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MEDICAL EFFECTS OF PRODUCTS OBTAINED FROM WILD ROSE PLANT

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Abstract: Except for one tropical African species, the Rosa L. species (roses; Rosoideae: Rosaceae) has 150–200 species that are extensively dispersed throughout temperate and subtropical ecosystems of the northern hemisphere. The fact that Central Asia is the rose's native continent is underlined in numerous sources. A quarter of the rose species are found in Europe and North America, while nearly half are found in Asia.
Rosa damascene Mill is the species utilized to obtain rose oil, even though there are 24 types of roses registered in Turkey's flora. Rosa damascene, also referred to as the Damascus Rose, Pink Oil Rose, Oil Rose, and Isparta Rose Rose is a perennial, thorny, intensely perfumed, pink-hued, half-layered, and winter-hardy shrub that only blooms in the spring. The range of products is also increasing due to the demand for roses and rose products in this sector. Many products are being developed in the field of nutrition, cleaning, and cosmetics.

The aim of this study is to investigate the effects of wild rose plants in the field of health and to expand their use. However, it is thought that increasing the variety of products obtained from the wild rose plant may contribute to the country's economy.

The aim of the study is to investigate the use of wild rose plant in our country and in other countries, to show in which diseases it is used and to determine its contribution to the economy of the countries.

Keywords: Rose, aromatic plant, medical

1. Introduction

Rosehip is the rose fruit of plants belonging to the Roseideae subfamily of the Rosaceae family called Fructus Rosae.

Rosehip, which is rich in nutrients, has not been adequately evaluated in our country until recent years. Recently, various rosehip products have been produced at the factories established in Gümüşhane and Tokat and other regions are trying to develop this sector. The range of use of rosehip in food and pharmacy is quite wide, especially in European countries and in other countries.

Both rosehip products and rosehip additive products are very numerous abroad. In our country, rosehip products such as tea, marmalade, nectar, and juice are consumed. 102 kcal of energy, 48.7g

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of water, 3.6g of protein, and 22.0g of carbohydrates, and fats are not contained in 100 grams of fresh rosehip plants. Rosehip belongs to the class of preferred fruits due to its high vitamin, mineral, anthocyanin, and other chemical compositions, which are of great importance for human health, as well as its high antioxidant capacity and phenolic content.

Edible flowers were used in ancient times for their therapeutic properties. Many sources indicate that edible flowers have many beneficial effects. These flowers have been used in culinary applications and the food industry since time immemorial because they improve the appearance, attractiveness, and taste of food. It is also noted that the smell of roses strengthens the heart, brain, and sensory organs, reduces tinnitus, and rose oil is also good for toothache and headache when rubbed into the forehead.

Rose oil has been traditionally used in the treatment of many diseases by taking part in aromatherapy applications in complementary medicine. Due to the growing tendency of scientists to natural products that have medicinal effects, recently there have been increased studies of the effects that such plants can have on human health.

Members of the Rosaceae family have been long used for food and medicinal purposes. They perform their physiological functions with high polyphenols, which have a wide range of biochemical activities in their content. Polyphenols play a critical role in human health as antioxidants, lipid peroxidation inhibitors, free radical scavengers, and anticancer, anti-inflammatory, antimutagenic, and antidepressant agents. It has been proven that products from these plants are a rich source of bioactive compounds, such as vitamins or polyphenols, which play an important role in maintaining health and preventing diseases. The content of flavonols and flavanols such as hyperocyte, isokuersetin, isoquercitrin, quercetin, quercitrin, rutin, catechin, and epicatechin in some rose species has been determined.

This flower has positive effects on human health in our country, although the use of mediciplantslanttheird its products is not as yet sufficiently widespread, people will be able to reach more easily, and more to exploit the increasing expansion of the production area and encourage the processing of the flower should be taken. To expand its use in a wider field in the field of health, more extensive scientific work is needed to determine its exact effects and properties in preventive, complementary, and therapeutic medicine.

