

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.

Our project objective is to purchase equipment and supplies in order to teach our Cellular and Molecular Biology graduate students the fundamental methods, techniques and theory of cell culture (eukaryotic and/or prokaryotic), gene expression analysis, and recombinant DNA technology within a new course entitled "Cell and Molecular Methods and Techniques". The Department of Biological Sciences has approved the course as a requirement for all students in the Cellular and Molecular Biology concentration. The modular laboratory exercises we are developing will be adaptable for use by any of our instructors by allowing flexibility to substitute their cell and gene of interest. These core biotechnology techniques will not only accelerate the development of our student thesis projects, but it will provide students with the breadth and depth of skills essential to be competitive within the biotechnology job market. There is a need for our students to be trained in cell and molecular techniques since there are greater than 200 biotech companies in the Northern California area.