

## POSTERS

**Bioactive compounds: chemicals vs biological effects**

## P1

**Haematopreventive Potential of Sun, Sulphited-Dried Apricot (*Prunus armeniaca* L.) and Its Kernel Against Ethanol Toxicity in Rats**

*Bayram Yurt<sup>1</sup>, Ismail Celik<sup>2</sup>*

<sup>1</sup>Department of Food Engineering, Faculty of Engineering, Iğdır University, Iğdir, Turkey

<sup>2</sup>Department of Biology, Sciences Faculty, Yuzuncu Yil University, Van, Turkey

Key words: apricot, apricot kernel, protection effect, blood constituent parameters, Rrats

The present study was carried to effect of sun, sulphited-dried apricot and its kernel against perturbation induced by ethanol in adult male Wistar rats. The haematopreventive potential of the plant's supplementations were evaluated by measuring blood constituent parameters such as Red Blood Corpuscles (RBC), Hematokrit (HCT), Mean Cell Volume (MCV), White Blood Corpuscles (WBC), Hemoglobin concentration (HGB), Mean Corpuscular Hemoglobin (MCH), Mean Corpuscular Hemoglobin Concentration (MCHC) and Platelet (PLT) counts. Eight experimental rat groups: I (control), II (20% ethanol), III (ethanol+ 15% sun-dried apricot), IV (ethanol + 30% sun dried), V (ethanol + 15% sulphited-dried), VI (ethanol+ 30% sulphited-dried), VII (ethanol+ 15% kernel) and VIII (ethanol+ 30% kernel). According to the results, RBC, HCT, HGB and MCHC levels were increased whereas decreased MCV, WBC and MCH levels by ethanol. The cited parameters of III., IV., V., VI., VII., and VIII groups except for WBC were obviously normalized to their control values. This means that apricot attenuated the haematological perturbation induced by alcohol in treated animals as compared to controls. Thus, apricot appeared to be a promising agent for protection against ethanol toxicity.

Correspondence to: bayramyurt@yahoo.com

## P2

**Extract from Chicory (*Cichorium intybus* L.) Seeds Improves Glycemia, Atherogenic Index and Antioxidant Status in Rats**

*Adam Jurgoński<sup>1</sup>, Jerzy Juśkiewicz<sup>1</sup>, Zenon Zduńczyk<sup>1</sup>, Bogusław Król<sup>2</sup>*

<sup>1</sup>Division of Food Science, Institute of Animal Reproduction and Food Research, Polish Academy of Sciences, Olsztyn, Poland

<sup>2</sup>Institute of Chemical Technology of Food, Technical University of Łódź, Łódź, Poland

Key words: chicory, caffeoylquinic acids, chlorogenic acid, rutin, the metabolic syndrome

The metabolic syndrome (MS) is a widespread diet-related disorder, defined as a cluster of interrelated risk factors for cardiovascular disease and type 2 diabetes. In the study we aimed to compare the effects of a high-fructose diet supplemented with rutin, a phenolic compound with well-recognized bioavailability and bioactivity, and a chicory seed extract rich in caffeoylquinic acids (CQA) on gut physiology and development of the MS in rats.

A 28-day experiment was conducted on 32 young Wistar males. In comparison with rats fed a standard corn starch diet (group C), the experimental group (group E) was fed a diet with an increased content of cholesterol and fructose, as well as with oxidized soybean oil. Rats from the other two experimental groups were administered the same diet as group E during the first two weeks of feeding, whereas at the beginning of the last two weeks, the diet was enriched with rutin or the CQA-rich extract from chicory seeds, so as the amount of added phenolics was equal in both dietary groups (0.15%).

The diet administered in group E caused hyperglycemia and increased blood serum atherogenicity, but did not induce other manifestations of the MS, *i.e.* dyslipidemia and oxidative stress. Similarly to rutin, dietary addition of the chicory seed extract improved glycemia, which was comparable to that determined in group C. In addition, the extract was found to decrease atherogenic index to the level observed in group C and to increase blood antioxidant status. Both dietary supplements reduced the content of thiobarbituric acid-reactive substances in a kidney and heart tissue when compared with group E.

The potential efficacy of the CQA-rich extract from chicory seeds in improving manifestations of the MS proved to be better than that of rutin, thus the extract might be considered as a dietary supplement for carrying out clinical trials.

Correspondence to: a.jurgonski@pan.olsztyn.pl