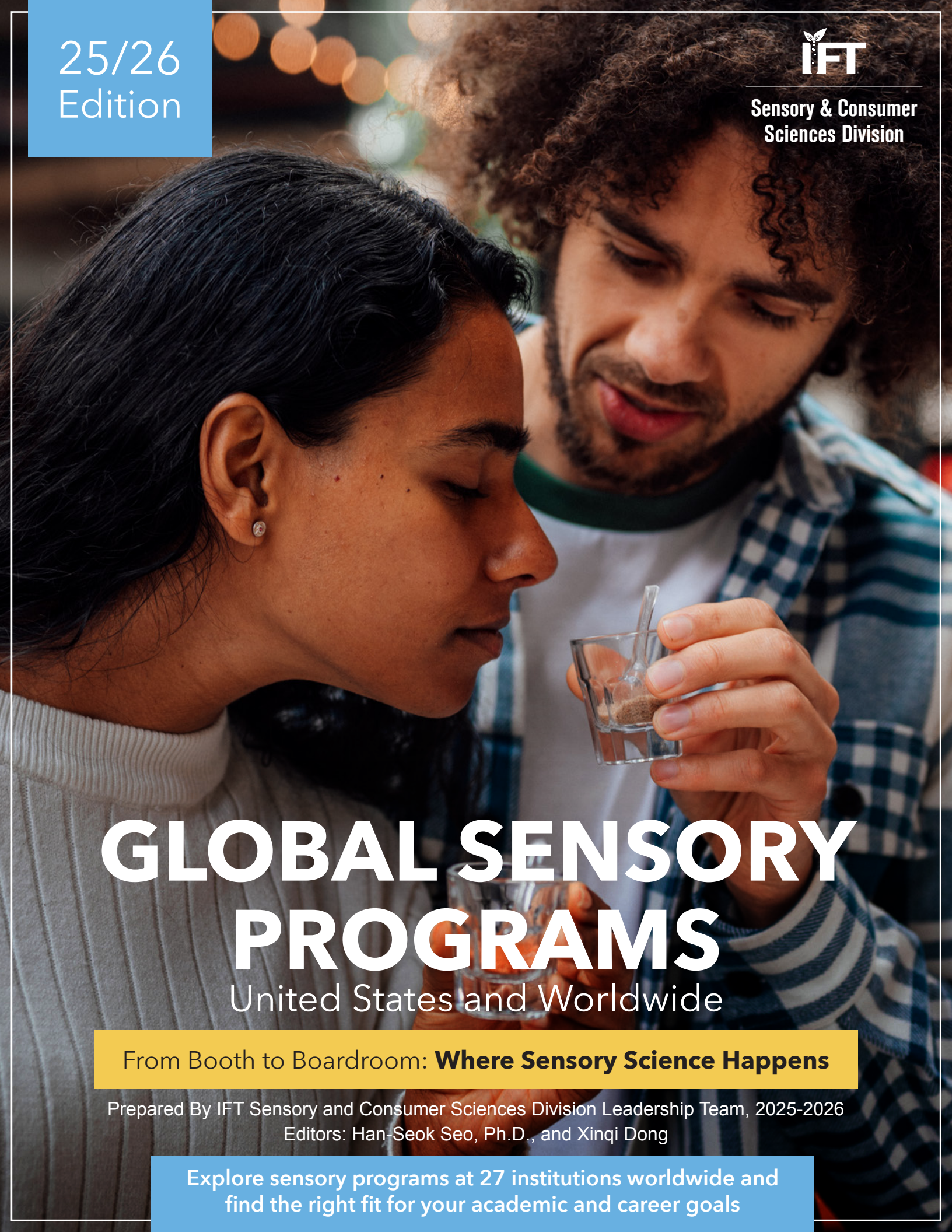
25/26 Edition

IFT

Sensory & Consumer Sciences Division



GLOBAL SENSORY PROGRAMS

United States and Worldwide

From Booth to Boardroom: **Where Sensory Science Happens**

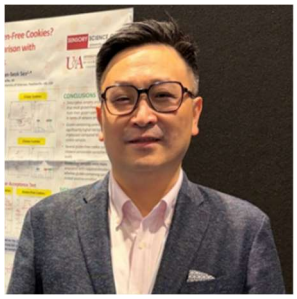
Prepared By IFT Sensory and Consumer Sciences Division Leadership Team, 2025-2026
Editors: Han-Seok Seo, Ph.D., and Xinqi Dong

Explore sensory programs at 27 institutions worldwide and find the right fit for your academic and career goals

Table of Contents

Section	Page
Foreword by Dr. Han-Seok Seo	1
Student Testimonial: Yao Jiang	2
Student Testimonial: Isa Maria A. Reynoso	3
Student Testimonial: Chien-I Hsu	4
Graduate Testimonial: Dr. Matthiew B. Haines	5
1. Acadia University	6
2. Auburn University	11
3. Brigham Young University	16
4. Chapman University	20
5. Clemson University	25
6. Cornell University	30
7. Deakin University	36
8. Ewha Womans University	42
9. Kansas State University	48
10. Louisiana State University	56
11. Michigan State University	62
12. Mississippi State University	66
13. Oregon State University	71
14. Purdue University	77
15. Singapore Institute of Food and Biotechnology Innovation	81
16. Texas A&M University	88
17. The Ohio State University	95
18. The Pennsylvania State University (Penn State)	100
19. The University of Tennessee, Knoxville	106
20. University of Arkansas, Fayetteville	112
21. University of California, Davis	119
22. University of Florida	127
23. University of Illinois Urbana-Champaign	132
24. University of Massachusetts Amherst	138
25. Utah State University	144
26. Virginia Polytechnic Institute and State University (Virginia Tech)	155
27. Washington State University	162

Foreword by Dr. Han-Seok Seo



Dr. Han-Seok Seo

Finding information about sensory science graduate programs has never been easier. With the internet and AI tools, prospective students can explore universities, faculty research interests, and academic programs within minutes. This contrasts sharply with my own graduate program search, which relied heavily on personal networks and word of mouth. However, easy access to information does not always reveal what matters most. University and laboratory websites may be outdated or may not fully reflect a program's vision, current research directions, laboratory environment, available opportunities, or other practical details students need to know before deciding whom to contact and where to pursue graduate study.

This gap inspired an initiative through the Institute of Food Technologists (IFT) Sensory and Consumer Sciences Division (SCSD). Beyond compiling publicly available information, we aimed to provide practical, up-to-date insights not easily found on laboratory websites or through AI-based searches. We hope this guide helps students explore participating programs, understand their research areas, expertise, and opportunities, and identify potential graduate advisors aligned with their goals.

The guide also serves researchers, educators, and food industry professionals seeking collaborators and academic partners. As sensory and consumer sciences become increasingly interdisciplinary and global, connections across laboratories, institutions, and countries are more valuable than ever. This inaugural edition features 27 university sensory science programs across the United States, Canada, Australia, Singapore, and the Republic of Korea. We hope it fosters international collaboration in research, cross-cultural consumer understanding, and global product development. We also hope future editions will feature more programs from an even wider range of countries.

I sincerely thank the representatives, faculty members, and colleagues from all 27 participating institutions for generously sharing information about their programs and laboratories. My special thanks go to Ms. Xinqi Dong for her exceptional dedication and invaluable contributions to co-leading this project. I am also grateful to SCSD Chair Alina Stelick for her support in launching and advancing this initiative, and to Mr. Chien-I Hsu, Ms. Yao Jiang, Ms. Isa Maria A. Reynoso, and Dr. Matthiew B. Haines for their enthusiastic participation and assistance. I also extend my appreciation to IFT staff members Ms. Melanie Bozek and Ms. Sydnie Nugent, as well as the IFT cover designer, for their valuable support.

Ultimately, we hope this guide becomes more than a collection of university sensory program profiles. We envision it as a starting point for meaningful connections among students and mentors, researchers and collaborators, academia and industry, and sensory scientists worldwide. Through these connections, we hope to foster a stronger, more collaborative, and globally connected sensory and consumer science community.

Han-Seok Seo, Ph.D., Dr. rer. medic.
Tyson Endowed Professor in Food Sensory Science
University of Arkansas, Fayetteville, Arkansas, United States of America

Student Testimonial: Yao Jiang

Yao Jiang is a Ph.D. student in the Department of Food Science at Cornell University, with research interests in flavor chemistry and sensory evaluation (advisor: Dr. Robin Dando). She currently serves as a Student Representative on the Community Team for the IFT Sensory and Consumer Sciences Division for the 2024–2026 term.



Yao Jiang

When I was applying for graduate programs, one of the most important things for me was reaching out to professors and having direct conversations with them. These discussions helped me better understand their research, expectations, and mentoring style, which are not always clear from websites or publications. Before contacting a professor, I recommend reading some of their recent publications to develop a basic understanding of their research and identify topics that genuinely interest you. When writing your personal statement in the application, try to describe your research interests as specifically as possible and explain how they connect with the research conducted in the lab you are applying to.

Equally important was learning about the lab environment. Through conversations with current students, I was able to get a sense of the lab culture, collaboration style, and overall atmosphere. This played a major role in my decision, as I believe a supportive and communicative lab environment is essential for both personal well-being and academic success. Another experience that might be useful, although it may not be possible for everyone, is working as a research assistant or laboratory assistant before applying to graduate school. Working in a research lab allows you to develop technical skills that may be useful in the future, but it also gives you an opportunity to understand what research is actually like and whether you would enjoy working in a similar environment for the next four to five years.

At Cornell, I have found that the lab environment strongly aligns with what I was looking for. My advisor and lab members are collaborative and open to discussion, which has made it easier to navigate challenges and grow as a researcher. My advisor is very supportive while also giving me the space to think critically and develop my own ideas. At the same time, he provides guidance when I move too far away from the main research direction. My lab members are also very supportive. We frequently discuss our research and share ideas and opinions, which allows us to gain new perspectives from each other. Besides, Cornell University has several resources and organizations that have been valuable to my research, including the Cornell Sensory Evaluation Center, Cornell Library, and Cornell Statistical Consulting Unit. My research focuses on understanding how chemical compounds contribute to flavor perception, particularly in maple syrup, and these resources have helped me develop both analytical and sensory research skills.

Overall, I encourage prospective graduate students to spend time talking with both professors and current students when evaluating graduate programs. Beyond the research itself, finding a lab environment and mentoring style that fits your goals and working preferences can have a significant impact on your graduate school experience.

Yao Jiang, Ph.D. Student
Department of Food Science
Cornell University, Ithaca, New York, United States of America

Student Testimonial: Isa Maria A. Reynoso

Isa Maria A. Reynoso is a Ph.D. student and graduate research assistant in the Department of Biochemistry, Nutrition and Health Promotion at Mississippi State University (advisor: Dr. Mark W. Schilling). She currently serves as a Student Representative on the Community Team for the IFT Sensory and Consumer Sciences Division for the 2025–2027 term.



Isa Maria A. Reynoso

My food industry experience in research and development in the Philippines motivated me to pursue graduate studies in Food Science. As an international student, finding opportunities overseas can be a daunting process, but my journey in the United States started with a simple email. I streamlined my search by listing universities with Food Science programs, then researching faculty members based on their specializations. I recommend composing an email that briefly shares your background, aspirations, and alignment with their program and directly asks about opportunities to study and conduct research.

From my experience, this first step opened doors to communicating with faculty members and learning first-hand about their research and laboratory culture. These conversations also provide you with information that will help you discern whether the available opportunities align with your values, passion, and career aspirations. Getting in touch with a faculty member can help you connect with their students or be referred to another faculty member or laboratory where you might be a better fit. Connecting with students is especially beneficial as you learn about their graduate student experiences and hear their advice about courses, organizations, housing, and navigating campus life. When I first moved to the States, my full intention was to focus on my program and earn my degree. It did not take long for me to realize that there are so many opportunities beyond the classroom, such as joining student organizations, research sampling trips, conference trips, and on-campus activities. All of these opportunities not only expand your skill set but also allow you to meet more people, which helps build a supportive community around you during the pursuit of your studies.

I am always grateful for all the colleagues and lifelong friends I made throughout my M.S. program at the University of Georgia and my time here at Mississippi State University. It makes such a difference having your mentors and colleagues look out for you and wholeheartedly support your success in the program. You have nothing to lose and everything to gain with this first step of reaching out.

Isa Maria A. Reynoso, Ph.D. Student and Graduate Research Assistant
Department of Biochemistry, Nutrition and Health Promotion
Mississippi State University, Mississippi State, Mississippi, United States of America

Student Testimonial: Chien-I Hsu

Chien-I Hsu is a Ph.D. student in Nutrition and Food Sciences at Louisiana State University, with interests in food product development, applied statistics, and sensory and consumer research (advisor: Dr. Witoon Prinyawiwatkul). He currently serves as E-Newsletter Editor Co-Lead for the IFT Sensory and Consumer Sciences Division for the 2025–2026 term.



Chien-I Hsu

My academic path began with training in chemistry and engineering at National Taiwan University before evolving toward food science, statistics, and sensory and consumer research during my Ph.D. training at Louisiana State University (LSU). Engineering taught me to think about systems and processes, while statistics and sensory science taught me to think more carefully about evidence, variation, and how people actually experience a product. Moving across all these areas has taught me that the same food problem can look very different depending on the tools and perspectives you bring to it. That's why I believe it's important to consider what skills, training, and perspectives the program will allow you to develop. The ways of thinking we developed during graduate school often stay with us much longer. Choosing a graduate program, therefore, is not all about finding an interesting research topic. It's also about understanding what kinds of training, mentorship, and opportunities will help shape how you think as a scientist throughout your master's or Ph.D.

Through my Ph.D. experience, I learned to pay attention to the advisor, research group, and the opportunities available around them, and not just the name of the graduate program or the university's ranking. In the Sensory Services Lab, I also came to appreciate how much both an advisor and the training opportunities provided by the research group can influence your development. An advisor does more than guide a thesis or dissertation project. They can influence the questions you ask, the methods you are exposed to, and the directions you are encouraged to explore. At the same time, opportunities beyond the research project matter. Being exposed to FOODii, which connects sensory and consumer research with food innovation, has shown me the value of looking beyond a single research project when evaluating a graduate training environment.

So, when evaluating a graduate program, I would encourage prospective students to look beyond a single project or research topic and ask themselves a simple question: what kind of scientist or professional will the combination of mentorship, training, and opportunities help me become?

Chien-I Hsu, Ph.D. Student
School of Nutrition and Food Sciences
Louisiana State University, Baton Rouge, Louisiana, United States of America

Graduate Testimonial: Dr. Matthiew B. Haines

Dr. Matthiew B. Haines is a sensory scientist at General Mills. He holds a Ph.D. from The Ohio State University, where his research focused on cross-modal taste-odor interactions of non-nutritive tastes using coffee as a stimulus (advisor: Dr. Christopher T. Simons). He currently serves as an Online Community Co-Lead for the IFT Sensory and Consumer Sciences Division for the 2025–2026 term.



Dr. Matthiew B. Haines

I always knew I wanted to build a career connected to food, but I didn't yet know which area of food science would be right for me. At Penn State, I was introduced to fields ranging from engineering and microbiology to quality, chemistry, and sensory science. Undergraduate research with Dr. Helene Hopfer and Dr. John Hayes, along with working in the Sensory Evaluation Center, gave me a closer look at how sensory and consumer research could answer questions about food. Those experiences sparked my interest in the field and helped me begin building relationships with mentors and peers.

I continued learning and expanding my network by attending research conferences and completing an international research internship at the University of São Paulo in Brazil. I helped a master's student analyze the volatile profile of a fruit native to Brazil. The project gave me a chance to contribute to research in a new setting, and living and working abroad taught me a great deal personally and professionally.

Because sensory and consumer science is such a connected field, those early relationships mattered as I considered graduate school. I was able to ask mentors for advice about programs and research opportunities and ultimately chose to work with Dr. Christopher T. Simons at The Ohio State University. My interests changed over time, and my dissertation ended up focusing on a different topic than the one I initially had in mind.

At Ohio State, I became more involved with IFT as a student representative on the Sensory and Consumer Sciences Division (SCSD) leadership team. Working alongside students, academics, and industry professionals helped me grow my network and build relationships beyond my university. Attending FIRST was especially valuable because it gave me the chance to connect with people in person and turn familiar names and faces on a screen into lasting professional relationships.

Later, a connection in my network helped me learn about a position at General Mills. Looking back, my path from undergraduate research through graduate school and into industry has reinforced one lesson: keep showing up, collaborating, and investing in good relationships. You never know where those connections may lead.

Matthiew B. Haines, Ph.D.
Sensory Scientist, General Mills
Graduate of the Department of Food Science and Technology
The Ohio State University, Columbus, Ohio, United States of America

1. Acadia University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Centre for the Sensory Research of Food
- **Department/Division Name:** School of Nutrition and Dietetics at Acadia University
- **Location:** Wolfville, Nova Scotia, Canada
- **Website:** https://nutrition.acadiau.ca/sensory-research-of-food.html

2. Key Contact

- **Primary Contact Name:** Dr. Matt McSweeney
- **Title/Role:** Professor and Director
- **Email:** matthew.mcsweeney@acadiau.ca

3. About Program and Capabilities

- **Brief Overview:**
  The Centre for the Sensory Research of Food (CSRF), located within the School of Nutrition and Dietetics at Acadia University, is dedicated to providing research opportunities for undergraduate students. The CSRF conducts both industry-sponsored and academic research, allowing students to gain an understanding of food research and industry from multiple viewpoints.

- **Established Year:** Late 1980s

- **Brief History:**
  The CSRF was established in the late 1980s by a previous director of the School of Nutrition and Dietetics at Acadia University. In 2014, Dr. McSweeney became the director of the CSRF. Over the years, it has provided support to local, national, and international companies in conducting sensory evaluation studies and working on a variety of research projects.

- **Vision and Mission:**
  Vision: To offer undergraduate students an opportunity to conduct research, where:
  ✓ Industry and academia collaborate effectively
  ✓ Food products are designed with consumer experience at the forefront
  ✓ Students are trained as skilled professionals in sensory and consumer science
  The vision is to serve as a hub for advancing food innovation. This is achieved through sensory evaluation studies and an improved understanding of human sensory perception.

Mission: To support the food industry and research community by:

- ✓ Conducting rigorous sensory and consumer testing
- ✓ Helping develop and improve food products
- ✓ Providing data-driven insights into how people perceive and choose foods

In short, its mission is to apply sensory science to develop food products that are both nutritious and appealing to consumers.

- **Test Capabilities:**
  - ✓ Trained panels
  - ✓ Discrimination testing
  - ✓ Consumer acceptance testing (central location test and home-use test)
  - ✓ Surveys focusing on the consumer perception of Atlantic Canadians
  - ✓ Focus groups
  - ✓ Chemical composition of different food products

- **Fun Facts:**
  - ✓ Research assistants take turns planning wine and cheese and other food pairings and events for all members of the lab.

4. About the People

- **Director/Principal Investigator:** Dr. Matt McSweeney
- **Staff and Students:**
  - ✓ 15 undergraduate research assistants
  - ✓ One to two undergraduate Honours Students work in the lab annually

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Consumer acceptance and food innovation: This work investigates how people respond to new foods and beverages, supporting product development for both industry and local food sectors
  - ✓ Sustainable and novel food ingredients: This work includes exploring seaweed, insects, food by-products, and other unconventional ingredients for use in new food products
  - ✓ Plant-based foods: Research focusing on improving the taste, texture, and consumer acceptance of plant-based meat, dairy, and egg alternatives
  - ✓ Sensory perception and product reformulation: Studies examining how different sensory properties (taste, smell, texture) influence perception, with applications such as reducing salt while maintaining flavor

- **Recent/Ongoing Projects:**
  - ✓ Exploring the sensory properties and consumer perception of different seaweed varieties
  - ✓ Evaluating the sensory properties of wines produced in Nova Scotia, Canada
  - ✓ Investigating how consumers perceive new ingredients and food-waste valorization
  - ✓ Research on the consumer perception of plant-based cheeses
  - ✓ Sensory evaluation studies to support regional food commodities (e.g. blueberries, lobster)

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Evaluation of Food (undergraduate course)
  - ✓ Food Product Development (undergraduate course)

- **Student Opportunities:**
  - ✓ Undergraduate researchers may complete independent research projects

7. About the Sensory Facility

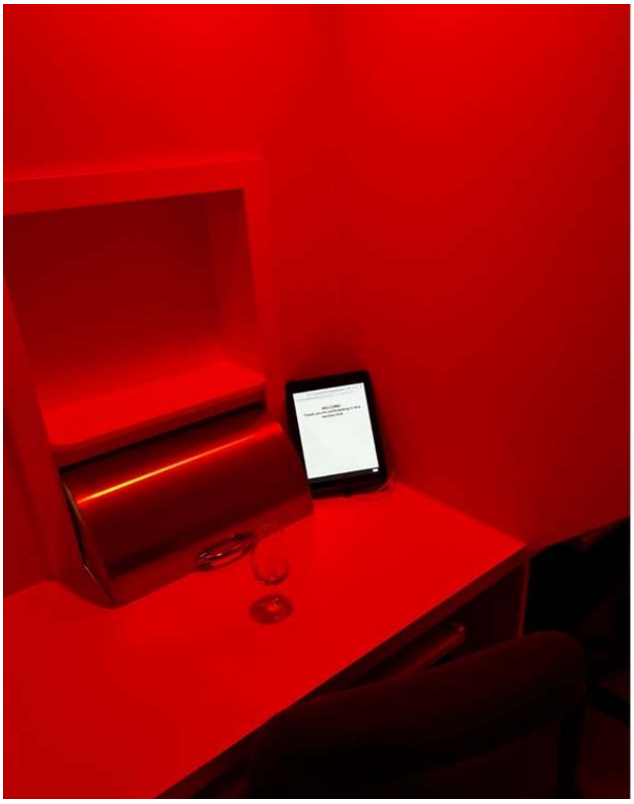
- **Testing Spaces:**
  - ✓ Nine sensory booths
  - ✓ Focus group room
  - ✓ Large prep kitchen
  - ✓ Texture analyzer and rheometer
  - ✓ Food product development facilities
  - ✓ Chemical analysis equipment

8. Inside the Lab



Research assistants in the CSRF

From left to right: Alex Redwood, Cayla Weiler, Brianna Power, Gabrielle Sloan, Brianna Lafosse, Bria Kelly, and Hayley Peters



One of the nine sensory booths within the laboratory



Sample preparation and serving area

2. Auburn University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Auburn University
- **Department/Division Name:** Food Science Program in the Department of Poultry Science
- **Location:** Auburn, Alabama, United States of America

2. Key Contact

- **Primary Contact Name:** Dr. Sungeun Cho
- **Title/Role:** Associate Professor
- **Email:** sungeun.cho@auburn.edu

3. About Program and Capabilities

- **Brief Overview:**
  The AU Sensory Lab in the Department of Poultry Science at Auburn University supports interdisciplinary research focused on sensory analysis, consumer behavior, and flavor chemistry. Although housed in Poultry Science, the lab evaluates a wide range of food products and fresh produce using both human sensory methods and advanced instrumental techniques, including a portable electronic nose, ultra-fast gas-chromatography, and an electronic tongue. The lab also offers sensory and flavor analysis services to academic and industry partners.

- **Established Year:** 2019

- **Brief History:**
  The AU Sensory Lab was established in September 2019 upon the arrival of Dr. Sungeun Cho as an Assistant Professor of Sensory Science in the Department of Poultry Science. Since its inception, the lab has developed a comprehensive research program integrating sensory evaluation, consumer behavior surveys, and flavor chemistry approaches to study food and beverages. The lab's growth has been driven by strong collaborations within the College of Agriculture, across Auburn University, with other universities, and through international partnerships.

- **Vision and Mission:**
  Vision: To be a leading interdisciplinary hub that integrates sensory science, consumer research, and flavor chemistry to advance food quality, innovation, and consumer acceptance through collaborative research.

Mission: To generate impactful knowledge by combining sensory evaluation, consumer behavior research, and instrumental flavor analysis. The lab aims to support food and agricultural innovation through cross-interdisciplinary and international collaborations, provide high-quality sensory and flavor analysis services to industry, and contribute to education and research excellence in sensory and consumer sciences.

- **Test Capabilities:**
  - ✓ Discrimination testing
  - ✓ Descriptive sensory analysis
  - ✓ Consumer acceptance testing
  - ✓ Focus group
  - ✓ Consumer survey
  - ✓ Food quality analysis through physicochemical analysis
  - ✓ Flavor quality analysis using portable electronic nose, ultra-fast gas chromatography, and electronic tongue
  - ✓ Shelf-life testing

- **Fun Facts:**
  - ✓ Since 2019, every student who graduated from the AU sensory lab has gained industry experience, either prior to joining the lab or through an internship completed during their graduate studies.
  - ✓ As part of the Poultry Science Department, we have access to a state-of-the-art research center, The Charles C. Miller Jr. Poultry Research & Education Center (https://agriculture.auburn.edu/poul/charles-miller-jr-center.php), where birds can be processed, along with fully equipped further-processing rooms designed for chicken quality research, including an industry-scale packaging machine; these facilities are also used to prepare samples for sensory research.

4. About the People

- **Director/Principal Investigator:** Dr. Sungeun Cho
- **Staff and Students:**
  - ✓ Michelle Hayden: Research assistant
  - ✓ Dr. Jihye An: Post-Doctoral associate
  - ✓ Jodie Jones: M.S. student
  - ✓ Xenia Murillo: M.S. student
  - ✓ Harshitha Maru: M.S. student
  - ✓ Harley Hicks: M.S. student
  - ✓ Zoe Jones: Undergraduate student

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Food quality analysis
  - ✓ Sensory research
  - ✓ Consumer surveys

- **Recent/Ongoing Projects:**
  - ✓ USDA Agricultural Research Service-funded project: Consumer perception survey of animal welfare-friendly processed chicken products; Development of a rapid-sensor-based detection system to detect contamination in poultry through volatile chemistry
  - ✓ National Science Foundation-funded project: Investigation of flavor and sensory quality of cherry tomatoes produced using aquaponic systems; Investigation of the effect of information depth about novel processing technologies on consumer behavior and acceptance
  - ✓ AU Alabama Agricultural Experiment Station-funded project: Development of rapid quality evaluation methods using electronic sensing technologies
  - ✓ Other Projects: Alternative protein-based food product development and consumer perception research on novel ingredients and products; Collaborative projects investigating how consumers perceive AI-generated food and beverages or food products produced using novel technologies

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Evaluation (graduate course)
  - ✓ Flavor Chemistry and Analysis (graduate course)
  - ✓ Introductory Food Science (undergraduate course)

- **Student Opportunities:**
  - ✓ Master's and doctoral assistantships
  - ✓ Undergraduate research assistantships
  - ✓ Internship program (3–6 months). To date, we have hosted undergraduate, M.S., and Ph.D. students from local institutions, across the United States, and internationally – including the Czech Republic, Honduras, Taiwan, and Republic of Korea.

7. About the Sensory Facility

- **Available sensory booths or testing space:**
  - ✓ Sensory booths (seven seats) with a preparation kitchen

- **Special equipment or technologies:**
  - ✓ Sensory analysis lab (texture analyzer, electronic nose, ultra-fast GC-MS, electronic tongue)

8. Inside the Lab

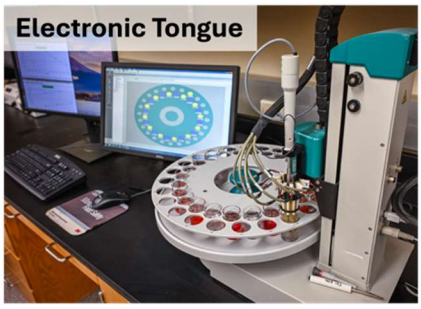


AU Sensory Lab Members





Sensory booths and panel training room







Sensory lab equipment

3. Brigham Young University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Brigham Young University
- **Department/Division Name:** Nutrition, Dietetics, and Food Science
- **Location:** Provo, Utah, United States of America
- **Website:** https://ndfs.byu.edu/sensory-lab
- **Social Media Handles:**
  - ✓ Instagram: https://www.instagram.com/byusensorylab/

2. Key Contact

- **Primary Contact Name:** Amanda Rees
- **Title/Role:** Sensory Lab Manager
- **Email:** amanda_rees@byu.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Brigham Young University Sensory Lab is a university-run facility where undergraduate food science and dietetic students gain hands-on, real-world training. This allows us to deliver quality services at competitive rates.

- **Established Year:** 1986

- **Brief History:**
  Dr. Lynn Ogden established the BYU Sensory Lab over forty years ago, starting in an age when data were painstakingly digitized by hand.

- **Test Capabilities:**
  The BYU Sensory Lab provides sensory and consumer services:
  - ✓ Consumer acceptance and preference testing
  - ✓ Difference testing
  - ✓ Focus groups
  - ✓ Home-use tests

- **Fun Facts:**
  - ✓ Our testing capabilities are resilient, allowing panels to continue even during power outages and computer shutdowns.

4. About the People

- **Director/Principal Investigator:** Dr. Laura Jefferies
- **Lab Manager:** Amanda Rees
- **Staff and Students:**
  - ✓ Number of undergraduate student employees: eight to twelve

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ The BYU Sensory Lab primarily conducts commercial sensory testing while also supporting research-focused studies.

- **Recent/Ongoing Research Projects:**
  - ✓ Consumer attitudes about packaging characteristics for adults and children
  - ✓ Novel food technologies
  - ✓ Role of trust and sensory evaluation
  - ✓ Acceptability of post-retail produce
  - ✓ Consumer acceptance of indoor aquaculture

6. About the Sensory Facility

- **Testing Spaces:**
  - ✓ We have a fully equipped facility, including a reception area, seven side-by-side private computerized booths, a client room, a fully equipped commercial preparation area, and a walk-in refrigerator and freezer.

