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## **ACCEPTED MANUSCRIPT**

# Preparation and antioxidant activities of important traditional plant polysaccharides

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**Abstract:** Polysaccharides are widely found in nature, mainly divided into three kinds of plant polysaccharides, animal polysaccharides and microbial polysaccharides. In recent years, the antioxidant activity of polysaccharide has become a hot spot in the field of polysaccharide research. Polysaccharide is one of the active ingredients of many medicines, which has the functions of increasing antioxidant enzyme activity, eliminating free radicals, inhibiting lipid peroxidation and protecting the biofilm, anti-oxidation and anti-aging effects. The preparation methods, main chemical structures and antioxidant activities of important traditional plant polysaccharides from different sources were investigated and discussed.

**Keywords:** Important traditional plant polysaccharides, preparation, chemical structures, antioxidant activities

#### 1. Introduction

Polysaccharide is one of the effective components from many traditional medicines, and has many functors, such as antioxidant activities, inhibition of lipid peroxidation, anti-aging, and so on. Furthermore, the extraction, purification, and action mechanism of polysaccharide from traditional medicine are eye-catching [1].

The traditional extraction method of polysaccharide from traditional medicine is water-boiling method. It is very convenient, but many ingredients are dissolved under the high temperature and some of the active ingredients have gone bad, which may reduce the efficacy. In order to obtain polysaccharide from traditional medicine, the traditional way is ethanol precipitation after boiling. In recent years, some researchers

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