial properties of this plant and using it in the production of medicines may lead to new advances in health care in the future.

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