7. Inside the Lab



Sensory booths



Reception



Kitchen



Sample preparation and serving

4. Chapman University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Sensory and Consumer Insights Lab
- **Department/Division Name:** Food Science Program
- **Location:** Orange, California, United States of America
- **Website:** https://sites.chapman.edu/sensorylab/
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/in/chapmansensory/

2. Key Contact

- **Primary Contact Name:** Dr. Uyen Phan
- **Title/Role:** Assistant Professor and Principal Investigator
- **Email:** uphan@chapman.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Chapman University Sensory and Consumer Insights Lab, part of the Food Science Program, focuses on investigating the intricate connections between food, sensory perception, and consumer behavior. We aim to bridge academia and industry by delivering impactful research, hands-on education, and collaborative solutions that support innovation. Through our work, we help translate sensory insights into strategies that enhance product development and consumer satisfaction.

- **Established Year:** 1982

- **Brief History:**
  Chapman University's Sensory Lab was established in 1982 by Dr. Fredric Caporaso as part of the university's emerging Food Science program. The Food Science program was developed in response to the needs of Southern California's large and growing food industry, which sought locally trained professionals in food science and sensory evaluation.

  Dr. Caporaso brought expertise in sensory science to Chapman and developed sensory courses, industry training, and applied research activities. The program collaborated with companies including Hunt-Wesson, Taco Bell, Herbalife, Baskin-Robbins, Baja Fresh, Ready Pac Produce, and other food and flavor businesses. In addition, short courses were conducted for companies such as Jack in the Box,

King's Hawaiian, BakeMark, Taco Bell, Hunt-Wesson, and Baskin-Robbins, both at Chapman and at company headquarters.

In its early years, sensory activities were conducted in temporary spaces, including the university's former President's Dining Room. Testing was largely paper-based and required substantial manual organization and participant recruitment. With external funding and institutional support, Dr. Caporaso later established dedicated sensory facilities, including a laboratory with seven sensory booths, a discussion area, kitchen facilities, and computerized testing capabilities.

The program contributed to the professional development of Chapman students, many of whom entered sensory, flavor, product development, and related positions in the food industry. Alumni have subsequently worked for organizations such as Pepsi, Taco Bell, Starbucks, Herbalife, Amazon Fresh, and numerous flavor and ingredient companies. Although the dedicated sensory laboratory was later repurposed to accommodate other university priorities, the program's industry impact and educational legacy continued. In 2023, Dr. Uyen Phan joined Chapman University and succeeded Dr. Caporaso following his retirement. Dr. Phan now leads the Sensory and Consumer Insights Laboratory and is continuing to develop the program's teaching, research, industry engagement, and student training activities.

- **Vision and Mission:**

  Our mission at the Sensory and Consumer Insights Lab is to serve as a premier hub for sensory science, where academia meets industry to drive innovation and excellence. We are dedicated to conducting high-quality research, providing exceptional education and training, and collaborating with industry partners to advance knowledge and solve practical problems. Through our interdisciplinary approach, we aim to make significant contributions to both academic scholarship and industry practice in the dynamic field of sensory science.

- **Test Capabilities:**

  As a Sensory Lab, we specialize in a broad range of sensory research. Our work focuses on understanding how these sensory experiences influence consumer preferences, behavior, and decision-making. This knowledge helps industries refine product development, enhance marketing strategies, and improve consumer satisfaction.

  Our lab provides a comprehensive suite of sensory and consumer science services, including:

  ✓ Discrimination testing
  ✓ Consumer acceptance testing (central location test, home-use test)
  ✓ Focus groups and one-on-one interviews

- ✓ Consumer behavior analysis
- ✓ Contract research and customized sensory/consumer solutions

4. About the People

- **Director/Principal Investigator:** Dr. Uyen Phan
- **Staff and Students:**
  - ✓ One postdoctoral researcher
  - ✓ Seven hourly lab assistants, including five graduate students and two undergraduate students

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Consumer perception and acceptance of value-added dairy products and dairy-based coffee beverages processed by different thermal processing technologies
  - ✓ Emotional response measurement in food consumption using innovative methodologies
  - ✓ Development and validation of sensory evaluation protocols
  - ✓ Marketing strategies and consumer insights for value-added food products
  - ✓ Eating behavior and motivations of food choices

- **Recent/Ongoing Projects:**
  - ✓ Fiber fortification of cow's milk
  - ✓ The effect of HTST, UHT, and retort processing on quality and stability of RTD coffee beverages containing milk
  - ✓ Consumers' acceptance of lactose-free milk in coffee beverages compared to regular and plant-based milks
  - ✓ Purchase-based approach to re-evaluate the thrifty food plan
  - ✓ Method development, comparison of automated facial expression analysis, and Check-All-That-Apply technique for emotional responses to novel proteins

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Evaluation of Foods (graduate course)
  - ✓ Consumer Research (graduate course)
  - ✓ Statistics for Food Scientists

- **Student Opportunities:**
  - ✓ Student Research Assistants
  - ✓ Graduate Research Assistants

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Sensory evaluation lab featuring 9 portable booths, 9 iPads, and a preparation kitchen

- **Special Equipment and Technologies:**
  - ✓ Compusense® is used for test design and data collection.
  - ✓ FaceReader is used for collecting facial expressions and emotions.
  - ✓ XLSTAT-Standard for advanced statistical analysis of sensory and consumer data

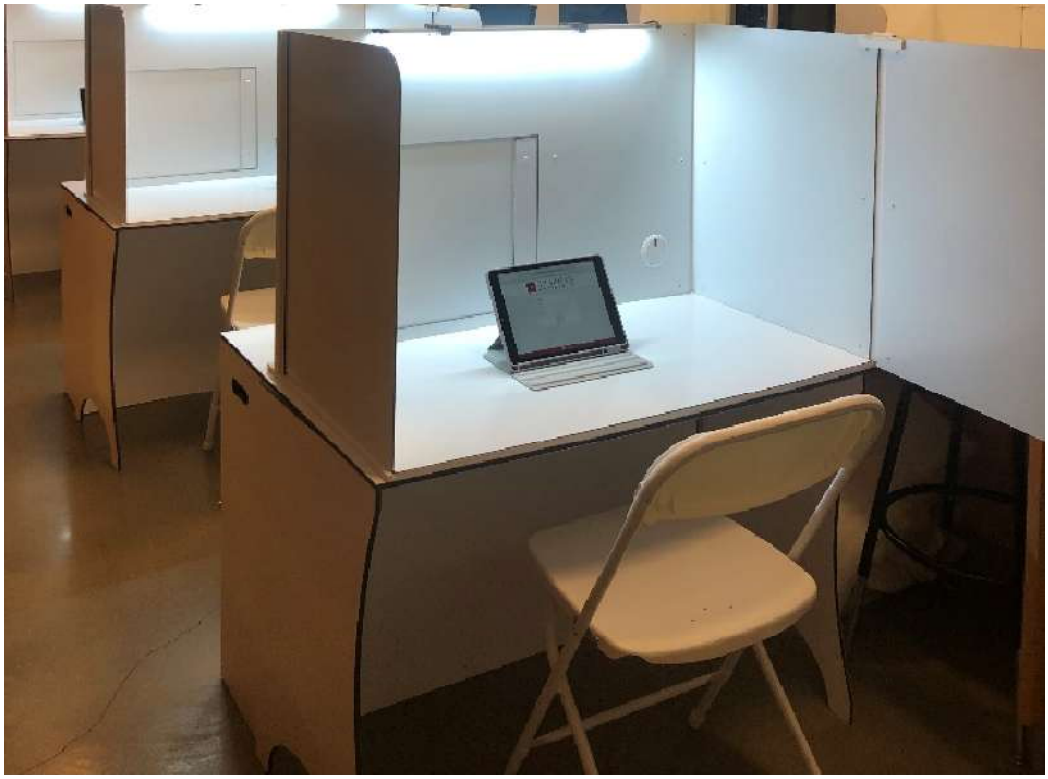
8. Inside the Lab



Chapman University Sensory and Consumer Insights Lab Team
Top row, from left to right: Prajwal Gaikwad and Atharv Kurhade
Bottom row, from left to right: Alisha Patterson, Dr. Cassandra Maya, Kim Hong, Nour Younies, and Dr. Uyen Phan



Sensory Lab preparation kitchen



Sensory Lab booths

5. Clemson University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Sensory Lab
- **Department/Division Name:** Department of Food, Nutrition and Packaging Sciences
- **Location:** Clemson, South Carolina, United States of America
- **Website:** https://www.clemson.edu/cafls/food-nutrition-packaging-sciences/research/service-centers/sensory-lab.html

2. Key Contact

- **Primary Contact Name:** Marie Hegler
- **Title/Role:** Senior Lecturer
- **Email:** carol@clemson.edu

3. About Program and Capabilities

- **Brief Overview:**
  The newly renovated Sensory Lab features eight individual panelist booths, equipped with precision-controlled multi-option L.E.D. lighting. The facility supports a variety of courses, including Dairy Product Evaluation and Food Product Development, as well as student- and faculty-led research. In addition, it operates as a Service Center, providing sensory and consumer testing services to industry partners.

- **Established Year:** 1970s

- **Brief History:**
  The sensory evaluation program at Clemson University dates back to the early 1970s and was significantly shaped by Elizabeth “Liz” Haplin, who led and advanced it for over three decades. Following her retirement in the late 2000s, Dr. Aubrey Coffee assumed leadership, notably modernizing the program by implementing its first computerized data collection system. After Dr. Coffee retired in 2018, oversight of the program transitioned among various faculty members for several years. Most recently, in 2025, Marie Hegler took over leadership, guiding lab renovations and continuing the program's long tradition of education, research, and industry engagement.

- **Vision and Mission:**
  Vision: To deepen the understanding of how people perceive, experience, and choose products through scientific excellence and collaborative engagement

Mission: To advance sensory science and consumer research through experiential learning, innovative research, and industry collaboration. We provide students, faculty, and external partners with the tools, expertise, and hands-on opportunities needed to understand consumer perceptions, optimize products, and make data-driven decisions that enhance product quality, acceptance, and innovation

- **Test Capabilities:**
  Our sensory services include consumer acceptability, descriptive, and discrimination testing using both quantitative and qualitative methods. Sensory evaluation projects conducted in the lab typically include IRB approval, study design, development of evaluation protocols, panelist recruitment, product preparation, test execution, statistical analysis, and record-keeping.

- **Fun Facts:**
  - ✓ Ms. Hegler and Dr. Coffee's connection to Clemson's sensory program dates back to their student days. While Ms. Hegler was pursuing her B.S. in Food Science and Dr. Coffee was completing her Ph.D., the two competed together on Clemson's Dairy Product Evaluation Team. As an undergraduate, Ms. Hegler also participated in a weekly pizza tasting for Mama Mary's pizza crust, an ongoing sensory evaluation project led by Ms. Haplin.

4. About the People

- **Director/Principal Investigator:** Marie Hegler

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Sensory evaluation and characterization of new and existing food and beverage products
  - ✓ Consumer perception, acceptability, preference, and discrimination testing to support product development, quality improvement, and market research
  - ✓ Applied sensory and consumer science research conducted in collaboration with industry partners and academic investigators
  - ✓ Student-driven product development and sensory research, including product development competitions, undergraduate research experiences, and graduate studies
  - ✓ Product optimization through sensory insights, consumer feedback, and data-driven decision-making

- **Recent/Ongoing Projects:**
  - ✓ The effect of packaging/labeling on the perceived value and acceptance of food products and beverages
  - ✓ Sensory attributes and consumer acceptance of new organic pulse cultivars
  - ✓ Strategies to enhance flavor and mitigate off-flavors in plant-based center-of-the-plate products
  - ✓ Optimization of gluten-free, locally sourced sorghum pasta formulation to meet consumer standards

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Food Product Development (undergraduate and graduate course)
  - ✓ Fundamentals of Baking Science (undergraduate course)
  - ✓ Dairy Product Evaluation (undergraduate course)
  - ✓ Quantity Food Production (undergraduate and graduate course)
  - ✓ Culinary Fundamentals (undergraduate course)
  - ✓ Food Processing and Preservation (undergraduate and graduate course)

- **Student Opportunities:**
  - ✓ M.S. and doctoral assistantships
  - ✓ Undergraduate research projects (i.e., Creative Inquiry)
  - ✓ Graduate research projects

7. About the Sensory Facility

- **Testing Spaces:**
  The Sensory Lab features eight individual panelist booths equipped with precision-controlled multi-option L.E.D. lighting to ensure consistent testing conditions. We offer a range of traditional and customized sensory testing for both food and non-food products. Research conducted in the Sensory Lab provides valuable data that helps researchers and industry partners make informed decisions about ingredients, packaging, flavor development, and marketing strategies.

- **Special Equipment or Technologies**:
  The Culinary Research Lab is adjacent to the Sensory Lab and plays a critical role in preparing standardized samples for sensory evaluation studies, ensuring precise formulation, controlled preparation, and reproducible results. Equipped with commercial-grade equipment and flexible workspaces, the Culinary Research Lab is a dynamic, hands-on environment designed to support coursework, research, and student innovation.

8. Inside the Lab



Sensory preparation area



Culinary Research Lab



Sensory booths

6. Cornell University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Cornell University Sensory Evaluation Center
- **Department/Division Name:** Department of Food Science, College of Agriculture and Life Sciences
- **Location:** Ithaca, New York, United States of America
- **Website:** https://cals.cornell.edu/food-science/outreach-extension/sensory-evaluation-center
- **Social Media Handles:**
  - ✓ Instagram: https://www.instagram.com/cu_sensoryevaluationcenter/
  - ✓ Facebook: https://www.facebook.com/cornellsensorycenter/

2. Key Contacts

- **Primary Contact Name:** Dr. Robin Dando
- **Title/Role:** Director, Sensory Evaluation Center, and Sensory Science Professor at Cornell University
- **Email:** robin.dando@cornell.edu

- **Primary Contact Name:** Alina Stelick
- **Title/Role:** Manager, Sensory Evaluation Center
- **Email:** ap262@cornell.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Cornell Sensory Evaluation Center is a state-of-the-art facility within the Department of Food Science that supports both academic research and industry product testing. It provides sensory and consumer research services to companies ranging from Fortune 500 firms to small businesses and offers hands-on training opportunities for students.

- **Established Year:** The program has served Cornell and external companies since the early 1990s. The current renovated facility reopened in October 2015 after a five-year hiatus during Stocking Hall renovations.

- **Brief History:**
  Cornell's Sensory Evaluation Program has been part of the Department of Food Science since the early 1990s, supporting both research and industry projects long before the current center existed. When Stocking Hall underwent a major renovation, the sensory facilities closed for several years, which paused most on-site testing. The program returned in October 2015 with the opening of the modern Sensory Evaluation Center, designed to expand the university's capabilities in sensory and consumer research. Since then, the center has continued to grow, offering updated testing methods, more structured student training, and broader support for companies across the food and beverage industry.

- **Vision and Mission:**
  The mission of the center is two-fold: to provide training and hands-on learning opportunities to students who are interested in the fields of sensory and consumer research, and to help businesses develop and improve their product offering through consumer and sensory testing.

- **Test Capabilities:**
  The center offers a wide range of sensory and consumer research methods, including:
  - ✓ Consumer acceptability testing
  - ✓ Preference testing
  - ✓ Discrimination testing
  - ✓ Descriptive analysis
  - ✓ Rapid profiling
  - ✓ Time-intensity methods
  - ✓ Olfactometry/gustometry
  - ✓ Taste morphology and gene expression
  - ✓ Animal models of taste
  - ✓ Eating behavior
  - ✓ Shelf-life studies
  - ✓ Qualitative research (group discussions)

- **Fun Facts:**
  - ✓ Did you know that the sensory lab at Cornell does not only test human sensory responses?

4. About the People

- **Director/Principal Investigator:** Dr. Robin Dando
- **Center Manager:** Alina Stelick
- **Staff and Students:**
  - ✓ One full-time, two part-time (one graduate student), three temporary workers, nine undergraduate student volunteers

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Sensory evaluation of new and existing food and beverage products
  - ✓ Consumer acceptability, preference, and discrimination testing for industry partners and academic studies.
  - ✓ Sensory methods research, including improving test methods, selecting effective panelists, and increasing accuracy of sensory judgments (from a Cornell sensory methods research project).
  - ✓ Biology of the senses
  - ✓ Decision-making underlying food selection
  - ✓ Student-driven sensory and product development research, including capstone product testing, product development competitions, and exploratory flavor studies.
  - ✓ Evaluating various agricultural products in collaboration with plant science, and testing various storage methods, varieties, and GMO fruits and vegetables

- **Recent/Ongoing Projects:**
  - ✓ Apples (2019-present), Peppers, Cabbages, and Bitter Melon (2025-present): Determine consumer perceptions and acceptance of a series of different fresh fruit (apples) and vegetables (peppers, etc.) to optimize long-term storage environments and improve varieties
  - ✓ Maple Syrup (2023-present): Determine consumer perceptions and acceptance of non-Grade A maple syrups; impact of environmental conditions during sap collection on syrup flavor; determine links between chemical composition and consumer perception of buddy maple syrup
  - ✓ Milk Sensory Quality Panel (1970s-present): determine sensory quality of fluid milk and other dairy and small ruminant milk-based products over their shelf-life. This is the longest continuous research program supporting the Dairy Industry in New York State
  - ✓ Sweetener Alternatives (2023-2025): Examined consumer perception of alternative sweeteners and blends in items such as ice cream, yogurt, and protein shakes
  - ✓ Novel fruit and vegetable breeding for taste and flavor

- ✓ Interactions between taste and olfaction
- ✓ Obesity and the taste system

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ FDSC 4100/FDSC 5100 – Sensory Evaluation of Food (undergraduate and graduate course)
  - ✓ FDSC 6950 - Current Readings in Food Science, Sensory Evaluation
  - ✓ Professional Training: Sensory Immersive Experience – Dairy Foods
  - ✓ Sensory Evaluation Center Training Sessions
  - ✓ Outreach Education for Industry Partners

- **Student Opportunities:**
  - ✓ Undergraduate and graduate research projects
  - ✓ Capstone product development testing: Food science seniors use the Sensory Evaluation Center to test prototypes.
  - ✓ Paid sensory panel work and study participation
  - ✓ Lab assistant roles for the Sensory Evaluation Center

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Ergonomically designed sensory booths that comfortably seat 8 panelists at a time, with additional portable booths available when larger studies require expanded capacity
  - ✓ Variable lighting options, including settings that mimic different consumer environments and a red-light mode for color-masking studies
  - ✓ Superior air-exchange and ventilation system designed for odor control and consistent testing conditions
  - ✓ Modern commercial kitchen and residential-style appliances for preparing and serving a wide range of food and beverage products
  - ✓ Multipurpose room equipped with advanced video-conferencing and remote-observation capabilities, ideal for qualitative research, focus groups, and descriptive panel training

- **Special Equipment and Technologies:**
  - ✓ Sensory data-collection platforms: RedJade®
  - ✓ Environmental controls: Variable lighting options (including red-light mode for color masking)
  - ✓ Sample preparation tools: Modern commercial kitchen equipment and residential-style appliances for realistic food and beverage preparation

- ✓ Qualitative research technology: Multipurpose room equipped with video-conferencing and remote-observation capabilities for focus groups and descriptive panel training

8. Inside the Lab



Cornell University Sensory Science Center team
From left to right: Yao Jiang, Eleanor Heberlein, Tiffany Hsu, Sabrina Choi, Alina Stelick, and Rogelio Cianchini Diaz, Robin Dando



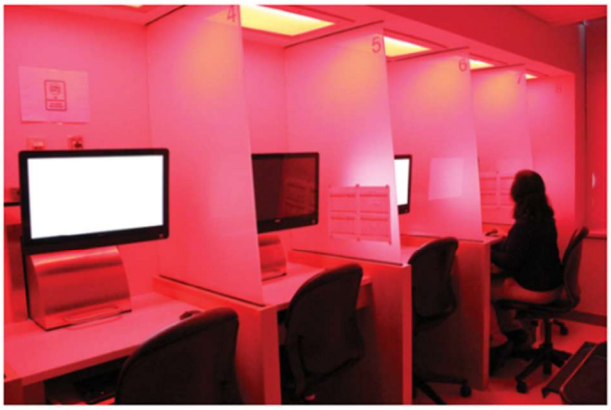
(A) Modern Commercial Kitchen



(B) Area with sensory booths



(C) Multipurpose room with conference tech



(D) Sensory booths under red light (Lisa Banlaki Frank)

Sensory facility (Photo credit: Lisa Banlaki Frank)

7. Deakin University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Deakin Centre for Advanced Food Sciences
- **Department/Division Name:** School of Exercise and Nutrition Sciences
- **Location:** Burwood, Victoria, Australia
- **Website:** https://advancedfoodsciences.com.au

2. Key Contact

- **Primary Contact Name:** Dr. Russell Keast
- **Title/Role:** Professor and Director of Deakin Centre for Advanced Food Sciences
- **Email:** russell.keast@deakin.edu.au

3. About Program and Capabilities

- **Brief Overview:**
  The Deakin Centre for Advanced Food Sciences is dedicated to working with the Australian food industry to make sustainable and healthier foods the preferred choice of consumers. By using state-of-the-art facilities and renowned researchers, we aim to deliver high-quality industry-relevant research, offer industry-focused consulting services, as well as train the next generation of food scientists.

- **Established Year:** 2013

- **Brief History:**
  Deakin Centre for Advanced Food Sciences was established at Deakin University under the leadership of Professor Russell Keast to advance research and industry engagement in sensory and food sciences. The centre has since grown into a multidisciplinary hub spanning sensory and consumer science, flavour chemistry, nutrition, food microbiology, and product development, supporting industry and research projects across Australia and internationally. Originally established as the Centre for Advanced Sensory Science (CASS), the research centre was officially renamed Deakin Centre for Advanced Food Sciences in January 2026 to better reflect its multidisciplinary expertise. We also house the food node of HyTECH (www.hytech.com.au), an Australian Research Council Industrial Transformation Training Centre.

- **Vision and Mission:**
  Making sustainable and healthier foods the preferred choice

- **Test Capabilities:**
  - ✓ Consumer acceptance testing and consumer insights
  - ✓ Descriptive analysis (trained sensory panel)
  - ✓ Difference and similarity testing
  - ✓ Shelf-life testing
  - ✓ Focus groups and in-depth interviews
  - ✓ Preference mapping and penalty analysis
  - ✓ Sensory marketing and packaging evaluation
  - ✓ Augmented and virtual reality sensory testing
  - ✓ Taste and satiety methodology
  - ✓ Oral tactile acuity research
  - ✓ Flavour analysis (GC-MS, GC-O, MDGC-MS and related analytical techniques)
  - ✓ Food safety and microbiological testing
  - ✓ Product development, reformulation, and optimization
  - ✓ Plant-based and alternative protein product innovation

- **Fun Facts:**
  - ✓ Not so much a fun fact, but we have to keep changing our group name - three times over the past 12 years: 1) The Centre for Advanced Sensory Science, 2) CASS Food Research Centre, and 3) The Deakin Centre for Advanced Food Sciences.

4. About the People

- **Director/Principal Investigator:** Dr. Russell Keast
- **Staff and Students:**
  - ✓ 10 staff and approximately 20 Ph.D. and Undergraduate students

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Sensory and consumer science
  - ✓ Flavour chemistry and analysis
  - ✓ Food safety
  - ✓ Nutrition Sciences
  - ✓ Product development
  - ✓ Taste and satiety research: linking sensory perception to consumption, oral tactile acuity, and hedonic responses

- **Recent/Ongoing Projects:**
  - ✓ Optimizing vegetable texture to improve consumption
  - ✓ Understanding Alimentary taste (macronutrient detection)
  - ✓ Changes to food flavour during storage
  - ✓ The role of caffeine in consumption of soft drinks and energy drinks
  - ✓ Extra virgin olive oil quality and provenance

6. Educational and Training Activities

- **Student Opportunities:**
  - ✓ Internships with Ph.D. research projects
  - ✓ DeCAF-Academy, an undergraduate program

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Deakin Centre for Advanced Food Sciences has two sensory laboratories comprising of a total of 17 fixed booths. Each booth has its own sink, tap, and two-way light switch. Our research centre has six portable sensory booths to use during in-field testing, while still maintaining the rigorous environment of the sensory laboratory.
  - ✓ The sensory lab is equipped with white and red-light testing capabilities. White light for when visual assessments are required; red light capability for hiding visual differences between products.
  - ✓ Joining the sensory laboratory, the preparation area is equipped with kitchen necessities including an oven, stove cooktop, fridge, freezer, and storage compactors.
  - ✓ Designated ‘round table’ room, reserved for focus groups, in-depth interviews, and trained panel. The room is equipped with a whiteboard, two TV screens, and four cameras to capture audio and visual movement. A prep area is attached to this space.

- **Special Equipment and Technologies:**
  - ✓ The Deakin Centre for Advanced Food Sciences boasts state-of-the-art separation science capabilities and facilities. We have expertise in MDGC and GC-O analysis and have unique capability to implement these high-resolution technologies as required.
  - ✓ VR headsets and large-screen projections create an immersive environment, which enables the systematic investigation of context on taste perception and food choice.

8. Inside the Lab



Deakin University Sensory Lab Students and Staff

Top row, from left to right: Dr. Claudia Hartley, Prof. Carolyn Ross, Lauren Antoniou, Dr Shirani Gamlath, Sixtine Boivineau, Wen Chi Ng, Akansha Gupta, Bharti Sharma, Lydia Taylor, Prof. Russell Keast, Teagan Hickey, Dr. Wan Sin Heng (Valarie), Kevin Ghavalas, Dr. Andrew Costanzo, Dr. Dan Dias, and Associate Prof. Gie Liem

Middle row, from left to right: Mayushi Malshika Jayakody, Anesu Magwere, Peeraporn Pakakaew, Simone Lewin, Dr. Agnes Mukurumbira, and Sherlyn Ardison

Bottom row, from left to right: Alicia Stramand, Dr. Snehal Jadhav, Penny Thew, and Phuong Mai Le



Sensory booths equipped with white and red lights



Gas Chromatography–Olfactometry setup



Samples serving area with two-way light switches

8. Ewha Womans University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Sensory Perception · Consumer Science Lab
- **Department/Division Name:** Department of Food Science and Nutrition (undergraduate) and the Major in System Health Science and Convergence (graduate), College of Science & Industry Convergence at Ewha Womans University
- **Location:** Seoul, Republic of Korea
- **Website:** https://sites.google.com/view/culinarysciencelaboratory/home?authuser=0
- **Social Media Handles:**
  - ✓ Instagram: https://instagram.com/sensoryconsumerlab/

2. Key Contact

- **Primary Contact Name:** Dr. Seo-Jin Chung
- **Title/Role:** Professor and Director
- **Email:** sc79d@ewha.ac.kr

3. About Program and Capabilities

- **Brief Overview:**
  At the Sensory Perception · Consumer Science Lab, we study how people taste, perceive, and ultimately fall for food — and we use that understanding toward one ultimate goal: making healthy eating something people genuinely want, not something they have to be talked into. Our work shows that liking isn't fixed: with the right framing, formulation, and context — and sometimes simply repeated exposure — even unfamiliar future foods and ethnic cuisines can become the nutritious, sustainable choices people grow to love.

- **Established Year:** 2006

- **Brief History:**
  Dr. Seo-Jin Chung established Culinary Science Lab 1 at Seoul Women's University (Seoul, Republic of Korea), in 2006. After moving to Ewha Womans University in 2012, Dr. Chung founded the Culinary Science Lab 2, which was renamed the Sensory Perception · Consumer Science Lab in 2025.
  The lab began with a single question: What makes food acceptable, or even beloved, to the people who eat it? Over the past two decades, that question has grown into a broad research program supported by Korea's leading public agencies, including the National Research Foundation of Korea, the Ministry of

Agriculture, Food and Rural Affairs, the Ministry of Oceans and Fisheries, and the Ministry of Health and Welfare, as well as private foundations and food-industry partners. The lab's findings have been published in journals such as *Food Quality and Preference*, *Food Research International*, *Food Chemistry*, *Appetite*, and *LWT*.

- **Vision and Mission:**
  To bridge the gap between foods that are good for us and foods we love, while training the next generation of insightful, globally minded food and consumer scientists. We believe sensory and consumer science is at its best when rigorous measurement meets real consumers, transforming research at the lab bench into healthier choices at the dinner table.

- **Test Capabilities:**
  - ✓ Consumer acceptance and preference (hedonic) testing
  - ✓ Descriptive analysis with trained panel
  - ✓ Rapid and fast-profiling methods (e.g., CATA, projective mapping)
  - ✓ Temporal sensory methods
  - ✓ Psychophysics and sensory metrology (e.g., gLMS, sweetness-potency measurement)
  - ✓ Food-evoked emotion measurement
  - ✓ Context-, framing-, and reference-frame studies
  - ✓ Cross-cultural consumer research
  - ✓ Online/remote, home-use, and no-contact home-use testing

- **Fun Facts:**
  - ✓ Our students have carried our research around the world, conducting cross-cultural sensory and consumer studies in partner labs and test kitchens across Denmark, France, Indonesia, Japan, mainland China, Taiwan, the United States, and the United Arab Emirates. We are always looking for new collaborators and unexplored regions to study together.
  - ✓ We have shown that it is possible to change how much someone enjoys a food without changing the food itself. Simply reframing how a food is described or presented can increase liking of insect- and plant-based proteins. Taste really does live as much in the mind as on the tongue.
  - ✓ In our lab, trendy foods rarely stay outside the door for long. From Dubai-style chocolate cookies to other viral food products, researchers often bring in new finds to taste and discuss together. Beyond simple tasting, this has become a small lab tradition for observing sensory characteristics and discussing potential consumer responses.

