

EXECUTIVE SUMMARY [NON-CONFIDENTIAL, NON-TECHNICAL ABSTRACT FOR PUBLIC INFORMATION OR PROGRAM PROMOTION]: State the application's broad, long-term objectives and specific aims, making reference to the potential public benefits of the project relevant to California. Do not include proprietary or confidential information. This may be distributed before the funding decision has been finalized.

The integration of computational molecular modeling methods along side experimental methods to solve scientific problems in the biotechnology industry is becoming more prevalent. This project seeks to introduce undergraduate students in Biology, Chemistry, and Biochemistry to some of the commonly used computer-based techniques that they may encounter in industrial settings. The project will integrate these computational methods into the core courses throughout the undergraduate chemistry curriculum. This integration will emphasize the practical applications of these methods to the solution of scientific problems. The long-term goal of this project is to complement a student's preparation in laboratory-based techniques with computer-based methods. This will lead to better prepared science majors who can more fully participate in industrial settings in the molecular-based sciences.