

**THE EFFECT OF FERULA EXTRACT ON THE ACTIVITY OF DIGESTIVE ENZYMES**

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ABSTRACT

It is known that the use of medicinal plants has taken a leading place in the world health system. Currently, the results of research and their use of medicinal plants in the treatment of diseases are increasing. Medicinal herbs or plants are an important potential source of therapeutic or curative agents. This article focuses on the knowledge of medicinal uses of plants and the role, contribution and benefits of medicinal plants against diseases of public health importance.

Keywords: Illness, medicinal plants, digestive tract, therapeutic.

Introduction

Medicinal plants are considered to have healing properties due to the presence of natural compounds. In addition, medicinal plants are a rich source of cosmetics, sanitary and aromatic substances. Medicinal plants are useful in the treatment of human diseases. One of our useful medicinal plants is *Ferula asafoetida*, which is mainly harvested in the mountainous regions in April and May.[1,2] *Ferula* is beneficial to many body organs and their related functions in humans, such as the immune system, gastrointestinal tract, endocrine, respiratory. affects the heart, blood vessels, nervous system, bones (skeleton) and teeth. *Ferula* thins the blood and lowers blood pressure and has expectorant and anthelmintic properties. Mainly it is used as an effective remedy for various stomach ailments, useful in cases of flatulence and stomach enlargement.[3,4,5] The integrity of the intestine depends on the balance of intestinal bacteria and the healthy nutrition of enterocytes and colonocytes, the cells of the intestinal lining. It also helps to digest certain foods containing carbohydrates.

Ferula asafoetida gum resin is an active ingredient that helps create a favorable environment for gut recovery.

MATERIALS AND METHODS

For the experiments, purebred white rats were taken from the zoo in Tashkent and kept separately in 50x30x28 cm³ plastic cages in the vivarium of the Faculty of Biology of the National University of Uzbekistan under Physiology and Neurobiology. The temperature of the room where the rats were kept was 20-25°C, and the relative humidity was 40-60%. The



lighting mode was natural. The day of birth was recorded as day 0, and the growing rats were kept in separate cages with the mother until the end of the follow-up. Animal diet consisted of standard vivarium chow. Rats had ad libitum food and water intake.

Experiments were conducted in growing rats. On the 20th, 25th, and 28th days of postnatal life, 1 group of rats and 2 mg/kg of the extract of ferula asafetida were orally administered to rats at 10 a.m. every day. The groups in the experiment were divided into 14 days and 28 days in the administration of kavark extract.

RESULTS OBTAINED

At the end of the experiments, the activity of α -amylase was studied in each part of the small intestine of the 28-day-old groups of rats that were given orally the extract of cowberry. As a result, we can see 2-fold activity of α -amylase in intestinal tissue of experimental rats compared to control rats. Control It can be seen that in the digestive tract, cowberry extract accelerates the process of breaking down polysaccharides into monosaccharides by α -amylase.

At the next stage, the effect of ferula extract on blood glucose levels of rats was studied. Glucose is a fuel for the body, it is important for the functioning of the brain and movement of the body. For this reason, glucose in the blood should always be absorbed slowly. We found that blood glucose levels were significantly higher than in control rats. Therefore, consumption of ferula extract in excess of the norm increases the amount of glucose in the blood and can cause negative results in the body. For example, disorders of the nervous system, effects on hormone metabolism, weight gain, and obesity.

In conclusion, it can be said that Ferula is included in the list of medicinal plants, and it is used in medicine as a means of preventing and treating many non-hereditary diseases, vascular, respiratory, and digestive system problems. Ferula is a very effective medicinal plant, which mainly works on the gastrointestinal system, cleanses and strengthens the gastrointestinal tract. It prevents intestinal disorders and constipation. For this reason, constipation was not observed in more than 30 rats in our experiment.

Taking into account these aspects, it is recommended to consume it in the daily diet in a sufficient amount and not exceeding the specified norm. However, excessive consumption can lead to obesity, increased blood glucose, and negative effects on nervous and humoral control.

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