4. About the People

- **Director/Principal Investigator:** Dr. Seo-Jin Chung
- **Staff and Students:**
  - ✓ One Postdoctoral researcher: Seulgi Kim
  - ✓ Three Ph.D. candidates: Jaeyoung Han, Yeonjoo Yeo, and Jeong-Won Lim
  - ✓ Three M.S. students: Minjeong Kang, Seongjoo Lim, and Dain Shin
  - ✓ One Undergraduate researcher: Yejin Cho

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Reshaping food acceptance: using reference frames to shift the liking of sustainable and alternative proteins (insect, mealworm, plant-based)
  - ✓ Acquired liking for novel foods: using repeated-exposure studies to understand how people learn to enjoy future foods and unfamiliar ethnic cuisines over time
  - ✓ Healthier reformulation and sweetness science: cutting sodium and sugar without losing taste, and linking sweetener chemistry and taste-receptor activity to perception
  - ✓ Foods for healthy aging and clinical needs: texture-modified foods and tailored nutrition for older adults and patients
  - ✓ Food, emotion, and culture: food-evoked emotions, eating context, and cross-cultural drivers of liking
  - ✓ Future-food sensory science: emerging foods and tools, from cultivated seafood to graphene-based cooking
  - ✓ Sensory and consumer method innovation: new optimization and remote/home-use testing approaches

- **Recent/Ongoing Projects:**
  - ✓ CATA-Optimize-to-Ideal (CATA-OI): a new consumer-driven product-optimization method
  - ✓ Foods that bring appetite back: reduced off-flavor/off-odor foods and recipes to prevent appetite loss in severely ill patients
  - ✓ Sensory perception in vulnerable populations: characterizing how taste, smell, and texture perception differ in groups such as older adults and patients, to design foods that truly meet their needs
  - ✓ The emotional language of eating: the Korean food-based emotion structure evoked by eating context and symbolism
  - ✓ Sweetness, measured precisely: standardized sensory protocols for the concentration-dependent sweetness potency of sweeteners

- ✓ Sensory profiling of alternative and cell-cultured foods for next-generation sustainable protein
- ✓ Graphene-powered cooking: sensory quality of ingredients cooked with eco-friendly graphene heating elements for innovative K-food
- ✓ Industry-partnered reformulation: helping processed-food makers reduce sodium and sugar

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Food and Nutrition on Sense
  - ✓ Sense Evaluation and Analysis
  - ✓ Advanced Food Sensory Research Techniques
  - ✓ Basic and Advanced Sensory Analysis workshops
  - ✓ Basic and Advanced Sensory Statistical Analysis workshops

- **Student Opportunities:**
  - ✓ Postdoctoral researcher, Graduate (M.S. / Ph.D.), and undergraduate research positions, with hands-on training across sensory evaluation, consumer testing, and product development

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ The lab is equipped with a 10-seat sensory evaluation booth, Compusense® Cloud, an online evaluation system, a sample preparation kitchen, and a multi-purpose room for lectures, meetings, focus-group discussions, and other research activities.

8. Inside the Lab



Sensory Perception · Consumer Science Lab Team
Top row, from left to right: Dain Shin, Yejin Cho, and Seongjoo Lim
Middle row, from left to right: Yeonjoo Yeo, Jeong-Won Lim, and Seo-Jin Chung
Bottom row, from left to right: Minjeong Kang, Jaeyoung Han, and Seulgi Kim



Sensory facilities

9. Kansas State University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Kansas State University Sensory and Consumer Research Center
- **Department/Division Name:** College of Applied and Professional Studies, Kansas State University, Olathe campus
- **Location:** Olathe, Kansas, United States of America
- **Website:** https://olathe.k-state.edu/research/sensory-consumer-research-center/
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/showcase/kstatesensory/
  - ✓ Facebook: https://www.facebook.com/kcscrc/

2. Key Contact

- **Primary Contact Name:** Dr. Martin J. Talavera
- **Title/Role:** Associate Professor and Director, Sensory and Consumer Research Center
- **Email:** talavera@ksu.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Sensory and Consumer Research Center (SCRC) at Kansas State University brings together applied research, graduate education, and industry engagement in sensory and consumer science. Located at K-State Olathe in the Kansas City metropolitan area, the Center conducts qualitative and quantitative consumer research, analytical sensory testing, and customized research for food and non-food products. The program is designed around hands-on learning: graduate students work alongside faculty and professional staff on real studies while developing expertise in sensory measurement, consumer behavior, research design, statistics, and interpretation.

- **Established Year:** 1980s

- **Brief History:**
  Kansas State University has a rich history in sensory science, shaped by many faculty, students, staff, and collaborators over more than four decades. Dr. Jean Caul conducted sensory research and industry testing at K-State for many years before pursuing the establishment of a formal sensory center. In 1982, with support from The Seven-Up Company, a sensory panel was established, and the Kansas Board of Regents authorized the creation of the Sensory Analysis Center.

Following Dr. Caul's retirement, Dr. Edgar Chambers IV joined K-State in 1988 and, during his longtime leadership, substantially expanded the Center's research, graduate education, and industry engagement. The Center developed an international reputation, collaborating with companies, universities, governments, and other organizations around the world and training generations of sensory scientists. Other faculty who contributed to the program over the years include Dr. Delores Chambers, Dr. Koushik Adhikari, and Dr. Kadri Koppel.

The program expanded to K-State Olathe with the establishment of the Sensory and Consumer Research Center, led by Dr. Marianne Swaney-Stueve, strengthening K-State's consumer research capabilities and providing direct access to the Kansas City metropolitan consumer market.

Dr. Martin Talavera, a graduate of K-State's sensory program with previous industry experience at PepsiCo and Mary Kay, joined the faculty at K-State Olathe in 2016 and has served as director of the Sensory and Consumer Research Center and sensory program since 2021. Today, the program continues to build on this history through graduate education, applied and academic research, and extensive collaboration with industry.

- **Vision and Mission:**

  Vision: To continue Kansas State University's longstanding tradition in sensory science by preparing the next generation of sensory and consumer science professionals and advancing the science through innovative research and collaboration.

  Mission: The mission is to advance sensory and consumer science through education, research, and collaboration. The program aims to:

  - ✓ Educate and train graduate students and professionals through coursework, hands-on research, and engagement with real-world sensory and consumer research.
  - ✓ Conduct research on products, research methods, and consumer behavior, addressing scientific questions and practical applications.
  - ✓ Integrate sensory, consumer, and instrumental data to provide a more comprehensive understanding of products, sensory perception, consumer responses, and behavior.
  - ✓ Evaluate and apply established and emerging research methods and technologies that expand the tools available to sensory and consumer scientists.
  - ✓ Collaborate with industry, academia, and other organizations to address current and evolving research needs and translate scientific findings into practical insights.

- **Test Capabilities:**
  - ✓ Quantitative consumer research: acceptance and preference testing, CLTs, HUTs, product diagnostics, JAR, CATA, penalty analysis, claim substantiation, segmentation, and MaxDiff
  - ✓ Qualitative consumer research: focus groups, one-on-one interviews, observational research, concept and packaging exploration, and early-stage product development research
  - ✓ Descriptive sensory analysis and product profiling through collaboration with trained sensory panels, including rapid profiling methods
  - ✓ Difference and discrimination testing: triangle, tetrad, degree-of-difference, and other methods based on research objectives
  - ✓ Experimental design and statistical analysis: multivariate methods, preference mapping, consumer segmentation, and integration of sensory, consumer, and instrumental data
  - ✓ Instrumental aroma analysis using GC-MS-O when appropriate to the research question
  - ✓ Customized research design and execution: study and questionnaire design, data collection, analysis, interpretation, reporting, and consulting
  - ✓ Multi-location research through U.S. and international collaborations
  - ✓ Consumer access: database of 9,000+ Kansas City metropolitan area consumers with targeted recruitment based on study needs
  - ✓ Product categories: foods, beverages, ingredients, pet foods and treats, children's products, personal care, aromas and fragrances, home care, and specialty consumer products

- **Fun Facts:**
  - ✓ Kansas City location: K-State Olathe is positioned within a major metropolitan area, giving the Center access to a large and diverse consumer population and proximity to food, ingredient, animal-health, consumer-product, and other industries.
  - ✓ Industry-integrated education: Students do more than learn methods in the classroom. They assist with real consumer and sensory studies, gaining experience in study planning, recruitment, questionnaire programming, product preparation, fieldwork, analysis, reporting, and client communication.
  - ✓ Flexible graduate education: Sensory sciences coursework is offered through K-State with options designed for students at the Olathe campus and online learners, helping working professionals as well as traditional graduate students develop specialized expertise.

4. About the People

- **Director/Principal Investigator:** Dr. Martin J. Talavera
- **Staff and Students:**
  - ✓ Bert Lawson: Sensory Research Assistant; recruitment, study coordination, and Center operations
  - ✓ Kay Wade: Administrative support and participant database management
  - ✓ Graduate students with various backgrounds from the United States and other countries, contributing an international perspective to the program

5. Current Research and Projects

- **Key Research Areas:**
  Research at K-State Olathe focuses on understanding the relationships among product properties, sensory perception, consumer responses, and behavior, with particular interest in research that translates scientific findings into practical product and consumer insights.
  - ✓ Consumer perception and behavior, including product acceptance, preference, health and wellness perceptions, and factors influencing consumer responses
  - ✓ Sensory characterization and product understanding, including relationships among product properties, sensory perception, and consumer responses
  - ✓ Sensory and consumer research methods, including the application, evaluation, and comparison of established and emerging approaches, such as temporal methods, rapid methods, text analytics, and AI-supported methods
  - ✓ Integration of sensory, consumer, and instrumental data to provide a more comprehensive understanding of products and consumer responses

- **Recent/Ongoing Projects:**
  - ✓ A multi-phase research program examining consumers' perspectives on gut health across generations
  - ✓ Research on plant-based foods and proteins, using sensory and consumer approaches to understand acceptance and flavor challenges
  - ✓ Studies examining relationships among texture, eating speed, sensory perception, liking, and food intake
  - ✓ Research examining the effects of cooking methods on sensory characteristics and temporal sensory perception of beans
  - ✓ Research comparing conventional consumer sensory methods with AI-assisted analysis of online reviews to examine sensory attributes associated with consumer liking
  - ✓ Application of design of experiments (DOE) for product formulation and optimization, including research with lucuma ice cream

- ✓ Research on freshness and fragrance perception in homecare products, including the development and validation of consumer measurement approaches
- ✓ Pet food and pet-product research, including sensory characterization, palatability, and studies involving pet owners
- ✓ Industry-sponsored sensory and consumer research across food, beverage, personal care, homecare, pet food, and specialty product categories

6. Educational and Training Activities

- **Graduate education**
  Kansas State University offers graduate study in sensory sciences with coursework and research experiences that integrate sensory science, consumer behavior, statistics, psychology, food science, and business applications. Graduate coursework includes sensory analysis, descriptive analysis, quantitative and qualitative consumer research, and statistical applications in sensory and consumer science. A 15-credit Graduate Certificate in Sensory Sciences is currently under development to provide focused training for graduate students and working professionals.

- **Sensory and consumer sciences coursework includes:**
  - ✓ Sensory Analysis: Foundations of sensory perception, analytical and affective methods, study design, data collection, and interpretation
  - ✓ Descriptive Analysis: Advanced training in product characterization, panel development, lexicon development, scaling, panel performance, and interpretation
  - ✓ Quantitative Consumer Research: Acceptance, preference, product diagnostics, consumer study design, and interpretation
  - ✓ Qualitative Consumer Research: Focus groups, interviews, observational methods, research design, moderation, and qualitative interpretation
  - ✓ Sensory Analysis Applications of Statistics: Advanced statistical methods for sensory and consumer data, including experimental design and multivariate analysis
  - ✓ Practicum and research experiences: Hands-on application of sensory and consumer methods in academic and industry projects

- **Graduate certificate:**
  A 15-credit graduate certificate in sensory sciences is currently under development. The proposed certificate will include coursework in sensory science and statistics, providing graduate students and working professionals with focused training in sensory and consumer science.

- **Student opportunities:**
  Graduate students may participate in research assistantships, thesis and dissertation research, industry-sponsored projects, teaching, professional conferences, internships, publications, and collaborative research. The Center's project-based environment gives students repeated exposure to the full research process, from defining objectives through communicating actionable findings.

- **Professional training and outreach:**
  Faculty and staff also contribute to short courses, workshops, guest lectures, and industry training. Recent activities have included instruction on pet-food palatability and consumer research, sensory aspects of extrusion products, and applied sensory and consumer research methods.

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Multipurpose rooms for consumer studies, with capacity for up to approximately 45 participants per session depending on study configuration
  - ✓ Focus-group rooms equipped with audio/video and streaming capabilities, and spaces for real-time client observation
  - ✓ Demonstration kitchen for food-preparation viewing, training, and research activities
  - ✓ Industry/commercial kitchen with food preparation equipment supporting a wide range of product categories and study designs
  - ✓ Compusense® Cloud software for questionnaire programming, sensory and consumer data collection, and study management
  - ✓ Flexible spaces that can be configured for central location testing, interviews, training, and specialized research activities

8. Inside the Lab



Kansas State University Sensory and Consumer Research Center

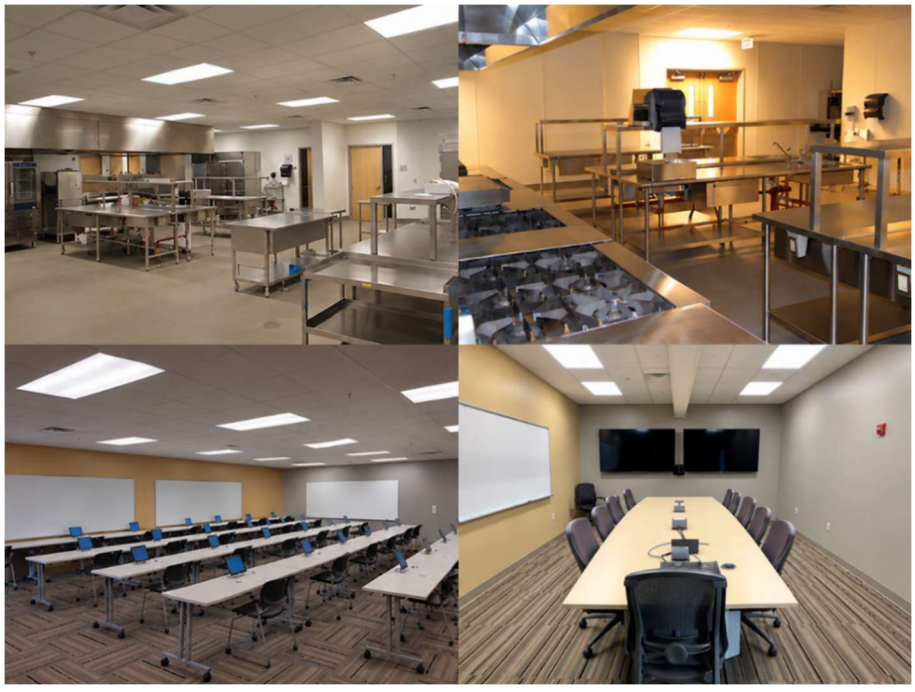
From left to right: Aquila Essuman (M.S. student), Sidharth Babu (Ph.D. student), Bert Lawson (Research Assistant), Martin Talavera (Director), Kay Wade (Research Aide), and Laura Buchanan (M.S. student)



Kansas State University – Olathe Campus Building



Central location test with adults and children, Community engagement, Graduate students representing the sensory program at the 2025 Kansas State Fair, and Ph.D. student Sidharth Babu using the GC-MS



Commercial kitchen for product preparation and testing, flexible consumer testing space configured for sensory and consumer research studies, and focus group room equipped with video, audio, live-streaming, and recording capabilities

10. Louisiana State University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Louisiana State University (LSU) Sensory Services Lab
- **Department/Division Name:** School of Nutrition and Food Sciences affiliated with the LSU AgCenter Food Innovation Institute (FOODii)
- **Location:** Baton Rouge, Louisiana, United States of America
- **Website:** https://www.lsuagcenter.com/portals/our_offices/departments/food-science/sensory%20services%20lab

2. Key Contact

- **Primary Contact Name:** Dr. Witoon Prinyawiwatkul
- **Title/Role:** Professor and Director
- **Email:** wprinyawiwatkul@agcenter.lsu.edu; wprinya@lsu.edu

3. About Program and Capabilities

- **Brief Overview:**
  LSU Sensory Services Lab is a teaching and research facility that also provides consultation and services related to sensory evaluation and consumer research for food and non-food products. The lab supports product development and shelf-life study projects for local, national, and international clients while offering hands-on experience for students. The lab has supported companies to launch and reformulate products in the past decade through sensory and consumer studies.

- **Established Year:** 2014

- **Brief History:**
  The Sensory Services Lab was a long-term goal of Dr. Witoon Prinyawiwatkul, Professor, when the Animal and Food Sciences Laboratory Building was completed in 2014. The lab celebrated 10 years of its establishment in 2024. This Lab is a state-of-the-art facility consisting of three areas: a food preparation area, a consumer test area, and a conference room. Over the past decade, the lab has supported national and international companies in reformulating and launching products through sensory and consumer studies.

- **Vision and Mission:**
  Vision: To provide clients with reliable sensory evaluation and consumer research services that help advance innovation through product optimization and quality improvement. We offer students hands-on experience through training and practice in various research-based and real-world industry projects.

- **Test Capabilities:**
  Currently, the lab provides services in the following areas:
  - ✓ Sensory discrimination test
  - ✓ Qualitative and quantitative consumer affective tests
  - ✓ Basic physicochemical analyses
  - ✓ Shelf-life evaluation

- **Fun Facts:**
  - ✓ TigerTasters: We have created a consumer database with 1,000+ volunteers from the Baton Rouge area.
  - ✓ Flexible testing formats: the lab can run off-site testing when the project design calls for it.
  - ✓ We are capable of performing simulated home-cooking and consumer tests in our Louisiana Department of Health (LDH) inspected commercial test kitchen.

4. About the People

- **Director/Principal Investigator:** Dr. Witoon Prinyawiwatkul (Faculty lead)
- **Staff and Students:**
  - ✓ Ashley Gutierrez (Assistant Director of LSU AgCenter FOODii)
  - ✓ Dr. Yupeng Gao (R&D Food Scientist/Sensory Scientist with LSU AgCenter FOODii)
  - ✓ Graduate students and student workers

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Currently, the research projects are focused on plant-based product development, novel insect-based products, upcycling seafood processing waste, and product-elicited emotion studies.

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Principles of Sensory Evaluation of Foods (undergraduate and graduate course)
  - ✓ Advanced Sensory Sciences (via a graduate special research topic course)
  - ✓ Short courses and hands-on lab training course “Sensory Evaluation of Foods” offered to food industry professionals

- **Student Opportunities:**
  - ✓ Dr. Witoon Prinyawiwatkul has hosted national and international undergraduate and graduate student interns and visiting scholars from Republic of Korea, Thailand, Honduras, Venezuela, Colombia, France, Turkey, China, and Italy for a sabbatical leave or short-term/long-term visits.
  - ✓ Graduate assistantships are available for graduate students.
  - ✓ Graduate and undergraduate students gain hands-on experience in sensory sciences by serving as lab technicians and assisting with sensory project execution such as project design, sample preparation, facility setup, coordinating panelists’ check-in/check-out, data analysis, and interpretation.

7. About the Sensory Facility

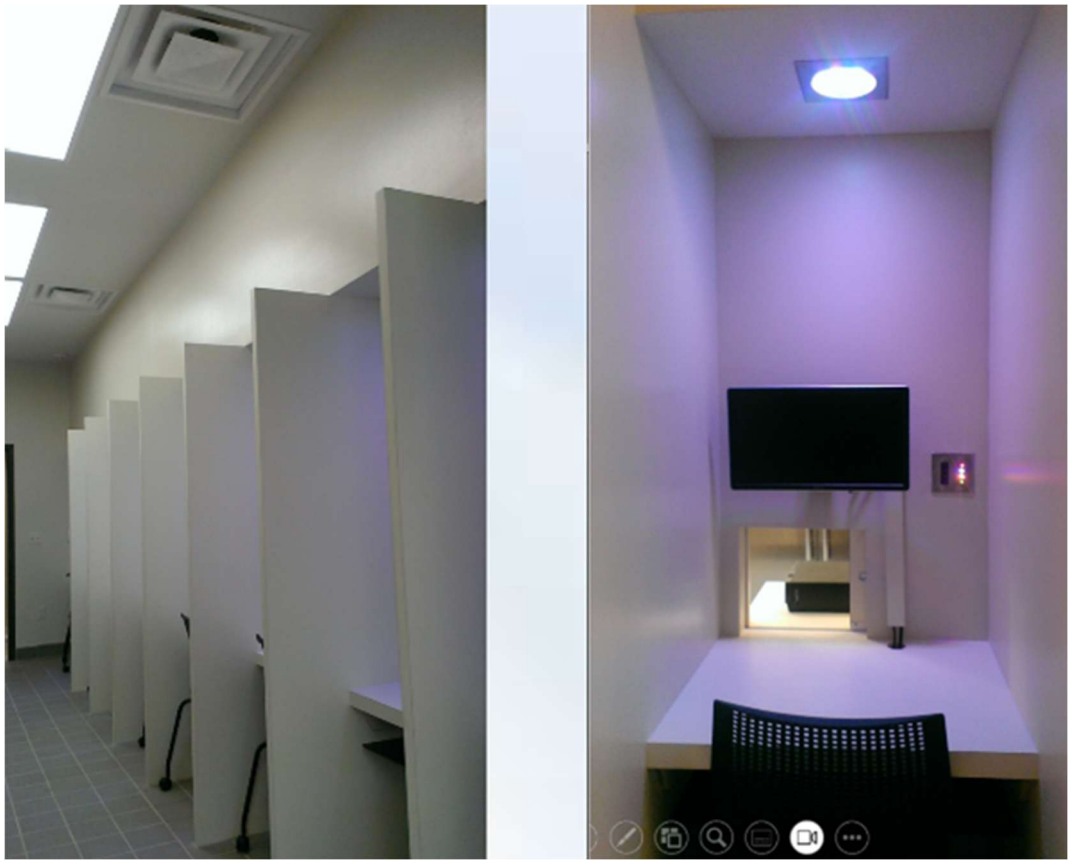
- **Testing Spaces:**
  - ✓ 16-partitioned booths fully equipped with computers and advanced software for precise data collection and statistical analysis
  - ✓ Utilizing the “TigerTasters” consumer database, researchers can easily recruit consumers for sensory and consumer testing.
  - ✓ The lab is connected to a fully equipped Louisiana Department of Health (LDH) inspected commercial test kitchen and a demonstration test kitchen.
  - ✓ A sensory conference room with a one-way mirror

- **Special Equipment and Technologies:**
  - ✓ The sensory lab is also furnished with fundamental equipment for food and ingredient analysis, including a pH meter, water activity meter, texture analyzer, colorimeter, viscometer, homogenizer, rapid moisture analyzer, and analytical balance.

8. Inside the Lab



Louisiana State University Sensory Services Lab Team
From left to right: Ashley Gutierrez, Chien-I Hsu, Dr. Witoon Prinyawiwatkul, Roberto Cedillos, Kanokwan Promjeen, Andrea Muela, Kaushalya Wickramasinghe, and Brandon Freire



Sensory booths



Test preparation area



Focus group room and one-way mirror observation area

11. Michigan State University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Michigan State University Sensory Evaluation Center
- **Department/Division Name:** Department of Food Science and Human Nutrition
- **Location:** East Lansing, Michigan, United States of America
- **Website:** https://www.canr.msu.edu/fshn/facilities/msu_sensory_evaluation_center
- **Social Media Handles:**
  - ✓ Instagram: https://www.instagram.com/msufoodsensory/
  - ✓ Facebook: https://www.facebook.com/msufoodsensory/

2. Key Contacts

- **Primary Contact Name:** Dr. Emily J. Mayhew
- **Title/Role:** Assistant Professor and Principal Investigator
- **Email:** mayhewem@msu.edu

- **Primary Contact Name:** Linda J. Riley
- **Title/Role:** Lab Manager
- **Email:** sensory@msu.edu

3. About Program and Capabilities

- **Brief Overview:**
  The MSU Sensory Evaluation Center is an active hub with a mission to support cutting-edge research, industry collaborations, entrepreneurship, teaching, and outreach. The center supports both grant- and industry-funded projects and operates a fee-for-service sensory and consumer research program. Research projects span the range from basic research on human smell and flavor perception to applied projects that aim to improve the sensory quality of foods and crops.

- **Vision and Mission:**
  Making foods that are good for health and the environment taste good
  There is a fundamental tension that many people experience in choosing between the foods they know they should eat and the foods that they want to eat. Our philosophy is that food carries tremendous cultural, emotional, and social importance, and that people should not be ashamed to seek comfort and pleasure in food. The research mission of our research lab is to promote more nutritious and sustainable eating by improving the sensory properties of nutritious and

sustainable foods, reducing the tension between what we should eat and what we want to eat.

- **Test Capabilities:**
  The Sensory Evaluation Center is fully equipped to conduct all types of sensory and consumer research, including descriptive analysis and rapid descriptive methods, discrimination testing, psychophysical testing, quantitative consumer testing, and qualitative consumer research.
  The lab operates a fee-for-service testing center with standard rates to support client projects.

4. About the People

- **Director/Principal Investigator:** Dr. Emily J. Mayhew
- **Lab Manager:** Linda J. Riley
- **Staff and Students:**
  - ✓ 4 graduate students
  - ✓ 11 undergraduate students

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Human olfaction
  - ✓ Odor-induced taste enhancement
  - ✓ Crop flavor improvement
  - ✓ Physicochemical-to-sensory modeling

- **Recent/Ongoing Projects:**
  - ✓ Investigating applications of plant growth regulators to modulate flavor in blueberries, strawberries, and hops
  - ✓ Cultivar and processing strategies for improved pulse flour quality
  - ✓ Optimizing sensory quality in controlled environment strawberry production
  - ✓ Characterizing the sweetness of honey and the impact of honey volatiles on its sweetness

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory FSC 310: Sensory Analysis and Consumer Research

- **Student Opportunities:**
  - ✓ Graduate research assistantships
  - ✓ Undergraduate research assistantships

7. About the Sensory Facility

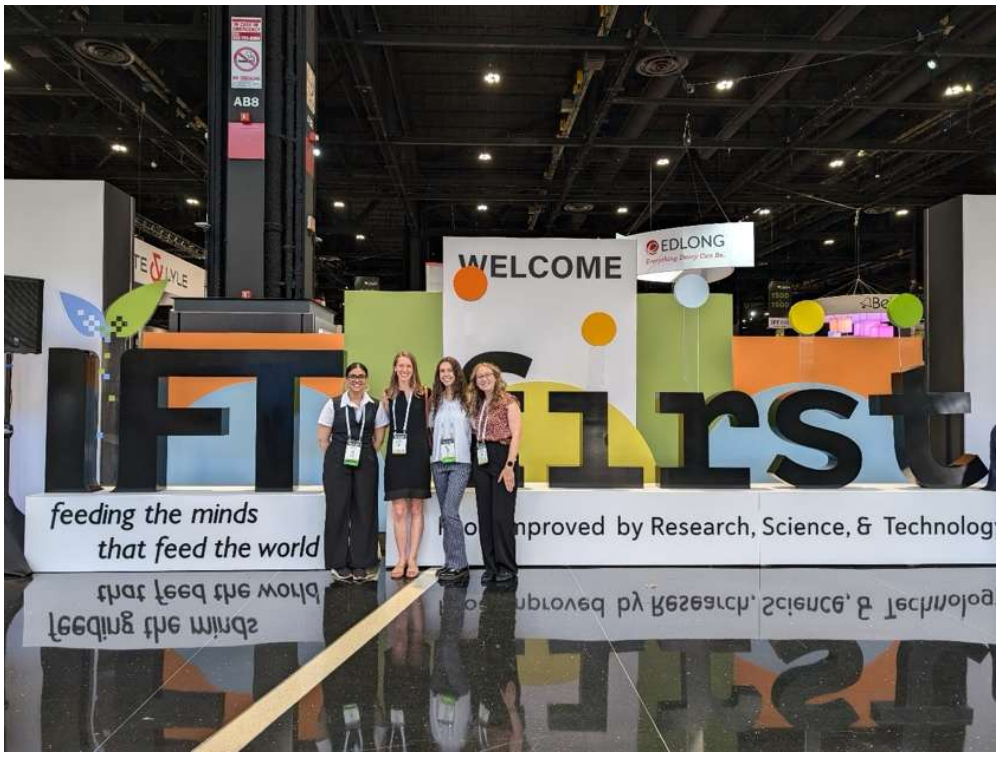
- **Testing Spaces:**
  - ✓ The MSU Sensory Evaluation Center is currently preparing for renovation. The new facilities will include 12 sensory booths and fully modernized facilities.

- **Special Equipment and Technologies:**
  The current facilities and equipment are described on our lab website (https://www.canr.msu.edu/fshn/facilities/msu_sensory_evaluation_center).

