

# School of Food Science Updates

September 16<sup>th</sup>, 2021



# Outline

- Food Science Overview
- School Overview
- School History
- Current Programs and Strengths
- Current Needs

# What is Food Science?

- Physical, biological, and chemical makeup of food
  - Food Technology
  - Sustainability
  - Nutrition
  - Food Safety
  - Food Chemistry
  - Processing
  - Packaging
  - Distribution



# Education for Job Readiness

- Students
  - BS, MS (or MS Online) and Ph.D.
  - Coursework PLUS:
    - WSU Creamery
    - Industry Internships
    - Club and Team Projects
    - Undergraduate Research



# Degree Majors

**General  
Food Science**

**Fermentation  
Science**

# Our Goals

- Provide strong science-based educational programs
- Develop joint programs with businesses and institutions to benefit US agriculture
- Investigate nutritional and functional properties of food and food components
- Develop new technologies and products to meet domestic and international market demands

## Our Goals

- Increase safety, quality, and value of Pacific Northwest food
- Assist agricultural community to remain competitive
- Promote sustainability in agriculture and food processing



# Our History

- Food science program was established in 1960s
- Became Department of Food Science and Technology in 1970
- Department of Food Science and Human Nutrition (FSHN) was created in 1983
  - Merged Human Nutrition and Foods with Food Science and Technology
- Nutrition/dietetics separated from FSHN Department in 2007





# Our History

- WSU and UI departments became joint School of Food Science in 2008
- WSU and UI Joint School separated from an administrative standpoint in February 2020
  - The undergraduate co-operative program for courses continues to exist
- Now we are the “**WSU – School of Food Science**”



# Where and What?

- Pullman
  - FSHN Building
    - Research and Teaching Labs
    - Food Processing Pilot Plant
    - Sensory Science Center
    - Extrusion Laboratory
  - WSU Creamery and Ferdinand's
    - Dairy Processing Pilot Plant
- Richland
  - WSU Tri-Cities Campus
- Prosser
  - Irrigated Ag Research and Extension Center (IAREC)



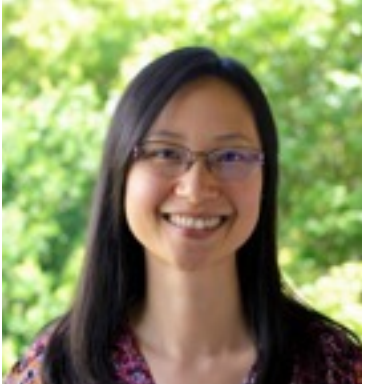
# Current Areas of Strength

Food Safety

Processing

Dairy

# Our Faculty



**Thuy Bernhard**  
**Clinical Assistant**  
**Professor**  
**and Director of**  
**MS Ag Food**  
**Science &**  
**Management**  
**Option**



