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Abstracts

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probiotic&fiber combination (15%) were most frequently used for fortification purposes. It was noticed that phytochemicals and fish oils were seldom used for food fortification and no products with added phytosterols were found.

Conclusions: This investigation identified several problems concerning fortified foods on Serbian market, including lack of legislative, inadequate labeling and health claims.

Key Words: fortified food, market, Serbia

27/259. Nutrition and Healthy Lifestyle

Origanum virens endemic from Portugal: a novel antifungal activity with antioxidant capacity

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Introduction: Origanum virens is widely used in Portuguese cuisine. Spices are common food adjuncts, which have been used as flavoring, seasoning, and coloring agents and sometimes as preservatives throughout the world for years. Many spices have been recognized to have medicinal properties and possess many beneficial effects on health, such as antioxidant activity, digestive stimulant action, anti-inflammatory, antimicrobial, hypolipidemic, anticarcinogenic potential. Although it is use as food condiment, it is also used in traditional medicine as antiseptic.

Objectives: An improved procedure for determination of the residual DPPH (1,1-diphenyl-2-picrylhydrazyl) free radical concentration was proposed taking into account the absorbance of both DPPH free radicals and DPPH nonradical stable form. The antifungal activity of Origanum virens essential oil on Candida albicans ATCC 10231 and physico-chemical characterization were evaluated.

Method. Design: The calculated residual DPPH free radical concentrations were compared with those obtained from a calibration curve and variation coefficients below 10 % were found. The essential oil were obtained from the aerial parts of the plant by hydrodistillation and minimal inhibitory concentration (MIC) as well as the minimal lethal concentration (MLC) were used in order to assay the antifungal activity against Candida albicans.

Results: MIC and MLC values were 0,005% and 0,040% respectively, ranging from 0,005% to 0,080% of essential oil. Concentrations, lower than MIC values strongly prevent fungal growing. It is difficult to attribute the activity of a complex mixture to particular constituents. The percentage decrease of DPPH standard solution was recorded with 65.0% for Portuguese Origanum virens.

Conclusions: This study supports the contention that traditional medicines remain a valuable source in the potential discovery of natural product pharmaceuticals. Significant antioxidant activity showed by Origanum virens provide a scientific validation for the traditional use of these plants. Further work on isolation and identification of active compounds and its efficacy needs to be done.

Key Words: Origanum virens; antioxidan activity, antifungal activity, physico-chemical characterization

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Physicochemical characteristics and antioxidant activity of Baobab (adansonia digitata) fruit. A traditional medical Angolan plant.

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Introduction: A medicinal plant is any plant in which one or more of its organ contains substances that can be used for therapeutic purposes on which are precursors for the synthesis of useful drugs. In the recent years, in the attempt to counteract the oxidative stress damages, the strategy of implementing the diet with antioxidants, especially deriving from natural sources, is becoming more and more convincing. Several studies have been directed toward the evaluation of several naturally antioxidant properties of many naturally occurring botanicals and herbs, potentially useful as nutriceutical ingredients.

Objectives: The biochemical composition and nutritive value of the fruit of the baobab fruit (Adansonia digitata) were studied.

Method. Design: Proportions of the various components of the fruit (pulp and seeds) were examined, and the various physicochemical characteristics of the pulp and seed were analysed. The antioxidant activity was assessed by DPPH method.

Results: The pulp was characterized by a low water content (6,7%), high acidity level (1,5%), and high contents of total soluble solids (79,5 ºBrix), ascorbic acid (600,7 mg 100 g-1) and total phenolics (504 mg 100 g-1). Seeds baobab fruit showed lower values, namely in total soluble solids (40,1 ºBrix), ascorbic acid 295,6 mg 100 g-1) and total phenolics (145,3 mg 100 g-1). The antioxidant activity, with DPPH assay, revealed significant statistics ($p < 0.05$) between samples (pulp and seed), showing more antioxidant activity in pulp fruit, with 87,7% versus 50% obtained in seeds.

