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Importance of CALLISIA FRAGRANS in MEDICINE, PHARMACEUTICAL and Other Fields

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Abstract: This article gives information about morphological structure, medicinal properties, use in medicine, chemical composition of Callisia fragrans L. plant. Literary information of foreign scientists about the chemical composition of the plant, the biological effect of its raw materials was analyzed. The main pharmacological properties of the medicinal raw material Callisia fragrans L. are also described. Information about the use of this medicinal plant in folk medicine of different countries of the world has been collected. Interestingly, this plant is a promising plant for use in official medicine in the future.

Keywords: Valuable traditional plant, indoor ornamental, Basketplant leaf extract, syrup, balm, oil, macro and micronutrients in leaves, scientific research, rare raw material.

I. INTRODUCTION.

One of the high efficiency and cheap pharmaceutical methods is the development of folk medicine. Callisia has a wide range of healing properties recognized in folk medicine. The leaves are large, the surface of the leaves is dark and green. Callisia fragrans(Basketplant) has been recognized as a valuable traditional plant with various medicinal properties. This plant is a widely cultivated, ornamental, perennial herb. It can be grown as a pot or basket plant, or as a ground cover in tropical or subtropical climates. Callisia fragrans is endemic to Mexico and occurs naturally in the West Indies, parts of the United States, and a few other places. It has been cultivated as an indoor ornamental in many countries since the early 1900s. However, it can also be grown outdoors in moist, fertile soil in warmer climates. The plant likes partially shaded areas.

II. METHODS.

Callisia fragrans is a wonderful herb in folk medicine with many healing properties for burns, toothaches, cancers and arthritis. Callisia fragrans, popularly known as the basket plant, has been introduced into traditional medicine to treat a variety of ailments including cardiovascular disease, burns, and pre-gastric cancer. Folk medicine is known for its beneficial properties. Therefore, this plant is widely used as an alternative to traditional medicine. Decoctions, infusions, tinctures, oils, and ointments are prepared from callisia. As a medicinal plant, it has a positive effect on the body externally and internally [1].

Reno-vascular hypertensive rats were treated with C. fragrans leaf extract (100 and 500 mg/kg; p.o.) and the reference drug captopril (20 mg/kg; p.o.) for 4 weeks. Blood pressure and heart rate were recorded using a tail cuff. Heart weight, left ventricular wall thickness, serum

creatinine and urea levels were measured. A spectrophotometric assay was used to analyze the angiotensin-converting enzyme (ACE) inhibitory activity of the extract and the reference drug. The total volume and concentration of sodium, potassium and chloride in urine samples were evaluated[2].

The presence of amino acids in the raw material has been proven. Aromatic callus is the starting material for biosynthesis. There are a number of physiologically active compounds: auxins, enzymes, alkaloids, polyphenols, vitamins, etc. A wide spectrum of pharmacological action also provides trace elements and other substances. It has the property of easy assimilation [3].

III. RESULTS.

It is also grown as a medicinal plant in Russia (see http://callisia.org./). Cultivated Callisia Fragrans. (Picture 1)[4]

Syrup from plant leaves is used for cough: ARVI, bronchitis and other cold diseases [5].

The basket plant's name is a reference to the basket-shaped base of its flowers. Source: JMK

Skin diseases are treated with oil from Callisia fragrans and also used for rubbing with arthrosis acne, arthritis, skin diseases and for all types of massage Zhu [6].

Balsam (prepared from alcohol tincture of plants) for applies to coronary artery disease, hypertension, atherosclerosis, varicose veins, polyarthritis, diabetes, gastric and duodenal ulcers colon, prostate adenoma.

Kallisia ointment is used to treat wounds those places, frostbite, trophic ulcers and others skin diseases [7].

Macro and microelements In leaves:

- Potassium (15000) 16000
- Calcium (77000) 55000
- Manganese (48) 82

- Iron (210) 250
- Cobalt (3.0) 1.5
- Nickel (1.5) 0.5
- Copper (8.5) 7.0
- Zinc (32.0) 25.0
- Chromium (35.5) 40.0
- Rubidium (6.5) 4.0
- Strontium (312.0) 150.0
- Lead (1.5) 2.0
- Vanadium 4.5

(in μg per dry weight) according to the literature (and according to our experiments) [8, 9]

The chemical composition of Callisia fragrans is noteworthy for its use in the food industry. The wealth of biologically active substances and the favorable ratio of components, the antimicrobial and antifungal effects of the juice or alcohol obtained from it, make the plant a valuable raw material for use in food production, especially in the production of functional compositions and products for therapeutic and preventive purposes. Because the therapeutic effect of its juice is very strong, it cannot be used in vitro in high doses.

IV. DISCUSSION.

The valuable buds and leaves of Callisia fragrans can be successfully used as preservatives and are biologically active additives in the production of functional food products. Research in this regard is ongoing. In conclusion, it should be noted that some materials related to the golden mustache were reported in the form of abstracts at international conferences. Mogilev and Kiev [10, 11, 12].

Indeed, the scientific research is effective, that is, the researches of the Scientists conducted on Callisia Fragrans are revealing all the pharmaceutical and medicinal properties in it. At the same time, the antibacterial and antifungal effect of its components to extend the shelf life of products, it prioritizes its use as a preservative.

It is a raw material not only for the pharmaceutical and food industry, but also for other industries.

V. CONCLUSION.

Based on the above materials, the following conclusion can be made. According to the chemical composition of Callisia fragrans, its use in the food industry, its main importance in medicine and pharmaceuticals were analyzed. Sufficient information has been shared on this. Researches and new researches of scientists were discussed in detail.

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