

## **Polyphenols Extracts as Inhibitors of Glycolytic Enzymes**

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An increasing number of *people* diagnosed with diabetes is connected with changes in life style and the carbohydrate-rich diet. Despite the existence of a pool of antidiabetic drugs, there is a need to find a new pharmaceuticals including those derived from plant materials. Polyphenols can be an interesting alternative of antihyperglycemic agents.

The aim of my research was the identification of polyphenols compounds which act as a inhibitors of carbohydrates degrading enzymes. The inhibition of alpha-amylase and alpha-glucosidase causes decreasing of the starch degradation and slowing down the increase of post meal hyperglycemia. In patients with insulin resistance this is crucial because improper cell sensitivity for insulin allows only for low level glucose absorption.

The presentation shows the results of alpha-amylase and alpha-glucosidase inhibitory activity of polyphenols extracts made from fruits, leaves and the waste products of the food industry. The analysis showed that, among the tested extracts, the most potent inhibitors of both enzymes are extracts obtained from the waste products. Therefore they have been subject to thorough analysis of the chemical composition and isolated compounds responsible for the inhibitory effect.