Conclusions: This current study reports on the phytochemical screening and antioxidant capacity of Baobab fruit which is known for its centenary use in traditional African medicine. This study was conducted as an initial step to elucidate the therapeutical, nutriceutical and cosmeceutical potential of these plant products until all the active components of these plants will be clearly established.

Key Words: Adansonia Digitata; Medical plant; Ascorbic acid; Total phenolics; Antioxidant Activity.

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Long-term diet modulation and behavioral life style intervention has a positive effect on body composition, C-reactive protein and rest energy expenditure in overweight women

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Introduction: C-reactive protein is one of the markers of persistent, low-grade inflammation and independent predictor of several chronic diseases and all-cause mortality. Last findings shown the influence of diet-modulation on biomarker of inflammation, body composition and the rest energy expenditure in obese persons. We assessed correlations between these factors and revealed the significance of healthy diet and life style on metabolism and weight-loss

Objectives: The intention of this study was to assess correlations between biomarkers of chronical infalamation, metabolism, body composition (percentage of fat) and determine the effects of long-term behavioral intervention diet-induced weight loss on these factors

Method. Design: Fifty six (> or = 42 y), overweight [body mass index (in kg. m2) > or = 28], women were assigned to behavioral weight loss treatment: healthy lifestyle control and diet-induced weight loss. The weight-loss intervention consisted of a weekly session with a registered dietitian to provide education, support for lowering energy intake and improve physical activity

Results: The diet-induced weight-loss intervention resulted in significantly greater reductions in concentration of C-reactive protein (P = 0.01), decrease free-fat percentage compared with did no weight-loss treatment. Despite a significantly (P < 0.001) greater loss of fat mass (-8.7 +. - 4.1 kg) compared with fat-free mass (-2.8 +. - 2.2 kg), energy expenditure at rest decreased by 9% following the intervention. Changes in C-reactive protein and free-fat percentage correlated with changes in body weight

Conclusions: These findings provide evidence that a dietary intervention designed to elicit weight loss and healthy life style reduces the concentration of inflammatory marker C-reactive protein and improve metabolism.

Key Words: metabolism, weight loss, healthy life style, C-reactive protein, body composition

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Traditional Food systems of indigenous peoples in Brazil: The Wari' Indians of Western Amazonia

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Introduction: Globally, indigenous peoples are at greater health and nutritional risk than non-Indians, as well as their environment and traditional food resources.

Objectives: This study was conducted to document the indigenous food system of the Wari' Indians of Western Amazonia, Brazil, wich number aproximately 3.000 individuals. Until the early 1960', most of them lived independently of the Brazilian society.

Method. Design: The study describes traditional food items, sociocultural meanings and rules, acquisition, processing and storage techniques, distribution and food consumption, as well as the nutritional consequences of changing food practices. It was conducted by two researchers in long term fieldwork based on participant-observation, between 2007 and 2008. Both researchers spoke the native language.

Results: The Wari' demonstrate an impressive knowledge of their environment and natural resources, and use a wide range of animal and vegetable items, including at least 30 varieties of insects. We identified an extensive set of sociological rules and symbolic principles that guides their food practices and reflects their social dynamics and cosmology. Despite recent changes, traditional concepts also direct the course of the adoption of new foods and practices. At the same time, the Wari' are undergoing important socioeconomic changes. From the nutritional standpoint there are negative consequences, that includes a shift away from their traditional food system to a store-bought diet. It results in an increased consumption of industrialized foods, poor in micronutrients and high in fat and sugar content. The tension between tradition and change exemplifies both the particular vulnerability of indigenous peoples as well as the difficulty to address food and nutritional issues in practical terms.

Conclusions: The ongoing changes in indigenous traditional food systems is a key issue to understand their nutritional profiles. Recognizing and documenting traditional knowledge, values, and food practices should be seen as prerequisites for health and nutrition policies addressing indigenous peoples.

Key Words: South American Indians; Nutritional status; traditional food systems