





### Faculty Member Contact Information

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<b>Contact Info</b>	
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<b>Department</b>	Environmental Sciences

### 1 Funded URCA Assistant

	This position is <b>ONLY</b> open to students who have declared a major in this discipline.	<b>M</b>
	This project deals with social justice issues.	
<b>X</b>	This project deals with sustainability (green) issues.	
<b>X</b>	This project deals with human health and wellness issues.	
	This project deals with community outreach.	
<b>X</b>	This mentor's project is interdisciplinary in nature.	<b>I</b>

**Are you willing to work with students from outside of your discipline? If yes, which other disciplines?**

- Yes, my project is truly interdisciplinary, please also mark me as interested in taking students from these areas: CHEM, BIOL

**How many hours per week will your student(s) be required to work in this position?**  
(Minimum is 6 hours per week; typical is 9)

- 9

**Will it be possible for your student(s) to earn course credit?**

- Yes, 1-2 credit hours of ENSC 499-021

**Location of research/creative activities:**

- Science West & Off campus

**Brief description of the nature of the research/creative activity?**

Selenium is an essential nutrient element for humans and animals. The objective of this research project is to determine biological accumulation of selenium in garlic tissues of different varieties grown in Southern Illinois and potential effects of soil selenium contents. Concentrations of Se in garlic tissues and also in the soil samples will be determined, and the garlic varieties that bioaccumulates high levels of Se will be identified.

**Brief description of student responsibilities?**

Experimental setup, sample collection, sample preparation (grinding and acid-digestion) and chemical analyses of selenium in plant tissues and soil using advanced analytical instruments.

**URCA Assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?**

The URCA assistant will become familiar with commonly used laboratory research methods and gain valuable research experience through various hands-on research activities. At the end of semester, the student will be able to give a scientific research presentation (either poster or oral) for his or her work at a regional conference (such as Illinois State Academy of Science Annual Conference).

**Requirements of Students**

**If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours) please indicate all required days and times:**

- Time flexible

**If the location of the research/creative activities involves off campus work, must students provide their own transportation?**

- N/A

**Must students have taken any prerequisite classes? Please list classes and preferred grades:**

- N/A

**Other requirements or notes to applicants:**

- Junior or Senior status with GPA of 3.0 or higher

