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TARAXACUM OFFICINALE L. IMPORTANCE OF THE PLANT IN FOLK MEDICINE AND MEDICAL USE

Sulaymonova N.
Tokhtaboyev N. X.
(ORCID: 0000-0003-3841-2660),

Tukhtaboyeva F. M.
(ORCID:0000-0003-4953-5252)
e-mail: notu.nt@gmail.com
Andijan State University, Andijan city, Uzbekistan.
Tel: +998902179145

Abstract
This article analyzes the importance of Taraxacum officinale L. (dandelion) in folk medicine and the directions of its use in medicine. Dandelion has long been used as a diuretic, blood purifier, and a means of improving the functioning of the liver and biliary tract. According to the results of modern research, it contains phenolic compounds, flavonoids, triterpenes, inulin, vitamins (A, C, E) and mineral elements (K, Ca, Fe, Mg), which have antioxidant, anti-inflammatory, hepatoprotective and immunomodulatory effects. In medicine, extracts of Taraxacum officinale are widely used in the form of phytopreparations, biologically active additives, tonic and detoxifying syrups, and tea mixtures. The results of the study confirm that this plant is an important scientific basis for the development of a new generation of phytopreparations based on natural, safe and highly biologically effective components.

Keywords: Medicinal herb, folk medicine, medicine, biologically active substance, flavonoid, inulin, hepatoprotector, antioxidant, phytopreparation.

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Introduction

In recent years, there has been a growing interest in improving human health, preventing chronic diseases, and creating natural remedies. The side effects and allergic reactions observed as a result of long-term use of synthetic drugs have made the scientific study of medicinal plants widely used in folk medicine a pressing issue.

Taraxacum officinale L.(medicinal herb) The plant has long played an important role in folk medicine. Infusions, decoctions and juices made from the roots, leaves and flowers of the plant have been used as a diuretic, liver cleanser, choleretic, appetite stimulant and blood circulation improver. The inulin, flavonoids, triterpenes, phenolic compounds, vitamins (A, C, E) and mineral elements (K, Ca, Fe, Mg) contained in the plant give the plant a multifaceted biological activity.

Modern pharmaceutical and biomedical research shows that Taraxacum officinale L. extracts have antioxidant, anti-inflammatory, hepatoprotective, diuretic, and immunomodulatory effects, and are effective in detoxifying the body, supporting liver function, and reducing oxidative stress.

The widespread use of this plant, its ecological purity and its potential as a renewable natural resource make it a promising source for use in the pharmaceutical, food and phytotherapy sectors. Therefore, the scientific study of the importance of Taraxacum officinale L. in folk medicine and its application in pharmaceutical practice is one of the important directions of modern phytotherapy.

Methods

In the studying the plant to identify biologically active substances, phytochemical analysis methods were used: UV-Vis spectrophotometry, HPLC, GC-MS, as well as pharmacological analysis methods for antioxidant, diuretic, and hepatoprotective activity.

These methods The scientific basis for the analysis of the importance of the Taraxacum officinale L. (dandelion) plant in folk medicine and the identification of its pharmaceutical application possibilities, as well as the mechanisms of

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beneficial effects of biologically active substances contained in the plant on the human body, was used in the research, and the following tasks were performed: Studying the forms of application of the Taraxacum officinale L. plant in folk medicine (infusion, decoction, syrup, tea, etc.); Analysis of the chemical properties of the main biologically active components of the plant - flavonoids, triterpenes, phenolic compounds, inulin, vitamins (A, C, E) and minerals; Analysis of the antioxidant, hepatoprotective, anti-inflammatory and diuretic activities of the medicinal plant based on modern scientific sources; Studying the structural and pharmacological properties of modern phytopreparations and biologically active additives developed on the basis of the plant. The tasks of substantiating the prospects for creating a new generation of pharmaceutical agents based on Taraxacum officinale L. were fulfilled.

Results and Discussion

During the studyThe role of the plant Taraxacum officinale L. (medicinal dandelion) in folk medicine and its pharmaceutical value have been widely analyzed. Modern phytochemical studies have shown that dandelion contains flavonoids, phenolic compounds, triterpenes, inulin, vitamins (A, C, E) and minerals (K, Ca, Fe, Mg, Zn) (Table 1).

