

EFFECT OF EXTRACTS FROM *PRUNUS DOMESTICA* ON THE VIOLATION OF INTESTINAL MOTILITY CAUSED BY BARIUM CHLORIDE IN MICE

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Introduction. Previous experimental studies of the laxative properties of four extracts obtained from the *Prunus domestica* fruits against the background of loperamide-induced constipation revealed effective phytoobjects in their ability to stimulate an intestinal motility – an extract containing fibers (EF) and an extract with a polysaccharide complex (EPC).

Aim. To confirm the laxative activity of extracts from the *Prunus domestica* fruits EF and EPC on the model of impaired intestinal motility mice caused by the barium chloride in mice, to identify the most effective substance among them and determine its effective dose.

Materials and methods. A study of the laxative effect of EF and EPC was carried out on a model of intestinal motility disorders caused by the action of barium chloride in mice. The studied indicator was the rate of passage of the contrast mass through the intestines of mice. The reference drug was Picolax (drops) at a dose of 0.3 ml/kg.

Results and discussion. The introduction of EF and EPC at doses of 75, 100, 200 mg/kg and Picolax at a dose of 0.3 ml/kg eliminated spasm of the smooth muscles of the stomach and intestines. It evidenced by the lengthening of the path of the contrast mass along the intestines of mice to the level of intact control (IC). In the case of using of EF, the intensity of laxative effect had a clear dose-dependent character: with increasing of the dose, the action intensified. At a dose of 200 mg/kg, as opposed to the doses of 75 and 100 mg/kg, the path of the contrast mass was statistically significantly higher than in the animals of IC group.

Conclusions. Experimental studies have confirmed the laxative properties of extracts from the *Prunus domestica* fruits. The EF extract showed a laxative activity at a dose of 200 mg/kg (29%), which exceeded the maximum activity of the EPC extract observed at a dose of 100 mg/kg (26%) and was at the level of the reference drug Picolax (27%). Between the two extracts from *Prunus domestica* fruits, the most active extract was EF. Its dose 200 mg/kg was determined as the most effective.

METABOLIC MODEL OF INSULINE RESISTANCE IN RATS

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Introduction. In the modern interpretation, insulin resistance (IR) is understood as the primary, selective and specific disorder of the insulin biological effect, which is accompanied by a decrease in glucose uptake by the insulin-sensitive tissues and leading to chronic compensatory hyperinsulinemia. Pathological process modeling in experimental animals allows to study the IR relationship with disorders in physiological, hormonal and metabolic reactions in the body.

The **aim** of this study was to review the literature data concerning fructose enriched diet that supposed to induce IR in rats.

Materials and methods. We conducted a literature search of scientific database PubMed for peer-reviewed studies focusing on key words “high-fructose diet, rats” and with addition “molecular mechanisms” from publication dates for 40 years from 01.01.1980 to 01.03.2020.

Results and discussion. We found that there are 1243 items for “high-fructose diet, rats” and 320 results for “high-fructose diet, rats, molecular mechanisms” during studied period.