**Open Position**  
  
**Associate**  
**Professor &**  
**Produce Safety**  
**Extension**  
**Specialist**



**Minto Michael**  
**Assistant**  
**Professor of**  
**Dairy Science**



**Carolyn F. Ross**  
**Professor and**  
**Director of the**  
**Sensory**  
**Evaluation**  
**Facility**

# Our Faculty

## V&E Program Faculty

---



**Stephanie Smith**  
Assistant  
Professor;  
Consumer Food  
Safety Specialist



**Meijun Zhu**  
Professor  
Food  
Microbiology  
and  
Nutrigenomics



**Girish Ganjyal**  
Interim  
Director,  
Associate  
Professor &  
Extension Food  
Processing  
Specialist



**James F. Harbertson**  
Associate Professor  
of Enology



**Thomas Henick-Kling**  
Professor,  
Director, V&E  
Program



# Our Staff

## Department Staff (3)

---



**Jodi Anderson**  
Academic  
Coordinator/  
Advisor



**Jane Lawford**  
Administrative  
Manager



**Frank Younce**  
Senior Scientific  
Assistant (Pilot  
Plant),  
Instructor



**Tonia Green**  
Research Intern  
(Meijun Zhu's  
Program)



**Cathy Blood**  
Events Coordinator  
(Food Extension  
Program)



**John Haugen**  
WSU  
Creamery  
Manager



**Beata Vixie**  
Research Intern  
(Carolyn Ross's  
Program)

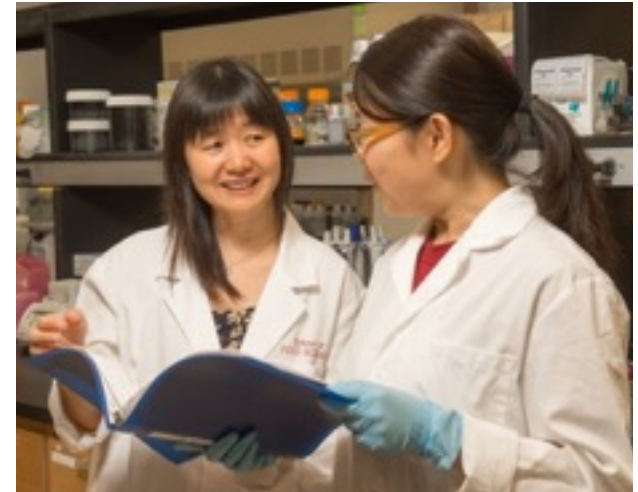
# Research and Extension Facilities

- WSU Creamery
- FSHN Pilot Plant
- Sensory Evaluation Program
- Food Microbiology Laboratories (Pullman and Prosser)
- Extrusion Processing Laboratory



# Research Projects

- Prevent foodborne illness naturally
- Rapid identification of foodborne pathogens using hyperspectral imaging
- Improving flavors in wine
- Developing dairy products
- Evaluating the use of nanobubbles for the safety of dairy products
- Making healthier snack foods



# Faculty Research

- **Lead collaborative innovation with a focus on:**
  - Improving food safety
  - Developing healthy and sustainable foods
  - Product solutions for improving health
  - Improving food quality using fundamental approaches

