GRANT SNAPSHOT

2010 Fredman Family Foundation – Pancreatic Cancer Action Network – AACR Innovative Grant

Grantee:	Frank McCormick, PhD
Institution:	University of California, San Francisco
Research Project:	Specific K-Ras Inhibitors for Treating Pancreatic Cancer
Award Period:	July 1, 2010 – June 30, 2012
Amount:	$200,000

Biographical Highlights

Dr. McCormick has been the Director of the UCSF Helen Diller Family Comprehensive Cancer Center since its inception in 1997. He also holds the positions of Associate Dean of the School of Medicine, the David A. Wood Professor of Tumor Biology and Cancer Research in the Department of Microbiology and Immunology, the E. Dixon Heise Distinguished Professor in Oncology, and Professor in Residence in the Department of Microbiology and Immunology.

Dr. McCormick received his PhD in Biochemistry in 1975 from the University of Cambridge, England, UK. After completing postdoctoral training at State University of New York at Stony Brook and Imperial Cancer Research Fund in London, he joined the Cetus Corporation, a biotechnology company, in 1981 as the Director of Molecular Biology and then, in 1990, became Vice President of Discovery Research. Subsequently he served as vice president of Therapeutic Research at Chiron Corporation, a pharmaceutical company. In 1996, he founded Onyx Pharmaceuticals, Inc., a biotechnology company, where he served as Chief Scientific Officer. There he developed Nexavar, an FDA-approved drug for treatment of kidney cancer and the only drug approved for treatment of liver cancer.

Dr. McCormick is on the editorial board of several highly prestigious cancer journals, including *Cell Growth and Differentiation*, *Cancer Cell*, and *Neoplasia*. He also serves as a board member or advisor to multiple cancer research organizations, including the American Association for Cancer Research, National Cancer Institute, Herbert Irving Comprehensive Cancer Center at Columbia University, and Dana-Farber/Harvard Cancer Center.

Project Overview

A protein called K-Ras is mutated and activated in the majority of pancreatic cancer cases, and thought to play a causal role in the development of this disease. Although an attractive potential therapeutic target, no drugs have been found to effectively block K-Ras. Dr. McCormick seeks to develop a new strategy to inhibit the activity of K-Ras in pancreatic cancer.

Previous attempts at K-Ras inhibition have focused on indirectly blocking the mechanism by which K-Ras gets attached to the cell membrane, where it is active. However, K-Ras can be differently modified to bypass this inhibition, and still become membrane-bound and activated. Dr. McCormick's strategy is to develop therapeutic compounds that will bind directly to K-Ras and physically impede its attachment to the cell membrane, preventing both the normal and compensatory mechanisms that otherwise activate K-Ras. Also, he will screen small molecule inhibitors that mechanically impede these pathways. Overall, these tactics represent a novel means by which to block K-Ras, a pivotal protein in the development and progression of pancreatic cancer.