8. Inside the Lab



Lab Social Event at Horrocks in Lansing, Michigan
From left, clockwise: Sarah Modi, Alyssa Hawkins, Lily Wei, Mariano Aldana, Jonas Ahonen, Sarah Coyne, Faith Zillinger, Anusha Pandya, Cora Garling, Giselle Torres, Emily J. Mayhew with kids, Linda J. Riley, and Somneang Oul



Lab Members Attending IFT FIRST in Chicago
From left to right: Kaveri Ponkshe, Emily J. Mayhew, Hannah Mulheron, and Anna Wagner



Sensory booths

12. Mississippi State University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Muscle Foods and Sensory Laboratory
- **Department/Division Name:** The Mississippi State Food Science Innovation Hub
- **Location:** Mississippi State, Mississippi, United States of America
- **Website:** https://www.bchnhp.msstate.edu/sensory/index.php
  https://www.foodscience.msstate.edu/
- **Social Media Handles:**
  - ✓ Instagram:
    https://www.instagram.com/msusensorylab/
    https://www.instagram.com/msu_foodhub/
  - ✓ Facebook:
    https://www.facebook.com/MSUMuscleFoods/
    https://www.facebook.com/p/MSU-Food-Science-Innovation-Hub-61563233519045/

2. Key Contact

- **Primary Contact Name:** Dr. Wes Schilling
- **Title/Role:** William L. Giles Distinguished Professor and Director of the Food Science Innovation Hub
- **Email:** schilling@foodscience.msstate.edu

3. About Program and Capabilities

- **Brief Overview:**
  Our research on muscle foods focuses on understanding and measuring human sensory perception and preferences — taste, smell, texture, and appearance — to enhance product development, consumer satisfaction, and overall sensory experiences. We conduct studies for both industry stakeholders and academia to understand consumer preferences, behaviors, and sensory experiences related to food and other consumer products. The insights gained from our research into consumer perception, satisfaction, and decision-making processes can help industries develop new and improved products that better meet consumers' needs and desires.

- **Established Year:** 2002

- **Vision and Mission:**
  The mission of the Mississippi State University Muscle Foods & Sensory Laboratory is: to provide a facility that will provide an ethical, professional, experienced, and knowledgeable atmosphere for teaching and research, to maintain and continually train a staff of faculty, staff, and students who are dedicated, experienced, certified, and reliable individuals who will carry out our primary goals of teaching and research; to provide a support facility for the Department of Biochemistry, Nutrition and Health Promotion, the Food Science Innovation Hub, Mississippi Agricultural and Forestry Experiment Station (MAFES) and its satellite facilities, and Mississippi State University that will enhance the ability of these units to carry on meaningful and productive research in food science and sensory evaluation; to teach and train our students to allow them to acquire the skills necessary to become productive members of their chosen profession and to allow them to carry on the outstanding tradition of service to the community inherent in this facility, Mississippi State University, and the state of Mississippi; and to provide to the industrial community a professional, ethical, and reliable facility to conduct testing on products, develop new products, and evaluate products, ideas, or concepts utilizing established scientific methodologies and techniques at a reasonable and competitive cost in a timely manner.

- **Test Capabilities:**
  - ✓ Discrimination testing
  - ✓ Consumer acceptance testing
  - ✓ Consumer preference testing
  - ✓ Time-intensity testing
  - ✓ Texture analysis
  - ✓ Affective testing
  - ✓ Descriptive analysis
  - ✓ Omics and microbiome testing
  - ✓ Rheological testing
  - ✓ Shelf-life studies
  - ✓ Physiochemical analysis (pH, color, proximate, etc.)

- **Fun Facts:**
  - ✓ James E. Garrison, the namesake of our facility, installed the first aseptic filling machine in the United States in 1968. He is among the pioneers behind long-life coffee creamers, half-and-half, and whipping creams we have available in the country.

4. About the People

- **Director/Principal Investigator:** Dr. Wes Schilling
- **Staff and Students:**
  - ✓ Number of staff/students involved: 20

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Sensory evaluation and testing
  - ✓ Food ingredient technology
  - ✓ Shelf-life studies
  - ✓ Methyl bromide alternatives for dry-cured ham

- **Recent/Ongoing Projects:**
  - ✓ Muscle foods processing
  - ✓ Methyl bromide alternatives for dry-cured ham
  - ✓ Shelf-life studies
  - ✓ Food ingredient technology
  - ✓ Microbiome analysis

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ FNH 4114/6114 Analysis of Food Products
  - ✓ FNH 4241/6241 Applied Food Chemistry
  - ✓ FNH 8163 Flavor and Food Acceptance
  - ✓ FNH 2112 Food Products Evaluation

- **Student Opportunities:**
  - ✓ Students can participate in internships in the Sensory Lab, and graduate assistantships are offered.
  - ✓ Research projects typically have a sensory testing objective.

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Seven booths and a full sensory kitchen

- **Special Equipment and Technologies:**
  - ✓ Conventional oven
  - ✓ Convection oven
  - ✓ Deep fryer
  - ✓ Air fryers

- ✓ Slow cookers
- ✓ Microwaves
- ✓ Stovetop
- ✓ Griddle
- ✓ Vacuum tumblers
- ✓ Instron texture analyzer

8. Inside the Lab



Muscle Foods and Sensory Laboratory Team (Photo credit: Macie Frost)
Top row, from left to right: João Victor Muraro Ito, Dr. Wes Schilling, Nathan Baxter, Louis Chatham, and Sadie Hoffman
Middle row, from left to right: Kyle Sharpe, Isa Maria A. Reynoso, Ryen Comey, Vada Lee Thacker, Macie Frost, and Kelsi Nichols
Bottom row, from left to right: Luke Perez, Landry Brouillette, Cheryl Lawrence, and Zoe Molloy



Part of the kitchen workspace and sensory booths

13. Oregon State University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Sensory & Consumer Science Program
- **Department/Division Name:** Department of Food Science & Technology
- **Location:** Corvallis and Portland, Oregon, United States of America
- **Website:** https://foodsci.oregonstate.edu/foodsci/services/sensory-testing
- **Social Media Handles:**
  - ✓ LinkedIn:
    https://www.linkedin.com/in/oregon-state-food-science-and-technology-2742601ab/
    https://www.linkedin.com/company/osu-food-innovation-center
  - ✓ Instagram:
    https://www.instagram.com/oregonstatefoodscience/
    https://www.instagram.com/osu_foodinnovationcenter/

2. Key Contacts

Consumer Sensory Testing in Corvallis Facility

- **Primary Contact Name:** Christina Edwards Van Muijen
- **Title/Role:** Sensory Business Development Manager
- **Email:** edwachri@oregonstate.edu

Consumer Sensory Testing in Portland Facility

- **Primary Contact Name:** Ann Colonna
- **Title/Role:** Sensory Consumer Science Program Director
- **Email:** ann.colonna@oregonstate.edu

Wine Sensory Testing

- **Primary Contact Name (Wine Sensory):** Camilla Sartori
- **Title/Role:** Program Manager
- **Email:** camilla.sartori@oregonstate.edu

3. About Program and Capabilities

Consumer Sensory Testing

- **Brief Overview:**
  Oregon State University has been a leader in Sensory Science since the early days of the field, and we continue to push the boundaries today. Since the 1980s,

we've partnered with both the Oregon food industry and major national and global CPG brands to deliver actionable, high-quality insights. Whether you're launching a new product, refining a formula, or exploring consumer preferences, our team is here to help you make confident, data-driven decisions. With two fully equipped testing locations and a team of experienced Sensory Science Project Managers, we offer flexible, customized solutions and a robust consumer database to fit your goals and budget.

- **Established Year:** Services began in the 1980s, with continued refinements including a newly enhanced passion and process for working with industry partners

- **Brief History:**
  OSU has been involved in sensory science since the early days of the field, primarily through its Food Science and Technology Department. Sensory evaluation was initially tied to food quality and product development for Oregon's agricultural and food industries. In the 1980s, OSU began offering structured sensory testing services, partnering with Oregon food companies and later national brands. This marked the start of professional sensory evaluation as a service, supporting product development and consumer research. In 1999, OSU expanded its sensory services with the launch of the Food Innovation Center (FIC), an experimental station in Portland, Oregon, enhancing support for innovation and food entrepreneurs, offering focus group capabilities, and providing access to more diverse consumer demographics.

- **Vision and Mission:**
  Our mission is to advance sensory and consumer science through innovative research, education, and industry collaboration. We strive to deliver high-quality, data-driven insights that empower food and beverage companies to create products consumers love, while training the next generation of sensory professionals and fostering sustainable, science-based solutions for global food system.

- **Test Capabilities:**
  - ✓ Acceptance/Preference testing (CLTs, HUTs, store/event intercept)
  - ✓ Difference testing
  - ✓ Focus groups
  - ✓ Sorting/rapid profiling
  - ✓ Facilitation
  - ✓ Sensory training

Wine Sensory Testing

- **Brief Overview:**
  The Wine Sensory Program at Oregon State University, led by Dr. Elizabeth Tomasino, focuses on understanding the complex relationship between wine chemistry and sensory perception. As part of the Oregon Wine Research Institute, the program investigates how aroma compounds, mouthfeel, and flavor interactions influence wine quality and consumer preferences.

- **Established Year:** 2012

- **Brief History:**
  Wine sensory research at OSU began as part of its Food Science and Technology Department, which has long offered courses in sensory evaluation of food and beverages. As Oregon's wine industry grew rapidly in the late 20th century, OSU expanded its enology and viticulture programs to support local producers with science-based solutions. Sensory evaluation became a key component of this effort, focusing on understanding flavor, aroma, and mouthfeel in wine.
  In the early 2000s, OSU established the Oregon Wine Research Institute (OWRI) as a collaborative hub for viticulture and enology research. OWRI brought together faculty, USDA scientists, and industry partners to address challenges in wine quality and sustainability. Sensory science became a cornerstone of OWRI's mission, linking chemical analysis with sensory perception to improve wine quality and regional identity.

- **Vision and Mission:**
  The Tomasino Wine Sensory Program at Oregon State University is committed to advancing the understanding of wine flavor, aroma, and mouthfeel through innovative research and education. Our mission is to provide science-based insights that support the wine industry in producing exceptional wines, while training students and professionals in sensory evaluation techniques. We aim to bridge chemistry and perception, fostering collaboration between academia and industry to enhance wine quality and consumer experience.

- **Test Capabilities:**
  - ✓ Descriptive analysis
  - ✓ Projective mapping
  - ✓ CATA and RATA
  - ✓ Difference testing
  - ✓ Flash profiling
  - ✓ Trained panels

- ✓ Emotion response

4. About the People

Consumer Sensory Testing

- **Directors/Principal Investigators:** Ann Colonna, Christina Edwards van Muijen, and Jesica Saeteurn
- **Staff and Students:**
  - ✓ Number of staff and students: 10

Wine Sensory Testing

- **Director/Principal Investigator:** Dr. Elizabeth Tomasino
- **Staff and Students:**
  - ✓ Camilla Sartori: Sensory Manager
  - ✓ Number of staff and students: 6

5. Current Research and Projects

Consumer Sensory Testing

- **Key Research Areas:**
  - ✓ CPG Food and non-food industry client research
  - ✓ Consumer perception and acceptance of edible packaging
  - ✓ Willingness to pay for blueberries and seafood
  - ✓ Consumers sensory assessment of bigleaf maple syrup
  - ✓ Crop and variety flavor wheel development for food product developers

- **Recent/Ongoing Projects:**
  - ✓ Open to any industry projects, ranging from food to personal care products

Wine Sensory Testing

- **Key Research Areas:**
  - ✓ Tropical fruit aroma, acceptance, and emotions in Chardonnay wines
  - ✓ Impact of viticultural and winemaking practices on wine quality
  - ✓ Thresholds for smoke taint in wine
  - ✓ Determination of chemical quality markers for specific aroma, flavor and mouthfeel qualities
  - ✓ Sensory impact of stink bug-affected hazelnuts
  - ✓ Ashy flavor recognition in Syrah and Riesling
  - ✓ Flavor interactions of volatile phenols in Pinot Noir and Cabernet Sauvignon
  - ✓ Roasting effects on Panama Geisha coffee and its sensory expression of terroir

- **Recent/Ongoing Projects:**
  - ✓ Perception of compound mixtures in wine
  - ✓ Thresholds of smoke compounds in wine
  - ✓ Mitigation of smoke taint in wine

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Evaluation of Food Class and Lab
  - ✓ Introduction to Wines, Beers, and Spirits
  - ✓ Production and Analysis of Beer Class and Lab
  - ✓ Production and Analysis of Wine Class and Lab

- **Student Opportunities:**
  - ✓ Research projects, internships, and research assistantships

7. About the Sensory Facility

Portland Facility

- **Testing Spaces:**
  - ✓ 12,000+ consumers in database
  - ✓ Ten booths with masking lights, can expand to seat 22 per session
  - ✓ Focus group room with one-way mirror, back rooms, recording, and streaming
  - ✓ Large prep kitchen with industrial cooktops, ovens, deep fryers, ample refrigerator space, and more
  - ✓ Store/ Event intercept capability
  - ✓ Adjacent to Product Development laboratories/kitchens, with professional food scientists on staff
  - ✓ Educational classrooms and workshop space

Corvallis Facility

- **Testing Spaces:**
  - ✓ 3,000+ consumers in database
  - ✓ All age ranges
  - ✓ Main database skews ‘Better For You’
  - ✓ Access to younger demographic (18–24 years old)
  - ✓ 12 booths with masking lights available, can expand to seat 20
  - ✓ Prep kitchen with two residential cooktops/ovens (eight burners total), ample refrigerator space, hot beverage and soup thermal holding equipment, and more.
  - ✓ Event intercept capability

8. Inside the Lab



Portland facility



Corvallis facility

14. Purdue University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Sensory Evaluation Laboratory
- **Department/Division Name:** Department of Food Science
- **Location:** West Lafayette, Indiana, United States of America
- **Website:** https://ag.purdue.edu/department/foodsci/sensory-evaluation-lab.html

2. Key Contact

- **Primary Contact Name:** Dr. Andrea Liceaga
- **Title/Role:** Professor and Director
- **Email:** aliceaga@purdue.edu

3. About Program and Capabilities

- **Brief Overview:**

  The goal of the Sensory Evaluation Laboratory is to provide our food science undergraduate and graduate students with practical experience in the principles and applications of sensory science. Likewise, our goal is to establish outreach activities with our industry partners with quality service and using appropriate sensory evaluation protocols as established by ASTM-E18.

  Students working in the Sensory Lab receive hands-on training for setting up and carrying out sensory evaluation tests. The Lab is an excellent teaching platform for those students seeking to further expand their knowledge in sensory science. The Sensory Evaluation Laboratory also collaborates with graduate students and faculty considering incorporating a sensory science component into their research projects.

  Over the years, the Sensory Lab has worked with over 100 food companies nationwide. When companies reach out to inquire about sensory testing, they receive guidance on the best sensory test method(s) to be used for their product. We meet with companies and discuss the best approach for sample preparation and the questionnaire to be used. Companies receive test results within one week. The Sensory Lab also offers a 2-day workshop that allows training in the best practices/methods for sensory evaluation as well as how to analyze and interpret sensory data.

- **Test Capabilities:**
  - ✓ Consumer testing (hedonic/acceptability)
  - ✓ Discriminative and similarity testing
  - ✓ Quantitative descriptive analysis
  - ✓ Our panelist pool consists of students (undergrads and graduate), faculty, and staff who work at Purdue University

4. About the People

- **Director/Principal Investigator:** Dr. Andrea Liceaga
- **Sensory staff:** Undergraduate food science students

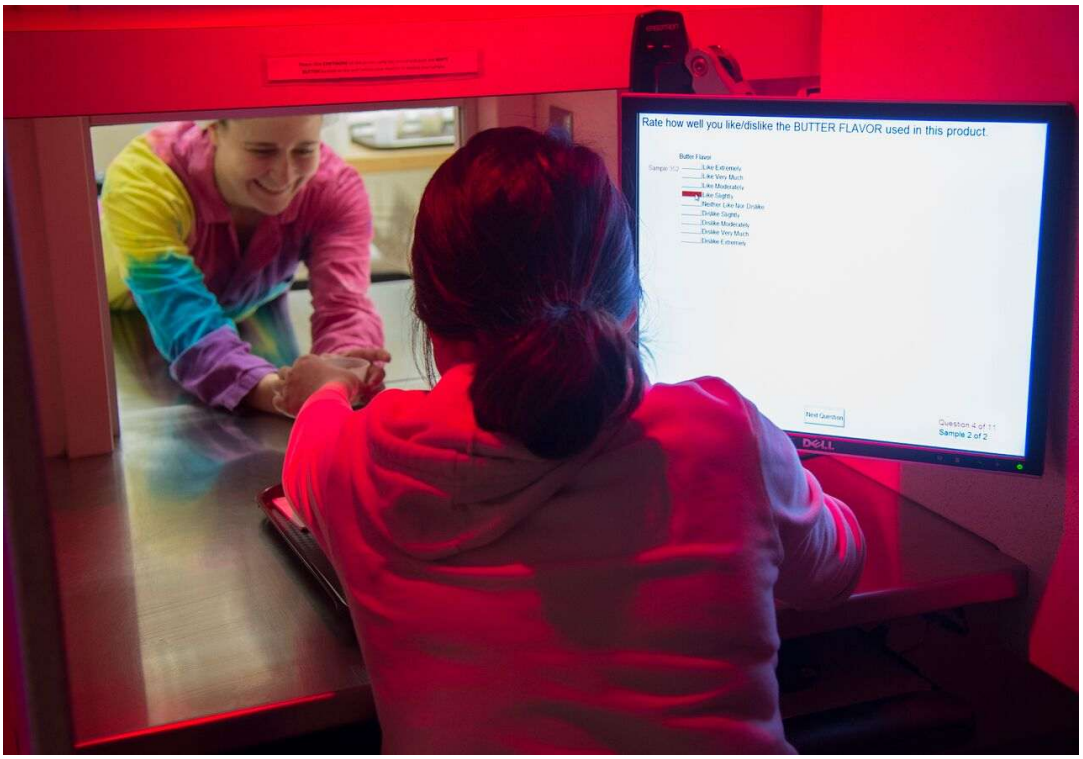
5. Educational and Training Activities

- **Student Opportunities:**
  - ✓ Hands-on training for setting up and carrying out sensory evaluation tests and research projects
  - ✓ The Sensory Lab also offers a 2-day workshop that allows training in the best practices/methods for sensory evaluation as well as how to analyze and interpret sensory data.

6. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Six individual sensory testing booths
  - ✓ Positive pressure
  - ✓ Controlled lighting
  - ✓ Water filtration system
  - ✓ Computerized data collection system (with RedJade® Sensory Evaluation software)

7. Inside the Lab



Sensory booths



Preparation area



Panel training room

15. Singapore Institute of Food and Biotechnology Innovation

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Sensory Science and Oral Processing (SSOP)
- **Department/Division Name:** Food & Sensory Science (FSS) Division
- **Institution:** Singapore Institute of Food and Biotechnology Innovation (SIFBI), A*STAR
- **Location:** Singapore
- **Website:** https://www.a-star.edu.sg/sifbi/our-research/research-division/food---sensory-science
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/showcase/astar-sifbi/posts/?feedView=all

2. Key Contact

- **Primary Contact Name:** Dr. Jianshe Chen
- **Title/Role:** Head of Division and Senior Principal Scientist
- **Email:** chen_jianshe@a-star.edu.sg

3. About Program and Capabilities

- **Brief Overview:**
  The Sensory Science and Oral Processing (SSOP) research platform within SIFBI's Food & Sensory Science Division conducts multidisciplinary research to understand how food properties, oral physiology, and sensory processes interact to shape eating experience, consumer perception, and human function. The platform integrates sensory and consumer science with food physics, food oral processing, oral physiology, and instrumental measurement. Research spans fundamental understanding of eating and sensory perception through to translation into healthier, enjoyable and culturally relevant foods, with particular strengths in Asian consumers and populations.

- **Established Year:** 2020

- **Brief History:**
  Singapore Institute of Food and Biotechnology Innovation (SIFBI) was established by the Agency for Science, Technology and Research (A*STAR) in 2020 to strengthen Singapore's food innovation and biotechnology ecosystem in support of national priorities such as food security, sustainable nutrition, and healthy longevity. Within SIFBI, the SSOP research platform plays a key role in understanding Asian taste preferences, texture perception, flavor science, and consumer eating behaviors. Over the years, the sensory platform has expanded its capabilities in sensory evaluation, ingestive behavior, flavor profiling, and consumer insights, supporting the development of healthier, more acceptable, and culturally relevant food products for Asian consumers while collaborating closely with both academic and industry partners. By integrating experimental approaches of food physics, oral physiology, and sensory psychology, sensory research at SIFBI aims to reveal the governing principles of food oral processing and implications to sensory perception.

- **Vision and Mission:**
  Vision: To be a world-leading centre for multidisciplinary sensory science, advancing both fundamental understanding and real-world applications

  Mission: To reveal the physical, physiological, psychological and neural principles underlying eating and sensory perception; to develop original approaches for understanding sensory stimulation, perception and food pleasure; and to translate this knowledge into solutions addressing the needs of consumers, industry and society

- **Test Capabilities:**
  The SSOP platform develops advanced methodologies and experimental platforms for in situ and in vitro assessment of oral processing and sensory responses. We translate scientific insights into practical solutions addressing consumer needs, guiding industry innovation, and informing public health and regulatory strategies.
  Sensory studies can be conducted via human-based and instrument-based methodologies, including:

  Human sensory, consumer, and oral-processing research:
  - ✓ Quantitative descriptive analysis
  - ✓ Temporal sensory methods to track how human perception of a product changes over time

- ✓ Consumer acceptance testing (central location test, home-use test, drive-in booths)
- ✓ Discrimination testing
- ✓ Focus groups and one-on-one interviews
- ✓ Online surveys utilizing a consumer profile database of Singaporeans
- ✓ Contract research and customized sensory/consumer solutions
- ✓ Chewing and mastication
- ✓ Eating capability measurement
- ✓ Bolus formation and characterization (e.g., particle size distribution, saliva incorporation, etc)
- ✓ Saliva composition and functional characterization

Instrumental and physiological characterization:

- ✓ Food rheology
- ✓ Soft tribology
- ✓ Mastication simulator
- ✓ Electromyography
- ✓ Dynamic oral flavour and aroma release
- ✓ Oral-nasal mass transfer
- ✓ Oral aerosol analysis
- ✓ Oral physiology characterization (tongue strength, lip-sealing function/strength, etc.)

- **Fun Facts:**
  Our research sometimes asks deceptively simple questions about everyday eating. For example, why durian can smell overwhelmingly pungent but become much more pleasant when eaten. Such observations often lead us to fundamental questions about how the mouth transforms food before we perceive it.

4. About the People

- **Director/Principal Investigator:** Dr. Jianshe Chen
- **Staff and Students:**
  - ✓ Number of staff and students: 10

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Human sensory perception, consumer behaviour and food preference
  - ✓ Food oral processing, oral biomechanics and eating capability
  - ✓ Sensory physiology and mechanisms of sensory stimulation and perception
  - ✓ Dynamic flavour release and oral–nasal mass transfer
  - ✓ Sensory nutrition, eating behaviour and human function
  - ✓ Human-centred food structure and sensory design

- **Recent/Ongoing Projects:**
  - ✓ Development of in vitro predictive models of food sensory attributes
  - ✓ Mastication and cognitive function: exploring food-based interventions for healthy ageing
  - ✓ Cross-cultural consumer study on hybrid/blended meats (mix of animal and plant-based meat)
  - ✓ Development of educational materials and food-based solutions targeted at increasing children's vegetable acceptance through caregiver-based collaborative research
  - ✓ Differentiation between texture and mouthfeel among Asian consumers
  - ✓ Saliva as a selective filter for pungent odours during oral consumption of durian
  - ✓ Saltiness intensity of sodium-rich condiments and its cardiovascular health impact on older adults in Singapore
  - ✓ Adaptive oral biomechanics across the lifespan

6. Educational and Training Activities

- **Student Opportunities:**
  - ✓ Undergraduate/Graduate research internships

7. About the Sensory Facility

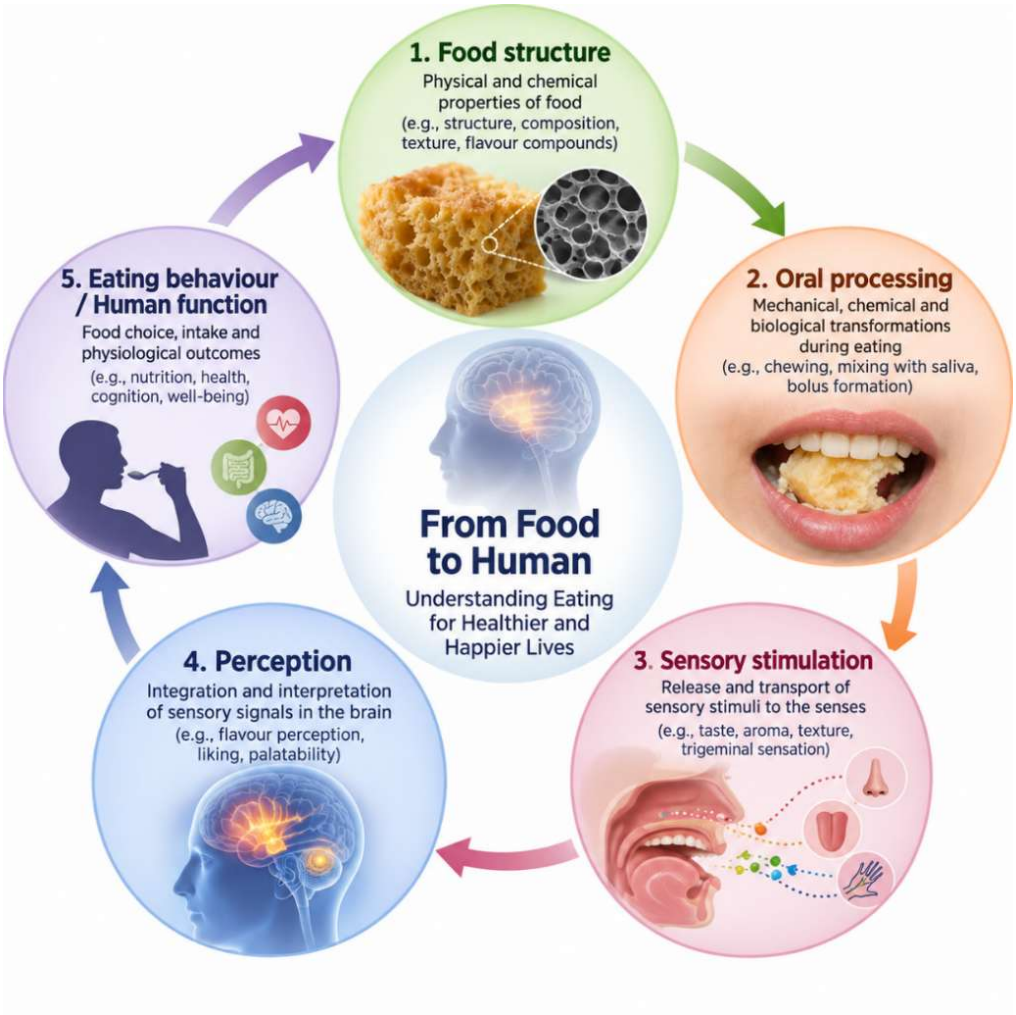
- **Testing Spaces:**
  - ✓ Sensory evaluation lab featuring a total of 14 booths with a preparation kitchen and controllable color lighting
  - ✓ Feeding stations for studies involving consumer insights, eating behavior and oral processing

- **Special Equipment and Technologies:**
  - ✓ SSOP at SIFBI is supported by the analytical platform with state-of-the-art instruments for chemical, physical, as well as microstructural analysis.
  - ✓ SSOP at SIFBI is also well equipped with other biometric tools, including EEG, eye tracker, galvanic skin response, and facial expression

8. Inside the Lab



The Team of Sensory Science and Oral Processing at SIFBI, A*STAR
Top row, from left to right: Professor Jianshe Chen, Derick Lee, Xanthe Lin, Reuben Ang, Christine Goh, Dr. Pey Sze Teo, and Brandon Tan
Bottom row, from left to right: Dr. Aaron Thong, Amanda Lim, Janani R, and Michelle Choy



The scientific pathway of sensory research at A*STAR
From food to human—Understanding eating for healthier and happier lives

Sensory Science and Oral Processing
SIFBI

The logo incorporates the initials "SSOP" to represent the diverse senses involved in sensory perception and consumer behavior, including sight, olfaction, hearing, taste, and cognition.



Sensory booths in normal (left) and red (right) lighting



Feeding stations for consumer and oral processing studies

16. Texas A&M University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Texas A&M Sensory Science Facility (SSF)
- **Department/Division Name:** Texas A&M University (Texas A&M AgriLife Research)
- **Location:** College Station, Texas, United States of America
- **Website:** https://pellegrino-lab.github.io/
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/in/robert-pellegrino-0b68073aa/

2. Key Contact

- **Primary Contact Name:** Dr. Robert Pellegrino
- **Title/Role:** Assistant Professor and Director of Sensory Science Facility (SSF)
- **Email:** robert.pellegrino@tamu.edu
- **Sensory Facility Email (For Consultation):** sensory@ag.tamu.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Texas A&M Sensory Science Facility (SSF), directed by Dr. Robert Pellegrino, provides consumer, analytical, and instrumental testing services to academic and industry partners. A full sensory kitchen, an instrumental laboratory, and 30 evaluation booths support both applied product development and basic research, including advanced psychophysical and physiology-based testing. The facility specifically works to uncover and model how smell and mouthfeel shape flavor perception, and to turn that insight into better products and eating experiences.