Currently, due to difficult-to-reach and expensive treatments, the quality of life of millions of people is declining and even their lives are ending. Cheap and affordable healers protect the continuity of human life and, consequently, the health of societies. For this reason, many different therapeutics have been investigated and the importance of plants in them has been revealed (1).

Edible flowers were used in ancient times due to their therapeutic properties.

Edible flowers are gaining renewed attention as rich sources of bioactive compounds. The ethanol extracts of eight edible flowers and the results of a study conducted to investigate phytochemical bioactivity be characterized as functional and edible flowers as a source of natural antioxidants as food to be consumed by the food industry support the use (2).

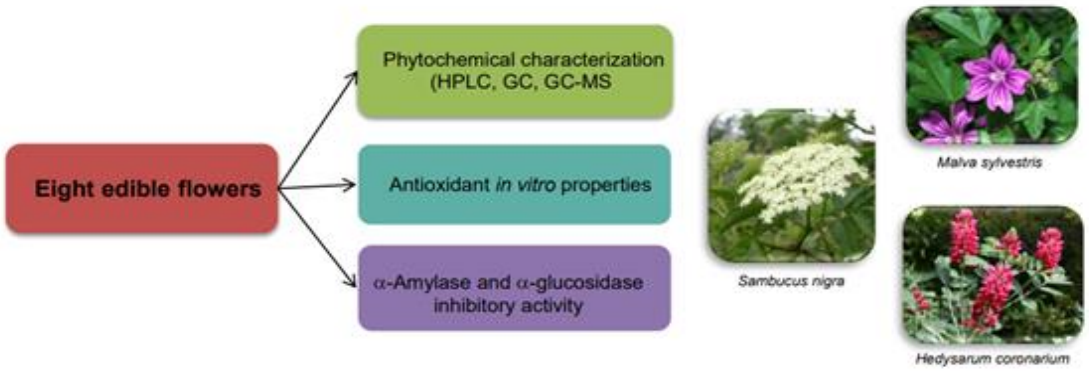

Figure 1. Bioactivities of eight edible flowers.

Many resources edible flowers, anti-anxiety, anti-cancer, anti-diabetic, anti-inflammatory, antioxidant, diuretic, anthelmintic immunomodulatory, and anti-microbial activity shows that it is very useful in many sources. People also use it in culinary operations, as it improves the aesthetic value, taste, flavor, and appearance of dishes (3).

Edible flowers contain a large number of phytochemicals that contribute to their health benefits, and the consumption of edible flowers has increased significantly in recent years (4). They have become the remedy for many diseases that affect people's organisms. Different parts of plants contain different substances. Although it seems that leaves containing glycosides and alkaloids are used frequently, the seeds, branches, and roots of the plant can also be very useful in different ailments. Plants, it is easy to grow and process (Rosa L.) pretty much importance is given (1).

Roses are important ornamental plants and are referred to as the shah of flowers, more than 150 species of roses and more than 2000 varieties have been recorded. Species of the Rosaceae family have long been used for food and medicinal purposes (5). Roses are as economically important as ornamental shrubs and cut flowers, as well as for perfumes, cosmetics, and pharmaceutical research (6).

Members of the Rosaceae family have long been used for food and medicinal purposes. They perform their physiological functions with high polyphenols, which have a wide range of biochemical activities in their content.

Polyphenols play a critical role in human health as antioxidants, lipid peroxidation inhibitors, free radical scavengers, and anticancer, anti-inflammatory, antimutagenic, and antidepressant agents. It has been proven that products from these plants are a rich source of bioactive compounds, such as vitamins or polyphenols, which play an important role in maintaining health and preventing diseases. The flavonol and flavanol contents of some rose species such as hyperocyte, isoquercetin, isoquercitrin, quercetin, quercitrin, rutin, catechin, and epicatechin have been determined (2).

Even though the rose, like other edible plants, has taken an important place in terms of health, it is not yet sufficient for use in the medical field. Further studies are needed to confirm their impact in this area.

