



Research

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GRANT SNAPSHOT

2008 Patty Boshell – Pancreatic Cancer Action Network – AACR Career Development Award

Grantee:	Peter Storz, PhD
Institution:	Mayo Clinic, Jacksonville, FL
Research Project:	<i>Kinases Regulating Pancreatic Cancer Resistance to Chemotherapeutics</i>
Award Period:	July 1, 2008 – June 30, 2010
Amount:	\$100,000



Biographical Highlights

Dr. Storz received his PhD in Cell Biology from the University of Stuttgart, Germany. Shortly after, he came to the United States and began a research fellowship in Cell Biology and Molecular Biology and then became an Instructor in Pathology at Harvard Medical School. Currently, Dr. Storz is an Assistant Professor in Biochemistry and Molecular Biology at Mayo College of Medicine, Rochester/Jacksonville, and an Associate Consultant in the Tumor Biology Department at Mayo Clinic, Jacksonville.

Project Overview

The funded project is designed to identify kinases, or cellular signaling proteins, that regulate resistance of pancreatic cancer cells to chemotherapeutic agents. Pancreatic ductal adenocarcinoma is extremely resistant to conventional chemotherapies. Its resistance has been closely linked to NF- κ B activity, which is an inducible transcription factor that is regulated by a variety of kinases. One of these kinases is Protein Kinase D1 (PKD1), which activates NF- κ B in response to stresses. PKD1 has previously been found to be over-expressed (increased) in pancreatic cancer and was shown to prevent apoptosis (a type of cell death where the cell uses specialized cellular machinery to kill itself).

The study uses a global approach to measure the contribution that PKD1 and other kinases have in elevating NF- κ B activity in pancreatic cancer cells, and also focuses on the specific role of PDK1 and whether PDK1 inhibitors decrease NF- κ B activity and affect resistance to chemotherapeutic agents. Study results are expected to contribute to the development of a pharmacologic strategy to re-sensitize pancreatic tumor cells to conventional chemotherapeutics and improve survival from this deadly disease.