

Welcome letter from the Organizing and Scientific Committee

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Dear colleagues and participants,

Welcome to this special supplement dedicated to compiling the abstracts of the communications and lectures of the FINUT 2020 Conference. The supplement accounts for 339 abstracts for oral and poster communications from 18 countries. It also comprises the abstracts of more than 80 selected guest speakers participating in the scientific symposia and special lectures.

The main objective of the FINUT Conference, which will be held every two years, is to create a space for exchange and discussion of ideas regarding the main challenges of Food and Nutrition in Iberoamerica, to provide solutions aimed at improving the health of the populations of the region, where all the stakeholders, both public and private, are present and can share their thoughts. In addition, the Conference seeks to open a place for contrasted science shared by the Iberoamerican region, a necessary space to open opportunities and to display the research work done in Food and Nutrition, especially that from Latin American countries.

The scientific program of the Conference includes 32 parallel symposia, 4 meetings with the experts and 10 special lectures. In this first edition the Conference focused on 4 topics:

- Challenges of nutrition and public health in Iberoamerica.
- Nutrition in the prevention and treatment of chronic diseases.
- Safe, healthy, and sustainable foods.
- Challenges for an effective and efficient public-private partnership in food and nutrition.

The Conference is organized by the Iberoamerican Nutrition Foundation (FINUT), a nonprofit organization founded in 2011 by the International Union of Nutritional Sciences (IUNS), the Latin American Society of Nutrition (SLAN), and the Spanish Nutrition Society (SEÑ) to promote knowledge, research, development and innovation of Nutrition and Food in Iberoamerica. The FINUT programs are aimed at training professionals and researchers interested in these areas and building partnerships with governments, universities, research centers and other organizations.

Although we are living moments full of uncertainty, the FINUT 2020 virtual Conference organizers would like to thank all our speakers, attendees, and collaborators for their effort to share the scientific advances in the fields of nutrition and food sciences. The organization acknowledges and congratulates all the FINUT 2020 participants and members of the committees for their ability to adapt to new communication needs and hope that in the next edition of the Conference we can give you all the very personal thanks for moving forward

and for continuing the valuable work of providing the world with true and scientifically verified research, so essential in these times.

¡We are looking forward to seeing you at the FINUT 2022 Conference!

Very truly yours,

Prof. Luis Moreno

President of the Organizing Committee

Prof. Benjamín Caballero

President of the Scientific Committee

Prof. Angel Gil

President of the Ibero-American Nutrition Foundation (FINUT)

Dr. María José Soto-Méndez

Executive Secretariat of the Conference

Organizer



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Celebrating 30 years of probiotic science



Results: Mice with a High Fat Diet had a significantly greater weight gain than controls ($p < 0.05$). According to IPGTT, 15-min glycemia was significantly higher in mice with High Fat Diet compared to mice with High Fat Diet + *calafate* ($p < 0.05$). HOMA was significantly higher in mice with High Fat Diet compared to those with High Fat Diet + *calafate* ($p < 0.05$). Resting energy expenditure and WAT weight were significantly lower in control mice ($p < 0.05$). No significant differences were observed in serum levels of MCP-1, IL-6 and TNF- α .

Conclusions: An extract of *calafate*, rich in polyphenols, improves the glycidic profile in mice with obesity induced by high fat diet.

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Conflicts of Interest: nothing to declare

Keywords: Obesity / Polyphenols / Inflammation

P028

NUTRITIONAL ALTERATIONS IN DIALYSIS PATIENTS WITH DEPRESSION AND SUICIDAL IDEATION

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Nutrition in the prevention and treatment of chronic diseases

Introduction: The main precursor of suicidal ideation is depression, which is the most common psychiatric disorder in dialysis patients. Studies have shown an association of depression with nutritional alterations and systematic inflammation; however, in patients with kidney disease there is no data about a possible relation between malnutrition, inflammation and suicidal ideation.

Objectives: To describe and compare the nutritional and inflammation statuses in dialysis patients with suicidal ideation and depression.

Methods: Cross sectional study; 36 dialysis patients >18 years old, any gender, who signed informed consent were included. Depression was measured by one psychiatrist using the Beck Depression Inventory, and suicidal ideation with the Beck Scale for Suicidal Ideation. A dietitian evaluated nutritional status by means of anthropometric and biochemical variables, and the Dialysis Malnutrition Score. Additionally, C-reactive protein and fibrinogen were measured.

Results: Prevalence of malnutrition, depression and suicidal ideation were 31%, 97% and 63%, respectively. Comparisons of values of hemoglobin, albumin, creatine, lipid profile and anthropometric parameters did not show significant differences according to the presence or not of depression and suicidal ideation. In the same way, there were no differences according to the presence of malnutrition

between the patients with and without depression and suicidal ideation.

Conclusions: Patients with depression or suicidal ideation did not show significant differences in any of the assessed nutritional variables. However, patients with depression and suicidal ideation seemed to have higher concentrations of C-reactive protein and fibrinogen. The present study opens an opportunity for future research.

Conflict of Interest: Authors declare no conflicts of interest.

Keywords: Nutritional status / Depression / Suicidal ideation / Dialysis

P029

NUTRITIONAL STATE OF SCHOOLS OF ANTIOQUIA AND QUINDÍO; EPIDEMIOLOGICAL ALERT FOR COLOMBIA¹

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Nutrition in the prevention and treatment of chronic diseases

Introduction: Obesity is considered a serious public health problem, associated with the development of chronic non-communicable diseases. Serving the overweight school population is an imperative, since weight gain during this stage conditions excess weight in adulthood.

