

## EDITORIAL

# DEVELOPMENT OF FOOD FOR AN INCREASINGLY OVERWEIGHT POPULATION

## DESARROLLO DE ALIMENTOS PARA UNA POBLACIÓN CADA VEZ MÁS OBESA

Nowadays, obesity is considered one of the biggest problems in public health, by its high prevalence and the relationship between the not chronic diseases such as diabetes, coronary heart disease, hypertension, dyslipidemia, among others (1). At the global level, over-weight is increased not only in high-income countries, but mainly in the low and medium, substantially in urban environments. In developing countries close to 35 million people were identified with this problem, while that developed the amount just reaches 8 million (2).

In Colombia, as reported by the national survey of the nutritional situation (ENSIN), Overweight in children (between 5 and 12 years) increased from 18.8%, in 2010, to 24.4% in 2015, while in adolescents (aged from 13 to 17 years) overweight increased from 15.5%, in 2010 to 17.9% in 2015. This phenomenon was not oblivious to the adult population, where the increase was from 51.2%, in 2010, to 56.4% in 2015 (3, 4). This shows a worrying trend in Colombia, which makes it not only a public health issue, but a challenge for the scientific field of food engineering and nutrition in the region and the country. Over the years, Governments have focused efforts towards the promotion of healthy eating and physical activity, but it is necessary to support these initiatives with the development of foods that reduce or control weight gain and generate satiety (5).

The food industry is responsible for generating products in line with the changes that are occurring in society, i.e., products for consumers more aware of the importance of diet on health, food for aging population, products which generate freshness perception, also ready to eat, with non-synthetic additives and products that provide benefits for the increase of life expectancy, these are the requirements of consumers and it is a tendency that are observed to global level (6). Researches on food processing have supported the food industry for the generation of products with properties and benefits on human health over decades, these have been called functional foods (7). There exist cases like peptide compounds, natural extracts and bacteria cultures with favorable properties for the human body, and that are being incorporated into the food to provide antioxidant properties, antihypertensive effect, among others, and convert the group of functional food in a feasible alternative in the prevention of certain diseases. This allows to generate different alternatives to deal with overweight and its related health problems.

In the development of functional foods, there are several aspects to consider, that can affect its acceptance by consumers. One of these is the quantity of bioactive compounds that are present in the product and that can generate an effect on the health of the consumer. In this sense, it might not be enough with a personal portion of the product to generate the effect, or that a high consumption of this can lead to toxicity. Another important aspect is the sensory quality of the product, and all about the product experience of customers during its ingestion. Aspects such as off-flavors, mechanical sensations, ease of swallowing, and physical perceptions of freshness and warmth, can influence in different ways consumers, affecting the acceptance of the product (8). To define the effectiveness of the functional substances, first it must be conducted as well in vitro studies as in vivo, to assess toxicity, and finally humans' tests, to assess the health aspects and sensory acceptance. Some authors (8) have developed schemes of work aimed to develop functional products, considering the existing governmental requirements in the developed countries. In this sense, there are studies that show an effect that is promising in the prevention and treatment of obesity, with

studies in rats, such as the addition of probiotic cultures in dairy products (9); also the positive effect on the lipid profile of obese rats with a aloe Vera gel diet (10), and a case of success in humans, like the consumption of a Queen Garnet plum extract rich in anthocyanins by healthy volunteers, and its effect on adipocytes generating hormones, with positive effect on the prevention of obesity (11).

Great economic and scientific efforts are being invested to reduce one of the most important health problems in developed and developing countries, such as obesity. Challenges still arise for governments, industry and academia, in order to reduce this public health problem, both in the education of the population in terms of acquiring healthy nutritional habits, as in the supply of products, more natural and with less caloric volume than the existing ones which we are exposed to at the present.

**ALEJANDRO FRANCO-AGUILAR.**

Nutricionista, MSc, PhD, Facultad de Ciencias Farmacéuticas y Alimentarias,  
Universidad de Antioquia, Medellín-Colombia.

**DIANA MARÍA GRANDA-RESTREPO**

Profesional en Ciencia y Tecnología de Alimentos, MSc, PhD, Profesora Asociada de Tiempo Completo,  
Facultad de Ciencias Farmacéuticas y Alimentarias,  
Universidad de Antioquia, Medellín, Colombia.

**JUAN DIEGO TORRES OQUENDO**

Profesional en Ciencia y Tecnología de Alimentos, PhD, Profesor Asistente de Tiempo Completo, Facultad  
de Ciencias Farmacéuticas y Alimentarias,  
Universidad de Antioquia, Medellín, Colombia.

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