

**EXECUTIVE SUMMARY [NON-CONFIDENTIAL, NON-TECHNICAL ABSTRACT FOR PUBLIC INFORMATION OR PROGRAM PROMOTION]:** (Long-term objectives and aims & potential public benefits to California).

An ORION scanning electron microscopic (SEM) digital imaging system will greatly extend the capabilities of the Biological Sciences Microscopy Facility by significantly lowering the costs of image documentation, and will permit image archiving and image sharing with other researchers, classrooms or interested internet users. Currently, Polaroid film is used to document each electron microscopic image at a cost to the student or faculty user of \$2.00 per micrograph. A typical student project might require 30 to 40 micrographs at a cost of \$60 to \$80 per project. A digital imaging system would enable students to capture 100's of images which could then be archived and written to a single DVD or printed out with a laser printer at little cost to the student or faculty user. The lower cost will encourage more usage of the microscopy facility. An image archiving system will be used to provide free access of scanning and transmission electron microscopic images, as well as 3-D, fluorescent and brightfield light microscopic images for classroom instruction, for student use, and for access by users of the internet.