

Workshop



World Congress on
ADVANCED NUTRACEUTICALS AND FUNCTIONAL FOODS
July 15-16, 2019 | London, UK

**The viewpoint on antioxidative nutrition and functional nutraceuticals following
robotical surgery (Minimally Invasive Surgery)**

Ozlem Tokusoglu

Manisa Celal Bayar University, Turkey

Dokuz Eylul University, Turkey

Robotic surgery is one of the types of minimally invasive surgery. In minimal surgery, miniaturized surgical instruments have been utilized that fit through a series of quarter-inch incisions. When performing surgery with the Da Vinci Si- the world's most advanced surgical robot-these miniaturized instruments are mounted on four separate robotic arms, allowing the surgeon maximum range of motion and precision and has 3-D camera. Robotic surgery provides less trauma on the body, minimal scarring, faster recovery time. Medical nutrition therapy comprehends oral nutritional supplements, enteral or parenteral nutrition after surgery. To acquire convenient healing and functional recovery, a metabolic response is indispensable, but this needs nutritional therapy especially when the patient is malnourished and the stress/inflammatory reply is prolonged. Nutrition therapy is the verdict of nutrition or nutrients either orally including regular diet, therapeutic diet, fortified food, oral nutritional supplements or by Enteral Nutrition (EN) or Parenteral Nutrition (PN) to cure or treat malnutrition.

In order to reduce perioperative discomfort including anxiety oral preoperative carbohydrate treatment (instead of overnight fasting) the night before and two hours before surgery should be administered. After operation, especially for gastrointestinal system, the intake of a hypo-osmolar 12.5% carbohydrate rich drink has been shown to reduce postoperative insulin resistance.

After minimal invasive surgery, oral preconditioning with glutamine, antioxidants, and green tea extract versus placebo elevated plasma vitamin C concentrations significantly and improved total endogenous antioxidant capacity without reducing oxidative stress and inflammatory response. It can be difficult to bounce back after an operation, but a number of vitamins, minerals and antioxidant nutrients can support the recovery of patient after minimal invasive surgery operations.

Studies have shown that long used vitamin K, which promotes blood clotting, to help heal incisions in patients after surgery and also aids in building strong bones. Vitamin K1 is present in many foods, especially leafy green vegetables including cabbage and spinach, broccoli, brussels sprouts, spring onions and is also present in liver, cow's milk, egg yolk and some cereals. With antioxidant properties many times more powerful than those found in better-known nutrients (including vitamin C and vitamin E), grape seed extract is a heart-smart and cancer-smart botanical. The mentioned antioxidants have been improved vascular health, has been protected brain cells, and has been increased overall well-being through consuming as ideal supplement after surgery. Besides, coenzyme Q10 may play a role as cancer prevention agent and may show positive effects on heart attacks and other diseases concerning free radical damage. The major function of coenzyme Q10 is as a catalyst for metabolism; it manages the complex chain of chemical reactions while food convert into energy packets which the body can use.

The fat in fish contains a form of polyunsaturated fatty acids called omega-3. These differ from the polyunsaturated fatty acids found in vegetable oils (called omega-6), and they have different effects on the body. The two most potent forms of

World Congress on ADVANCED NUTRACEUTICALS AND FUNCTIONAL FOODS

July 15-16, 2019 | London, UK

omega-3, EicosaPentaenoic Acid (EPA) and DocosaHexaenoic Acid (DHA), are found in abundance in cold-water fish such as salmon, trout, mackerel and tuna. The body loses iron when bleeding, it may be recommended in supplemental doses after surgery but in the minimal invasive surgery, needing as less. Iron-rich foods include liver, beef and lamb. Oysters, mussels and clams also contain iron. Vegetarians can get plenty of iron from beans and peas, leafy greens, dried fruits (raisins, apricots), seeds (pumpkin, squash, sunflower) and fortified breakfast cereals. Brewer's yeast, blackstrap molasses and wheat bran are also good sources after minimal invasive surgery. Iron helps the body immune system functions, provides energy, gives to mind a supremacy. Deeply colored fruits like blueberries, strawberries, raspberries, blackberries, cherries and pomegranates consuming after minimal surgery boost the antioxidant intake owing to these fruits contain anthocyanidin compounds which are not only enhance the Vitamin C effect, but also improve capillary integrity and stabilize collagen matrix.

