



DEPARTMENT OF

# FOOD SCIENCE



## Research Overview

The Department of Food Science is committed to impacting the world food system and quality of life by educating and training students for careers in industry, government, and academia. Our mission is to engage in discovery-driven activities leading to innovative learning and outreach that: enhances health, safety, quality, and sustainability of foods; prepares the next generation of leaders in food science; and addresses stakeholder needs. The Department of Food Science has developed four key areas of expertise, each with several major thrusts.



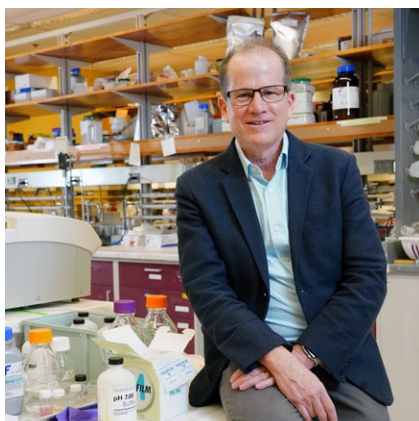
## Research Areas

### FOOD CHEMISTRY, STRUCTURE, AND FUNCTION

Identifies and creates new aspects of composition, structure, and other functional properties of whole foods and food constituents using chemistry, biochemistry, and material sciences to improve the quality, nutrition, affordability, stability, and sustainability of food and food-related products

### FOODS FOR HEALTH

Applies food and biological science principles to the study of whole foods, macro- and micro-nutrients, and bioactive components as a means to improve consumer health and identifies mechanisms by which these effects arise (such as the molecular interactions of food components in biological systems and the role of the gut microbiome)



### FOOD PROCESSING & TECHNOLOGY DEVELOPMENT

Integrates engineering, chemistry, nanotechnology, environmental sciences, and microbiology through food processing operations to produce safe, nutritious, sustainable, and value-added products

### FOOD SAFETY AND MICROBIOLOGY

Studies pathogenic, beneficial (probiotic and fermentative), and spoilage microbes and their interaction with food and the host, and develops novel inactivation and detection methods for pathogens



*Pictured at left from top:*  
*Dr. Lavanya Reddivari,*  
*Dr. Stephen Lindemann,*  
*Dr. Haley F. Oliver,*  
*Dr. Bruce R. Hamaker*  
*and Dr. Eun Joong Oh*

**SENAY SIMSEK**  
 DEPARTMENT HEAD

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## Faculty by Research Area

### FOOD CHEMISTRY, STRUCTURE, AND FUNCTION

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### FOODS FOR HEALTH

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*Dr. Lisa Mauer's research is aimed at improving the delivery of thiamin in food products. Their goals are to identify all factors that impact the stability of thiamin in food products (including those containing whole and refined wheat, rice, and corn) from production to storage, and to determine if new, more stable, salt forms of thiamin can be produced.*



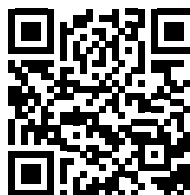
*Dr. Jen-Yi Huang, Associate Professor of Food Science*

### FOOD PROCESSING & TECHNOLOGY DEVELOPMENT

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### FOOD SAFETY AND MICROBIOLOGY

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