

ANTIDIABETIC PROPERTIES OF BIOACTIVE COMPOUNDS, PREVENTION OR TREATMENT?

- ¹**Sepideh Parchami Ghazae**, Candidate of biological sciences, assistant of the department of pharmacology, clinical pharmacology, pathological physiology
- ²**Tetyana Harnyk**, Doctor of medical sciences, Professor, Professor of the department of physical education, sports and human health
- ¹**Petro Sereda**, Doctor of medical sciences, Professor, Head of the department of pharmacology, clinical pharmacology, pathological physiology
- ¹**Kateryna Marchenko-Tolsta**, MD, Senior lecturer, Senior lecturer of the department of pharmacology, clinical pharmacology, pathological physiology
- ¹*Kyiv Medical University*
²*Vernadsky Taurida National University, Kyiv*

Extracts of plants have been playing an important role in prevention and treatment of diseases even in modern time. In the last few decades, several human trials, have revealed that ginseng (which contains ginsenoside) may exert antidiabetic effect, regulating insulin and glucose metabolism path ways through different mechanisms. Reduction of Hb A1c and fasting blood glucose levels in diabetic patients receiving ginsam has been proved. Hydrolyzed ginseng extract cut the absorption of glucose in the intestinal lumen, decreasing fasting plasma glucose. It has been reported that ginseng improves beta cells function, intensifying insulin sensitivity. Moreover, Protopanaxatriol (PPT)- type ginsenoside Rg1, not only affects insulin resistance but improves liver function and lipid profile, testifying therapeutic use of Rg1 in type 2 diabetic patients with fatty liver. Flavonoids are the most common naturally occurring polyphenol compounds. Antidiabetic action of flavonoid Kaempferol achieved through enhancing glucose metabolism in skeletal muscle and impeding gluconeogenesis in the liver. Luteolin mediates its hypoglycemic potential via improving insulin sensitivity of body cells. As a matter of fact, concomitant use of natural products and synthetic drugs may be suggested in patients with diabetes mellitus.