Biography

Tokusoglu has completed her PhD at Ege University Engineering Faculty, Dept of Food Engineering at 2001. She is currently working as Associate Professor, Dr faculty member in Celal Bayar University Engineering Faculty Department of Food Engineering. She performed a visiting scholar at the Food Science and Nutrition Department /University of Florida, Gainesville-Florida-USA during 1999-2000 and as visiting professor at the School of Food Science, Washington State University, Pullman, Washington, USA during April-May 2010. She has published many papers in peer reviewed journals and serving as an editorial board member of selected journals. She published the scientific edited two international book entitled Fruit and Cereal Bioactives: Chemistry, Sources and Applications and entitled Improved Food Quality with Novel Food Processing by CRC Press, Taylor & Francis, USA Publisher and third book Food By-Product Based Functional Food Powders by CRC Press, too; She also published three national books entitled Cacao and Chocolate Science and Technology, Special Fruit Olive: Chemistry, Quality and Technology and Frying Oils Science and Technology. She organized and/or administered as Conference Chair at many conferences and congress in various parts of USA and Europe.

tokusogluozlem@yahoo.com



Scientific Tracks & Abstracts



World Congress on ADVANCED NUTRACEUTICALS AND FUNCTIONAL FOODS

July 15-16, 2019 | London, UK

Evaluation of underutilized tree-crop, *Ricinodendron heudelotii*, as a functional feed for nutrition and health

Michael Ezekwe¹, Samuel A Besong² and Ramon Johnson¹

¹Alcorn State University, USA

²Delaware State University, USA

Njangsa (*Ricinodendron heudelotii*), a tropical tree that grows in the forest of West and Central Africa, produces fruits that are manually shelled to collect oil seeds and dried. A compositional analysis of njangsa revealed a unique nutrient presence of long chain omega-3 fatty acids not usually associated with plant materials. The seed had 31.4% crude protein and 44.7% lipid. Of this lipid, about 73% was composed of Poly Unsaturated Fatty Acids (PUFA), almost entirely of eicosapentaenoic acid, with about 18% oleic acid. Preliminary studies were conducted to determine if njangsa seed meal would alter the lipid and other metabolite levels in the pig and/or improve pork quality traits. Twelve crossbred gilts and barrows were fed corn-soybean diets containing 14% crude protein. Treatment group was supplemented with 2% njangsa oil seed meal. Growth and carcass traits showed similar carcass characteristics ($P>0.05$). Backfat measurement was reduced ($P<0.05$), while kidney weight was elevated ($P<0.01$) in treated animals. Pork sensory evaluation were not different between the experimental groups. Oil rich supply of long chain PUFA from sources other than seafood may provide a more sustainable source, capable of reducing children and adult obesity.

Biography

Michael Ezekwe (Ph.D.) is a professor of Animal Science and director of Swine Patent awards. He is involved in OICI-International livestock improvement project activities in Africa. He has conducted technology transfer training workshops in Ghana, Gambia and Nigeria under the auspices of the US AID-OICI International. He has collaborated with North-South Institute Inc.; Davie, Florida, on livestock improvement projects in the US Virgin Islands territory and island of St. Thomas. Development Centre at Alcorn State University. He is a trained animal nutritionist and has worked with swine, goat, and poultry in the area of feed utilization, growth and development. He is involved in human as well as swine nutrition research projects, which are supported by USDA-NIFA and ARS. He has published referred journals. He also conducted research involving vegetable purslane and waterleaf and their unique omega-3 fatty acid content. His research has earned him three U.S.