1-**table** Chemical groups of the main biologically active substances in the plant Taraxacum officinale L.

No.	Substance group	Main representatives	Biological activity
1	Flavonoids	Luteolin, Apigenin, Isoquercitrin	Antioxidant, anti-inflammatory
2	Phenolic compounds	Caffeic acid, Ferulic acid	Neutralizes free radicals
3	Triterpenes	Taraxasterol, β-amyrin	Hepatoprotector, immunomodulator
4	Inulin	Polysaccharide	Prebiotic, lowers blood glucose
5	Vitamins	A, C, E	Antioxidant, detoxifier
6	Minerals	K, Ca, Fe, Mg, Zn	Maintains electrolyte balance, participates in hemopoiesis

The synergistic effect of these components explains the high effectiveness of medicinal yarrow in folk medicine.

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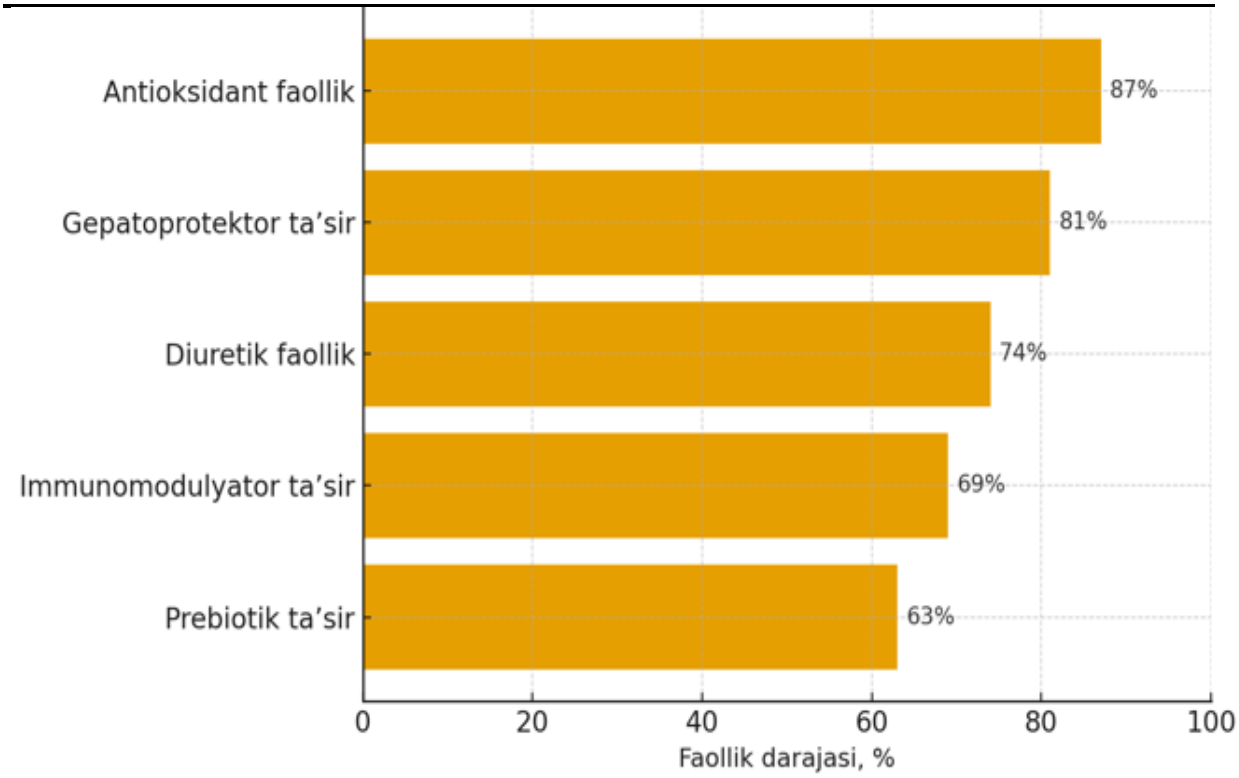

Diagram 1. Main biological activity types (%) of Taraxacum officinale L. extract

As can be seen from the diagram, the plant extract is particularly characterized by antioxidant and hepatoprotective activity, which is important in restoring liver function and cleansing the body of toxins (Diagram 1).

