

**CHEMISTRY
ARTS & SCIENCES**

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE WOMEN

FOR APPLICATION YEAR: 2021

PROJECT TITLE: Sensors for real-time neurochemical detection

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Project Description

The project will involve developing electrochemical sensors for real-time neurotransmitter detection in the brain. The student will learn fundamental electrochemistry applied to biological systems and will learn how to design and fabricate new sensors. Students will be given the opportunity to learn surface analysis techniques including XPS, AFM, and Raman spectroscopy to characterize their sensors. The project outcomes will include application of the new sensors for monitoring neurotransmitter signaling in the brain. Students will work closely with graduate students in the lab and will be mentored how to analyze their data and present their data.