Roni Lara Moya, J Food Nutr Disord 2017, 6:3(Suppl)
DOI: 10.4172/2324-9323-C1-002

11TH European Nutrition and Dietetics Conference

Detox and Metabolism Practical Orthomolecular and Nutritional Approach

Roni Lara Moya
CESPU University, Portugal

One of the main health problems of the contemporary life and a mandatory concern to all anti-aging physicians is the outcome of the constant contact with the high level of intoxication, which can be connected to the widest range of diseases, from allergies till cancer or neurodegeneration. Discussion of the physiological pathways for detoxification has been mainly centered around phase I and phase II enzyme systems. Some key nutrients and antioxidants substances, which can inhibit the oxidation of a molecule and have the capacity to nullify the ill effects of oxidation caused by free radicals in the living organisms, have been and continue to be investigated for their role in the modulation of metabolic pathways involved in detoxification processes. Superoxide dismutase (SOD), glutathione peroxidase (GPX) and catalase are the key enzymatic antioxidants of this defense system by which the free radicals that are produced during metabolic reactions are removed. Several publications to date have leveraged cell, animal, and clinical studies to demonstrate that within the correct dose and synergy, food-derived components and nutrients can function as important co-factors to modulate processes of conversion and excretion of toxins from the body. The "Phase I" cytochrome P450 superfamily of enzymes (CYP450) is generally the first defense employed by the body to bio transform xenobiotics, steroid hormones, and pharmaceuticals. These microsomal membrane-bound, heme-thiolate proteins, located mainly in the liver, but also in enterocytes, kidneys, lung, and even the brain, are responsible for the oxidation, peroxidation, and reduction of several endogenous and exogenous substrates. It is accepted that any variability in the number of CYP450 enzymes could have benefit(s) and/or consequence(s) for how some individual responds to the effect(s) of (a) toxin(s). Many nutrients appear to act as both inducers and inhibitors of CYP1 enzyme. These findings indicate that specific foods, vitamins, minerals, enzymes, etc., may upregulate or favorably balance metabolic pathways to assist with toxin biotransformation and subsequent elimination. Various foods such as cruciferous vegetables, berries, soy, garlic, turmeric and other spices, plus probiotics and exogenous antioxidants such as vitamins C, E, B complex, glutathione, cysteine, taurine, methionine, L-carnitine, CoQ10, etc., have been suggested to be beneficial and commonly prescribed as part of the orthomolecular and functional medicine-based therapies. The objective of this talk is to highlight the clinical effect of the orthomolecular nutrients in the detoxification mechanisms. Enhance the knowledge about the main antioxidants, foods, and their individual phytonutrients, especially in the case of dietary supplements and functional foods, could be worthwhile for clinicians to consider for patients who are taking a polypharmacy approach or are in contact with pollution by-products, heavy metals, hormones and further xenobiotics.

Biography

Roni Lara Moya has done his studies in Biomedicine from the University of Mogi das Cruzes, Sao Paulo. He has done his specialization in Anti-Aging Medicine from Seville University, Spain. He completed his Master of Science in Molecular and Cellular Immunology and Biology from the University of Coimbra, Portugal and Master of Science in Clinical Advanced Nutrition from the University of Barcelona, Spain. He did his PhD in Biomedicine and Immunology from the Gulbenkian Institute of Science and Coimbra University. He is the Coordinator of Orthomolecular Medicine of ReGenera Research Group for Aging Intervention. He is the Professor and Director of the Graduation Program in Orthomolecular Therapy-CESPU University, Portugal. He is the Scientific Advisor for Nutraceuticals and Cell Therapy Companies in Europe.

ronimoya@gmail.com

Notes: