The Faculty of Biotechnology and Food Engineering

Seminar

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Quality Materials for Quality Foods

Abstract

I will describe my past and ongoing research interests in bioactive materials development from plants, and describe some future targeted work on novel interventions for human and animal health improvement. The first example can be classified within 'new crop development'; we selected and characterized a set of genetic resource accessions in Amaranthus that provided wide diversity in functional properties of starch and protein, high levels of squalene, and interesting antioxidant pigments. Using this as a model for bioprospecting in plants, we further searched for polyphenolic antioxidant resources in Chinese medicinal materials, focusing on antimicrobial applications. This work has continued into a major project on genetic resource exploration for new food .materials in common beans

Another issue that I have worked on extensively is the modernization, standardization, and quality specifications for traditional food products, such as various types of Asian noodles. For material specifications for export and import of raw materials we need the ability to predict the sensory quality of the final product using objective instrumental methods. Unfortunately, traditional texture analysis methods such as TPA have serious limitations. Using a nanotexture approach to surface properties of starch sheets, I will describe an approach to the development of more strongly based analytical methods for texture prediction.

Wednesday, 19/6/19, 14:00 – 15:00, Room 300

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