GRANT SNAPSHOT

2008 Randy Pausch, PhD – Pancreatic Cancer Action Network – AACR Pilot Grant

Grantee:	Nabeel Bardeesy, PhD
Institution:	Massachusetts General Hospital, Boston
Research Project:	*Molecular Markers of Drug Sensitivity in Pancreatic Cancer*
Award Period:	July 1, 2008 – June 30, 2010
Amount:	$100,000

Biographical Highlights

After receiving his PhD in Biochemistry from McGill University in Canada, Dr. Bardeesy completed a Postdoctoral Fellowship in Medical Oncology at the Dana-Farber Cancer Institute at Harvard Medical School. He currently is an Assistant Professor at Harvard Medical School and an Assistant Geneticist at Massachusetts General Hospital Cancer Center. Dr. Bardeesy specializes in the generation of genetically engineered mouse models to study the biology of pancreatic cancer. His interest in the disease was sparked by a fellow postdoctoral student who had lost two family members to pancreatic cancer. This experience illuminated the urgency for an improved understanding of the disease biology and treatment discoveries.

Project Overview

Clinical advances in therapeutics against pancreatic cancer have been very unsatisfying since the approval of gemcitabine over 10 years ago. While about one in ten patients with pancreatic cancer respond to targeted and conventional therapies, little is known about the chemo-resistance of this cancer or why some patents respond well to treatment and others have a negative or no response. In other cancers, progress in treatment has come from the observation that some patients respond to certain therapy and that this response is due to specific genetic alterations in the tumor cells. The importance of this discovery is that it demonstrates that different drugs can be matched or tailored to patients with these genetic changes who are most likely to benefit from these treatments.

The funded project analyzes the responsiveness of cells derived from many different pancreatic cancer patients to a large set of anti-cancer drugs and then compares the drug sensitivity with the genetic features of the cancer to determine which features predict drug responsiveness. Predictions will be tested using a series of mouse models that resemble the human disease. The study will define genetically and biologically different subgroups of pancreatic ductal adenocarcinoma; provide new insights into drug therapeutics, including synergistic drug combinations; and inform the design of refined clinical trials.