Objectives: To analyze the nutritional status of the school population of the city of Medellín and the city of Armenia, Colombia

Methods: Two elementary and high school basic education institutions were selected from the cities of Medellín and Armenia. Anthropometric measurements (weight, height, age, and sex) were collected, and BMI was classified according to age, using the Anthro Plus program and the SPSS. Verification of data collection was carried out, anthropometrically reassessing 10% of the population already nutritionally classified, in addition, expert validation of the BMI classification according to age was carried out.

Results: 593 schoolchildren were evaluated, 416 in Medellín and 177 in Armenia.

In Medellín, 53.1% presented adequate nutritional status, 37.8% excess weight; (25.5% overweight and 12.3% obesity), 9.1% weight deficit, (7.9% risk of thinness and 1.2% in thinness); the greater obesity in men.

In Armenia, 33.5% were overweight (20.6 overweight and 12.9% obese), 9.1% weight deficit (7.6% risk of thinness and 1.8% thinness) and 57, 1% adequacy.

Conclusions: The obesity level was found similar in both cities, but the overweight level was higher in Medellín. According to the National Survey of the Nutritional situation - ENSIN- 2015, the excess weight index for Colombia was 24.4% for this population group, which indicates that, four years later, in 2019 in Medellín, the national average of excess in 54.9%, and in Armenia in 37.3%, with the aggravating circumstance that at the age of 11 years, it exceeds 100% of

the national average in Medellín, with 51% of schoolchildren with excess of weight, generating an alert at the national level to identify its determining factors and generate relevant interventions.

Conflict of Interest: The study has no conflict of interest

Keywords: schoolchildren / malnutrition / obesity.

P030

EFFECTS OF PHYSICAL ACTIVITY ON THE REGULATION OF SACAROSE CONSUMPTION, FOOD, BODY COMPOSITION AND GLUCOSE LEVELS AND LIPID PROFILE

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Nutrition in the prevention and treatment of chronic diseases

Introduction: Continuous and excessive intake of sucrose has been linked with the development and maintenance of pathological patterns, being a risk factor for chronic and cardiovascular diseases. Knowing why an organism continuous consuming a food in quantities that make it sick is of interest, as well as identifying and generating strategies that can reduce this consumption and counteract the health damage. The realization of physical activity (PA) is a mechanism with physiological and behavioral regulation effects.

Objetives: Thus, the aim was to evaluate the effect of PA on drinking and eating, body composition and glucose levels and the lipid profile of rats exposed to daily consumption of a sucrose beverage (SB) at 8% (p/v) concentration.

Methods: ABC experimental design, consisting of 3 phases of 30 days each. Sixteen Wistar rats grouped into four groups: sedentary-sedentary, sedentary-active, active-active, active-sedentary. Throughout the study the feeding was at libitum. The first phase was established as the baseline period. The SB was added to the diet from the second phase for all groups and the induced PA at 15 m/min for the active groups. In the third phase, half of the sedentary ones carried out PA and half of the active ones transitioned to a sedentary condition. At the end of each phase a blood extraction was performed to determine glucose levels and lipid profile. At the end of the study the subjects were euthanized to obtain fat mass.

Results: During the period of exposure to PA it was determined: (a) Decrease in the intake of SB during the period of exposure to PA and an increase in the consumption of the standard diet; (b) regulation of caloric intake; (c) constancy in glucose levels and lipid profile; (d) lower fat mass and delay in body weight gain.

Conclusions: Performing PA is an effective mechanism in the regulation of the intake of a SB, promoting the adjustment of disturbed homeostatic and behavioral processes, delaying health damage.

Conflict of interest: not conflict of interest

Keywords: Physical activity, sucrose, regulation, eating behavior.

P031

ANTINOCICEPTIVE EFFECT OF JUICE AND ETHANOLIC EXTRACT OF GRANADA (*PUNICA GRANATUM L.*) IN AN EXPERIMENTAL MODEL OF NOCICEPTIVE AND INFLAMMATORY PAIN

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Nutrition in the prevention and treatment of chronic diseases

Introduction: Currently, a wide range of medications are used for the treatment of pain, however, these do not always exhibit good pharmacological efficacy or lead to adverse or undesirable effects. That is why, it is considered important to propose alternative treatments to help mitigate the nociceptive behavior. In this sense, the use of traditional medicine, as in the case of Granada (*Punica granatum L.*) as an antinociceptive agent, due to its therapeutic effects traditionally reported and because they are not yet well established possible mechanisms of action proposed its analgesic effect.

Objetives: To evaluate the antinociceptive effect of lyophilized juice and the ethanolic extract of pomegranate peel (*Punica granatum L.*) in an experimental model of formalin in rats.

Methods: The pomegranate was collected in the municipality of Tasquillo, state of Hidalgo, Mexico in the months of August-October 2019. The juice was extracted manually and dried in a freeze dryer. The peel was macerated in ethanol for 2 weeks, then filtered and concentrated under reduced pressure with the help of a rotary evaporator. The antinociceptive activity was evaluated using the formalin model (2%). 30 minutes before the test, a dose of 316 mg / kg p.o (lyophilized juice and ethanol extract of peel) and acetylsalicylic acid as a reference drug (100 mg/Kg p.o) were administered intragastrically.

Results: The juice and the pomegranate peel ethanolic extract (316 mg/kg p.o.), showed statistically significant antinociceptive activity in nociceptive and inflammatory pain (p <0.05). Pain inhibition rates were 34% for juice and 45% for ethanolic extract.

Conclusions: The ethanol extract of peel and the lyophilized juice of pomegranate endemic to the state of Hidalgo, have an antinociceptive effect in two types of pain: nociceptive and inflammatory. However, more research is needed to elucidate one of the possible mechanisms of action responsible for this pharmacological activity.