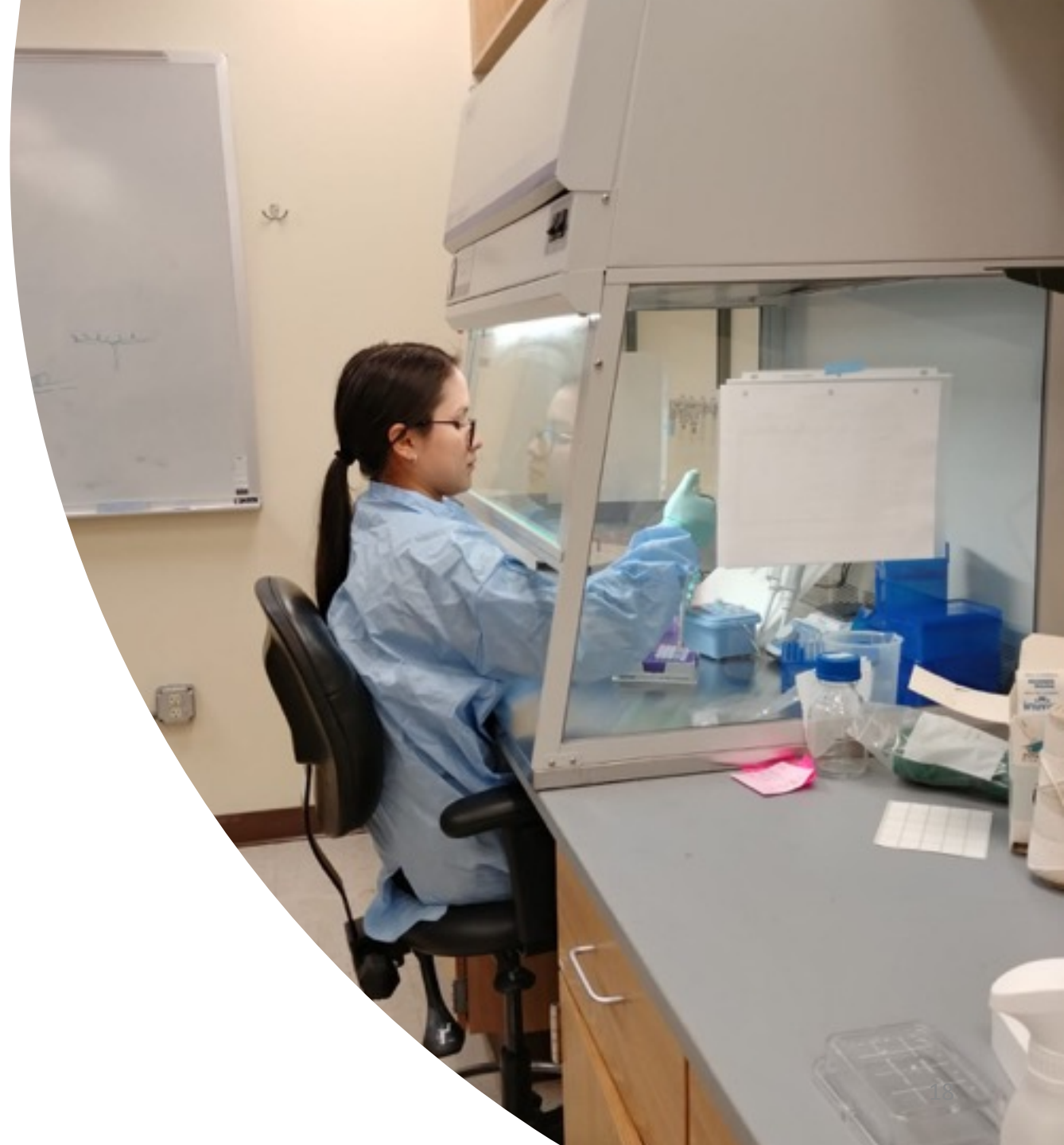


# Food Safety

- Meijun Zhu (food microbiology)
- Open Position (food microbiology, produce safety)
- Stephanie Smith (food microbiology, consumer food safety)
- Minto Michael (dairy microbiology, process validation, food safety)
- Charlie Edwards (wine microbiology)
- Girish Ganjyal (process food safety)

9/16/2021

Go Cougs!



# Fundamental Approaches for Quality

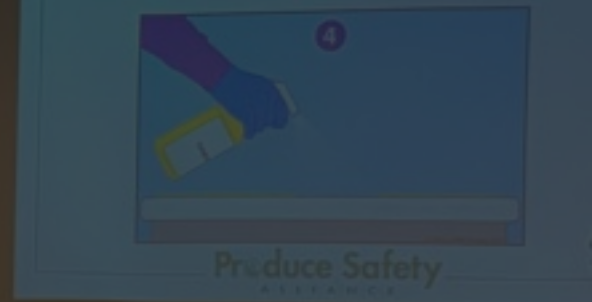
- Charles Edwards (wine quality)
- Girish Ganjyal (food processing, extrusion, ingredient technology)
- James Harbertson (wine quality)
- Carolyn Ross (sensory science and food/pharmaceutical analysis)





# Extension Faculty

- Stephanie Smith (Consumer food safety)
- Girish Ganjyal (Food processing and safety)
- James Harbertson (Wine making and quality)
- Open Position (Produce safety)



# Our Faculty, Staff, and Students

- 6 (+2 V&E) Faculty
- Jane Lawford (Admin Manager)
- Jodi Anderson (Student Advisor)
- Frank Younce (Pilot Plant Manager)
- John Haugen (Creamery Manager)
- 43 Undergraduate Students
- 44 Graduate Students
- 78 M.S. Ag. Food Science & Management Option Students
- 9 Online Food Science Certificate Program Students



# WSU Learning Outcomes

1. Critical & Creative Thinking
2. Quantitative Reasoning
3. Scientific Literacy
4. Information Literacy
5. Communication
6. Diversity
7. Depth, Breadth, and Integration of Learning

<https://ucore.wsu.edu/students/learning-goals/>



# Student Activities

- **Food Science Club**
  - Meet students
  - IFT involvement
  - Service and fundraising
  - Industry tours
  - Link to faculty
  - Link to SFS Alumni



# Student Activities

- Product Development and Dairy Product Evaluation
  - Concept-to-consumer product development experience
  - Multiple national product development contests
  - Compare evaluations to those of experts



# Student Activities

- College Bowl
  - IFTSA competition
  - Tests everything from in-depth knowledge to food trivia
  - Compete regionally and nationally against other food science students



## Current Needs:

- Undergraduate enrollment for FS major
- Creamery integration
- Fundraising to hire teaching instructors

# Current Fundraising Efforts:

- Dedicated to grow the undergraduate program
- 2020-2021 - \$100,000 from PSIFT (Puget Sound IFT) section
- New Endowment
  - To hire a teaching faculty (with 100% teaching appointment dedicated to our undergrad program)
  - Goal – \$1.75 million by end of 2022

# Current Fundraising Efforts:

Dawn Butler

Director of Development

WSU, CAHNRS

Email: [ndbutler@wsu.edu](mailto:ndbutler@wsu.edu)





**Thank you for your  
support!**



# Thank You

<http://sfs.wsu.edu/>



*School of*

**Food Science**

WASHINGTON STATE UNIVERSITY