

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. This should NOT be a duplicate of the Technical Abstract above.

Human embryonic stem cell biology has become an important component of biotechnology research. Scientists have predicted stem cells could be used to treat a myriad of ailments, including diabetes, neurological disorders, and multiple kinds of cancers. California has demonstrated support for this research by passing Proposition 71 to fund the California Institute for Regenerative Medicine (CIRM). The establishment of CIRM ensures that cutting edge stem cell research will take place in California. This will require highly competent technicians and researchers to perform the laboratory work. The Department of Biological Sciences at Humboldt State University would like to contribute to future of stem cell biology in California by training students in the science and laboratory techniques required for human embryonic stem cell research. The funds from this grant would be used to train HSU faculty in the current methods of human embryonic stem cell culture , purchase the equipment, and prepare the reagents so that a stem cell laboratory course could be offered at HSU for 12 senior undergraduate students and/or graduate students in cellular in molecular biology, beginning in the 2009 fall semester. In addition, we will incorporate an abbreviated curriculum into the laboratory portion of Bio410, the existing cellular biology course. This would introduce up to 36 more students to stem cell research, bringing the total up to 48 students/year.