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Bioactive Compounds for Cancer Prevention

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Consumption of bioactive compounds could be close to 1 g/day in our diet, making them the largest source of anti-oxidants. Dietary sources include fruits, vegetables, cereals, legumes, chocolate, and plant based beverages such as juices, tea, and wine. Extensive biomedical evidence suggests that bioactive compounds no matter their class may contribute to the prevention of cardiovascular disease, cancer, osteoporosis, diabetes, and neurodegenerative diseases. They have been also shown to exhibit beneficial effects on capillary permeability and fragility, to have anti-platelet, hypolipidemic, anti-hypertensive, antimicrobial, anti-viral, anti-allergenic, anti-ulcerogenic, cytotoxic, anti-neoplastic, anti-inflammatory, anti-atherogenic, and anti-hepatotoxic activities. These potential health benefiting properties may call for development of these compounds into future therapeutic agents. The content of bioactive compounds is also potentially influenced by food processing and storage conditions, which can result in transformation of flavonoids, and loss of flavonoid content. This presentation will briefly cover some relevant current statistics about cancer, dietary recommendations and the different family of bioactive compounds that have exhibited chemopreventive properties in selected foods coverings pre-clinical and clinical studies that have been performed to identify their potential chemopreventive effects after dietary consumption.

Biography

Dr. Yáñez received his Ph.D. in Pharmacology and Toxicology from Washington State University in 2008. His graduate research centered on stereospecific bioanalytical, pharmacokinetics and pharmacodynamics of chiral flavonoids. After graduating he joined Schering-Plough (later Merck) where he worked in the DMPK Biodisposition group working mainly with HCV drugs PK studies and in-silico modeling in order to bring GastroPlus into the Biodisposition group. He currently works for Alcon where he works with various glaucoma and intraocular pressure (IOP)-lowering agents and closely works with regulatory submissions in the DMPK department. He continues his research interests on PK/PD, bioactive compounds and health effect of various traditional plants. For this, he collaborates with various universities in Peru and Spain where he serves as research consultant, reviewer for grant submissions, and provides seminars in various subjects. Dr. Yáñez is member of various scientific and honor societies in the US, Europe and Latin America. He has about 50 peer-reviewed reviews, articles, and books chapters.