ezekwe@alcorn.edu

World Congress on ADVANCED NUTRACEUTICALS AND FUNCTIONAL FOODS

July 15-16, 2019 | London, UK

ACAÍ – The Brazilian berry and it’s molecular targets

Ney Felipe Fernandes
Nutrição Avançada, Brazil

Açaí, a word of Tupi Guarani origin (yasa'i) meaning "weeping fruit" is the fruit of the Euterpe oleracea palm tree, native to the Amazon rainforest, in South America. Commercially sold açaí is extracted by maceration and extraction of its pulp containing carbohydrates, lipids (mainly oleic acid), fibers and proteins. But as in the nutritional sciences we should not look only at the tip of the iceberg, that is, the macronutrients, we must look at what is immersed, what is more important and what is sometimes not seen with the naked eye: its phytochemical points. When speaking of longevity, the eyes must be focused mainly on two physiological aspects: reduction of subclinical basal inflammation and attenuation of oxidative stress. It is probably in these two aspects (oxidative stress and inflammation) that açaí (whether consumed in the form of fruit in natural or juice or pulp) can contribute to human health. The coloration of açaí is due to the presence of a large number of anthocyanins. The most predominant anthocyanins in açaí are cyanidin 3-O-rutinoside and cyanidin 3-O-glycoside (C-3-O) that has correlation with improvement inflammatory indicators (TNF-alpha, NfκB) an increase in the expression of Nrf2. Also, velutin (flavone isolated from açaí pulp) may have an anti-inflammatory role, since it was able to modulate TNF and NfκB levels in vitro. In another study, açaí was able to modulate the activity of TLR4 receptors, thus impacting other inflammatory markers (VCAM, ICAM, TNF-alpha, NfκB). We cannot say that we would obtain safe and desirable results from anthocyanins by simply consuming the açaí that is marketed (and usually not its fresh fruit) Nor can we, as we know, claim that a given functional food cures certain disease. However, it is prudent to work with the idea of 'chronic, regular ingestion' to promote longevity.

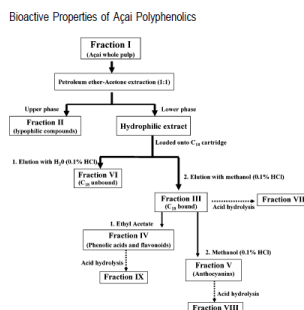


Figure 1. Simplified isolation scheme used to fractionate and purify phytochemicals present in açai whole pulp.

Biography

Nutritionist, master's in molecular biology (Universidade Federal do Paraná), Specialist in Exercise Physiology (Universidade Veiga de Almeida- Rio de Janeiro), Nutrição Avançada Owner, Author of the book "Sports Nutrition - Myths and Truths".

neyfelipec@hotmail.com

World Congress on ADVANCED NUTRACEUTICALS AND FUNCTIONAL FOODS

July 15-16, 2019 | London, UK

Nutrition role in prevention and cure diseases

Lama Alnaeli

Wellness by Design, UAE

Starting with some statistics from the CDC (Centers for Disease Control and Prevention) which reports that chronic diseases are leading causes of death and disability, 70% of annual deaths are due to chronic diseases. These preventable conditions not only compromise quality of life, they add to rising health care costs (75% of the healthcare cost).

The good news is that we have the power to help prevent chronic disease, as making positive diet and lifestyle changes can help reduce risk. Eating healthy foods, getting enough exercise, and refraining from tobacco and excessive alcohol use confer numerous health benefits; including possibly preventing the onset of chronic diseases.

A study from the Departments of epidemiology and nutrition in Harvard school of public health was done to assess the epidemiological evidence on diet and cancer and make public health recommendations.

They found that:

- Overweight/obesity increases the risk for cancers of the oesophagus (adenocarcinoma), colorectal, breast (postmenopausal), endometrium and kidney and it was recommended that the body weight should be maintained in the body mass index range of 18.5-25 kg/m², and weight gain in adulthood avoided.
- High salt intake may possibly lead to stomach cancer; that's why it is highly recommended that we watch out our consumption of salt preserved foods.
- Scalding hot drinks and foods may possibly increase the risk of oral cavity, pharynx and oesophagus cancer; hence it's recommended that the temperature of our intakes should always be moderate.
- Physical activity, the main determinant of energy expenditure, reduces the risk for colorectal cancer and reduces the risk for breast cancer; regular physical activity is highly advised.

Furthermore, there are recent findings that food-based guidelines are reflected in specific dietary approaches to improve cardiovascular risk factors, such as the dietary approaches to stop hypertension diet and therapeutic Lifestyle changes, which have shown effectively, benefit hypertension and hypercholesterolemia, respectively. These diets, therefore, significantly reduce coronary heart disease risk and are effective in decreasing cardiovascular morbidity and mortality risk. To conclude, a healthy lifestyle and a good balanced diet are the key of healthy living. Medical nutrition therapy plays a key role not only in curing diseases, but also in preventing it.

Biography

Lama Alnaeli is the Co-founder and Director, Wellness by Design. Besides being the Brand Health Ambassador for many famous companies, she is the official Health and Diet Speaker for more than 10 local and International TV & radio channels. Her weekly columns in Arabic magazines and newspapers along with her daily social media postings are followed by thousands of people from the region. Besides attending many international conferences in the Health & Nutrition field, She holds the honour of being the keynote speaker indifferent national conferences. She is the member of American Dietitian Association & Canadian Diabetes Association. She is actively involved in different medical awareness campaigns and holds the title of Health advisor for Down Syndrome Association and Autism Association. She is also an international Public Speaker on how to use your food to nourish body & soul.

lamaalnaeli@gmail.com

World Congress on
ADVANCED NUTRACEUTICALS AND FUNCTIONAL FOODS
July 15-16, 2019 | London, UK

Pilot and pivotal clinical outcome study to determine satiation and satiety through FenuLean (Fenugreek flakes) administered on healthy volunteers with > 30 BMI. Possible mechanism of action?

Krathish Bopanna

Consultant Pharmacologist, India

FenuLean (Fenugreek flakes) is a proprietary product of Bio-gen Extracts Ltd. was de-fatted and de-bitterized fibres with a high fibre content of $\geq 50\%$ of which 20-25% are soluble fibres and 30-35% are insoluble fibres. The bulking and viscosity properties of dietary fibre in the stomach are predominantly responsible for influencing satiation and satiety which in turn are the key indicators in the weight management program. In the pilot and pivotal study conducted FenuLean, taken thirty minutes prior to meal, effectively suppress the appetite by initiating the sense of satiety, reduction of hunger, feeling of fullness, desire to consume food and prospective need to consume food. Fibre rich foods usually are accompanied by increased efforts and/or time of mastication, which leads to increased satiety through a reduction in rate of ingestion. It makes a good replacement for conventional products in number of bakery items.

Interestingly soluble fibre derived from FenuLean has been identified chemically as galactomannans just like other fibre of guar seeds or psyllium husk. Interestingly the ratio of mannose to galactose in the FenuLean is 1:1 making it superior in terms of its gel-forming characteristic over other galactomannans. Interestingly we found changes in the post prandial glucose response and this could be attributed to the increasing the viscosity of digested food in the gut, these fibres, especially of fenugreek origin, delay the absorption of carbohydrates. Considering the significant amounts of galactomannans in fenugreek seeds, it is of utmost importance that the effects of these in the control of postprandial glycemia and its response to weight management. Our studies using FenuLean showed growing evidence in the literature that fenugreek fibres can improve glucose homeostasis by delaying carbohydrate digestion and absorption and enhancing insulin action.

Primary aim of our study was to examine the effects of FenuLean from fenugreek at 10g and 5g on satiety and fullness, and on reduced ratings of hunger, desire and prospective food consumption. Secondary objective was to determine FenuLean at the same doses from fenugreek would reduce glycemic and insulin response apart from the palatability. The Investigational Product (IP) contained FenuLean 5g and 10g. FenuLean 5g / 10g was consumed orally with water along with a standard meal (breakfast).

FenuLean 5g & 10g consumption lead to improvement in

- Overall satiety of the healthy subjects
- Increased satisfied satiety and higher fullness was observed
- Reduced hunger, desire to consume food and prospective food consumption
- Satiety satisfaction and fullness scores increased from thirty minutes post consumption
- Positive trend of reduction in serum insulin after consumption
- Overall, palatability of the FenuLean 5g and 10g was found to be comparable.

World Congress on ADVANCED NUTRACEUTICALS AND FUNCTIONAL FOODS

July 15-16, 2019 | London, UK

Viscous and gel-forming property of soluble dietary fibre inhibit macronutrient absorption, reduce postprandial glucose response and may benefit some changes in the body metabolism. However, in our study the increase in satiety was not related to reduced absorption of glucose as our study did not find any effects of FenuLean on postprandial blood glucose concentrations. Healthy volunteers do not show changes in post prandial glucose concentration(s) even post consumption of fibre which is a good sign of maintenance of glucose homeostasis. Currently we are investigating whether FenuLean in over 100 subjects would have significant effects on postprandial blood glucose response to a larger meal or high energy meal or subjects with high BMI. The effects on appetite suppression and food intake suggest that FenuLean (fenugreek flakes) may have a role in the control of food intake in normal individuals.

Biography

Bopanna is a thought leader in the field of clinical and drug development that include being past president of Indian Society of Clinical Research (ISCR), Advisory council member of DIA, Past member of National committee in health and family welfare, Govt of India, Board of management JSS Medical University, Mysore etc. Over twenty-three years of experience in large global pharma company, Information technology company and in contract research organisation as a 'C' level executive for over 13 years. Some of the leading companies he has worked includes AstraZeneca, Tata Consultancy Services, Manipal Acunova (Manipal healthcare and medical group), Next Bio research labs and Semler group of companies. Currently serving as a director in the board of a health, nutraceutical, sports and medical device(s) companies.

krathishbopanna@gmail.com