FOOD SAFETY
The Department of Food Science and Technology’s Food Safety Team employs hyperspectral imaging, predictive microbiology and quantitative risk assessment, develops and evaluates the efficacy of intervention technologies to mitigate the risk of biological and chemical foodborne hazards, develops rapid detection methods and researches fungal interactions with plants and the gastrointestinal tract.

RESEARCH ACTIVITIES

**DR. JOHN RUPNOW**  
[foodsci.unl.edu/rupnow](http://foodsci.unl.edu/rupnow)  
Dr. Rupnow teaches Food Safety education and food handling protocols as well as food toxicology and Introduction to Food Science.

**DR. JEFAM SUBBIAH**  
[foodsci.unl.edu/schlegel](http://foodsci.unl.edu/schlegel)  
The Subbiah Lab researches hyperspectral imaging and near-infrared spectroscopy systems for food safety applications and non-thermal preservation technologies such as pulsed electric field pasteurization. Dr. Subbiah is also working on predictive microbiology and risk assessment models.

**DR. JAYNE STRATTON**  
[foodsci.unl.edu/stratton](http://foodsci.unl.edu/stratton)  
The Stratton Lab studies food safety microbiology, including Rapid detection methods for pathogens (Listeria, E. coli O157:H7, Salmonella) and the evaluation of interventions for the reduction of pathogens in various food and pet food matrices.

**DR. ANDRÉIA BIANCHINI**  
[foodsci.unl.edu/bianchini](http://foodsci.unl.edu/bianchini)  
Applied research on the evaluation of ingredients, assessment of processes, and development of strategies to reduce/prevent contamination of final products with mycotoxins and bacterial pathogens. The development of quality control mechanisms. HACCP assistance focusing on food, dairy and feed products.

**DR. HEATHER HALLEN-ADAMS**  
[foodsci.unl.edu/hallenadams](http://foodsci.unl.edu/hallenadams)  
The Hallen-Adams lab researches the role of fungi in the healthy human gut, including interactions between different species of gut fungi, interactions with bacteria, and interactions with the human host. We also study the potential for fungal probiotics to limit fungal disease in humans.
## RESEARCH ACTIVITIES

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Research Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dr. Jennifer Clarke</strong></td>
<td>Dr. Clarke researches the analysis of complex high-dimensional data; statistical model assessment, validation, and prediction; metagenomics; and inference from multitype data; ‘big data’ applications.</td>
</tr>
<tr>
<td><strong>Dr. Bing Wang</strong></td>
<td>Dr. Bing Wang’s primary research interests center around human health risk assessment, epidemiology and research synthesis methodologies. Dr. Wang has applied the principles of those disciplines to a diverse of fields, including charactering the risks of sparsely tested chemicals, developing probabilistic evidence-synthesis method for dose-response assessment, and the risk-benefit analysis of nutrient fortification in grain food.</td>
</tr>
<tr>
<td><strong>Dr. Zhong Zhang</strong></td>
<td>Developing fast analytical methods to detect food contamination and characterize food composition by surface enhanced Raman spectroscopy/FT-IR/NIR/nanotechnology.</td>
</tr>
<tr>
<td><strong>Dr. Changmou Xu</strong></td>
<td>Exploring natural antimicrobial and anti-biofilm agents from botany against foodborne pathogens in foods. Developing fast analytical methods to detect pesticides in foods.</td>
</tr>
</tbody>
</table>