

EXECUTIVE SUMMARY [NON-TECHNICAL ABSTRACT FOR PUBLIC INFORMATION OR PROGRAM PROMOTION]:

State **in layman's terms** the application's broad, long-term objectives and specific aims, making reference to the potential public benefits of the project relevant to California.

Computational biochemistry is a broad discipline dealing with the use of computers to facilitate biochemistry, covering a wide range of topics, from molecular biology, metabolism and genetics, to theoretical biophysics. As an extremely significant emerging discipline in biotechnology, supporting efforts in areas such as drug discovery, medicinal and pharmaceutical chemistry, computational biochemistry methods can (and should) be among the practical tools of the skilled experimentalist. Given the increasingly important role of computation in mainstream research, enhanced training and education in the field is needed. The specific aims of this curriculum development and infrastructure project are to develop and implement interactive documents, case studies and presentations in support of a recently implemented modular computational curriculum at CSU Fullerton, and to assess the impact of these materials on training and undergraduate research. The file formats chosen for this project are easily viewed by freely available, integrated, user-friendly software applications, eliminating the need for the end user to purchase a costly license. The relatively small size of the project files to be created facilitates simple sharing and downloading by the broader scientific community for training and distance learning applications.