- **Established Year:** 1988

- **Brief History:**
  The facility traces its origins to Fall 1988, when Dr. Rhonda Miller established a sensory evaluation laboratory within the Department of Animal Science to support research on the palatability, texture, and quality of meat and meat products. Under Dr. Miller, the facility developed and maintained an expert-trained descriptive panel that served meat scientists at Texas A&M along with faculty, scientists, and industry cooperators from other institutions, and it carried out consumer sensory evaluation as well. Since 2026, Dr. Robert Pellegrino now directs the facility, broadening its scope to include advanced psychophysical and physiological measures across a variety of foods and beverages. In 2027, the lab will again expand to include the newly constructed Aplin Center with an additional 30 sensory booths surrounding

a state-of-the-art kitchen, a virtual-reality room, focus rooms, and fermentation laboratories (including wine, beer, and coffee production).

- **Vision and Mission:**
  Vision: To uncover general principles governing flavor perception across individuals with intact and altered sensory systems, and to translate that discovery into better products, sensory evaluation methods, and interventions that improve food enjoyment and nutrition

  Mission: To deliver reliable sensory and consumer data to academic and industry partners, and to train the next generation of sensory scientists through hands-on research and testing

- **Test Capabilities:**
  The facility offers a full suite of sensory and consumer science services, delivered as full-service projects (study design through analysis and reporting) or as data collection only:
  - ✓ Consumer testing for product acceptance, preference, and perception, with target or general consumer populations (standard, pilot, and focus-group formats).
  - ✓ Descriptive sensory analysis or discrimination testing with trained human panels
  - ✓ Instrumental testing, including pH, water activity and water-holding capacity, colorimetry, texture analysis (e.g., Warner-Bratzler shear force), and omics analyses
  - ✓ Advanced psychophysical and physiology-based testing for basic and translational research
  - ✓ Free consultation to scope project goals, methodology, timeline, and budget

- **Fun Facts:**
  - ✓ Each lab member has a favorite smell and texture. It’s on our lab website!
  - ✓ The facility's director is a trained bartender who runs food/bev pop-ups and has designed recipes for people with smell loss, co-authoring a cookbook (Rediscovering Flavor) to help them get flavor back.

4. About the People

- **Director/Principal Investigator:** Dr. Robert Pellegrino
- **Staff and Students:**
  - ✓ Lab and Facility Manager: Hanyi Shi
  - ✓ Graduate Students: Bisma Khaliq (Ph.D.), Kade Gordon (M.S.)
  - ✓ Undergraduate students: Brendan Cisneros (Food Science), Amy Rodriquez (Animal Science), Panchami Gopal (Neuroscience)
  - ✓ A standing trained descriptive panel is maintained at the facility

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Sensory and quality characterization of foods and agricultural commodities, including meat products
  - ✓ Quantitative modeling of chemical and structural relationships to sensory perception
  - ✓ Multimodal approach to profiling the complexities of textures in food
  - ✓ Chemesthesis and the trigeminal contribution to flavor
  - ✓ Effects of smell loss and other sensory impairments on perception, acceptance, and eating

- **Recent/Ongoing Projects:**
  - ✓ Fatomics: fat quality, sensory, and metabolic implications of pork lard and beef tallow under realistic cooking conditions
  - ✓ Development of flavorful melons through engineering fruit flavor metabolism
  - ✓ Masticatory efficiency as a guide for treating individuals with eating disorders and dementia
  - ✓ Understanding Maillard reactions across breed, feed and muscles of domestic cattle
  - ✓ Translational tools for smell loss, including flavor-rehabilitation guidance for affected individuals

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ ANSC 487 / FSTC 487: Sensory Evaluation of Foods

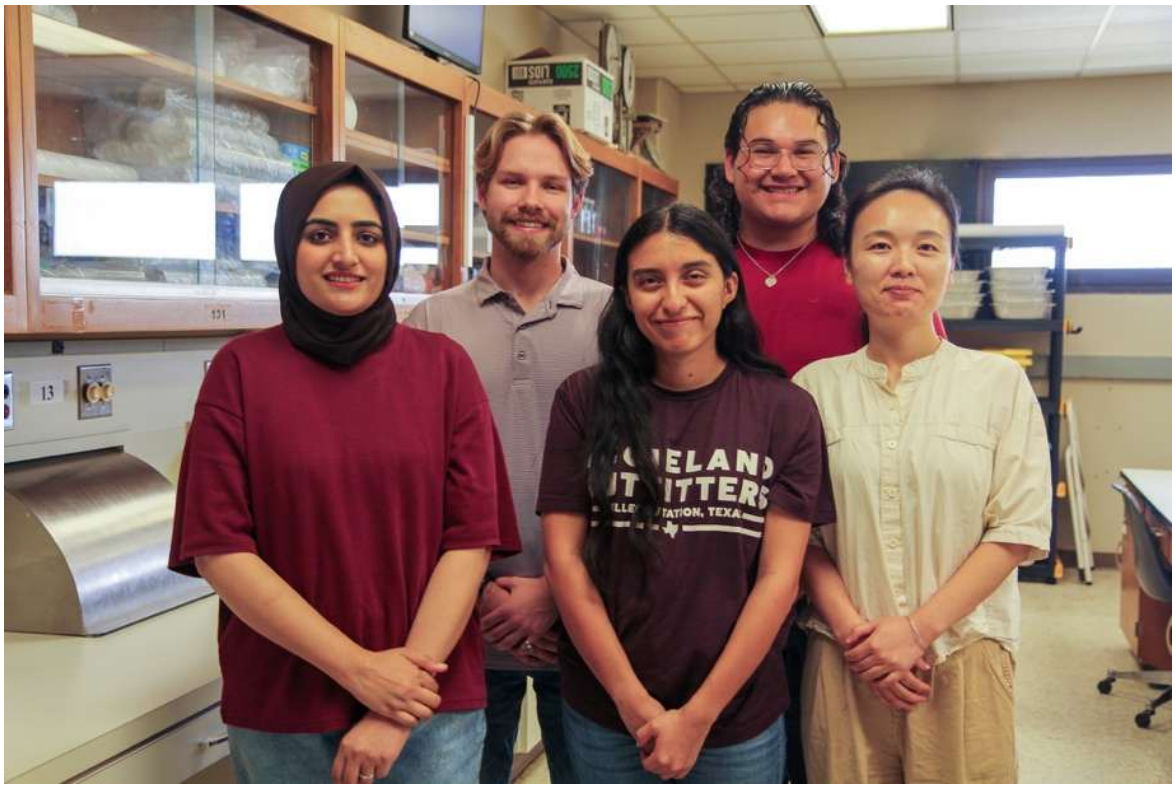
- **Student Opportunities:**
  - ✓ Graduate research assistantships (M.S. and Ph.D.)
  - ✓ Undergraduate research positions
  - ✓ Internships for domestic and international students

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Sensory evaluation suite with 19 primary booths (tablet-based data collection and standardized white, red, and dim lighting) plus 11 additional booths for advanced psychophysical and physiology-based testing, for 30 booths total
  - ✓ Sensory kitchen with a full professional cooking range and commercial hood for controlled preparation, cooking, heating, and holding of samples
  - ✓ Dedicated prep space for sample staging, portioning, and handling
  - ✓ Instrumental laboratory for food quality and texture analysis
  - ✓ Walk-in cold room and walk-in freezer
  - ✓ Access to shared facilities, including the Flavor/Aroma Chemistry Lab (GC-MS with olfactory ports), a food microbiology laboratory, National Center for Electron Beam Research, Human Clinical Research Facility, and the Rosenthal Meat Science and Technology Center

- **Special Equipment and Technologies:**
  - ✓ Two texture analyzers, colorimeters, and general-purpose food chemistry equipment (e.g. water activity)
  - ✓ Foss FoodScan for fat, moisture, protein, collagen, sodium, and saturated fat content
  - ✓ GC-MS with dual olfactory detection ports and solid-phase microextraction (SPME) headspace sampling (shared Flavor/Aroma Chemistry Lab)
  - ✓ Foodservice cooking equipment under a capture-air hood, including electric charbroilers, griddles, ovens, deep fryers, and indoor grills

8. Inside the Lab



The Texas A&M Sensory Science Facility Team
From left to right: Bisma Khaliq, Kade Gordon, Amy Rodriquez, Brendan Cisneros, and Hanyi Shi



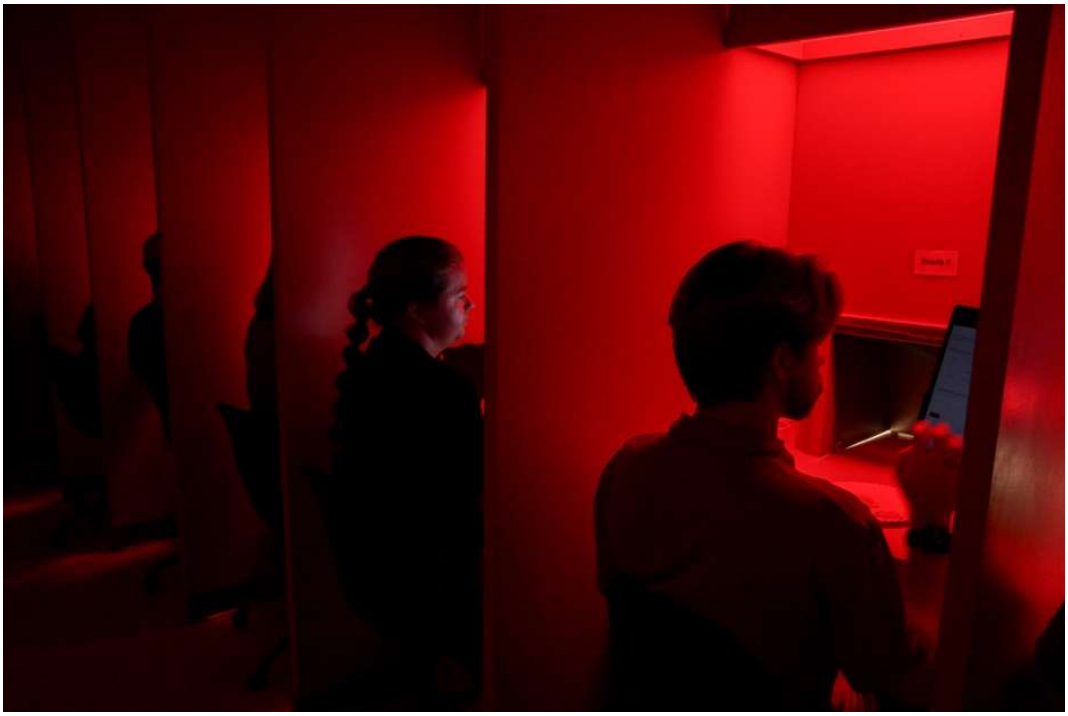
Grill and hood, kitchen side



Booths, kitchen side



Booths, consumer side



Sensory booths, consumer side, close-up

17. The Ohio State University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Food Perception & Liking Laboratory
- **Department/Division Name:** Department of Food Science and Technology
- **Location:** Columbus, Ohio, United States of America
- **Website:** https://u.osu.edu/simonslab/; https://sensorytesting.osu.edu/

2. Key Contact

- **Primary Contact Name:** Dr. Christopher T. Simons
- **Title/Role:** Professor and Director
- **Email:** simons.103@osu.edu

3. About Program and Capabilities

- **Brief Overview:**
  The lab uses a multidisciplinary approach to develop fundamental insights into the mechanisms underpinning food perception, food reward, and food choice. The program combines sensory science and psychophysics with behavioral measurement and physiological approaches to investigate how sensory properties, individual differences, and contextual factors influence human responses to food. A key strength of the program is its ability to integrate traditional sensory methodologies with emerging approaches for measuring food perception and consumer behavior. Eye tracking, physiological recordings, and facial expression analysis provide complementary insights to data collected using traditional methods. The use of immersive and virtual reality testing enables the incorporation of realistic environmental and contextual factors to better understand how sensory responses translate to real-world food experiences. The research program is supported by the Sensory Evaluation Center which conducts research ranging from fundamental psychophysical studies to large-scale consumer testing and industry-focused product research. These integrated capabilities provide a unique platform for studying food perception from controlled measurement of individual sensory processes through consumer acceptance, food choice, ingestive behavior, and context-rich food experiences. A main outcome of our research is to translate fundamental sensory science into improved methods for understanding and developing foods.

- **Established Year:** 2013

- **Test Capabilities:**
  - ✓ Psychophysical testing
  - ✓ Consumer acceptance testing
  - ✓ Descriptive analysis panels
  - ✓ Immersive testing capabilities
  - ✓ Eye tracking

- **Fun Facts:**
  - ✓ For the past couple of years, we have celebrated the Lunar New Year with dim sum, origami, and red lanterns!

4. About the People

- **Director/Principal Investigator:** Dr. Christopher T. Simons
- **Staff and Students:**
  - ✓ Ran Tao: Sensory Program Manager
  - ✓ Two Postdoctoral Associates
  - ✓ Five graduate students
  - ✓ Four undergraduate students

5. Current Research and Projects

- **Key Research Areas:**

  The project portfolio is diverse with projects typically aligned to the following themes:
  - ✓ Food perception and psychophysics: Understanding individual differences and mechanisms underlying taste, smell, chemesthesis, and oral tactile perception.
  - ✓ Sensory interactions and flavor perception: Investigating how taste, smell, and trigeminal/oral tactile sensations interact to shape flavor and food perception.
  - ✓ Food reward, liking, and choice: Examining the factors that influence hedonic responses, motivation, consumer preferences, and food-related behavior.
  - ✓ Context and ecological validity: Understanding how environmental, social, and product-related context influences sensory perception, liking, and consumer responses.
  - ✓ Sensory and consumer research methodology: Developing and evaluating new approaches to improve the validity, reliability, and predictive value of sensory and consumer testing.
  - ✓ Food sensory quality and product development: Applying fundamental sensory research to understand the sensory drivers of food quality and liking to support the development of improved food products.

- ✓ Behavioral and physiological measurement: Integrating sensory testing with behavioral and physiological measures to better understand the processes underlying human responses

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Food Perception and Liking Course (undergraduate and graduate course): fall semester
  - ✓ Advanced Concepts in Sensory (graduate course): every 2 years, spring semester

- **Student Opportunities:**
  - ✓ Undergraduate students can get involved through independent study or FoodSURE – an undergraduate research experience

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ 10 sensory booths
  - ✓ Psychophysical lab space
  - ✓ Immersive environment laboratory
  - ✓ Focus group/Descriptive analysis room

- **Special Equipment and Technologies:**
  - ✓ Virtual reality and immersive environment technology
  - ✓ Eye tracking
  - ✓ Psychophysiological suite
  - ✓ Facial expression analysis

8. Inside the Lab



Food Perception & Liking Laboratory Team (Photo credit: Sam Brown)
From left to right: Kai Chang, Ran Tao, Ying Yang, Chris Simons, Matthiew B. Haines, Alyssa Sutanto, Kaeden Young, Berenece Montano, Aishwaryia Badiger, Risia Cohelo Lacerda, Thitima (Jess) Kaothaisong, Audrey Kuei, and Adam Chismar



VR picture (Photo credit: Matthiew B. Haines)

18. The Pennsylvania State University (Penn State)

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Sensory Evaluation Center
- **Department/Division Name:** Department of Food Science
- **Location:** University Park, Pennsylvania, United States of America
- **Website:** https://foodscience.psu.edu/about/facilities/sensory
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/groups/8440034/
  - ✓ Instagram: https://www.instagram.com/pennstatesec/
  - ✓ Facebook: https://www.facebook.com/SECpennstate/

2. Key Contact

- **Primary Contact Name:** Dr. Morgan Failla
- **Title/Role:** Sensory Lab Manager
- **Email:** mef5910@psu.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Pennsylvania State Sensory Evaluation Center is a full-service, state-of-the-art human research testing facility that provides students with experiential learning in sensory and consumer science. It teaches sensory methodology through residential education courses, accredited online courses, and in-person short courses. Our facility supports food and CPG companies via technical assistance and sensory testing services, as well as training the next generation of sensory scientists at the B.S., M.S., and Ph.D. level.

- **Established Year:** 1972

- **Brief History:**
  The Sensory Evaluation Center began conducting sensory tests on food and non-food products in the Borland Lab in the early 1970s, before moving into new state-of-the-art facilities in the Erickson Food Science Building in 2007.

- **Vision and Mission:**
  We believe sensory and consumer science methods can be applied to almost any food or consumer good. As such, we strive to train generalists who can apply fundamentals to almost any product category.

- **Test Capabilities:**
  - ✓ Discrimination testing
  - ✓ Consumer acceptance tests
  - ✓ Preference testing
  - ✓ Central location tests
  - ✓ Home-use tests
  - ✓ Online surveys
  - ✓ Conjoint analysis
  - ✓ Descriptive analysis
  - ✓ Qualitative research (focus groups, structured interviews)
  - ✓ Instrumental sensory correlations
  - ✓ GC-MS/GCO

- **Fun Facts:**
  - ✓ The world-famous Berkey Creamery can serve ~10,000 ice cream cones on a football weekend, with crowds wrapping across the building and down the block: we occasionally leverage this unique opportunity to crowdsource taste tests with community members aged 8 to 80!

4. About the People

- **Directors/Principal Investigators:**
  - ✓ Dr. John E. Hayes (Director, SEC)
  - ✓ Dr. Helene Hopfer (Director, Graduate Certificate in Sensory and Consumer Science)

- **Adjunct Faculty, Staff and Students:**
  - ✓ One adjunct faculty (Kirkmeyer)
  - ✓ One professional staff member (Failla)
  - ✓ Two postdoctoral fellows
  - ✓ Seven to nine graduate students
  - ✓ 15-20 undergraduate students

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Applied sensory testing
  - ✓ Human psychophysics
  - ✓ Taste biology
  - ✓ Flavor chemistry
  - ✓ Sensometrics
  - ✓ Qualitative research

- **Recent/Ongoing Projects:**
  - ✓ How salivary composition affects oral astringency (e.g., in wine and chocolate)
  - ✓ Starch breakdown in the mouth (salivary amylase)
  - ✓ Bitterness perception (tastant-protein binding)
  - ✓ Texture perception
  - ✓ Segmentation in affective responses to sourness
  - ✓ Non-nutritive sweeteners and sugar reduction strategies
  - ✓ Psychophysics of oral touch and chemesthesis
  - ✓ Modulation of eating rate via texture and chemesthesis
  - ✓ Validation of rapid smell tests

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ FDSC 404 Sensory Evaluation of Foods (Hayes; in person)
  - ✓ FDSC 403 Sensory Data Collection and Analysis (Hayes; online)
  - ✓ FDSC 515 Sensometrics (Hopfer; online)
  - ✓ FDSC 516 Consumer Insights (Kirkmeyer; online)
  - ✓ FDSC 534 Ingestive Behavior Seminar (Hayes; in person)
  - ✓ Principles of Sensory Evaluation Short Course (in person, each spring)
  - ✓ Graduate certificate in Sensory & Consumer Science

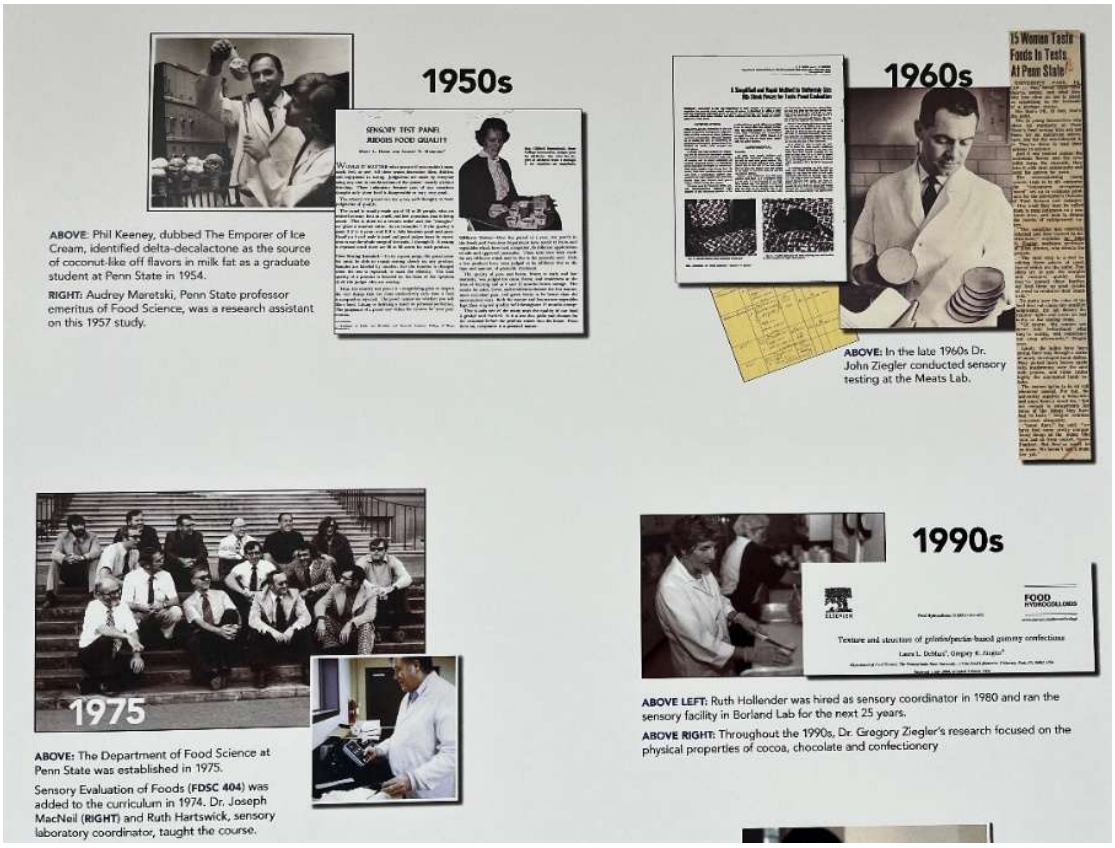
- **Student Opportunities:**
  - ✓ Wage payroll, independent study, and Honors College theses for undergraduate students
  - ✓ Fully funded graduate assistantships for all M.S. and Ph.D. students
  - ✓ Postdoctoral positions
  - ✓ Visiting scholar positions by negotiation

7. About the Sensory Facility

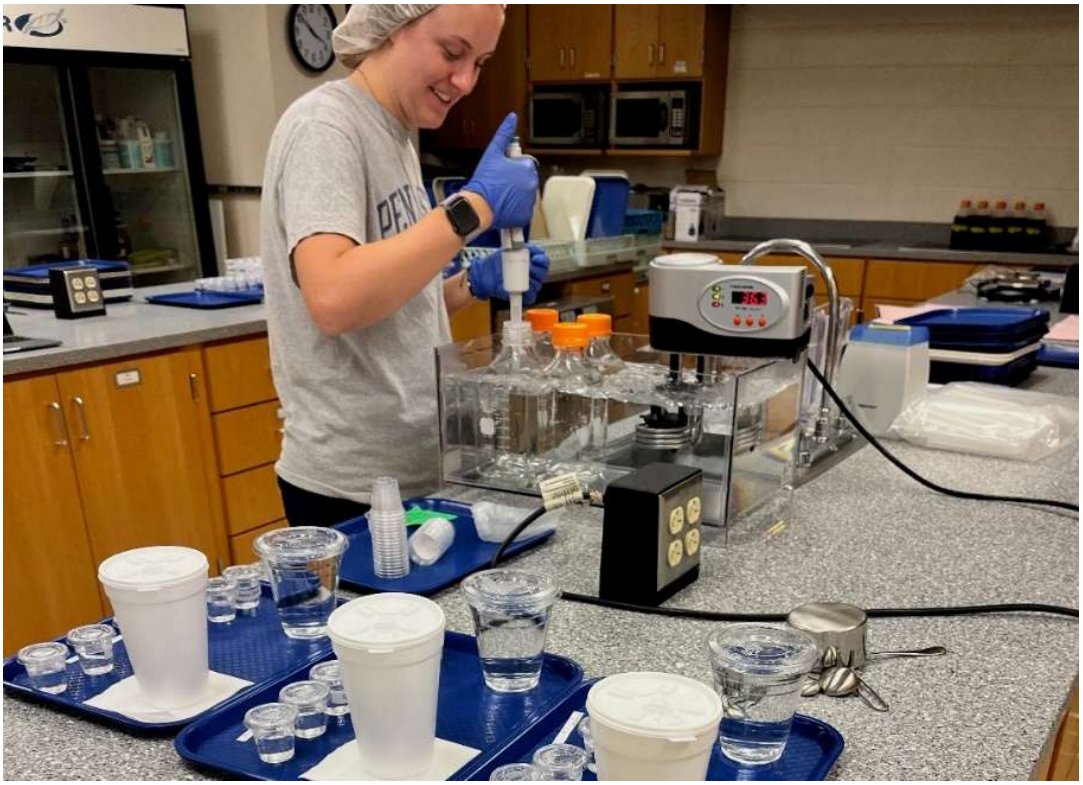
- **Testing Spaces:**
  - ✓ 12 individual testing booths equipped with serving windows, controlled lighting, and computerized data collection
  - ✓ Separate qualitative research suite including conference room, one-way mirror, and observation room

- **Special Equipment and Technologies:**
  - ✓ Computers in every booth for ballot presentation and data collection using Compusense® software
  - ✓ 30+ tablet computers for crowdsourced data collection in the field
  - ✓ A modern fully equipped preparation kitchen
  - ✓ A meeting room for descriptive panel training
  - ✓ Focus group rooms with video and recording capabilities

8. Inside the Lab



Display at Pangborn 2017 highlighting the history of sensory science at the Pennsylvania State University



Caroline Getz, a Food Science undergraduate, prepares samples in the lab



Kristin Joy Leong-Fern, M.S., prepares samples in the lab



Ashley Gruman, M.S., leads a crowdsourced taste test during a football weekend



Samples prepared for a lab exercise in FDSC 404, Sensory Evaluation of Foods

19. The University of Tennessee, Knoxville

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** The University of Tennessee's Center for Sensory Science
- **Department/Division Name:** Department of Food Science
- **Location:** Knoxville, Tennessee, United States of America
- **Website:** https://sensory.tennessee.edu/
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/in/utksensorylab

2. Key Contact

- **Primary Contact Name:** Sara Burns
- **Title/Role:** Lecturer and Manager
- **Email:** sara.burns@utk.edu

3. About Program and Capabilities

- **Brief Overview:**
  Tucked inside the Food Science Building on the University of Tennessee Institute of Agriculture's campus in Knoxville, Tennessee, the Center for Sensory Science is quietly doing some of the most applied, industry-relevant sensory work in the Southeast. Whether you're a food company looking to launch a new product or a researcher trying to better understand how people experience flavor, this lab is built to help.

- **Established Year:** 1972

- **Brief History:**
  The Sensory and Evaluation Laboratory at the University of Tennessee Institute of Agriculture has been serving researchers and industry partners since the 1970s. In 1986, Dr. Marjorie Penfield assumed leadership of the experimental lab and expanded its services to support both academic research and industry clients. While teaching, conducting research, and mentoring students, Dr. Penfield guided the lab's growth and development for nearly three decades.
  In 2014, Sara Burns, one of Dr. Penfield's graduate students, took over lab operations. Under her leadership, the lab has continued to expand and now collaborates with approximately 25 industry clients. In 2025, the lab further strengthened its team with the addition of Assistant Sensory Lab Manager Peyton Crates.

As the only sensory evaluation laboratory of its kind in Tennessee, the lab provides valuable expertise and resources to businesses, researchers, and organizations across the state and beyond. The lab continues to welcome new partnerships and opportunities, supporting clients with customized sensory testing, consumer research, and product evaluation services.

- **Vision and Mission:**
  Vision: The University of Tennessee's Center for Sensory Science envisions a future where sensory science helps shape a more sustainable, innovative, and consumer-focused food system. Through research and collaboration, the lab seeks to accelerate the development and acceptance of novel ingredients, alternative proteins, sustainable processing methods, and next-generation food products that benefit consumers, industry, and society.

  Mission: The University of Tennessee's Center for Sensory Science is dedicated to delivering rigorous, consumer-driven sensory research and evaluation services that empower the food and beverage industry to make smarter, faster, and more confident product decisions. By combining state-of-the-art sensory testing facilities with deep scientific expertise, the Center partners with companies of all sizes — from emerging startups to established brands — to bridge the gap between product development and consumer acceptance. Through descriptive analysis, consumer affective testing, discrimination testing, focus groups, physical and instrumental analysis, and large-scale online survey administration, the Center provides the insights needed to bring better, more innovative food experiences to market. Grounded in the academic excellence of the University of Tennessee Institute of Agriculture, the Center also contributes to the broader advancement of sensory science through an active research program and by training the next generation of food scientists who will drive the industry forward.

- **Test Capabilities:**
  - ✓ Consumer and Affective testing: From simple preference tests to large-scale acceptance studies, the Center designs and executes consumer research that connects real people to real products. Their tiered consumer recruitment model allows companies to target broad or highly specific demographic profiles depending on their needs.
  - ✓ Discrimination testing: Ideal for reformulation, cost-optimization, or quality control projects where understanding whether consumers can detect a difference between products is critical
  - ✓ Focus groups: The Center's moderators are RIVA-trained (Research Industry Validated Approach), ensuring focus group sessions are conducted with the

structured, professional methodology that produces reliable and insightful qualitative data.

