

**Project Summary** (150 words maximum)

We propose continued funding support for undergraduate students to help chemistry faculty develop new integrated third year lab experiments. The department has recently begun construction of its new shared instrument facility, which will house ~\$500,000 worth of modern instruments. The facility will directly benefit undergraduates by providing hands-on experience with instruments that are currently inaccessible. To effectively use these instruments and capitalize on the teaching opportunities arising from the facility's shared nature (for teaching and research), new laboratory experiments must be

developed. We wish to continue our development of 'research-style' projects that integrate the different disciplines within chemistry; these projects will better reflect the difficult, real world chemistry problems our graduates are likely to face. This will be a considerable improvement over the current labs which teach 'text-book' experiments, sometimes with obsolete equipment, in courses separated by discipline. This project will impact about 200 students per year but impact them repeatedly through several chemistry courses.