

List of FSHN Faculty for Undergraduate Research Updated Fall 2009

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.

Dawn Bohn

Dr. Bohn's main area of research focuses on the impact of relative humidity on water and carbohydrate mobility, particularly in amorphous carbohydrates. Dr. Bohn does not have a lab, but she can accept highly motivated students if an appropriate partnership with another faculty member can be established. Dr. Bohn also conducts research on the benefits of novel instructional tools in the classroom. Currently accepting undergraduates for 1-3 hours of credit.

Keith Cadwallader (Flavor Chemistry)

Application of sensory and instrumental methods for the analysis and characterization of food flavors. Students will learn how to apply gas chromatography-mass spectrometry, gas chromatography-olfactometry and sensory evaluation methods for the applied and fundamental study of food flavor chemistry. ***Currently considering undergraduate students for research-Spring and Summer 2009 and for FSHN295 or FSHN 396 Credit (2 - 4 hours).***

Elvira De Mejia (Food Chemistry, Food Analysis, Nutritional Toxicology).

Research in Dr. De Mejia's laboratory includes novel flavonoids, from herbal teas, and bioactive peptides that contribute to human health. A focus in her laboratory over the past 4 years has been the study of the mechanism of action of proteins and peptides in soybean genotypes and soy products with biological potential against transformed human cells. While other legumes also contain bioactive peptides and proteins, the presence of anticancer peptides, such as lunasin, in soy-products makes soybean unique. Fellows in her laboratory would obtain multidisciplinary training in biochemical toxicology, enzymology, protein biochemistry and food chemistry. Special focus will be given to the study of the mechanisms of action of bioactive food components mainly proteins and flavonoids, and their interaction, to address wellness. ***Currently accepting undergraduate students for research-Spring, Summer and Fall 2010.***

Nicki Engeseth (Food Chemistry)

One research focus in our laboratory is in the area of natural antioxidant chemistry and how these antioxidants work to stabilize food systems (enhancing food quality) and to protect against oxidation in humans (enhancing human health). We have recently begun the research of the impact of processing on highly nutritious papaya fruit in terms of nutritional value, antioxidant content and flavor. Also related are studies on honey and raisins and the chemistry of changes in chocolate over storage (with focus on texture, flavor and antioxidant components). Another area of interest is the impact of environmental stress on oilseed quality. We are studying the impact of elevated carbon dioxide and ozone on soybean quality, including the impact on bioactive components as well as the impact on

oxidative stability. These two areas of emphasis overlap in many ways, particularly with antioxidant chemistry and also in our studies of oilseed metabolic pathways.

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

The focus of my laboratory has been to evaluate the effects of tomato bioactives on the development of prostate cancer using cell culture and animal models. We are also utilizing tomato cell suspension culture to biosynthesize radiolabeled bioactives for research. *Will consider accepting undergraduate students for research.*

Timothy Garrow (Biochemical/Molecular Nutrition, Clinical Nutrition).

Dr.Garrow's lab provides training in microbiology, biochemistry and molecular biology as tools to study the enzymology, physiology and molecular genetics of sulfur amino acid and one carbon metabolism. These areas of research have broad implications for human health and disease, including causes and treatments for vascular diseases and cancer. *Will interview students who show an interest in this area of research.*

Michael Miller (Food Microbiology, Food Safety, Gastrointestinal Microbiology)

Research in Dr. Miller's laboratory investigates the functional genomics of lactic acid bacteria (LAB). In particular, we are interested in characterizing LAB function in numerous applicants including food, gastrointestinal tract and industrial fermentations. For more information, visit my web site at: <http://www.nutrsci.uiuc.edu/faculty/profile.cfm?id=106>. *Currently accepting undergraduate students for research.*

Manabu Nakamura (Biochemical/Molecular Nutrition, Nutrition Education)

Our research group provides opportunities to experience nutrition research either in biochemical/molecular laboratory, or in an outreach nutrition education project. Students of all levels will be considered. For more information of our group, visit our lab web site, <https://netfiles.uiuc.edu/mtnakamu/www/Opportunities.htm>

Kelly Tappenden

The long-range goal of our research is to enhance the lives of individuals with intestinal dysfunction. Efforts focus on understanding the regulation of small intestinal function by various nutrients and intestinal-specific peptides. Highly motivated, talented undergraduate students will be considered to join our research team. The undergraduate researcher will participate in ongoing research testing hypotheses addressing fundamental issues in gastrointestinal physiology. We will provide the opportunity for training in molecular, histological and biochemical techniques as the student engages in ongoing research. An interview is required for consideration.

Other opportunities

ACES Undergraduate Research Scholarship Program

A \$400 scholarship plus up to \$1,000 for research expenses. Applications due in November and April
http://students.aces.uiuc.edu/research_programs

Note: Students may also subscribe to an e-mail alert service regarding paid positions at
<https://osfaweb1.ad.uiuc.edu/vjb/login.aspx>