



## AGAINST CONDITIONAL PATHOGENIC BACTERIA OF AHILLEA SANTOLINA (AHILLEA SANTOLINA) PLANT STUDY OF MEDICINAL PROPERTIES

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Article history:	Abstract:
<b>Received:</b> February 8 <sup>th</sup> 2022 <b>Accepted:</b> March 8 <sup>th</sup> 2022 <b>Published:</b> April 24 <sup>th</sup> 2022	The chemical composition and medicinal properties of the common yarrow plant ( <i>Achillea Santolina</i> ) were studied, and the determination of its effect on opportunistic bacteria that cause bird diseases, which are important in veterinary practice, was also analyzed.

**Keywords:** : Achilles Santolina plant, poultry, conditionally pathogenic bacteria, infectious diseases, immunobiological processes, immunoprophylaxis, immune stress, phytotherapy.

### RELEVANCE OF THE TOPIC.

In recent years, special attention has been paid in our country to the protection, cultivation, storage, processing and rational use of medicinal plants.

In our country, a number of resolutions and regulations in this area, including the Decree of the President of the Republic of Uzbekistan dated April 10, 2020 No. PP-4670 "On measures for the protection, cultivation, processing and rational use of available resources of wild medicinal plants." The decision was made [1].

This is especially important in medicine in the treatment and prevention of various human diseases.

The use of medicinal plants for phytotherapeutic purposes is also important in veterinary practice.

Not only pathogenic microorganisms negatively affect the newborn organism, but also conditionally pathogenic microorganisms act as pathogens of infectious diseases when the organism's resistance decreases.

About 100 species of conditionally pathogenic microorganisms on the etiological factor of modern diseases: *Staphylococcus*, *Streptococcus*, *Escherichia*, *Escherichia*, *Klebsiella*, *Serratia*, *Proteus*, *Pseudomonas*, *Haemophilus*, *Mycobacterium*, *Mycoplasma*, *Candida*, *Pneumocysta* and others.

In practice, the most common conditionally pathogenic microorganisms include bacteria such as *colibacteria*, *salmonella*, *pasterella*, *pseudomonas*, *staphylococci*, *streptococci*. Under certain conditions, these bacteria cause severe and life-threatening infectious diseases [4].

Diseases caused by conditionally pathogenic bacteria in birds are found in all countries of the world.

Many scientists have studied diseases caused by conditionally pathogenic bacteria in birds,

developed various scientific hypotheses and treatment regimens, preventive measures [2,3,4].

However, problems with conditionally pathogenic bacteria and their properties are poorly studied in terms of population and the internal mechanisms of immunobiological processes against them in the body are not fully understood [2,4].

Today, poultry farming in our country is becoming an industrial sector and is developing rapidly. Nevertheless, the prevention and control of infectious diseases remains a pressing issue.

### THE PURPOSE OF THE STUDY.

Study of the chemical composition of the plant *Achillea Santolina* (common butterbur) and its medicinal properties against diseases caused by conditionally pathogenic bacteria in egg-laying birds.

### RESEARCH MATERIALS AND METHODS.

The research was carried out on egg-laying poultry in the Poyarik district of Samarkand region in the conditions of personal subsidiary farms.

To do this, first of all, the epizootiological status and anamnestic data of the population's personal subsidiary farms are studied. Laboratory tests are then performed to determine the effect of the *Achillea Santolina* plant against diseases caused by conditionally pathogenic bacteria in birds.

### RESEARCH RESULTS AND THEIR ANALYSIS.

Poultry farming is one of the most important sectors of animal husbandry, and great attention is paid to its development in our country.

Nowadays, poultry breeding in poultry farms, all categories of farms and personal subsidiary farms of the population, from which poultry and eggs are grown. As a result, poultry farming is developing from

year to year and occupies an important place in the national economy.

In our view, immunoprophylactic measures in poultry are focused only on the prevention of diseases caused by viruses, and the prevention of bacterial infections is neglected.

This is because vaccines for the prevention of bacterial infections, including immunoprophylaxis of salmonellosis and colibacteriosis in poultry farms, do not always give the expected results.

Therefore, the fact that the current immunoprophylactic system in poultry causes immunosuppression, the irrational use of the phenomenon of immunological resonance implies the use of natural laws in the preparation of phytotherapeutic drugs and their widespread use in veterinary practice to ensure population resistance to bacterial infections.



