





### Faculty Member Contact Information

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<b>Contact Info</b>	
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<b>Department</b>	Chemistry

### **1 Funded, 5 Unfunded 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.	
	This project deals with sustainability (green) issues.	
	This project deals with human health and wellness issues.	
	This project deals with community outreach.	
	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: Pharmacy, Engineering, Biology, Environmental Chemistry, Computer Science

**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)

- 7

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

- Yes, 0-2 credit hours of CHEM 296, CHEM 396, CHEM 496

**Location of research/creative activities:**

- Science Building West, Southern Illinois University Edwardsville

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

The research conducted in Andrés's group is multidisciplinary, combining light microscopy, biochemistry, and photochemistry. The main focus is to explore the contribution of different bacterial lifestyles to the resistance of antibiotics and photoactive biocides whose mechanism of action encompasses oxidative damage. They are also interested in the R&D of light-activatable antimicrobial materials to mitigate the spread of infectious diseases in healthcare facilities and common used areas. These studies will contribute to improving antimicrobial treatments and developing the next-generation self-sterilizing photoactive materials.

**Brief description of student responsibilities?**

Students working in the chemistry research laboratory are expected to demonstrate a strong commitment to safety, accuracy, and ethical conduct. Their responsibilities include conducting experiments, analyzing data, and contributing to ongoing research projects under the guidance of the lab supervisor or principal investigator.

**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?**

By the end of their experience in a chemistry research lab, students should have acquired a comprehensive understanding of various experimental techniques and methodologies used in chemistry research. They should be proficient in executing experiments with precision, adhering to safety protocols, and accurately analyzing and interpreting data. Additionally, students should have improved their skills in scientific communication, including presenting findings, writing reports, and engaging in collaborative discussions. Furthermore, they should have gained practical knowledge of lab equipment usage, proper handling of chemicals, and maintaining a clean and organized laboratory environment.

**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:**

- N/A

**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:**

- N/A