

## PROGRESS IN PHARMACOLOGICAL RESEARCH OF ASTRAGALUS

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**Abstract** The resource of Astragalus is rich. It has medicinal base in many countries. The main ingredients of Astragalus are Astragalus polysaccharides, Astragalus saponins, Astragaloside and Astragalus flavonoids[1] .In recent years, Astragalus pharmacological effects of extensive research. Studies have shown that Astragalus is effective in immune regulation, diabetes, anti-tumor, anti-virus, anti-aging.

**Keywords:** Astragalus ; Pharmacological effects

Astragalus is from the leguminous plants Mongolian Astragalus or film pods Astragalus root, which is the traditional Chinese herbal medicines. In recent years, the composition of Astragalus and pharmacological studies have shown that, Astragalus contains polysaccharides, saponins, flavonoids, folic acid, alkaloids, and trace elements and other active ingredients.It can enhance the body's immune system, regulate blood pressure, anti-tumor, anti-aging [2].

### 1. Astragalus polysaccharide

Astragalus polysaccharide is one of the most active components in Astragalus membranaceus. It plays an important biological function, with immune regulation, anti-tumor, hypoglycemic, antiviral, metabolic disorders and anti-aging effects. Zhong etc[3].found, thymus index and spleen index increased, and blood, liver, brain malondialdehyde (MDA) content decreased in D-galactose rats aging model administered Astragalus polysaccharide. But SOD, GSH-Px and CAT and other antioxidant enzymes activity are increasing, which indicate that Astragalus polysaccharide can enhance the immune function, improve its antioxidant capacity to delay aging.

### 2.Astragalus total saponins

Now, more than 40 kinds of mushroom saponins are isolated from Astragalus membranaceus, Astragalus membranaceus and their similar plants. There are mainly astragalus saponins and soybean saponins[4].The study found that astragalus saponins on the brain, liver, lung, myocardium, kidney have a protective effect, in addition to anti-cell apoptosis, anti-inflammatory and anti-virus, improve anemiat. Liu Yuxia etc[5]. studied the effect of astragaloside on the left ventricular myocardium in normal and cardiac dysfunction rats. It was found that astragaloside exhibited positive muscle strength in the left ventricle of normal or cardiac dysfunction rats. Not only increasing myocardial oxygen consumption in the case of contraction but also diastolic function.

### 3.Astragalus flavonoids

Flavonoids have the effect in the regulation of the immune system, anti-oxidation, anti-apoptosis and so on. Liu etc[6].established rat model of retinoic acid osteoporosis, and observed the different doses of total flavonoids Astragalus on bilateral femur and other biomechanical indicators of the impact. The results showed that the total flavonoids of Astragalus could increase the bone mineral density and enhance the anti-external shock ability of rats induced by osteoporosis. And its mechanism could be related to the effect of estrogen.

### 4.Conclusion:

Astragalus is a traditional Qi-tonifying drug, monomer with a variety of chemical active ingredients. It has a good effect and compatibility of traditional Chinese medicine and health care to share on cardiovascular system, nervous system, digestive system, diabetes, cancer . In the future, research of Astragalus should focus on the following two aspects, one is the study of a drug efficacy, mechanism, the clinical selection of dosage forms. The other is preventing disease, exploring the effective addition of Astragalus membranaceus, and promoting its application in health food.

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