Therefore, we aimed to study its effect against diseases caused by conditionally pathogenic bacteria in birds, using the chemical composition and specific properties of the plant *Achillea Santolina*, which is widely used in folk medicine.

From the study of the chemical composition and medicinal properties of the plant *Achillea Santolina*, we have identified the following.

***Achillea Santolina* L.** Ancient authors associate the name of the plant with the name of Achilles, the hero of the Trojan War.

In fact, the name of the series means "Achilleros" in Greek. Achilles allegedly treated the wound with this plant.

Some people interpret the name of the plant in Greek as "chilos" - green fodder or "chiloi" - a

thousand, and "millefolium" in Latin "mille" - a thousand, "folium" - a leaf, ie a sign that the leaf of the plant has been cut too much (a thousand times).

**Distribution.** *Achillea millifolium* is an annual herbaceous wild plant that grows in all mid-latitudes of Eurasia and has also been cultivated in medical pharmacy. *Boymodaron* belongs to the *Qoqiotdoshlar* family, and 5 species of *boymodaron* grow in Uzbekistan. In Tashkent, Samarkand, Fergana, Andijan and Surkhandarya regions it grows on fine-grained and gravelly mountain slopes, hills, gardens, fields and roadsides.

**Botanical definition.** *Achillea Santolina* is a perennial herb with a distinctive odor, reaching up to 80 cm in height. Almost unbranched, slender roots have a rhizome that produces underground twigs.

The stems of this plant grow straight, usually branched only near the inflorescence, slightly angular. The leaves are mostly lanceolate, hairy, the lower leaves are banded, the upper part of the stem is slightly small, almost bandless.

The flowers are white, sometimes slightly pink, small. It emerges from the tips of the stems and branches and forms basket-shaped inflorescences. The fruit is elongated, silvery-gray in color, with flat seeds. It blooms from June to September, the fruits begin to ripen in August.

**Medicinal products:** a) thyme herb,  
b) leaves of thyme,  
c) the flowers of the birch.

**Chemical composition.** The leaves and flowers of thyme contain essential oil, alkaloids, carotene, significant amounts of vitamin C, vitamin K1, a small amount of choline, flavonoids, asparagine, acotinate and other acids, resins, bitter substances, additives, the fruits contain fatty oils.

**Effect and use.** In folk medicine, decoctions made from yarrow and flowers are recommended as a hemostatic, wound healing, antipyretic, use in tuberculosis, asthma, as an appetite suppressant, diuretic and hemostatic agent.

Abu Ali ibn Sina used decoctions of this herb in asthma, radiculitis, and urinary stones.

In modern medicine, galenic preparations made from the thyme plant have been found to eliminate the contraction of smooth muscles. Therefore, the pain decreases and the excretion of grass and urine increases.

These properties of the plant depend on the flavanoids and essential oils it contains. Due to the presence of bitter substances in it, the secretion of



gastric juice increases and abdominal relaxation decreases.

Due to the presence of nutrients, essential oils and other substances in this plant, it has anti-inflammatory, anti-allergic, antibacterial effect, helps wounds heal faster.

Tincture of yarrow slows heart rate and lowers blood pressure has been found in animal experiments.

Infusions and liquid extracts of yarrow are prescribed as an appetite suppressant in gastric ulcers, gastritis, anti-inflammatory in diseases of the urinary tract, as well as a hemostatic agent.

Hamazulene and achillein glucoside-alkaloids from the biologically active substances in the flowers, leaves and twigs of the plant have been found to be the leading substances that provide the anti-hemorrhagic effect of dye.

Therefore, using the unique medicinal properties of the plant *Achillea Santolina*, we studied the effect of the herb made from it.

In our study of egg-laying birds, we found that the *Achillea Santolina* plant has a unique medicinal property in stopping blood flow and increasing vascular strength in some diseases caused by conditionally pathogenic bacteria, including salmonellosis.

We also aim to continue our research on the unique medicinal properties of the common herb *Achillea Santolina*.

#### **CONCLUSIONS.**

1. The common herb *Achillea Santolina* is a natural herb with unique medicinal properties.

2. The herb of the common herb, *Achillea Santolina*, has the property of stopping blood flow and increasing vascular strength in some diseases caused by conditionally pathogenic bacteria in egg-laying birds.

3. Taking into account such medicinal properties of the thyme plant, it is expedient to prepare phytotherapeutic drugs from them and widely use them in veterinary practice against conditionally pathogenic bacteria.

#### **LIST OF USED LITERATURE**

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