- ✓ Descriptive analysis: The Center utilizes the Spectrum™ Method, one of the most precise and scientifically rigorous descriptive analysis techniques available. This approach uses a trained panel and universal intensity scales to generate highly reproducible, actionable data on a product's sensory profile, giving companies a detailed, objective picture of exactly what consumers are experiencing.
- ✓ In-Home Use Testing (IHUT): Products are tested in the environments where consumers actually use them, capturing authentic behavioral and sensory feedback outside of a controlled lab setting.
- ✓ Online survey administration: The Center manages survey design and distribution at the local, regional, or national level, offering flexible reach without sacrificing data quality.
- ✓ Physical and Instrumental Analysis — Texture analysis, rheometry, color measurement, and size evaluation provide objective, quantifiable data that complements panel and consumer findings

- **Fun Facts:**
  - ✓ The Sensory Lab serves as a hallmark stop for the Herbert College of Agriculture for school programs, community partners, and key stakeholders.
  - ✓ The Sensory Lab is a key element in the University of Tennessee Creamery's ice cream flavor development. One day our sensory team had to taste 30 different peppermint ice cream prototypes!

4. About the People

- **Director/Principal Investigator:** Sara Burns
- **Staff and Students:**
  - ✓ Peyton Crates: Assistant Lab Manager
  - ✓ Taryn Breeden: Undergraduate student
  - ✓ Suhani Daniels: Undergraduate student
  - ✓ Mia Warren: Undergraduate student
  - ✓ Emma Gilroy: Undergraduate student

5. Current Research and Projects

- **Key Research Areas:**
  The UT Center for Sensory Science supports a wide range of research initiatives, lending its sensory expertise to projects that tackle some of today's most pressing challenges in food science and sustainability.

- ✓ Sensory methodology: Expanding and refining the tools available to sensory scientists
- ✓ Olfactory perception: Deepening understanding of how humans perceive complex odors
- ✓ Cross-modal food perception: Exploring how inputs across different sensory modalities interact during food experience
- ✓ Texture perception and oral processing: Examining the relationship between oral processing and mouthfeel

- **Recent/Ongoing Projects:**
  - ✓ Developing new processing methods for fresh produce that reduce food waste and minimize chemical use
  - ✓ Extracting proteins from all parts of Tennessee-grown plants to expand sustainable protein sources and reduce agricultural waste
  - ✓ Evaluating flavored mushroom-based products designed to replicate the sensory experience of meat, supporting the development of consumer-accepted sustainable alternatives
  - ✓ Supporting reformulation efforts aimed at removing artificial colors, dyes, and additives from food products while maintaining consumer acceptance and sensory quality

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Evaluation of Food (undergraduate and graduate course)
  - ✓ Outreach education for students, stakeholders, and industry partners

- **Student Opportunities:**
  - ✓ Hands-on sensory lab work for undergraduate students
  - ✓ Connections with regional, national, and international industry clients and companies
  - ✓ Undergraduate internships

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Six-booth controlled-lighting testing room with iPads, keyboards, mouse, and serving hatches
  - ✓ RedJade® software for ballot presentation and automated data collection
  - ✓ Focus/meeting room with two-way mirror, large TV monitor, video and recording capabilities, seats up to 15
  - ✓ Fully equipped prep kitchen with commercial-grade appliances and five GE convection ovens
  - ✓ Walk-in cooler and freezer with remote temperature monitoring

8. Inside the Lab



Sensory Lab booth room



Sensory Lab workstation (booths)

20. University of Arkansas, Fayetteville

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** University of Arkansas Sensory Science Center
- **Department/Division Name:** Department of Food Science at the University of Arkansas Division of Agriculture
- **Location:** Fayetteville, Arkansas, United States of America
- **Website:** https://aaes.uada.edu/technical-services/sensory-science-center/
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/company/95728330/
  - ✓ Instagram: https://www.instagram.com/arkansas_sensory/
  - ✓ Facebook: https://www.facebook.com/profile.php?id=100063727563587

2. Key Contact

- **Primary Contact Name:** Dr. Han-Seok Seo
- **Title/Role**: Tyson Endowed Professor in Food Sensory Science and Director
- **Email:** hanseok@uark.edu

3. About Program and Capabilities

- **Brief Overview:**
  The University of Arkansas Sensory Science Center is a leading hub for sensory and consumer research, providing a comprehensive suite of testing, evaluation, research, and consulting services. Built on a strong interdisciplinary foundation, the center integrates sensory science, consumer insights, psychology, neuroscience, and emerging artificial intelligence (AI) technologies to deepen our understanding of how diverse populations perceive, experience, and interact with food and non-food products in everyday contexts.

- **Established Year:** 1996

- **Brief History:**
  The center traces its origins to 1996, when Dr. Jean-François Meullenet joined the Department of Food Science and established the University of Arkansas Sensory Service Center to support industry needs in sensory evaluation. After Dr. Meullenet transitioned to an administrative role, Dr. Han-Seok Seo joined the university in January 2012 and became the director, expanding the center's scope beyond traditional sensory testing to include broader interdisciplinary approaches to sensory and consumer research. Reflecting this expanded focus, the center was officially renamed the University of Arkansas Sensory Science Center on February

2, 2020. The date was intentionally selected to symbolize the center's evolution into "Version 2.0."

- **Vision and Mission:**
  Vision: To optimize the design and interaction of sensory cues among consumers, products, and environments in ways that promote healthier, happier, smarter, and more sustainable behaviors, ultimately enhancing the well-being of diverse communities

  Mission: The center conducts cutting-edge basic and applied research on multisensory interactions and consumer behavior across four key dimensions of the consumer-product-interface:
  - ✓ Within products: Identify how sensory attributes and their interactions shape perception, experience, acceptance, and behavior.
  - ✓ Across consumers: Understand and predict individual differences in perceptual, emotional, and cognitive responses to sensory cues.
  - ✓ Across environmental contexts: Examine and optimize environmental interface factors that influence perception, acceptance, decision-making, and behavior.
  - ✓ Through behavioral interventions: Develop evidence-based, sensory-driven nudges and interventions that encourage healthier, more informed, and more sustainable choices.

  Beyond advancing the science of multisensory perception and consumer behavior, the center is committed to translating research discoveries into innovative intervention strategies, practical applications, and commercialization opportunities. Its work emphasizes diversity and inclusion, digital innovation, and sustainability, while contributing to resilient agricultural and food systems.
  The center also advances education, interdisciplinary training, industry and community engagement, and outreach, with the broader goal of fostering healthier, happier, smarter, and more sustainable communities.

- **Test Capabilities:**
  The center provides a comprehensive suite of sensory and consumer science services, including:
  - ✓ Discrimination testing
  - ✓ Descriptive sensory analysis using the Spectrum™ method
  - ✓ Consumer acceptance testing, including central location tests, home-use tests, and drive-in booth testing
  - ✓ Focus groups and one-on-one interviews
  - ✓ Online surveys supported by a consumer profile database of more than 4,000 active residents in Northwest Arkansas

- ✓ Consumer behavior analysis
- ✓ Physicochemical analysis of food products
- ✓ Contract research and customized sensory and consumer research solutions

In addition, the center conducts multi-location consumer acceptance testing through collaborations with sensory evaluation centers and food innovation centers at partner institutions.

- **Fun Facts:**
  - ✓ Graduates receive a commemorative baseball jersey featuring a unique number assigned according to the order of thesis or dissertation completion. The jerseys are presented during the center's "Hall of Graduates" celebration.
  - ✓ The center's room number, E18, coincidentally matches the ASTM International Committee E18 on Sensory Evaluation.

4. About the People

- **Director/Principal Investigator:** Dr. Han-Seok Seo
- **Staff and Students:**
  - ✓ Nguyen "Helen" Ngo: Laboratory Manager and part-time M.S. student
  - ✓ Descriptive sensory panel: 8 trained panelists
  - ✓ Lei Chen: Ph.D. student
  - ✓ Natalia Calderón: Ph.D. student
  - ✓ Brianna Avellaneda: Undergraduate student
  - ✓ Hernan Campos: Undergraduate student
  - ✓ Maximus Gibbon: Undergraduate student
  - ✓ Brandon Nguyen: Undergraduate student
  - ✓ Lili Groom: Undergraduate student
  - ✓ Lily Sayler: Undergraduate student
  - ✓ Haley Ward: Undergraduate student

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Sensory characterization and optimization of food products and agricultural commodities, including rice and poultry, to support health, consumer acceptance, product quality, and market competitiveness
  - ✓ Neural mechanisms underlying chemosensory and multisensory perception, with emphasis on how sensory signals interact, integrate, and are interpreted
  - ✓ Sensory disorders and individual differences, and their effects on perception, acceptance, emotional response, and consumer behavior

- ✓ Advanced methods for measuring perception, emotion, acceptance, and behavior, including innovative sensory, behavioral, physiological, and digital approaches
- ✓ Sensory-based interventions designed to promote consumer well-being and encourage healthier, happier, smarter, and more sustainable choices, an approach referred to as “Sensory Nudge”

- **Recent/Ongoing Projects:**
  - ✓ Investigating how cognitive and psychological differences influence perception, emotion, and behavior
  - ✓ Developing AI-driven screening approaches and sensory-based interventions for autistic children
  - ✓ Designing interventions to improve eating quality among individuals experiencing sensory loss, including hearing, olfactory, and visual impairments
  - ✓ Examining consumer-product-interface dynamics using immersive and digital technologies
  - ✓ Designing neuromarketing-informed strategies to enhance food product promotion
  - ✓ Profiling and optimizing the sensory and non-sensory attributes of Korean foods in collaboration with the Global Center for K-Food at the University of Arkansas Division of Agriculture

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Evaluation of Food (undergraduate and graduate levels)
  - ✓ Chemosensory Perception and Measurements (graduate level)
  - ✓ Special Problems Research (undergraduate and graduate levels)
  - ✓ Special Topics: Culinary to Max Quality (undergraduate and graduate levels)
  - ✓ Sensory Science Journal Club (monthly online journal club open to students and professionals worldwide)
  - ✓ Rice Quality and Evaluation Short Course (offered in collaboration with the University of Arkansas Rice Processing Program and the Cereals & Grains Association)
  - ✓ Sensory Nudges Conference
  - ✓ FlavAR Workshop
  - ✓ Outreach education for students, stakeholders, and industry partners

- **Student Opportunities:**
  - ✓ Master's and doctoral assistantships
  - ✓ Undergraduate internships
  - ✓ Domestic and international research internships ranging from 1 to 12 months
  - ✓ The center welcomes students who bring diverse perspectives, experiences, and personal motivations related to sensory and consumer science. It is committed to creating an environment that supports both professional development and personal growth throughout each student's academic journey.

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Sensory evaluation laboratory featuring 13 individual booths, a preparation kitchen, and a focus-group room equipped with a one-way mirror
  - ✓ Multisensory garage room for olfactory, gustatory, and tactile testing, as well as food characterization
  - ✓ Immersive room designed to simulate a variety of food-experience environments
  - ✓ Neuromarketing and observation room for consumer-insight studies or research involving sensory or neurodiverse populations

- **Special Equipment and Technologies:**
  - ✓ Biometric and physiological measurement tools: EEG, eye-tracking system, galvanic skin response, facial expression analysis, and chewing EMG
  - ✓ Immersive technologies: Virtual reality systems, an immersive room environment, and an experimental restaurant setting
  - ✓ Stimulus delivery systems: Olfactometer and gustometer for precise and controlled stimulus administration
  - ✓ Analytical instruments: Texture analyzer, rheometer, colorimeter, and related food characterization equipment

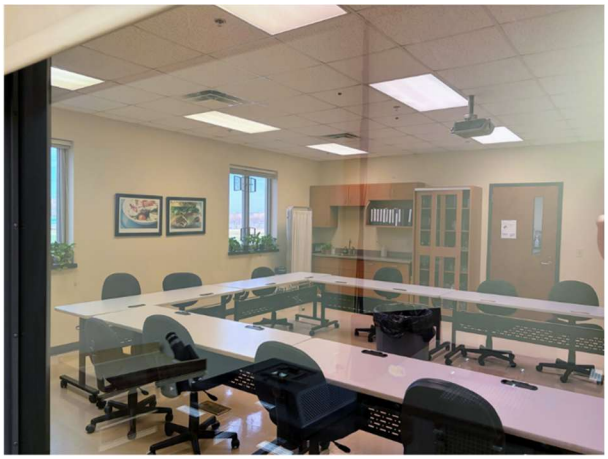
8. Inside the Lab



The University of Arkansas Sensory Science Center Team
Top row, from left to right: Han-Seok Seo, Lei Chen, Natalia Calderón, Janet Feichtel-Cross, Dana Thompson, Bill Golbuff, and Michael Cosgrove,
Bottom row, from left to right: Janie Michaelson, Nguyen Helen Ngo, Erin Slayton, Tracy Abshier, and Vasti McBride

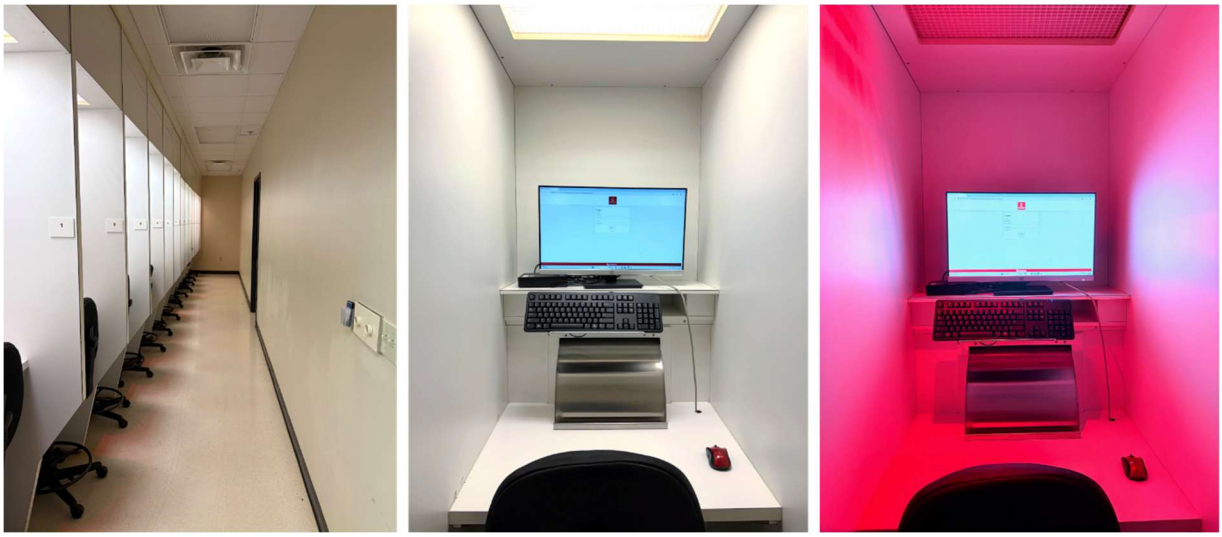


Focus Group Interview/ Panel Training Room

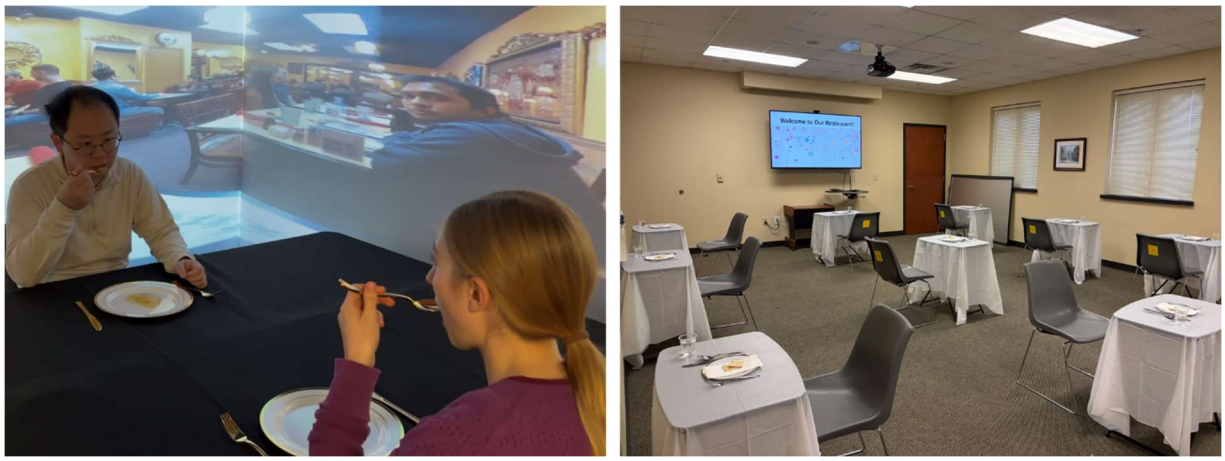


One-Way Mirror Observation Room

Sensory facilities



Sensory booths



Immersive room and Experimental restaurant setting



The Science-Telling-About-Revolution (STAR) in Sensory Nudges Conference hosted by the University of Arkansas Sensory Science Center

21. University of California, Davis

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Three sensory laboratories – Guinard Lab, Delarue Lab, and Nguyen Lab – are located in the Sensory Building of the Robert Mondavi Institute for Wine and Food Science
- **Department/Division Name:** Department of Food Science and Technology (Guinard Lab and Delarue Lab) and Department of Viticulture & Enology (Nguyen Lab)
- **Location:** Davis, California, United States of America
- **Website:**
  - ✓ Sensory and Consumer Science – Department of Food Science and Technology: https://foodscience.ucdavis.edu/research/sensory-science
  - ✓ Department of Viticulture & Enology: https://wineserver.ucdavis.edu/#/
  - ✓ UC Davis Sensory Hub: https://sensoryhub.ucdavis.edu/
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/company/robert-mondavi-institute; https://www.linkedin.com/company/ucdavisvande/
  - ✓ Instagram: https://www.instagram.com/ucdavisrmi/; https://www.instagram.com/ucdavisvande/

2. Key Contacts

Guinard Lab

- **Primary Contact Name:** Dr. Jean-Xavier Guinard
- **Title/Role:** Professor and Sensory Scientist
- **Department:** Food Science and Technology
- **Email:** jxguinard@ucdavis.edu
- **Website:** https://foodscience.ucdavis.edu/people/jean-xavier-guinard#/

Delarue Lab

- **Primary Contact Name:** Dr. Julien Delarue
- **Title/Role:** Professor in Sensory and Consumer Science
- **Department:** Food Science and Technology
- **Email:** jdelarue@ucdavis.edu
- **Website:** https://delaruelab.ucdavis.edu/

Nguyen Lab

- **Primary Contact Name:** Dr. Ha Nguyen
- **Title/Role:** Assistant Professor of Sensory Science
- **Department:** Viticulture and Enology
- **Email:** haxnguyen@ucdavis.edu
- **Website:** https://wineserver.ucdavis.edu/people/ha-nguyen#/

UC Davis Sensory Hub

- **Primary Contact Name:** Drs. Julien Delarue and Ha Nguyen
- **General Sensory Hub Contact:** sensoryhub@ucdavis.edu
- **Website:** https://sensoryhub.ucdavis.edu/

3. About Program and Capabilities

- **Brief Overview:**
  The Robert Mondavi Institute – Sensory Building houses sensory and consumer science teaching and research laboratories for both Food Science & Technology and Viticulture & Enology departments.

- **Established Year:** 1955

- **History:**
  The University of California, Davis has been a pioneer in sensory science since the establishment of its Viticulture & Enology (V&E) and Food Science and Technology (FST) Departments. In the 1960s, Professors Maynard Amerine (V&E) and Rose Marie Pangborn (FST) revolutionized fundamental and applied sensory science through their mentorship and research. Dr. Amerine transformed California's wine industry through sensory quality evaluations such as the Davis Scorecards (1935, 1959), while Professor Pangborn advanced research on consumer preferences, food sensory evaluation, and individual differences in perception. Together with Dr. Edward B. Roessler (Department of Mathematics), they created the content for the course FST 107: Sensory Evaluation of Foods, taught to FST students by Professor Pangborn for the first time in 1960, which helped shape the field. They then co-authored Principles of Sensory Evaluation of Food in 1965, the first-ever sensory textbook. The legacy continued through contributions from Dr. Ann Noble (V&E), who developed the Wine Aroma Wheel. More recently, Dr. Hildegarde Heymann (V&E) further advanced sensory science through research and the widely used textbook Sensory Evaluation of Foods: Principles and Practices, co-authored with Dr. Harry Lawless, Emeritus Professor at Cornell University.

Dr. Howard G. Schutz (FST) was a pioneer of modern sensory and consumer research, advancing methods for studying food preference, acceptance, and the role of consumption context. Dr. Christine Bruhn (FST) further expanded this legacy through influential research on consumer behavior, risk perception, and consumer responses to food technologies, while directing the UC Davis Center for Consumer Research for more than two decades.

Dr. Schutz also pioneered the UC Davis Applied Sensory and Consumer Science Certificate Program, working with Dr. Jean-Xavier Guinard and Rebecca Bleibaum to establish a program that has trained hundreds of sensory professionals worldwide.

- **Vision and Mission:**
  - ✓ To advance the impact of sensory and consumer science across disciplines.
  - ✓ To understand how people perceive products and use sensory insights to drive innovation, quality, and consumer understanding across industries.

- **Test Capabilities:**

  The center provides a comprehensive suite of sensory and consumer science services, including:
  - ✓ Human psychophysics testing
  - ✓ Descriptive analysis
  - ✓ Discrimination testing
  - ✓ General and targeted consumer panels
  - ✓ Quantitative and qualitative consumer tests
  - ✓ Immersive testing
  - ✓ Sensory genetics
  - ✓ Sensometrics

- **Fun Facts:**
  - ✓ The Pangborn Sensory Science Symposium was established in honor of Professor Rose Marie Pangborn's contributions to the field of sensory science.
  - ✓ Dr. Ann Noble was the first female professor hired in the Viticulture & Enology Department in 1974.

4. About the People

Guinard Lab:

- **Principal Investigator:** Dr. Jean-Xavier Guinard
- **Staff and Students:**
  - ✓ **Current Graduate Students:** Maite Serantes (Ph.D. Candidate), Sophia Fan (M.S. Student), Sonja Owens (M.S. Student)
  - ✓ **Recent Students and Visiting Scholars:** Lik Xian Lim, Katie Routt, Rubén Barroso (Universidad La Laguna, Spain), Karinna Estay (visiting professor, Universidad de Chile, Chile), Elena Romeo (Basque Culinary Center, Spain)

Delarue Lab

- **Principal Investigator:** Dr. Julien Delarue
- **Staff and Students:**
  - ✓ **Recent Graduate Students:** Daniel Schoonbrood, Linli Zhu, Jane Ong
  - ✓ **Recent Postdoc:** Dr. Kyle Hamilton (2022-2023)
  - ✓ **Recent Graduate students (visiting):** Luiza Freitas (Brazil), Rodrigo Sant'Ana (Brazil), Minkyu Kim (Republic of Korea), Ai Ting Goh (NZ/Singapore), Sarah Domingie (France), Victoire Lucas (France)
  - ✓ **Undergraduate Students:** hosts about six UG students on a yearly basis

Nguyen Lab

- **Principal Investigator:** Dr. Ha Nguyen
- **Staff and Students:**
  - ✓ **Lab Manager:** Annegret Cantu - Specialist
  - ✓ **Current Graduate Students:** Aaron Castillo (Ph.D. Student), Victoria Esparza (Ph.D. Student), Yufei Dai (M.S. Student), Jonathan Dobler (M.S. Student), Saurav Mohanty (M.S. Student)
  - ✓ **Current Undergraduate Students:** Roslyn Huang, Kavita Lal, Alexandra Elizabeth Leite, Alexandra Razo-Alcaraz, Abigail Wong
  - ✓ **Recent Students and Visiting Scholars:** Sydney Goodman, Sierra Lambert, Emily Lung, Kayla Yee, Dr. Encarna Gómez-Plaza (visiting professor)

UC Davis Sensory Hub

- **Directors:** Dr. Julien Delarue and Dr. Ha Nguyen
- **Founders:** Dr. Julian Delarue, Dr. Gaëlle Chanlot, Jackie Beckley, and Rebecca Bleibaum

5. Current Research and Projects

- **Guinard Lab**
  - ✓ Design of healthy, sustainable and still delicious food and drink through the Flip Strategy™: Protein Flip, Flexitarian Flip, Dessert Flip, Salt Flip, Fat Flip
  - ✓ Sensory determinants of food intake, food choice and preferences
  - ✓ Sensory quality and consumer acceptance of foods and beverages, for product development, breeding programs and industry partnerships
  - ✓ AI prediction of consumer liking and expert quality from sensory, compositional and structural data
  - ✓ Developing new sensory and consumer testing methods: Hedonext, Coffee Cuality, Wine Quality, Quali-Quanti combos
  - ✓ Coffee sensory and consumer science (Coffee Center): brewing, consumer liking, Brewing Control Chart, Coffee Taster's Flavor Wheel

- **Delarue lab:**
  - ✓ Sensory and consumer methods for healthy and sustainable food systems
  - ✓ Understanding product experience: context, appropriateness, and familiarity
  - ✓ Rapid sensory methods and sensory-led product design
  - ✓ Consumer perception of emerging and evolving product categories
  - ✓ Sensory perception of coffee defects

- **Nguyen lab:** Perception mechanisms, individual differences, and sensory evaluation methods to address global challenges in nutrition and food security.
  - ✓ Psychophysics and mechanisms of perception and modulation of bitterness and mouthfeel, applied to medications, foods, wine, and beverages
  - ✓ Individual, genetic, and cultural differences in consumer perception and preference
  - ✓ Data science to understand sensory perception and language from large datasets

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ FST 100B – Food Properties
  - ✓ FST 117 – Design and Analysis for Sensory Food Science
  - ✓ FST 127 – Sensory Evaluation of Foods
  - ✓ FST 159 – New Food Product Ideas
  - ✓ FST 207 – Advanced Sensory-Instrumental Analyses
  - ✓ FST 217 – Advanced Sensory and Consumer Science
  - ✓ FST 227 – Food Perception and the Chemical Senses

- ✓ VEN 125 – Wine Types & Sensory Evaluation
- ✓ VEN 125L – Sensory Evaluation of Wine Laboratory
- ✓ VEN 215 – Sensometrics
- ✓ VEN 225 – Advanced Sensory Analysis of Wines

- **Continuing and Professional Education:**
  - ✓ Applied Sensory and Consumer Science Certificate Program

- **UC Davis Sensory Hub:**
  - ✓ Annually organizes a workshop in the fall and a conference in the winter
  - ✓ Hosts the UC Davis Special Collections for Sensory and Consumer Science at the UC Davis Library

- **Student Opportunities:**
  - ✓ Undergraduate Research Assistantship
  - ✓ Graduate Student Research Fellow

7. About the Sensory Facility

- **Spaces of the three sensory labs include:**
  - ✓ Kitchen laboratories and the Food Innovation Lab
  - ✓ Two sensory rooms with a total of 29 standard individual sensory booths
  - ✓ Psychophysics testing room
  - ✓ Sensory Immersive Room – A 360-degree video experience space with special effects (sound, smell, breeze, mist).
  - ✓ The Silverado Vineyards Sensory Theater – A space used for conducting consumer testing (70 sensory booths), hosting public programs and lectures, and instruction for sensory science courses.

8. Inside the Lab

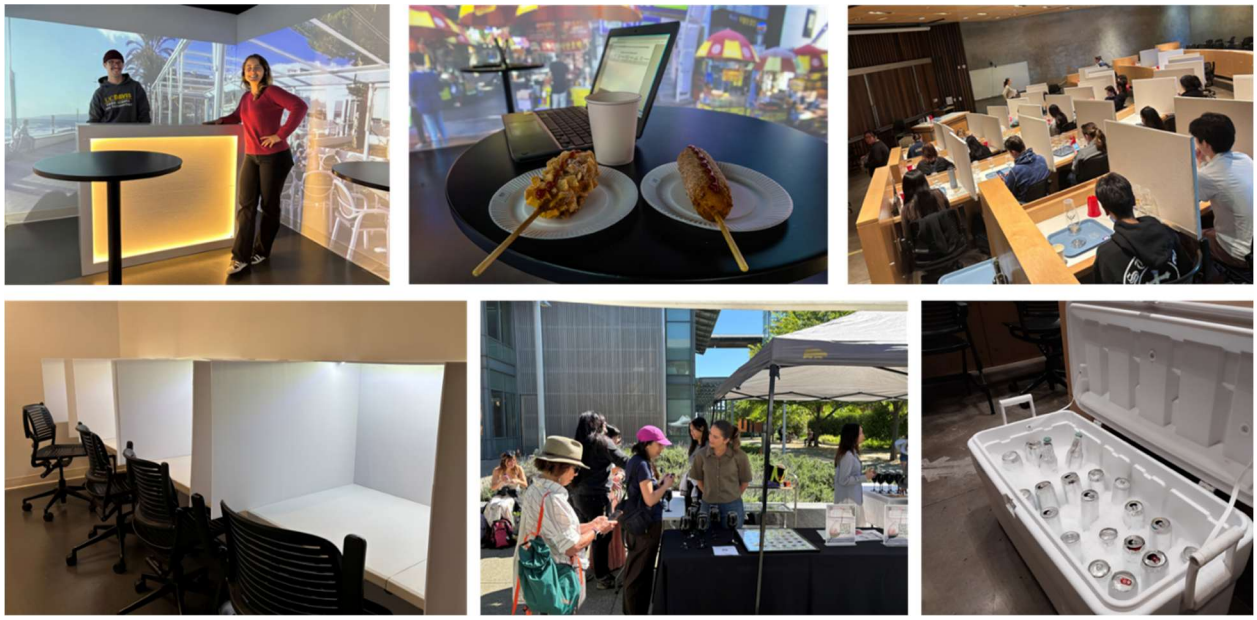


Robert Mondavi Institute for Wine and Food Science – Sensory Building and the Silverado Vineyards Sensory Theater



Guinard Lab

Sample preparation in the Guinard Lab and the Food Innovation Lab, and consumer panels in the Silverado Vineyards Sensory Theater.



