

## THE BIRCH OF BARK IS PERSPECTIVE SOURCE OF BIOLOGICAL ACTIVE SUBSTANCES

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**Introduction.** A considerable sector of modern medical preparations market is occupied by non-steroidal anti-inflammatory drugs (NSAIDs). They are widely used for treating inflammation of soft tissues, locomotor system, rheumatic, cardiovascular, nervous diseases, injuries, during postoperative period, for symptomatic treatment of pain syndrome of different genesis. However, despite the fact that NSAIDs are clinically effective, there are many contraindications and limitations for their use. Therefore search of new drugs on the basis of phylogenous substances with anti-inflammatory action is an important direction of modern medicine. The information as for the birch tree use in folk medicine confirms that the birch bark features healing, anti-inflammatory and anti-tumor activities. Pharmacological activity of thick extract of *Betula verrucosa* was studied based on the data of experimental and clinical studies present in the literature, which confirm the ability of some bioactive substances (steroids, flavonoids, tannin agents) to influence the process of healing and regenerations of tissues.

**Aim.** The expressive of major groups of biologically active substances (compounds of steroid nature) from the bark and birch sprouts, separating them into individual components.

**Materials and methods.** The objects of study were middle part of the bark of the trunk (collected at 1-2 meters) bark, shoots 1, 2, 3, 5-6 years of birch *verrucosa*. The qualitative composition of the compound nature of the steroid was determined by Lieberman-Burchard reaction, the reaction of Salkovskij, the reaction of Lafon, the reaction of Sanyo.

**Results and discussion.** When stratification of concentrated sulfuric acid dissolved in acetic anhydride in extracts of bark and birch sprouts on the border of two layers of liquid appeared red color, which passed in emerald green. Into a solution of lipophilic fractions adding 5-6 drops of concentrated sulfuric acid. Into 2 ml of lipophilic fractions was added 1 drop of 10% solution of copper (II) sulphate and gently heated. The colour of solutions in test tubes with extracts from the bark and shoots on blue-green. Into 2 ml of lipophilic fractions were added to 1 ml of 0.5% ethanol solution of vanillin, 3-4 drops of concentrated sulfuric acid and heated in a boiling water bath, the color of reaction was yellow.

**Conclusions.** Various chemical composition and widely used birch *verrucosa* further detailed study of birch bark.