

## **Study of the capillary-strengthening effect of polyphenolic concentrate from apples**

**Galuzinska L.V., Fylymonenko V.P., Senyuk I.V.**

Department of Biochemistry, National University of Pharmacy, Kharkiv, Ukraine

ljubvgaluzinskaja@ukr.net

Given that the composition of the studied polyphenolic concentrate from apples includes polyphenols, the important pharmacological properties of which are the ability to seal cell membranes, reduce their permeability, and increase the resistance of the vessel walls, it was advisable to study the effect of polyphenolic concentrate from apples on vascular permeability.

The aim of the study was to investigate the effect of polyphenolic concentrate from apples on vascular permeability by the method of Golikov P.P.

The effect of polyphenolic concentrate from apples on vascular permeability of rats was evaluated by the time of coloring of papules (skin areas of animals at the site of injection of phlogogenic substances) in seconds.

The animals of the control group showed faster staining of skin papules formed by zymosan (85.7 seconds), slower staining with histamine (172.8 seconds) and the slowest staining with protein (268.5 seconds). The results of the experiment showed that the polyphenolic concentrate from apples had a capillary-strengthening effect, which was most pronounced when increasing the permeability of the vascular wall of rats with zymosan. In animals modeled with histamine papules, not very slow staining of papules was observed. The drugs equally slowed down the coloring process.

The capillary-strengthening effect on the background of subcutaneous injection of protein to rats was the same in both experimental groups, and the rate of papule staining was 1.2 times slower compared to the control group.

Thus, the results of the experiment indicate the ability of polyphenolic concentrate from apples to reduce vascular permeability in «winter», «histamine» and «protein» inflammation, which correlates and coincides with the similar effect of the comparison drug quercetin in all models.