



## FOOD PROCESSING AND TRANSFORMATION

Food Processing and Transformation research includes intotoxin removal, preservation, easing marketing and distribution tasks, and increasing food consistency. In addition, it increases the availability of many foods, enables transportation of delicate perishable foods across long distances and makes many kinds of foods safe to eat by reducing spoilage and pathogenic micro-organisms.

## RESEARCH ACTIVITIES

### DR. ROLANDO FLORES

[foodsci.unl.edu/rflores](http://foodsci.unl.edu/rflores)

Dr. Flores studies fractionation and grain processing modeling operations, as well as new uses for grains, agricultural products and by-products, in addition to the utilization, optimization and development of foods.

### DR. RANDY WEHLING

[foodsci.unl.edu/wehling](http://foodsci.unl.edu/wehling)

The Wehling lab researches the chemistry and analysis of cereal grains, and develops rapid analytical methods for measuring food quality of grains and other commodities.

### DR. CURTIS WELLER

[foodsci.unl.edu/weller](http://foodsci.unl.edu/weller)

The Weller lab focuses on value-added processing of agricultural commodities and physical properties determination. Research effort has been concentrated on the refining of grain sorghum to recover high-value lipids and enhancing food safety through control of foodborne disease agents.

### DR. DAVID JACKSON

[foodsci.unl.edu/djackson](http://foodsci.unl.edu/djackson)

Dr. Jackson researches the characterization of corn/sorghum hybrids and their end-use functionality, improving corn processing technologies, and tortilla/chip process chemistry.

### DR. JEYAM SUBBIAH

[foodsci.unl.edu/subbiah](http://foodsci.unl.edu/subbiah)

The Subbiah lab is developing non-thermal preservation technologies such as pulsed electric field pasteurization.

### DR. DEVIN ROSE

[foodsci.unl.edu/drose](http://foodsci.unl.edu/drose)

The Rose lab researches ways to improve the evaluation of quality and chemical composition of whole grains and how to determine differences in chemical and physical properties of whole grains that influence end-use quality.

## Contact Us



Learn more at  
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## RESEARCH ACTIVITIES

### DR. ANDRÉIA BIANCHINI

[foodsci.unl.edu/bianchini](http://foodsci.unl.edu/bianchini)

Dr. Bianchini studies the impact of processing on the quality and safety of foods. She has a particular interest on the effect of thermal and non-thermal processing on mycotoxins, pathogenic and sporeforming bacteria.

### DR. OZAN CIFTCI

[foodsci.unl.edu/ciftci](http://foodsci.unl.edu/ciftci)

The Ciftci lab studies the development of a green biorefinery based on supercritical fluid technology for value-added processing of renewable feedstocks to develop integrated extraction, fractionation, reaction and particle formation of lipids and nutraceuticals as well as understanding the fundamentals associated with such process development. Green chemistry in supercritical fluids with a specific focus on development of novel hybrid or coupled supercritical carbon dioxide bioreactors for the conversion of lipids.

### DR. BING WANG

[foodsci.unl.edu/wang](http://foodsci.unl.edu/wang)

Dr. Bing Wang researches the application of quantitative risk assessment in evaluating the risk of adverse human health effects due to the exposure of biological and chemical hazards via food and other sources if relevant, to improve the use of scientific information in regulatory decisions about food safety and human health.

### DR. GEORGE CAVENDER

[foodsci.unl.edu/cavender](http://foodsci.unl.edu/cavender)

Dr. Cavender studies the impact of processing on the quality and safety of foods. He has a particular interest on the effect of non-thermal and other novel processing technologies on the physicochemical and sensory properties of foods.

### DR. YUE ZHANG

[foodsci.unl.edu/zhang](http://foodsci.unl.edu/zhang)

Dr. Zhang studies the molecular interactions of biopolymers with other food components and the correlations between molecular interactions, structures and functionalities of food systems. Thermal analytical and rheological methods are employed to evaluate the processing and storage of foods.

### DR. ZHONG ZHANG

[foodsci.unl.edu/zhongzhang](http://foodsci.unl.edu/zhongzhang)

Developing new process for egg ingredients fractionation, functional saccharides production, and downstream purification. Evaluating and improving the functionality and performance of egg ingredients. Exploring the health benefits of egg ingredients.

### STEVE WEIER

[fpc.unl.edu/pilot\\_plants](http://fpc.unl.edu/pilot_plants)

Steve Weier's research includes extrusion and food processing technologies, scale up, and grain extrusion. He currently manages the Food Processing Center Pilot Plants.

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