Seminars in Biotechnology BTEC 592 & BTEC 692

"Protein Diversification: Plant Proteins"

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10.30
Biotechnology Lecture Hall

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Dr. E. Aytunga ARIK KIBAR, is a Senior Chief Researcher at TÜBİTAK Marmara Research Center, Kocaeli, Turkey since 2011. After graduating from Department of Food Engineering, Hacettepe University, Ankara Turkey, she earned her MSc and PhD degrees in food science and technology at the same university. From 2001 to 2011 she worked as researcher at Hacettepe University, Department of Food Engineering. During her 12 years at TÜBİTAK MAM, she has taken part in many national and international projects. She participated as a task leader in RESFOOD (EU FP7, GA: 308316) and NutraHEALTH (EU FP7, GA: 316012) projects and participated in MycoKey (H2020 GA: 678781) and PRO-METROFOOD (GA: 739568) projects. She is currently deputy coordinator of EU-IPA II - INNOFOOD Project, and coordinating EITFood founded "InterHEI" project. She is the one of founding member of "TÜGİP - Food Innovation Platform of Turkey" (www.tugip.org.tr). TÜGİP is the national food technology platform aims to sustainable development of Turkish food industry with R&D and innovation-based activities. Her key technical interests include innovative food processing and preserving technologies and food physicochemistry.

The global population is expected to reach 9.7 billion in 2050. The increase in population and urbanization will not only grow demand for food, but also the search for healthier, affordable, accessible and innovative foods. In the next decade we will witness a transformation of our food systems: Food production will need to not only increase, but also be sustainable and circular, therefore the type of foods and the way we produce and process them will change. In this context, food protein security goes to the heart of the food security debate. Meeting protein demand, within the newly set planetary limits, is one of the biggest challenges for the global food system in the 21st century. Therefore, the need and benefits

of a dietary shift to plant-based protein sources are crucial for environmental safety and transition through a climate neutral food system.

While an increasing trend in the proportion of plant sources included in the diet is obvious, the energy inputs required to manufacture plant protein ingredients can impact both the environment and health. Moreover, processing may impact nutritional quality, and thus human health. Therefore, more research is needed to develop mild processing techniques for plant proteins.