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# ABSTRACT BOOK

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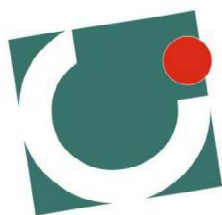
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## NEW TRENDS IN FOOD PRODUCT DEVELOPMENT TOWARDS NEW CONSUMERS AND NEW MARKETS

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### Abstract

Presently, new ways of life and increasing demands regarding the food products are redesigning the consumer markets all over the world. This reality brings undoubtedly new challenges for the food industry as well as new opportunities. However, facing this trend might be easier for some companies than others, depending on the degree of preparation they hold. Innovation is often motivated by external factors and the company realizes the necessity to maintain or improve its performance in relation to its competitors and please the consumers (Guiné et al., 2016). Today's consumers are more worried about the health effects of the foods they ingest, tending to diminish or avoid consumption of harmful products, like those with trans fatty-acids, excess of refined sugars, preservatives and colorants, while increasing the consumption of healthier foods, like those rich in bioactive compounds such as antioxidants, vitamins or fibres, among others. Also, the pressure of society over the environment and its devastating consequences has led to a raise in general consciousness to the environmental impacts associated with food production. These may include minimization of package and usage of biodegradable materials or safer production methods like organic agriculture and cleaner industrial technologies (Waterlander et al., 2018).

This work intends to highlight some aspects related to the tendencies regarding the development of new food products targeting health benefits and environmental advantages.

### ***Healthier food products***

The worldwide burden of diet-related non-communicable diseases such as diabetes, obesity or heart related problems is one of the major societal problems in the present and in the near future. Addressing the diet-related diseases and improving population nutrition and health status involves a multi-disciplinary approach, including public health interventions, adequate information and marketing, dietary patterns changes and consumer awareness towards the problem as well as the

role of the food industry. Improvements in dietary patterns associated with healthy lifestyles and exercise have demonstrated to exert a major positive impact on health, and therefore they should be adopted by the wide majority of the population.

People are more concerned about the contribution of food for a healthier status, and therefore prefer to buy healthier foods. However, the prices of these foods must be appealing and avoidable by most of the people, even with lower incomes. The functional foods market has increased largely and presently surpasses that of the more traditional food products.

The potential health effects of bioactive molecules are often not recognized due to their poor water solubility, chemical instability, adverse taste profile or low oral bioavailability. Hence it is imperative to guarantee their stability and bioavailability on the human body to provide the desired health effects. For example, many types of bioactive molecules found in foods (“nutraceuticals”), including curcumin, resveratrol, polyphenols, sulforaphane, anthocyanins, genistein, quercetin and lycopene, have shown anticancer activities.

### ***Environmentally friendly foods***

The Food and Agriculture Organization (FAO) defines sustainable diets as those with low environmental impacts, and that guarantee a healthy life not only to the present but also to future generations. These diets aim to optimize the use of natural and human resources, protecting the ecosystems and biodiversity, making a controlled use of land, water and energy, minimizing impact on climate change. Furthermore, they must comply with other societal factors, such as being culturally acceptable, of easy access, economically fair, nutritionally adequate safe and healthy.

Food production is responsible for approximately 30% of global greenhouse gas emissions, as well as for 70-80% of all human withdrawals and it is a significant cause of water pollution. In the last decades, modern food systems have to face the challenge to shift towards sustainable development and production methodologies, by identifying solutions that allow increasing productivity while being sustainable along the whole supply chain thus contributing to the minimization of climate change consequences. The interest towards food products produced with innovative technologies (from farm growing to industrial processing) has increased and attention has been paid to the factors that could explain consumer acceptance or skepticism about these solutions.

During the last years the packaging sector has experienced a great degree of innovation, with emphasis on the usage of biodegradable materials and also edible materials, which by being

ingested with the food minimize the production of waste. Edible biopolymer coatings and films are responsible for additional protection to fresh products and at the same time produce equivalent effects to modified atmosphere storage.

### ***Final considerations***

In the food sector, product and process development is essential for success. Failure to develop products adequate to the new market and consumers' trends relegates companies to uncompetitive positions. The food industry devoted to functional foods and nutraceuticals has experienced important developments and innovation has led to the appearance on the market of foods designed for health. Regarding the environmental concerns, food packaging is probably the area in which the consumers better recognize the innovation and therefore tend to adopt foods that minimize the use of package or use biodegradable materials.

### **References**

Guiné RPF, Valente LP, Ramalhosa ECD. (2016) New Foods, New Consumers: Innovation in Food Product Development. *Current Nutrition & Food Science*, 12(3), 175–189.

Waterlander WE, Mhurchu CN, Eyles H, Vandevijvere S, Cleghorn C, Scarborough P, Swinburn B, Seidell J. (2018), Food Futures: Developing effective food systems interventions to improve public health nutrition. *Agricultural Systems*, 160, 124–131.