Johns Hopkins University

Department of Chemical & Biomolecular Engineering

Fall 2022 Seminar Series

Dr. Liz Specht
The Good Food Institute

Thursday, October 13, 2022
10:30 a.m.
Mudd Hall 26
Zoom Meeting ID: 919 5918 2879
Passcode: 270887

Title: Technological Challenges and Opportunities in the Emerging Field of Alternative Proteins

Abstract: Global demand for meat is expected to rise by nearly 70% in the next 30 years, but current meat production methods will be unable to meet this demand. Furthermore, the most efficient meat production methods – those that involve intensive, industrialized systems – are plagued by a host of harms such as severe environmental pollution and public health risks. Despite increasing consumer awareness of these limitations and harms, global meat consumption continues to rise. Simply advocating for less meat consumption has not proven tractable, at least until the appearance of compelling alternatives.

One tractable and scalable solution is to develop technologies for making desirable and price-competitive meat alternatives using plant-based, microbial fermentation-derived, or animal cell-cultured inputs that satisfy consumer demand while exhibiting a fraction of the resource burden of conventional meat production. While consumer demand for these products has surged in recent years – as have the number of startup companies commercializing them – this sector is still nascent from a technology development standpoint.

This talk will explore the state of the alternative protein industry with a particular focus on areas of technological need where an influx of innovation seems best poised to advance the field. We will also examine the innovation ecosystem in which this activity is occurring, including strategic investment and partnerships with the established food and meat industries and with parallel industries such as life science and industrial biotechnology.

Bio: As Vice President of Science & Technology at The Good Food Institute, Liz works to identify and forecast areas of technological need within the alternative protein field. Her efforts also catalyze research to address these needs while supporting researchers in academia and industry to move the field forward. Liz has a bachelor's degree in chemical and biomolecular engineering from Johns Hopkins University, a doctorate in biological sciences from the University of California San Diego, and postdoctoral research experience from the University of Colorado Boulder. Prior to joining GFI in 2016, Liz had accumulated a decade of academic research experience in synthetic biology, recombinant protein expression, and development of genetic tools. She is a firm believer in the power of technology to enable us to meet growing food demands in a sustainable way.