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.

The outcome for individuals with pancreatic cancer is dismal. Since no standard cure for advanced cancer of the pancreas is available, new targets indicative of early pancreatic disease must be developed for more effective diagnoses. The key objective of this study is to reveal differences in the molecular signature between normal and pancreatic cancer cells. This proposal will take advantage of cutting-edge profiling techniques to identify signatures. Two important tools to be used are pancreatic cancer cells representing the different stages of the disease to be analyzed by new ultra-sensitive molecular detectors. The cells will be grown under conditions to closely resemble the environment that would be present in the body. Then a stepwise procedure has been outlined to break up the cells and isolate molecules from the cell surface. Understanding the repertoire of proteins on the cell surface is crucial in detecting how cancer cells behave. Direct comparisons will be made between the molecules (signature) present on healthy cell to that of cancer cells. The long-term goal of this study is to better comprehend the basic biology of pancreatic cancer so that better treatments can be developed to improve the quality-of-life for patients fighting this disease.