Delarue Lab

Context studies in the immersive room (beach bar, Korean street food), large scale consumer test in the Silverado Vineyards Sensory Theater, Pop-up sensory booths, and field tests with blinded samples.



Nguyen Lab

Wine sample preparation and evaluation in the J. Lohr Sensory Room



Sensory Hub

Annual Conference and Special Collection Days (feat. **from top left to bottom right:** Rebecca Bleibaum, Joel Sidel, Herbert Stone, Hildegarde Heymann, and Sue Langstaff)

22. University of Florida

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** University of Florida Sensory Laboratory
- **Department/Division Name:** Food Science & Human Nutrition Department within the University of Florida's Institute of Food and Agricultural Sciences
- **Location:** Gainesville, Florida, United States of America
- **Website:** https://fshn.ifas.ufl.edu/about/sensory-laboratory/

2. Key Contact

- **Primary Contact Name:** Dr. Charles Sims
- **Title/Role:** Director and Professor
- **Email:** csims@ufl.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Food Science Sensory Lab is a teaching and research facility that provides sensory analysis for industry companies and collaborates frequently with academic partners at the University of Florida and other universities across the country. The lab focuses on providing sensory services using quantitative and qualitative testing methods tailored to the client's testing needs. Following the highest scientific and industry standard methods, the lab helps to design questionnaires, prepare and run tests, and analyze data to help support all areas of food and beverage development.

- **Established Year:** Mid-1990s

- **Brief History:**
  The Food Science Sensory Laboratory at the University of Florida (UF) was started in the mid-1990s by Dr. Charles Sims and has remained under his direction for nearly 30 years. Since 1996, Dr. Sims has supervised 47 graduate students (and counting) through this lab, many of whom work in food science and sensory roles today.

- **Test Capabilities:**
  Our lab focuses on three areas of testing tailored to each client's needs:
  ✓ Consumer acceptance
  ✓ Difference/discrimination testing
  ✓ Descriptive analysis

Our services also include:

- ✓ Project design
- ✓ Project set-up
- ✓ Panelist recruitment and compensation
- ✓ Data analysis and explanation of results

- **Fun Facts:**
  - ✓ While our lab is known around campus as the “taste panel”, we study other senses as well. One exciting study we have performed recently was evaluating the aroma of six different species of Christmas trees.
  - ✓ Our lab worked on a project with the United States’ Department of Defense, studying military rations for about 3 years.
  - ✓ Lab members were featured on a 2019 BBC Earth Science documentary about taste, starring our long-time lab member, Dr. Linda Bartoshuk.

4. About the People

- **Director/Principal Investigator:** Dr. Charles Sims
- **Staff and Students:**
  - ✓ Sensory Lab Manager: Haley Russo
  - ✓ Research Scientist: Dr. Aslı Odabaşı
  - ✓ 18 undergraduate lab assistants

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Odor-induced taste enhancement using volatiles
  - ✓ Consumer acceptance testing used to develop new cultivars of specialty crops

- **Recent/Ongoing Projects:**
  - ✓ Sweet-enhancing volatiles in solid and semi-solid matrices
  - ✓ Consumer acceptance and shelf-life determination of Florida-grown finger limes
  - ✓ Consumer acceptance and perception of not from concentrate and from concentrate orange juice
  - ✓ Descriptive analysis of muscadine wine and Florida-grown hops

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Quality Control in Food Systems (undergraduate course)
  - ✓ Sensory Evaluation of Food (graduate course)

- **Student Opportunities:**
  - ✓ Our lab hires undergraduate students as sensory lab assistants. They serve in a lab technician role, preparing samples, setting up the facility, and welcoming panelists. It is a great way for students to gain hands-on experience in sensory science.
  - ✓ All of the graduate students who have worked in this lab have been supported by assistantships.

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ 18 individual booths with an extensive sample preparation space on the other side
  - ✓ Each booth has a computer for efficient data entry and has red light capability.
  - ✓ A conference room for focus groups and descriptive analysis sessions

- **Special Equipment and Technologies:**
  - ✓ Compusense® software
  - ✓ Industrial test kitchen for sample preparation
  - ✓ Instruments to measure texture, viscosity, Brix, titratable acidity, and color, if needed

8. Inside the Lab



University of Florida Sensory Laboratory Team

From left to right: Hanyu Luo, Haley Russo, Dr. Aslı Odabaşı, Dr. Charles Sims, Ellie Morris, Rachel Obora, Taylor Brockman, Katie Hull, and Diego Azarra



Evaluation booths



Sample preparation area



Industrial test kitchen

23. University of Illinois Urbana-Champaign

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** National Soybean Research Laboratory (Pepino Lab and Asensio Lab) and Bevier Hall (Torrico Lab)
- **Department/Division Name:** Food Science and Human Nutrition
- **Location:** Urbana, Illinois, United States of America
- **Website:**
  - ✓ Pepino Lab: https://publish.illinois.edu/pepinolab/
  - ✓ Torrico Lab: https://publish.illinois.edu/torrico-lab/
  - ✓ Asensio Lab: https://lipidslab.web.illinois.edu/

2. Key Contacts

Pepino Lab

- **Primary Contact Name:** Dr. M. Yanina Pepino
- **Title/Role:** Professor, Director of the sensory lab in the National Soybean Research Laboratory and the clinical research suite
- **Email:** ypepino@illinois.edu

Torrico Lab

- **Primary Contact Name:** Dr. Damir D. Torrico
- **Title/Role:** Assistant Professor, Director of the sensory lab in Bevier Hall
- **Email:** damir@illinois.edu

Asensio Lab

- **Primary Contact Name:** Dr. Claudia M. Asensio
- **Title/Role:** Research Assistant Professor
- **Email:** casensio@illinois.edu

3. About Program and Capabilities

- **Established Year:** 1947

- **Brief History:**
  The Department of Food Science and Human Nutrition (FSHN) traces its roots to 1872, when the University established the School of Domestic Science and Arts, which included instruction in foods and dietetics and was considered a pioneering effort in scientific education related to food and nutrition. In 1947, the University of Illinois created the Department of Food Technology that later became the

Department of Food Science. One important early figure was Joseph Tobias, a dairy technology faculty member; his work served as an important precursor to what we now call sensory science: systematic human evaluation of flavor, texture, defects, and overall quality. By the 1974–75 academic year, UIUC was offering FS 202, a three-credit course in sensory evaluation of foods taught by Joseph Tobias that included both classroom instruction and laboratory work. Nowadays, the department maintains dedicated sensory laboratories in Bevier Hall and the National Soybean Research Laboratory.

- **Vision and Mission:**
  The motto in the Pepino lab is a quote from an outstanding Physiologist, Jacques Le Magnen: “It is unacceptable to study either a bodiless psychology or a decapitated physiology.”

  The mission in the Torrico lab is to advance sensory science in food research by understanding taste perception and its related physiological and psychological factors.

- **Test Capabilities:**
  - ✓ Detection thresholds
  - ✓ Perception of intensity at suprathreshold concentrations
  - ✓ Hedonic evaluation
  - ✓ Taste vs. flavor intensity perception (contribution of retronasal olfaction)
  - ✓ Preferences
  - ✓ Sniffing sticks for smell detection thresholds
  - ✓ Odor identification tests
  - ✓ Metabolic responses to different taste/food interventions.
  - ✓ Traditional and rapid descriptive analysis
  - ✓ Discrimination tests
  - ✓ Temporal methods including time intensity analysis and temporal dominance of sensations
  - ✓ Advanced physico-chemical characterization of foods coupled with sensory data
  - ✓ Analysis of emotion elicited by foods
  - ✓ Biometric analysis and food perception

- **Fun Facts:**
  - ✓ Taste helped put whipped cream in a can! In the 1930s, UIUC researchers rejected CO_2 because it made cream taste off and switched to nitrous oxide – helping create Instantwhip.
  - ✓ Sensory science has been taught at Illinois for more than 50 years – and the sensory evaluation course taught by Joseph Tobias in the 1970s is the ancestor of today's FSHN 302 taught by Dr. Torrico today.
  - ✓ Chocolate tasting meets virtual reality! Dr. Torrico's FSHN 302 class has taken chocolate tasters to virtual concerts and sightseeing tours to explore how our surroundings shape the emotions we experience while eating.

4. About the People

Pepino Lab

- **Director/Principal Investigator:** Dr. M. Yanina Pepino
- **Staff and Students:**
  - ✓ This varies greatly from year to year, depending on the number of graduate/undergraduate students, approximately five to ten people

Torrico Lab

- **Director/Principal Investigator:** Dr. Damir Torrico
- **Staff and Students:**
  - ✓ Currently five graduate students and five undergraduate students

Asensio Lab

- **Director/Principal Investigator:** Dr. Claudia M. Asensio
- **Staff and Students:**
  - ✓ Currently four graduate students and three undergraduate students

5. Current Research and Projects

Pepino Lab

- **Key Research Areas:**
  - ✓ Sensory Nutrition, with the overall goal to better understand how individual differences in taste, smell, and flavor perception interact with nutrient metabolism to shape dietary choices and, in turn, affect human health

- **Recent/Ongoing Projects:**
  - ✓ By using a combination of psychometrically sound, validated sensory assessment methods and metabolic research methods, the laboratory is

currently studying the effects of 1) bariatric surgery on ingestive behavior and alcohol metabolism, 2) low-calorie sweeteners on sweet taste perception and glucose homeostasis, and 3) taste and smell perception in clinical populations.

Torrico Lab

- **Key Research Areas:**
  - ✓ Sensory and consumer sciences, including food perception, preferences, and acceptance; physiological, psychological, and emotional responses to foods using biometric approaches; virtual reality and immersive environments to understand how consumption context shapes food experiences; food product development and optimization through sensory and physicochemical characterization; and sensory evaluation methods and advanced statistical analysis of sensory and consumer data

- **Recent/Ongoing Projects:**
  - ✓ Dr. Torrico's recent research includes optimizing fermentation conditions to improve the sensory and physicochemical properties of plant-based yogurts, particularly soy- and almond-based alternatives, and investigating fermentation effects on kombucha quality. Additional projects examine sodium reduction in pretzel bites and its effects on texture and product quality, alongside biometric analysis to understand consumers' physiological and emotional responses to foods.

Asensio Lab

- **Key Research Areas:**
  - ✓ Sensory properties of food systems with high lipid or protein content
  - ✓ Methods for extending the freshness and safety of edible oils and fats while minimizing the impact on sensory properties and the need for synthetic preservatives

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ FSHN 302 Sensory Evaluation of Foods
  - ✓ FSHN 424 Biopsychology of Ingestive Behavior.
  - ✓ FSHN 580 Ethics in Research, IRB and IACUC.
  - ✓ FSHN 518 Chemistry of Food Lipids
  - ✓ FSHN 519 Flavor Chemistry
  - ✓ FSHN 502 Advanced Sensory Science

- **Student Opportunities:**
  - ✓ Undergraduate research assistantship
  - ✓ Graduate student research fellow

7. About the Sensory Facility

Pepino Lab and Torrico Lab include:

- **Testing Spaces:**
  - ✓ A total of 14 independent sensory booths
  - ✓ A metabolic sensory kitchen
  - ✓ Clinical research suite for metabolic studies
  - ✓ Two focus group/training sensory room

- **Special Equipment and Technologies:**
  - ✓ Convection oven, air fryer, fridge, freezers,
  - ✓ Sonicators
  - ✓ Analytical scales
  - ✓ Milli-Q water
  - ✓ iPads/computers with Compusense®
  - ✓ BOD POD (body composition)
  - ✓ Centrifuges
  - ✓ Head Space Gas Chromatography with automated sampler
  - ✓ Gas Chromatography-MS with automated sampler
  - ✓ YSI to measure glucose on site
  - ✓ Piccolo Express (metabolic tests)
  - ✓ HemoCue systems (point of care devices providing lab-quality hemoglobin and white blood cell results)
  - ✓ Phlebotomy service
  - ✓ A complete biometric analysis station
  - ✓ A fully-equipped kitchen for food preparation
  - ✓ Viscometers, water activity meters, moisture meters, and refractometer capabilities

8. Inside the Lab



University of Illinois Sensory Hub
(Laboratories, Molecular Kitchen, Focus Group Room)
Asensio-Pepino-Torrico Graduate Students

24. University of Massachusetts Amherst

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Nolden Sensory Team
- **Department/Division Name:** Department of Food Science at the University of Massachusetts Amherst
- **Location:** Amherst, Massachusetts, United States of America
- **Website:** https://alissanolden.wixsite.com/noldensensoryteam/research-team

2. Key Contact

- **Primary Contact Name:** Dr. Alissa Nolden
- **Title/Role:** Professor and Director
- **Email:** anolden@umass.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Nolden Sensory Team is an interdisciplinary collaborative team focused on sensory and consumer research, providing a comprehensive array of sensory testing and evaluation methodologies, as well as the ability to conduct clinical studies. Understanding the human sensory experience is at the forefront of the team's research, and many of the researchers bring interdisciplinary backgrounds including nutrition, genetics, biochemistry, molecular biology, chemistry, engineering, business, and economics.

- **Established Year:** 2019

- **Brief History:**
  The Nolden Lab was established with a mission to better understand how humans perceive and experience food, and how those sensory experiences shape food choice, nutrition, and health. Since its founding, the lab has grown, conducting innovative research targeted at answering fundamental questions about taste and smell mechanisms to applied work addressing contemporary challenges in health and the food system.
  Over time, the Nolden Lab has expanded its focus to include diverse areas such as taste and smell dysfunction, individual variability in flavor perception, sensory strategies to improve nutrition and health outcomes, and consumer acceptance of emerging food technologies including plant-based and precision-fermented foods. The lab combines human sensory testing, clinical and biological approaches, and consumer research to bridge basic science with real-world applications. Equally central to the lab's mission has been training the next generation of scientists

through mentorship, interdisciplinary collaboration, and partnerships with industry and federal research programs.

- **Vision and Mission:**
  To advance a future where understanding human sensory experiences transforms health, nutrition, and food innovation through research that creates meaningful impact for both society and industry, while fostering a scientific community that values diverse perspectives, backgrounds, and lived experiences. The Nolden Lab seeks to uncover how people perceive and experience food through research in taste, smell, sensory science, and consumer behavior. We are committed to conducting impactful, translational research that bridges fundamental discovery with real-world applications to improve human health, inform clinical practice, and drive innovation within the food industry. Through interdisciplinary collaboration, mentorship, and an inclusive environment that values diversity of people, ideas, and experiences, we aim to train the next generation of scientists and develop solutions that improve how people experience food and nutrition.

- **Test Capabilities:**
  The Nolden Lab employs a broad range of sensory and consumer research methodologies to investigate human responses to foods, beverages, and chemosensory stimuli. Capabilities include descriptive sensory analysis, consumer acceptance and preference testing, discrimination testing, temporal sensory methods, psychophysical assessment of taste and smell perception, and studies of individual variability in sensory function. The lab also integrates clinical and translational approaches to examine taste and smell dysfunction, food-related behaviors, and factors influencing dietary choices and nutrition. Through both in-person and remote research platforms, the lab supports industry and federally funded projects aimed at addressing fundamental scientific questions and generating meaningful applications for food innovation and health outcomes.

- **Fun Facts:**
  - ✓ When students in our lab graduate, they write their name on the side of one of the counters in the sensory facility.
  - ✓ Over the past seven years, we have had seven high school students, 28 undergraduate students, 15 M.S. students, one M.B.A. student, two Ph.D. students, two visiting scholars, and two postdoctoral researchers as members of our lab.

4. About the People

- **Director/Principal Investigator:** Dr. Alissa Nolden
- **Staff and Students:**
  - ✓ Dr. James Makame: Postdoctoral researcher
  - ✓ Dr. Lakmani Tharaka Galaniha: Postdoctoral researcher
  - ✓ Regis Ndagijimana: Lab Manager
  - ✓ Sasi Tansaraviput: Ph.D. candidate
  - ✓ Aviva Stein: M.S. student
  - ✓ Jingzhe Xiong: M.S. student
  - ✓ Tianyi Huang: M.S. student
  - ✓ Hitarthi More: M.S. student
  - ✓ Baoluo (Paul) Gao: M.S. student
  - ✓ Tyler Hallock: M.B.A. student
  - ✓ Kat Liang: M.S. student
  - ✓ Trevor Wei: M.S. student
  - ✓ Cye Cao: M.S. student
  - ✓ Bryan Yu: B.S./M.S. student
  - ✓ Olivia Linderman: B.S./M.S. student
  - ✓ Aminata Toure: B.S. student
  - ✓ Yurelin Castillo Feliz: B.S. student
  - ✓ Chelsea Sanjaya: B.S. student
  - ✓ Seth Cosin: B.S. student
  - ✓ Khue Nguyen: B.S. student
  - ✓ Libby Smith: High school student

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Individual differences in taste perception, genetics, and biological mechanisms
  - ✓ Consumer behavior and sensory perceptions of plant-based and sustainable foods
  - ✓ Assessment and implications of taste loss in clinical populations

- **Recent/Ongoing Projects:**
  - ✓ Genetic variation in sweet and metallic perception
  - ✓ Gene expression in taste buds and their association with dietary feeding study
  - ✓ Evaluating thickeners and their impact on taste, mouthfeel, and flavor, with impact on patients suffering from dysphagia
  - ✓ Consumer perception of cell-cultured salmon
  - ✓ Consumer preferences and understanding of fermented products (sauerkraut, kombucha, yogurt)

- ✓ Sensory evaluation of plant-based and hybrid yogurts

6. Educational and Training Activities

- **Student Opportunities:**
  - ✓ Undergraduate research opportunities
  - ✓ Master's program

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Sensory evaluation lab featuring 10 booths equipped with call buttons, a preparation space, and a clinical testing space. In addition to our traditional sensory laboratory, we have access to additional spaces on campus that offer access to a full kitchen, a separate flexible sensory testing area (ability to run about 20 – 30 participants at a time), and convenient and central locations on campus. We are equipped with iPads and use Compusense® Cloud sensory software. The lab can conduct central location tests and has access to a diverse population on campus and the surrounding Amherst community.

8. Inside the Lab



Nolden Sensory Team in Spring 2023



Nolden Sensory Team End of Year Lab Event in May 2025



Nolden Sensory Team Lab Event in May 2026



Testing booths (the facility includes 10 booths)



Preparation area

25. Utah State University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Utah State University Sensory Facility
- **Department/Division Name:** Department of Nutrition, Dietetics and Food Sciences (NDFS), S.J. & Jessie E. Quinney College of Agriculture & Natural Resources
- **Location:** Logan, Utah, United States of America
- **Website:** https://qanr.usu.edu/facilities/taste-panel-room (*Note: Website currently being updated*)

2. Key Contact

- **Primary Contact Name:** Dr. Joana Pico
- **Title/Role:** Director of the Utah State University Sensory Facility | Assistant Professor in Food Science, and Head of the Food Sensoromics and Metabolomics Laboratory
- **Email:** joana.picocarbajo@usu.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Sensory Evaluation Facility at Utah State University (USU), located in the C. Anthon Ernstrom Nutrition and Food Science Building (750 N. 1200 E., Logan, UT 84322), features eight individual testing booths within a 150 sq. ft. sensory evaluation room, connected via pass-through hatches to a fully equipped, 420 sq. ft. food preparation kitchen. Modernized testing stations incorporate controlled multi-spectrum lighting, ergonomic seating, and touchscreen tablets for computerized data cloud collection using RedJade®. The facility supports advanced sensory and consumer research by integrating traditional sensory methodologies – including discrimination testing, descriptive analysis, and consumer studies – with instrumental molecular characterization of food quality. This integrated approach investigates the chemical and physicochemical drivers of sensory perception and liking through ‘targeted’ and ‘untargeted’ analytical strategies, commonly associated with ‘sensoromics’ and ‘flavoromics,’ respectively. By combining human sensory responses with advanced instrumental measurements – particularly chromatography and mass spectrometry, ‘sensometrics’ (i.e., statistical analysis of sensory data), and AI-driven machine learning, the facility enables the identification of key molecular drivers of sensory attributes and consumer preferences for the development of predictive models of consumer liking. This multidisciplinary framework supports the development of

healthier foods, formulation optimization, shelf-life extension, and more efficient and sustainable food processing.

- **Established Year:** 1975

- **Brief History:**
  Building upon Utah State University's century-long legacy in food science, the Sensory Facility was formally established in 1975 within the newly constructed C. Anthon Ernstrom Nutition and Food Science Building to support agricultural and dairy research, academic instruction, and faculty-led investigations. Initially designed for manual sensory testing, the facility incorporated eight isolated evaluation booths, a dedicated preparation kitchen, and standardized environmental controls to ensure reliable sensory assessments. In 2000, under the direction of Dr. Silvana Martini, the facility transitioned toward computerized sensory testing and digital data acquisition. Beginning in mid-2024, under the directorship of Dr. Joana Pico, the facility underwent comprehensive physical, operational, and technological modernization, including upgraded sensory booths, RedJade® touchscreen systems, controlled lighting, and enhanced food preparation infrastructure. Between late 2024 and early 2026, its research capabilities expanded beyond traditional discrimination and consumer testing to encompass advanced descriptive methodologies, complex 'sensometrics' (e.g., multivariate statistics), and instrumental food quality analyses that connect with sensory data via 'sensoromics' and 'flavoromics.' All this allowed the facility to offer customized sensory services that expedite and improve food processing, shelf life, and product development, particularly with the integration of machine learning approaches for predictive modeling of consumer liking and preference.

- **Vision and Mission:**
  Vision: To serve as an internationally recognized, multidisciplinary center of excellence in traditional sensory and consumer sciences – including discrimination testing, descriptive analysis, and consumer testing – integrated with instrumental food quality characterization, sensoromics, flavoromics, and predictive modeling. By linking human perception with the chemical and physical drivers of sensory attributes and consumer liking, the facility aims to enable faster, more informed food formulation and product development than human sensory data alone, supporting high-quality, safe, sustainable, health-promoting, and indulgent foods.

  Mission: To advance academic and graduate research by training students deeply in the design, execution, and interpretation of discrimination, descriptive, and consumer tests, including panel leadership and appropriate statistical analyses

('sensometrics'), as well as providing industry partners with these comprehensive external traditional sensory services. For both internal and external users, we aim at complementing these established human sensory methodologies with instrumental flavor, taste, texture, and other food quality analyses; thus, by integrating human and instrumental data through 'sensoromics', 'flavoromics,' and predictive models of consumer liking and acceptance, we will help to identify the drivers of consumer food preference, optimize food formulations, and accelerate food product development. This integrated approach offers to our NDFS graduate students and private companies – from early-stage innovators to established food manufacturers – actionable insights beyond those available from human sensory testing alone, while pursuing healthy, safe, sustainable, and highly acceptable products.

- **Test Capabilities:**

  A. Sensory methodologies with human panelists (*including advanced sensometrics*):
  - ✓ Consumer and affective testing (e.g., 9-Point Hedonic Scale, Rank Preference, Just-About-Right scaling, and Check-All-That-Apply)
  - ✓ Descriptive analysis and sensory profiling (e.g., Quantitative Descriptive Analysis (QDA) and Sensory Spectrum® descriptive methodology)
  - ✓ Discrimination and difference testing (e.g., Tetrad tests, Triangle tests, Duo-Trio tests, and Paired Comparison testing)

  B. Instrumental characterization of food physicochemical properties (*bridging sensory attributes to objective physical and chemical markers*):
  - ✓ Appearance (e.g., color) measurement
  - ✓ Texture and rheology analysis
  - ✓ Flavoromics and volatile profiling (e.g., SPME-GC/MS)
  - ✓ Taste-related physicochemical attribute analysis (e.g., total content, and HPLC-DAD/RID/QQQ-MS profiling)
  - ✓ Lipid oxidation (i.e., rancidity) and flavor stability analysis (e.g., total content, and HPLC-DAD/RID/QQQ-MS profiling)

  C. Nutritional, enzymatic, and bioactivity profiling via HPLC-DAD/RID-QQQ-MS (*as parameters impacted by sensory-driven reformulation and processing*):
  - ✓ Nutrient and bioactive profiling
  - ✓ Enzymatic activity analysis
  - ✓ *In Vitro* digestion and bioaccessibility analysis

D. Sensoromics for integrated shelf-life and product formulation and/or optimization:

- ✓ Shelf-life and stability tracking
- ✓ Experimental design and data analytics via machine learning to predict liking

- **Fun Facts:**
  - ✓ At the 'USU Sensory Facility' and 'Food Sensoromics and Metabolomics Laboratory', world-class research goes hand-in-hand with a vibrant team culture! Beyond executing sensory studies and state-of-the-art chemical analyses, our team stays close through friendly billiard tournaments, giant dessert challenges, and interactive science field trips.
  - ✓ We work hard, support each other's growth, and make time to celebrate every success together – creating a collaborative, fun, and inclusive home for food science innovation.

4. About the People

- **Director/Principal Investigator:** Joana Pico, Ph.D. in Chemistry (with a flavor chemistry emphasis), Director of the Utah State University Sensory Facility | Assistant Professor in Food Science, and Head of the 'Food Sensoromics and Metabolomics Laboratory' | UC Davis Applied Sensory & Consumer Science Certificate, and Descriptive Panel Leader trained through the Spectrum Academy.

- **Staff and Students:**
  - ✓ Food Sensoromics and Metabolomics (FSML) Laboratory research team
  - ✓ Other graduate students from the NDFS Department at USU
  - ✓ Hourly externally hired assistants

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Novel functional foods
  - ✓ Healthier foods, including reduced-sugar, reduced-fat, and high-protein options
  - ✓ Sustainable food processing
  - ✓ Indulgent snacks
  - ✓ Meat and dairy products, and their plant-based alternatives

- **Recent/Ongoing Projects:**
  - ✓ Research activities heavily prioritize internal academic research projects and graduate student training.
  - ✓ Specific research topics align with the ongoing projects and research priorities of the facility's Principal Investigator (PI), Dr. Pico.

- ✓ Additionally, Dr. Pico provides scientific guidance and sensory evaluation expertise to other PIs in their sensory-related projects.

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ NDFS 5100/6100: Sensory Evaluation of Foods (*currently taught by Dr. Pico*).
  - ✓ NDFS 5500/6500: Food Analysis (*currently taught by Dr. Pico*).
  - ✓ NDFS 5920: Food Product Development (*previously taught by Dr. Pico*).
  - ✓ Specialized short courses in *Food Metabolomics and Sensoromics* are available upon request.
  - ✓ Sensory Science Seminars hosting industry talks and visiting scholars to connect sensory science with metabolomics, flavor chemistry, and predictive machine learning.

- **Student Opportunities:**
  - ✓ Hands-on training for undergraduate and graduate students in running commercial and research sensory software (RedJade®)
  - ✓ Applying appropriate statistical tools ('sensometric')
  - ✓ Designing IRB protocols
  - ✓ Serving as panel leaders
  - ✓ Executing sample preparation
  - ✓ Performing instrumental quality analysis (e.g., flavor by GC-MS and LC-MS, color, rheology, and texture)
  - ✓ Building machine learning models of consumer liking

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ Individual testing booths and sensory software:
    Eight individual sensory evaluation booths equipped with wall-mounted touchscreen tablets, pull-out keyboards, and RedJade® software for computerized sensory testing, automated experimental design, randomized sample presentation, and cloud-based data collection. Controlled multi-spectrum lighting, carbon-filtered ventilation, and ergonomic seating minimize environmental and sensory biases. The sensory evaluation room is completely separated from the food preparation kitchen, with only the connection between the sensory personnel and the panelists via pass-through hatches to a fully equipped kitchen, minimizing bias as much as possible.

    A separate space equipped with a projector and whiteboard supports descriptive panel training and focus group sessions. Advanced data analysis and predictive modeling are conducted using XLSTAT, RStudio, and Python.

- ✓ Pass-through hatches:
  Individual pass-through hatches connect the preparation kitchen directly to each sensory booth, ensuring panelist isolation and sample blinding. Standardized serving ware, randomized three-digit sample codes, and controlled lighting minimize presentation bias and support reproducible sensory evaluations.

- ✓ Dedicated preparation kitchen:
  A fully equipped, food-safe kitchen supports standardized sensory sample preparation, food formulation, and culinary prototyping. Equipment includes commercial ovens, cooktops, deep fryers, sous vide systems, canning systems, refrigeration and low-temperature freezers, analytical balances, homogenizers to prepare beverages and 10L jars to serve them, and vacuum sealers. Additional specialized equipment for food processing, like spray dryer, freeze-dryer, dehydrators, baking and fermentation platforms, dairy – including ice cream and cheese – and meat pilot plants, and the complete platform to produce chocolate and diverse confectionery are also available in the same building. For shelf-life studies, an environmentally controlled chamber for accelerated shelf-life studies alongside instruments for measuring pH, water activity, a wide range of cooking temperature sensors, food safety kits for kitchen surfaces, and refractometer for soluble solids are also available in the sensory facility for fast tracking of food quality before being served.

