

## The Importance of Online Publications on Food and Nutrition

### Ragae S

Department of Food Science, University of Guelph, Guelph, Canada

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**Corresponding author:** Sanaa Ragae

✉ sragae@uoguelph.ca

Adjunct Professor and Cereal Program Manager, Department of Food Science, University of Guelph, Guelph, Canada

**Tel:** 519-731-1870

**Fax:** 519-824-6631

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There is strong evidence indicating burgeoning global demand for functional foods and nutrition. This is demonstrated by the increase in consumer preference for healthier food choices. Providing consumers with healthier food choices would have positive impact on health care system as well as the global economy. Research has shown that consumption of functional foods rich in roughage, antioxidants, resistant starch, minerals and vitamins are associated with health benefits and reduced diet related diseases.

Several studies recommended wholegrain and fiber-rich foods for healthy diets because of their health-enhancing and disease-preventing properties. The consumption of high fiber foods is associated with low glycemic response and energy intake, increased satiety and reduced risk of type-2 diabetes. For instance, whole grains contain two main categories of dietary fiber fractions, soluble and insoluble fiber. The beneficial effects of soluble fiber are presumed to be due to its reduction of the glycemic response by forming gels and delaying gastric emptying, while insoluble fiber is associated with a reduction in the risk of type-2 diabetes attributed to decreased insulin demand and lower glycemic response and perhaps could also suppress appetite. Such fiber-rich food products would be useful in strategies aiming to mitigate obesity and type-2 diabetes.

Several pseudocereals such as quinoa, amaranth and buckwheat have unique nutritional composition giving them great potential as functional and bioactive ingredients in food products. Several pseudocereals are an important energy source and high quality protein, dietary fiber and lipids rich in unsaturated fatty acids. Several pseudocereals also contain significant levels of minerals, vitamins, and notable amounts of other bioactive components such as phytosterols and polyphenols. Recently, pseudocereals rich in phytochemicals such as phenolic compounds (e.g., flavonoids and phenolic acids), carotenoids, vitamins, etc. have gained increasing attention due to their potential health effects, such as antioxidant, anticancer, anti-aging, anti-atherosclerotic, anti-inflammatory and antimicrobial activities.

An example for functional ingredients is green and black teas. As we all know, both tea are very popular beverages all over the world. Tea polyphenols are well known for their health benefits including reduced risk of breast cancer, attenuated blood pressure, reduced total and low density lipoprotein

cholesterol, and anti-carcinogenic and ant-mutagenic properties. Tea polyphenols are flavonoids such as catechins and theaflavins. There are differences in the profile of flavonoids present in green or black tea due to the different processing methods used in their production. The fermentation process to produce black tea results in enzymatic oxidation of polyphenols, which in turn produces catechin polymers, such as theaflavins and thearubigins and many uncharacterized polyphenols. These polyphenols have an ability to inhibit digestive enzymes. On the other hand, heating involved during production of green tea inactivates enzymes in the tea. As a result, green tea polyphenols are not oxidized and consist of monomeric catechins, such as epicatechins, epigallocatechins, and their galloyl esters. Our research on starch-polyphenolic interaction demonstrated that starch structure is a major factor to determine its interaction with phenolic as well as its hydrolysis by digestive enzymes. Starches from different botanical sources differ in several aspects including their morphology and structure that consequently will have an impact on their functional properties.

Several studies have demonstrated that berries by-products could be a good source of dietary fiber and other associated bioactive compounds such as polyphenols. During processing of beverages from berries a significant amount of solid material is produced as waste. Taking into consideration that food wastes could seriously have negative effects on the urban environment and human health, actions have to be taken to utilize these waste into value-added products that could be used in the food industry. Our research on a by-product from beverage production from Goji

berries indicated the high nutritional value of the goji by-product. Goji by-product is a rich source of insoluble dietary fiber, soluble dietary fiber, protein, lipid, minerals and phenolic compounds. Therefore, the by-product from goji beverage production could be considered a valuable and economic ingredient for the functional food industry.

Therefore, the main goal of Journal of Food, Nutrition and Population Health is to publish the most recent research and innovation in the food and nutrition area to help promoting public health.