2. Rosa L. (roses; Rosoideae: Rosaceae)

Roses have been admired for their beauty and fragrance since the beginning of civilization (6). It is a kind of flower that has varieties that are wild and grown in gardens by breeding. It is understood that the wild rose was known in Central Asia from time immemorial. The earliest information about the garden rose was given by Herodotus in the gardens of Babylon. The rose is also mentioned in ancient Greek literature. Rose is a kind of flower that has passed from the East to the West via the Middle East, Anatolia, and the Greek Islands (7).

Rosa L. its genus is widely distributed from the temperate habitat of the Northern hemisphere to the tropical sub-habitat of Asia, and there are only one tropical African species. It consists of approximately 150-200 species (8).

Figure 2. Morphological diversity of flowers and fruits of several representatives of Rosa. (A) The flower of Rosa hugonis. (B) R. the flower of moyesii. (C) R. the flower of multibracteata. (D) R. odorata flower. (E) R. the flower of praelucens. (F) R. the flower of prattii. (G) R. the flower of tsinglingensis. (H)R. the flower of roxburghii. (I) R. rubus flower. (J) R. the flower of roxburghii. (K) R. it's a villosa flower. (L)R. primula flower. (M) R. the fruit of sikangensis. (I) R. fruits of omeiensis. (O) R. the fruit of the mairei. (P)R. the fruit of macrophylla. (Q) R. fruits of sweginzowii (8).

Rosa L. is an upright shrub with broad leaves that can grow to a height of 1-2 meters (9). Typically, branches and trunks are spiky (10). Some wild rose species have spread from North America to Mexico, as well as south to Ethiopia, Arabia, Northern India, and the Philippine Islands. They have also reached the Arctic Circle in the north. Its growth is especially encouraged by the conditions in the region from the Mediterranean to the Himalayas, as well as in East Asia. These plants are resistant to harsh environmental conditions (rocky and sloping terrain, poor soil, lack of water) (11).

Because of the complex chemical makeup of rose, its dried fruits are used to make broths, medicinal extracts, and syrups. Numerous vitamins, minerals, and tannins are abundant in rosa. Pectin, organic acids, and sugar that is simple to digest are also included (9).

Rosa is very helpful since it enables one to restock their supply of depleted antioxidants, vital acids, trace minerals, and vitamins. They also aid in preventing detoxification and aging of the body. Rosa's dried fruit can be brewed into a beverage for the simplest method of preventing beriberi sickness. Rosa is a great preventative and therapeutic drug. It is widely utilized in cosmetology, medicine, and culinary (9).

2.1. Rosa L. Types

24 species of roses are registered in the plant presence in Turkey. The most important of these are rosehip (rosa canina) and Isparta rose (rosa damascena).

Rosa canina; colloquially known as dog rose, rosehip or rosa canina is a variety of rose.

The Rosacea family includes the perennial plant Rosa canina L. It naturally grows on the edges of forests, in puddles, thickets, and pastures. Rosa canina L. has long been utilized as a food, dietary supplement, and source of vitamins across the world. It has several vitamins, including vitamin C, as well as beneficial substances like polyphenols, carotenoids, carbs, and fatty acids (12).

Due to its chemical composition, rosehip contains bioflavonoids useful for the body, which have an antioxidant effect (9). Rosehip, which is rich in nutrients, has not been adequately evaluated in our country until recent years. Recently, various rosehip products have been produced in factories established in Gümüşhane and Tokat regions, and attempts are being made to develop this sector in other regions (13). There are quite a lot of products made from rosehip abroad, as well as a variety of products with rosehip additives. In our country, rosehip products such as tea, marmalade, nectar, and water are consumed (14).