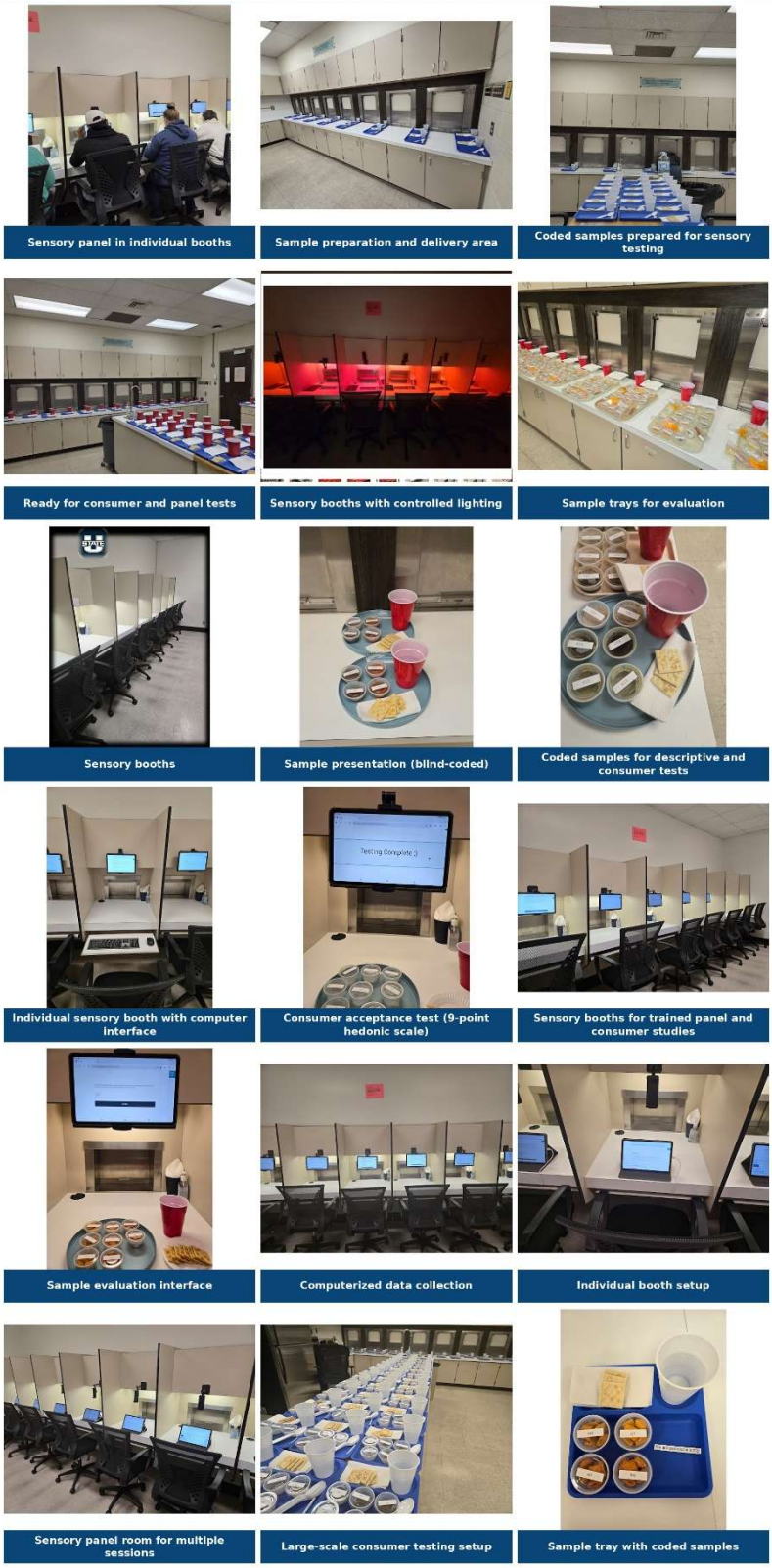
- **Advanced instrumental suite:**
  Located at Dr. Pico's research group space, it houses, among others, the following pieces of analytical equipment useful for the instrumental determination of organoleptic properties: Agilent SPME-GC/MS for volatile aroma characterization (flavoromics), Agilent HPLC-DAD/RID/QQQ-MS for non-volatiles (taste compounds, fats affecting texture), rheology and texture analyzer for viscoelastic and structural properties, UV-Vis spectrophotometry for colorimetric reactions determining food quality (e.g., total sugars), particle size analyzer, and colorimeters for surface color.

8. Inside the Lab



Utah State University Sensory Facility Team

From left to right: Zak O., Manuel G., Dr. Josh L., Micaela G., Dr. Joana P., Ramon P., Saroj P., Kenya M., Deborah L., and Russ R.

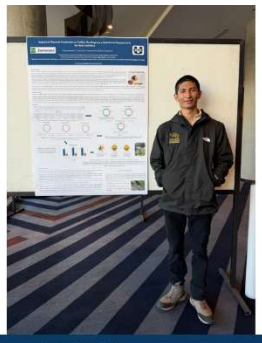


Comprehensive overview of the state-of-the-art USU Sensory Facility and several testing workflows



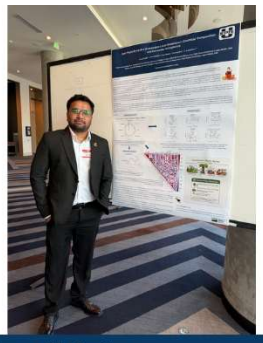
Chemistry Department Retreat

Saroj Paudel (MSc student), graduate research assistants Zak Obray and Russ Reiss, and Dr. Joana Pico at the Chemistry Department Retreat.



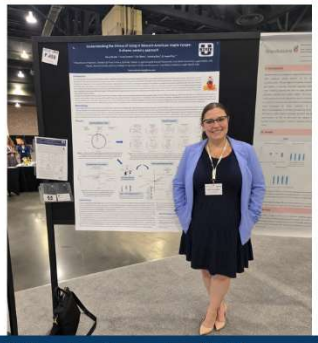
IFT Bonneville Section

Ramon Astul Pineda-Rodas presenting research at the IFT Bonneville Section. A visiting scholar from Zamorano University, he is expected to begin graduate studies at USU under Dr. Pico in Spring 2027.



IFT Bonneville Section

Saroj Paudel presenting research at the IFT Bonneville Section. He plans to defend his MSc thesis in Spring 2027 and begin PhD studies under Dr. Pico in Summer 2027.



16th Pangborn Symposium | 2025

Dr. Joana Pico presenting "Consumer acceptance of American maple syrups and its relationship with their physicochemical properties" at the 16th Pangborn Sensory Science Symposium, Philadelphia, August 17–21, 2025.



IFT FIRST | Chicago, July 2026

Saroj Paudel at IFT FIRST, Chicago, July 2026. MSc thesis: "Sustainable Valorization of Diverse Maple Species: Nutritional Profiles, Sensory Attributes, and Chemical Fingerprinting." Supported by USDA AMS Acer Access and Development Program (24ACERUT1041).



Utah Capitol | Research Poster

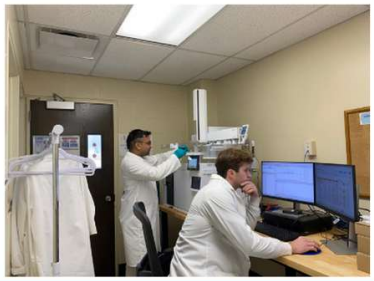
Micaela Garcia presenting her research on sensory and nutritional perceptions of suboptimal fresh produce among Utah college students at the Utah Capitol.



Graduation | Micaela Garcia

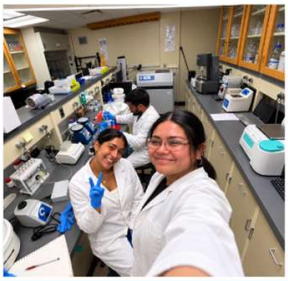
Dr. Joana Pico with honors student Micaela Garcia at graduation. Micaela served as a teaching assistant for Sensory Evaluation of Foods and researched perceptions of suboptimal fresh produce for her capstone.

Some sensory-related scholarly activities attended by Dr. Pico's team



SPME-GC/MS Aroma Analysis

Saroj Paudel and Russ Reiss working on aroma analyses via SPME-GC/MS.



FSML Research Team in Action

Deborah Lopez (undergraduate research assistant), Saroj Paudel (MSc student, background), and Kenya Merida (undergraduate research assistant). All three participated in USU Sensory Facility activities. Deborah and Kenya also served as teaching assistants for Sensory Evaluation of Foods.



Preparing Samples for Aroma Analysis

Preparation of volatile compounds for aroma analyses in maple syrup and fruits.



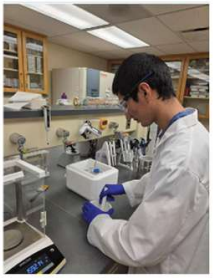
Measuring Fruit Sweetness (°Brix)

Micaela Garcia, undergraduate research assistant and Dr. Pico's honors student, measuring fruit °Brix as a proxy for sweetness.



Machine Learning & Predictive Modeling

Dr. Josh Lomax, visiting scholar in Dr. Pico's laboratory, explaining RStudio machine-learning pipelines for predictive modeling of consumer liking.



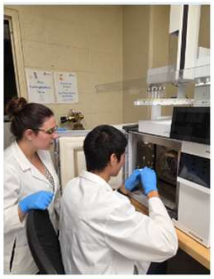
Preparing Samples for SPME-GC/MS

Visiting scholar Ramon Astul Pineda-Rodas preparing samples for aroma analysis via SPME-GC/MS.



Sensory Panelist Recruitment

Former graduate assistant Livia Cardoso greeting sensory study panelists and explaining the IRB information.



GC Column Replacement & Training

Dr. Joana Pico showing Ramon how to replace the GC column for instrumental aroma analysis.

Laboratory activities from Dr. Pico's research team on sensoromics studies





Instrumental analytical platforms at Dr. Joana Pico's Food Sensoromics and Metabolomics Laboratory (FSML)

From left to right: HPLC-DAD/RID/QQQ-MS for nonvolatile food constituents and taste-active compounds and SPME-GC/MS for volatile aroma profiling and flavor characterization

26. Virginia Polytechnic Institute and State University (Virginia Tech)

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Sensory Evaluation Laboratory Service Center
- **Department/Division Name:** Department of Food Science and Technology
- **Location:** Blacksburg, Virginia, United States of America
- **Website:** https://www.fst.vt.edu/partnerships-and-learning/sensory-evaluation-lab.html

2. Key Contact

- **Primary Contact Name:** Jeri Smith
- **Title/Role:** Sensory Evaluation Laboratory Manager
- **Email:** jkost07@vt.edu

3. About Program and Capabilities

- **Brief Overview:**
  The Virginia Tech Sensory Evaluation Laboratory (VT SEL) is a full-service sensory science facility supporting research, product development, and quality optimization. Operating as a service center, VT SEL partners with academia, industry, and government to provide rigorous, data-driven sensory and consumer insights. The lab integrates scientific methodology with practical applications to guide decision-making from early-stage innovation through commercialization.

- **Established Year:** 2013

- **Brief History:**
  VT SEL was developed to expand Virginia Tech's capabilities in sensory and consumer science and to serve as a centralized resource for faculty, students, and external partners. The facility builds on longstanding strengths in food science and human sensory research, supporting both academic research and industry collaboration.

- **Vision and Mission:**
  Vision: To be a leading academic sensory science partner advancing research, innovation, and education

Mission: To deliver high-quality sensory and consumer research services, train the next generation of sensory professionals, and support evidence-based decision-making in product development and quality

- **Test Capabilities:**
  - ✓ Discrimination testing
  - ✓ Consumer acceptance and preference testing
  - ✓ Descriptive sensory analysis (trained panels)
  - ✓ Discrimination testing (triangle, duo-trio, etc.)
  - ✓ Rapid sensory methods (e.g., CATA, projective mapping)
  - ✓ Shelf-life and product optimization studies
  - ✓ Questionnaire design and data analysis

- **Fun Facts:**
  - ✓ The lab engages a diverse local consumer base from the Blacksburg community.
  - ✓ VT SEL supports projects across multiple product categories, from food and beverages to emerging consumer goods.
  - ✓ The facility bridges academic research and real-world industry applications.

4. About the People

- **Director/Principal Investigator:** Jacob Lahne, Ph.D., Associate Professor and Graduate Program Director, Department of Food Science and Technology
- **Faculty and Staff:**
  - ✓ Dr. Renata Carneiro, Assistant Professor
  - ✓ Dr. Yun Yin, Associate Professor
  - ✓ Dr. Amanda Stewart, Associate Professor
  - ✓ Jeri Smith, M.S., Sensory Evaluation Lab Manager
- **Students:**
  - ✓ Julia Adornetto: Ph.D. student
  - ✓ Isabel Gutierrez: Ph.D. student
  - ✓ Taylor Peele: Ph.D. student
  - ✓ Madhvi Singh: Ph.D. student
  - ✓ Olivia Vowell: Ph.D. student
  - ✓ Luke Leach: Ph.D. student
  - ✓ Valeria Araujo Cedeno: M.S. student
  - ✓ Jackson Schatz: Undergraduate student
  - ✓ Lauren Kulp: Undergraduate student
  - ✓ Mary Claire Mea: Undergraduate student
  - ✓ Maiev McClain: Undergraduate student

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Sensory characterization and consumer perception
  - ✓ Product optimization and reformulation
  - ✓ Flavor, texture, and appearance drivers of liking
  - ✓ Consumer segmentation and preference mapping
  - ✓ Method development in sensory science

- **Recent/Ongoing Projects:**
  - ✓ Investigating green shell beans to enhance economic sustainability and competitiveness of small and medium-sized farms in the Mid-Atlantic region
  - ✓ Enhanced mid-Atlantic system sustainability through development of high-protein and stress-tolerant faba bean for winter production
  - ✓ Effects of peanut skin phenolics on production and muscle quality of aqua-cultured rainbow trout.
  - ✓ Assessment of quality diversity of bean-to-bar chocolates crafted from wild cocoa (Theobroma cacao L.) from the Brazilian Amazon rainforest.
  - ✓ Determining and meeting the sensory-evaluation needs of VA wine- and cider-makers
  - ✓ Evaluating consumer-centric sensory-marketing language for hard apple cider: A Bayesian contingent valuation approach
  - ✓ Exploring facilitators and barriers of cooking and food preparation among urban-suburban and rural-remote residents: A mixed-methods concept mapping study
  - ✓ The use of AI-assisted methodologies in collecting and analyzing text-based consumer data: A case study exploring facilitators and barriers of home meal preparation on Quora
  - ✓ Development and validation of the Food Agency Scale: A measurement tool to predict cooking behavior and processed food consumption
  - ✓ The effect of information framing on consumer perception of cell-cultured meat
  - ✓ A comparison of free-linking and projective-mapping tasks on biltong, a seasoned meat product
  - ✓ Analyzing larger sample sets with rapid methods: Incomplete-block designs with free-sorting and free-linking tasks
  - ✓ Development of a hard cider flavor wheel using free word sorting and multivariate statistical techniques
  - ✓ Characterization of Virginia-grown apple varieties for cider production
  - ✓ Sensory characterization of apple juice used for cider
  - ✓ Postharvest storage of southern apples for cider production
  - ✓ Harvest maturity of southern apples for cider production

- ✓ Interdisciplinary approach to flavor chemistry of cherry tomatoes grown in different environments
- ✓ Intercropping strawberry with garlic: Yield, pests, and sensory assessments
- ✓ Consumer acceptability of Virginia blackberries
- ✓ Peanut paste discrimination testing
- ✓ Consumer acceptance of lamb products
- ✓ Consumer acceptance of BBQ sauces
- ✓ Consumer acceptance of chickpea pasta

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ Sensory Evaluation of Foods
  - ✓ Flavor Chemistry
  - ✓ Wines and Vines

- **Student Opportunities:**
  - ✓ Graduate research projects in sensory and consumer science
  - ✓ Undergraduate internships and hourly positions in the lab
  - ✓ Hands-on experience with study design, data collection, and analysis
  - ✓ Opportunities to work with industry-sponsored projects

7. About the Sensory Facility

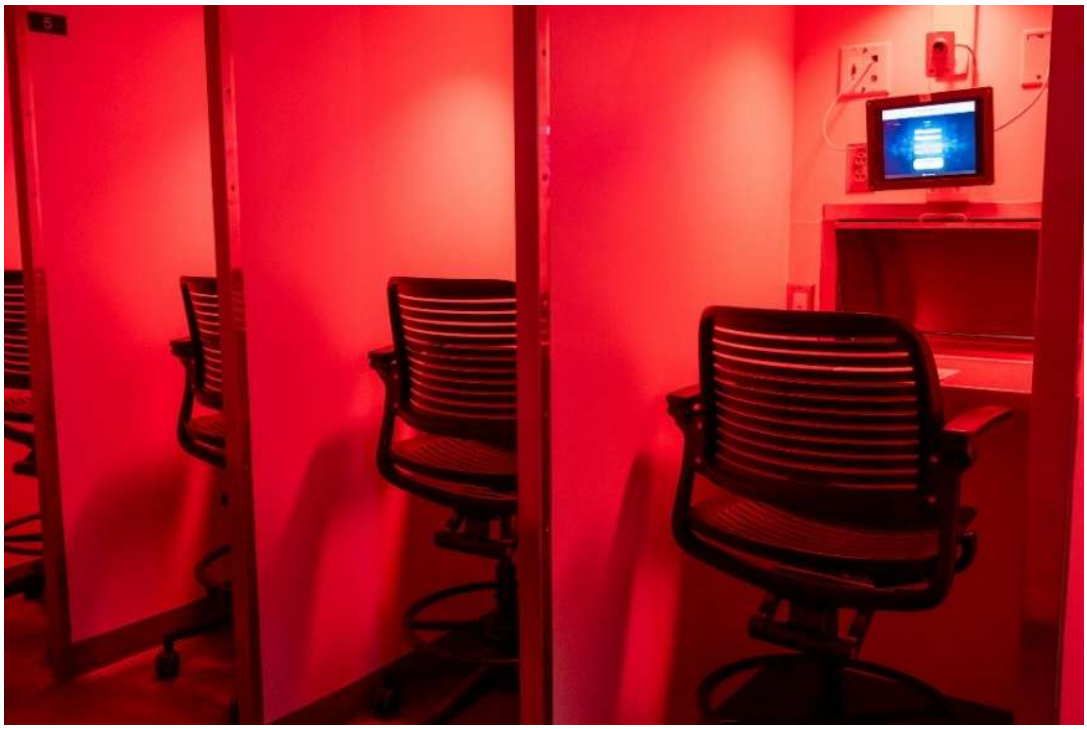
- **Testing Spaces:**
  - ✓ Individual sensory booths: The lab includes 10 isolated booths equipped with LED lighting, ventilation, and computerized data collection terminals. These booths ensure unbiased, distraction-free evaluation of food and beverage samples.
  - ✓ Test kitchen: A fully equipped preparation area allows for precise sample handling and temperature control, ensuring consistency and safety in every study.
  - ✓ Focus group room: A dedicated space for qualitative research, including moderated discussions, product feedback sessions, and consumer panels
  - ✓ Data collection and analysis tools: The lab uses industry-standard software (Compusense®) for sensory data collection and statistical analysis, supporting both descriptive and consumer testing methodologies.

8. Inside the Lab



Sensory Evaluation Laboratory Service Center Team

From left to right: Taylor Peele (Ph.D. student), Elissa Hall (Recent M.S. Graduate), Mary Claire Mea (undergraduate FST student), Julia Adornetto (Ph.D. student), Dr. Renata Carneiro (Associate Professor), Han Nguyen (prior FST undergraduate student), Madhvi Singh (Ph.D. student), and Jackson Schatz (undergraduate FST student)



Sensory booths



Focus group/Training room



Preparation kitchen

27. Washington State University

1. Institution/Organization Information

- **Laboratory/Center/Team Name:** Washington State University Sensory Science Center
- **Department/Division Name:** School of Food Science
- **Location:** Pullman, Washington, United States of America
- **Website:** https://sfs.wsu.edu/sensory/
- **Social Media Handles:**
  - ✓ LinkedIn: https://www.linkedin.com/company/wsu-sensory-science-center/
  - ✓ Instagram: https://www.instagram.com/wsu_sensorysciencecenter/
  - ✓ Facebook: https://www.facebook.com/wsusensorysciencecenter/

2. Key Contact

- **Primary Contact Name:** Dr. Carolyn Ross
- **Title/Role:** Director and Professor
- **Email:** cfross@wsu.edu

3. About Program and Capabilities

- **Brief Overview:**
  The WSU Sensory Science Center, housed within the School of Food Science at Washington State University, is a leading resource for sensory and consumer science research, analytical testing, education, and industry collaboration. The WSU Sensory Science Center partners with organizations ranging from startups to global companies in the food, beverage, pet food, cosmetics, and pharmaceutical sectors, helping them understand consumer perceptions, optimize product quality, characterize sensory and analytical attributes, and make data-driven product development decisions. Through sensory and consumer research, instrumental and analytical testing, and interdisciplinary collaborations spanning fields such as horticulture, animal science, psychology, economics, and marketing, the WSU Sensory Science Center advances both scientific knowledge and practical industry solutions. In addition, it serves as a training environment for undergraduate and graduate students, preparing the next generation of sensory, analytical, and food scientists.

- **Established Year:** 2005

- **Brief History:**
  What began in 2005 with a consumer study on Washington State red wines has evolved into a widely recognized sensory science and food analysis program. Over the past two decades, the WSU Sensory Science Center has partnered with more than 200 companies, helping organizations of all sizes better understand their products through consumer research, sensory evaluation, and instrumental analysis of flavor, aroma, taste, and texture. The WSU Sensory Science Center has also played an important role in training future food, sensory, and analytical scientists while fostering interdisciplinary research, innovation, and industry collaboration.

- **Vision and Mission:**
  Vision: To advance sensory science, consumer research, and instrumental food analysis through excellence in research, education, and service, generating knowledge, developing future scientific leaders, and delivering innovative solutions that improve product quality, consumer experiences, and health outcomes

  Mission: To contribute to the broader body of knowledge in sensory science, consumer science, and food analysis through excellence in research, teaching, and service by:
  - ✓ Conducting high-quality sensory, consumer, and instrumental research to advance understanding of product quality, consumer perception, and food characteristics
  - ✓ Educating and mentoring the next generation of food, sensory, and analytical scientists
  - ✓ Providing sensory evaluation, consumer research, and instrumental analysis expertise to industry partners to support product development, quality improvement, and innovation
  - ✓ Applying state-of-the-art analytical technologies to characterize the physical, chemical, textural, flavor, aroma, and taste properties of foods and consumer products
  - ✓ Supporting interdisciplinary research that enhances food quality, consumer experiences, product innovation, and health-related outcomes
  - ✓ Translating scientific knowledge into practical solutions that benefit industry, consumers, and society

- **Test Capabilities:**
  The WSU Sensory Science Center offers a comprehensive suite of analytical, sensory, and consumer science services.

  A. Sensory services:
  We offer testing at our facility (central location tests) and also testing through home-use tests. We have also gone off-site to conduct sensory testing at local grocery stores, regional shopping centers and regional senior centers (for testing with adults over 65). Specific tests include:
  - ✓ Consumer acceptance and liking studies
  - ✓ Difference and similarity testing (triangle, duo-trio, tetrad, difference-from-control)
  - ✓ Attribute diagnostic testing (Just-About-Right analysis)
  - ✓ Trained descriptive panel profiling
  - ✓ Threshold determination studies
  - ✓ Focus groups
  - ✓ Online consumer surveys

  B. Analytical services:
  - ✓ Electronic tongue analysis to provide taste fingerprinting and product discrimination: WSU is one of the few academic institutions in the U.S. equipped with this technology.
  - ✓ Physical food property testing using a Texture Analyzer
  - ✓ Volatile aroma and flavor compound analysis using Gas Chromatography-Olfactometry-Mass Spectrometry (GC-O-MS)
  - ✓ Statistical analyses and interpretation of data: We provide comprehensive statistical analysis and expert interpretation to support product development, quality improvement, and research decision-making.

- **Fun Facts:**
  - ✓ The WSU Sensory Science Center is one of the few academic institutions in the United States equipped with an electronic tongue, an instrument that mimics aspects of human taste perception and can generate a unique "taste fingerprint" for foods and beverages.
  - ✓ Participants in WSU sensory studies are rewarded with gift cards for Ferdinand's Ice Cream Shoppe.

4. About the People

- **Director/Principal Investigator:** Dr. Carolyn Ross
- **Staff and Students:**
  - ✓ Dawna Engler: Lab Manager
  - ✓ Rachel Potter: Ph.D. candidate
  - ✓ Osasere (Osa) Igbinoba: Ph.D. student
  - ✓ Erin Macedo: M.S. student
  - ✓ Johanna Gebbia: M.S. student

5. Current Research and Projects

- **Key Research Areas:**
  - ✓ Inclusive food design for various populations, including children with intellectual and developmental delays and older adults

- **Recent/Ongoing Projects:**
  - ✓ Practitioners, caregivers, and children's perspectives on food texture
  - ✓ The Influence of Milk Jug Packaging on Milk Quality
  - ✓ Changing the Cheese Narrative: How Protein and Lactose Education Shapes Consumer Choice
  - ✓ Easy Eating: Exploring older adults' perception of Spiciness and Texture

6. Educational and Training Activities

- **Courses and Training Offered:**
  - ✓ FS 350 Instrumental and Sensory Analysis of Food
  - ✓ FS 450/550 Advanced Instrumental and Sensory Analysis of Food

- **Student Opportunities:**
  - ✓ Graduate and undergraduate student research projects

7. About the Sensory Facility

- **Testing Spaces:**
  - ✓ We have eight sensory testing booths, equipped with tablets and Compusense® sensory software for data collection and analysis.
  - ✓ We have an additional ten tablets for training, research activities, and off-site sensory testing.
  - ✓ Our facilities and expertise enable us to work with a diverse range of participant populations, including children, adults, and companion animals, providing flexibility for a wide variety of sensory research applications.

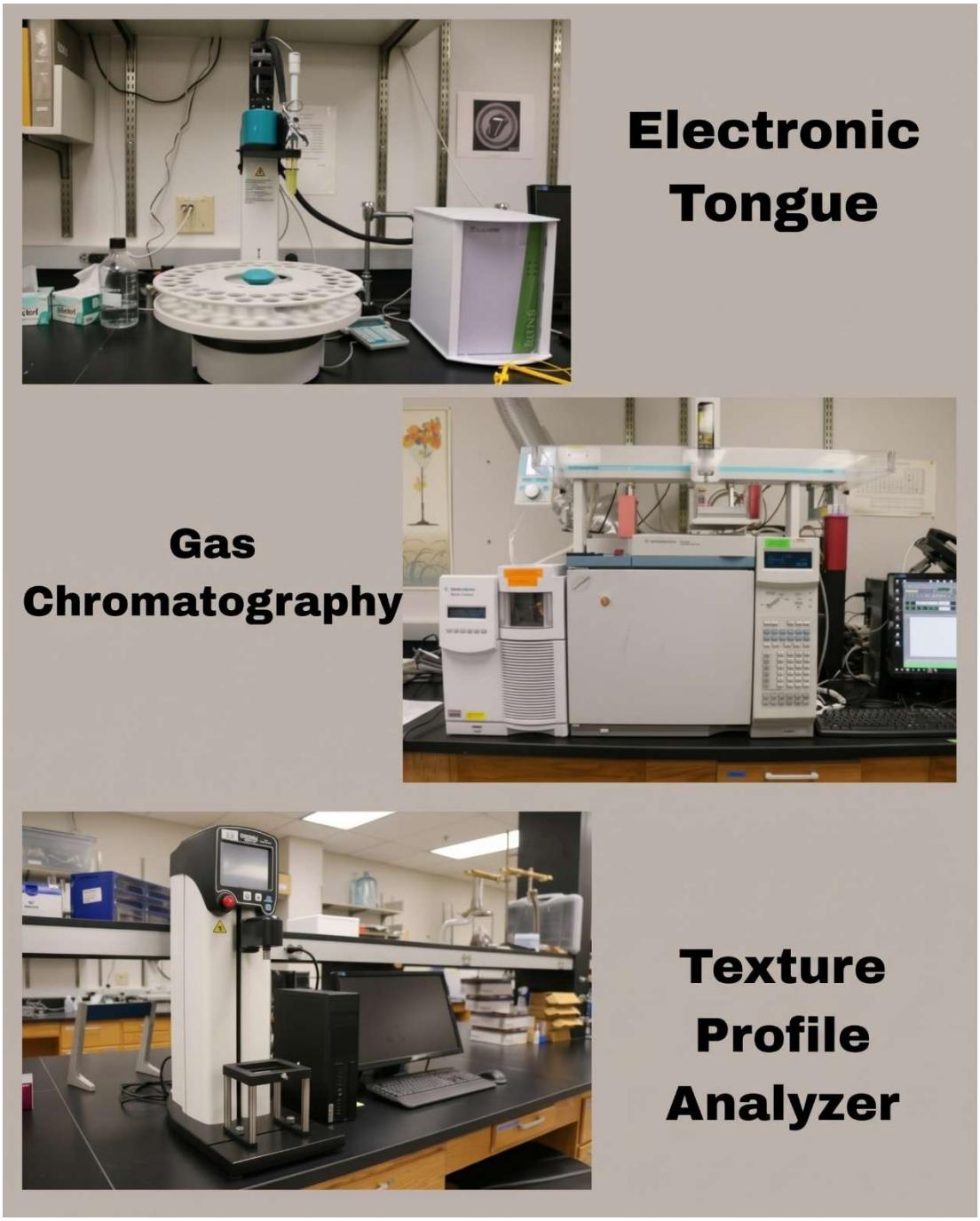
8. Inside the Lab



Washington State University Sensory Science Center Team



Washington State University Sensory Science Center Team in Action



Analytical facilities



Sensory facilities