

HEPATOPROTECTIVE ACTIVITY LIPOPHILIC AND HYDROPHILIC LIME LEAVES EXTRACT RESEARCH

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Introduction. Paracetamol is the one of the most used non-prescription drugs in Ukraine. As one of the most effective analgesics and antipyretics, paracetamol is nevertheless a potential hepatotoxic agent.

Not only overdose of paracetamol, but even its long-term use contributes to the development of drug hepatitis, especially for people with hepatitis of various etiologies or patients with diabetes mellitus. The liver synthesizes, concentrates, and secretes bile acids and excretes other toxicants, such as bilirubin. Drug-induced injury to hepatocytes and bile duct cells can lead to cholestasis. Cholestasis, in turn, causes intrahepatic accumulation of toxic bile acids and excretion products, which promotes further hepatic injury.

Paracetamol hepatotoxicity caused not only by the result of covalent binding of its highly reactive metabolite N-acetyl-4-benzohinonimin with macromolecules of hepatocytes, but also by activation processes of free-radical oxidation (FRO) with enzymatic and non-enzymatic dysfunction of antioxidant systems.

Aim. Hepatoprotective activity lipophilic and hydrophilic lime leaves extract research.

Materials and methods . This work is devoted to the experimental research of the hepatoprotective properties of hydrophilic (PL-1) and lipophilic (PL-2) lime leaf extracts. Investigations have been carried out on the paracetamol hepatitis model of rats. White mongrel male rats with weight 180-220 g have been used in this research.

Results and discussion. As a result of these experiments revealed that the use of PL-1 and PL-2 in drug-induced hepatitis caused by paracetamol reduces the intensity of cytochrome P-450 and free radical processes in the liver, increases the activity of the antioxidant system of hepatocytes and contributes to the normalization of carbohydrate, protein and lipid metabolism, and recovery processes bile production and secretion.

Efficiency of researched extracts is 20% higher on average than the efficiency of the reference drug silibor in the intensity, of the hepatoprotective action.

Conclusions. Conducted research testifies the advisability of further preclinical lime leaves extracts studies to create new domestic plant hepatoprotector on their basis.