Table 1. Nutritional Values of Rosehip (100 g) (15)

Nutritional Composition	Nutritional Value
Water (g)	48.7
Energy (kcal)	102
Protein (g)	3.6
Fat (g)	0
Carbohydrates (g)	22
Calcium (mg)	11
Iron (mg)	2
Magnesium (mg)	15
Phosphorus (mg)	123
Potassium (mg)	390
Copper (mg)	0.190
Manganese (mg)	0.170
Ascorbic Acid (mg)	1250
Thiamine (mg)	120
Riboflavin (mg)	7
Vitamin K (mg)	80

It is frequently used as a food ingredient, vitamin source, and medical treatment. Rosa species vary greatly in their chemical composition and vitamin content. As a supplement, dog rose has therapeutic value. There have been numerous research to look at the relationship between the dog rose's form and kind, location, weather, soil, fertilizer use, and other environmental factors.

The fruit's flesh is the dog rose component with the highest commercial value. It is employed in traditional medicine and rosaresmia. It also controls the function of the gastrointestinal tract, tissue regeneration, and the creation of hormones. It also has anti-inflammatory, choleretic, diuretic, and favorable effects on glucose metabolism (9).

In the Monographs of the German Commission E, r. it is reported that the fruits of canina (rosehip with seeds) have prophylactic and therapeutic activities against a wide range of ailments, including inflammatory disorders such as arthritis, rheumatism, gout, and sciatica. Besides that, infectious diseases including colds and flu, gastrointestinal disturbances against to aid in digestion, gastric mucosa and infection for the Prevention of gastric ulcer, gallstones, as a laxative for gallbladder complaints, kidney, and urinary tract disorders, and have been used as a diuretic (16).

Discussed are rosehip's therapeutic benefits for treating the symptoms of osteoarthritis, rheumatism, and colds. The antibacterial, anti-cancer, anti-diabetic, and anti-obesity capabilities of this medicinal plant are also supported by the research gathered in this article (12). Rosa is a perennial, thorny plant with a pink color and a powerful perfume. It is also known as Isparta Rose, Pink Oil Rose, Oil Rose, Gum Rose, and am Rose (1). It is grown for commercial purposes.

The medicinal properties of rosehip in the symptomatic treatment of osteoarthritis, rheumatism, and colds are discussed. There is also evidence compiled in this article about the antibacterial, anti-cancer, anti-diabetic, and anti-obesity properties of this medicinal plant (12).

Rosa damascena; is a perennial, thorny plant with a pink color and a powerful perfume. It is also known as Isparta Rose, Pink Oil Rose, Oil Rose, Gum Rose, and am Rose (1). It is grown for commercial purposes for high-value rose crops in India (5). It is a hybrid species and its true homeland and origin are not exactly known. It is grown in the Western Anatolia region (Isparta, Burdur) to obtain rosehip. The main substances of the Rosa damascena (Isparta rose) plant are Citranellol, Geraniol, Nerol, Eugenol and Phenylethyl alcohol. Due to its composition, it provides spiritual comfort and is said to help childbirth pass easily, especially when used before childbirth. Several gynecologists have noted that the mother's child, who uses rose oil from birth, is better at distinguishing odors than those who do not. It also has a fairly strong fungicidal effect. It can also be used as a tonic, cramping remedy, sedative, regulating the functions of the heart and small intestine. It is also suitable for use on all types of problematic, dry, and allergic skin, in cases that require the closure of wounds with the formation of new tissue (1).

The use of medicines and pastes made from rose water and rose is very common in the Ottoman Empire. Although the use of rose for a beautiful smell is somewhat outside the field of medicine, the smell of rose has been used to treat the soul. Rose oil is widely used in ancient medicine. Rose oil has been used for diseases of the brain and to strengthen memory. In addition, it has been widely used in diseases such as eczema (17).

In mice, long-term after the application of copper sulfate, Rosa damascene on histopathology of the testis and epididymal sperm quality of the essential oil is supportive to assess its effects in a study in the treatment group, the seminiferous tubules epithelium organized group when compared to copper sulfate in sperm count, motility, viability, and normal architecture and a significant improvement was observed (18).

3. CONCLUSION

The consumption and use of edible species of the rose plant are quite common. It is preferred in areas such as food, medicine, and cosmetics. Although rose is effective against some diseases with its many phytochemical effects, precise data on its use in the medical field have not been provided. Further research is needed in this area to scientifically prove and confirm their scarring.

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