Table 2 Some herbal preparations made from Taraxacum officinale L.

No.	Drug name	Country of manufacture	Main effect	Scope of application
1	Dandelion Root Extract	USA	Hepatoprotector, detoxifier	Liver, stomach, bile ducts
2	Hepatophyte tea blend	Russia	Cholesterol, mild diuretic	Liver and kidney function
3	Organic Dandelion Tea	Germany	Antioxidant, immunostimulant	As a prophylactic tea
4	Taraxol syrup	India	Blood purifier, tonic	Hormonal imbalance, general condition

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In the pharmaceutical industry, extracts of medicinal ginger are widely used in natural preparations. Most of them are complex agents based on phytocomponents (Table 2).

As a result of the conducted research, it was scientifically confirmed that it is not for nothing that the plant Taraxacum officinale L. (medicinal dandelion) has been widely used in folk medicine since ancient times. A thorough analysis of the chemical composition, biologically active components and pharmacological activity of the plant revealed that it has natural, safe and multifaceted therapeutic properties.

The leaves, roots and flowers of the medicinal plant contain flavonoids (luteolin, apigenin, quercetin), phenolic compounds (ferulic, caffeine and chlorogenic acids), triterpenes (taraxasterol, β-amyrin), inulin, as well as vitamins (A, C, E) and mineral elements (K, Ca, Fe, Mg, Zn). As a result of the combined action of these substances, the plant exhibits antioxidant, hepatoprotective, anti-inflammatory, diuretic and immunomodulatory activity.

The results obtained scientifically substantiated the traditional forms of use in folk medicine (tincture, decoction, syrup, tea). Especially due to its high antioxidant and hepatoprotective activity, Taraxacum officinale L. is recommended as an effective tool for restoring liver function, cleansing the body of toxins, and maintaining metabolic balance.

Conclusion

The uniqueness of medicinal ginger is that it neutralizes free radicals in the body, protects cell membranes from oxidative damage, thereby reducing oxidative stress. Inulin, as a prebiotic, normalizes intestinal microflora and supports the activity of the detoxification system. Therefore, extracts from this plant are valuable raw materials for the development of functional foods, biologically active additives, phytotonic drinks and pharmaceutical preparations.

In modern pharmaceutical practice, preparations based on Taraxacum officinale L. (e.g., Dandelion Root Extract, Hepatofit tea mixture, Taraxol syrup) meet international standards and, due to their natural origin, are recognized as agents with fewer side effects than synthetic drugs.

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Also, studying the medicinal plant yarrow is beneficial not only from a medical point of view, but also from an economic and ecological point of view: it is a widespread, fast-growing, renewable natural resource, and as a local raw material, it allows the pharmaceutical industry to become partially independent of imports.

References

1. Lim T. K. Taraxacum officinale //Edible Medicinal And Non-Medicinal Plants: Volume 7, Flowers. – Dordrecht : Springer Netherlands, 2013. – S. 516-536.
2. Lis B. et al. Flavonoid preparations from Taraxacum officinale L. fruits – A phytochemical, antioxidant and hemostasis studies //Molecules. – 2020. – T. 25. – №. 22. – p. 5402.
3. Jeon H. J. et al. Anti-inflammatory activity of Taraxacum officinale //Journal of ethnopharmacology. – 2008. – T. 115. – №. 1. – p. 82-88.
4. Escudero N. L. et al. Taraxacum officinale as a food source //Plant foods for human nutrition. – 2003. – T. 58. – №. 3. – p. 1-10.
5. Ivanov I. G. Polyphenols content and antioxidant activities of Taraxacum officinale FH Wigg (dandelion) leaves //International journal of pharmacognosy and phytochemical research. – 2014. – T. 6. – №. 4. – p. 889-893.