

The Faculty of Biotechnology and Food Engineering

Thought for food and food for thought
Special seminar

Dairy Proteins: Impact of processing on functionality and gastro-intestinal digestion



Dr. Andre Brodkorb

*Teagasc - Agriculture and Food Development Authority
Ireland*

Abstract. In this talk, several examples are given on how to understand, control and modify the structure of milk proteins, and modulate their digestibility, thereby adding value to foods. Rapid pilot scale, pre-heat treatments of whey proteins can improve the standard processability and/or efficiency of the enzymatic hydrolysis of protein products. This will benefit down-stream production of nutritional products such as infant formula, sports nutrition and nutrition for the elderly. Changes in processing conditions can also affect the gastro-intestinal transit of dairy proteins and accelerate or delay the bioaccessibility of nutrients, as demonstrated by static (Brodkorb et al. Nature Protocols 2019) or semi-dynamic in vitro digestion methods (Mulet-Cabero et al. Food Hydrocolloids, 2019, Food Chemistry 2020). In particular heat treatment and homogenisation can have a profound effect on the mechanism and kinetics of in vitro and in vivo gastro-intestinal digestion of dairy proteins, due to gastric restructuring. Dairy proteins can also act as carriers for labile, bioactive components of food to protect or encapsulate them during food production, storage or the harsh environment of the gastro-intestinal tract (in vivo and in vitro, Doherty et al. Int. Dairy J. 2012).

Wednesday, 22/7/2020, 13:00 – 14:00, Via zoom
Meeting ID: 920 7625 1187 Password: 361258