

## Undergraduate Research Opportunities

Updated Fall 2020

*Students are encouraged to include the following when inquiring about undergraduate research opportunities: 1) when they are interested in doing the research (i.e. – current semester, summer, etc.), 2) undergraduate major, 3) what year in school they are 4) previous experiences, 5) availability, and 6) contact information.*

*Additionally, faculty members receive a large volume of e-mails. Students are encouraged to follow-up on first messages and inquire with faculty members again if they do not receive a reply. They may simply have not had an opportunity to respond to the initial message.*

*This is not an exhaustive list of opportunities. If you find a research area you are interested in working, do not hesitate to contact the faculty.*

**Hong Chen** (Molecular Nutrition, Nutrient-gene Interaction).

The Chen lab focuses on understanding how foods/nutrients are sensed by cellular metabolic, signaling, and epigenetic pathways and how these responses shape our body during early development, disease development, and aging. Specific training includes analysis of gene expression, histological imaging and analysis, and big data analysis of various tissues and cells in animal models, human specimens, and cell cultures. ***Currently accepting undergraduate students.***

**John Erdman** (Biochemical/Molecular Nutrition, Clinical Nutrition)

One focus of my laboratory has been to evaluate the effects of tomato and lycopene on the development and progression of prostate cancer using animal models. Another is evaluating the impact of lutein on brain and eye function. ***Will consider accepting undergraduate students.***

**Zeynep Madak-Erdogan** (Clinical Nutrition)

Dr. Madak Erdogan studies how obesity drives chronic diseases like cancer and metabolic syndrome. We are using analysis of big data sets from ChIP-Seq, RNA-Seq, metabolomics experiments and various public databases, mouse models, and basic molecular and cell biology techniques. Interview and complete biosafety training are required. ***Accepting 1 student who can contribute 10 hours/week that can commit for at least 2 years.***

**Manabu Nakamura** (Clinical Nutrition)

The main focus of Dr. Nakamura's current research is to develop a cost-effective program for dietary treatment of obesity. Several undergraduate students have been assisting an ongoing project, Individualized Diet Improvement Program (IDIP) for sustainable weight loss. A few new students will be considered for assisting the work such as processing diet and weight records, and preparation of session materials and feedback advise to participants. Typically, a commitment of 3-6 hours per week for 2 semesters or longer is expected. ***Will consider accepting undergraduate students.***

**M. Yanina Pepino** (Ingestive Behavior)

Research in Dr. Pepino laboratory focuses on the analysis of individual differences in human taste perception and preferences, with an emphasis on sensory control of food and alcohol consumption. Dr Pepino's overall goal is to establish a research program that integrates analyses of taste perception with nutrient metabolism and the impact of dietary choices on health and disease. By using a combination of psychometrically sound validated sensory assessment methods, and metabolic research methods, we are currently studying: a) the effects of bariatric surgery-induced weight loss on flavor perception, eating behavior and alcohol drinking; b) the effects of non-nutritive sweeteners on taste preferences and glucose homeostasis;c) fat taste perception;and d) taste dysfunction in cancer survivors. **We are considering accepting students who will be committed to work for at least 8 hrs. per week, for at least two years. Interview and complete biosafety training are required.**

**Matthew Stasiewicz** (Food Microbiology, Food Safety)

Dr. Stasiewicz's laboratory studies applied problems in food safety microbiology. In particular, ways to track and control bacterial pathogens that persist in food associated environments such as in-field produce operations, and ways to removing fungal toxins from cereals and other seeds. On these core topics, we are looking for undergraduates who would be willing to pair with graduate students to assist with project design, data collection, and analysis. For students interested in data analysis and statistics, there may be different projects available working with public data related to food recalls, outbreaks, and social media in food safety. See our website (<https://mjs.fshn.illinois.edu/>) for more information. **Typical projects are 3-6 h / week, with interest for >1 semester, and openings start in January 2021.**

**Yi-Cheng Wang** (Food Safety and Engineering)

Research in Dr. Wang's laboratory focuses on developing engineering approaches to improving food quality and safety, mostly involving nanotechnology, bio-sensing, and smart packaging. We will provide students with training opportunities in engineering, chemistry, materials science, and microbiology in the course of participating in specific projects relevant to the above topics. Interested students should send their resumes when inquiring. Interview and complete biosafety training are required. **We are currently accepting students who will be committed to work for at least 8 hours per week, for at least one semester.**

**Related resources:**

**Office of Undergraduate Research**  
**Safety Guidelines and OUR Operational Updates**

**FSHN 195 Introduction to Undergraduate Research**

Learn about research opportunities available to undergraduate students in the FSHN department, and find a laboratory that fits a student's interests and education goals. Guest faculty members present research opportunities in their laboratory and then give a laboratory tour for students to learn more about the research activities there. Approved for S/U grading only. Offered in the spring semester.

**<https://courses.illinois.edu/schedule/terms/FSHN/195>**

**ACES Undergraduate Research Scholarship Program**

A \$500 scholarship plus up to \$1,000 for research expenses. Applications will be reviewed on a rolling basis

**<http://academics.aces.illinois.edu/honors/undergraduate-research>**