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Society for Surgery of the Alimentary Tract, Inc.  
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Dear SSAT Board of Trustees:

July 2010 marked the end of my two-year Career Development Award that supported my research entitled “Inflammation-Related Genes as Risk Factors for Pancreas Cancer”. My research project has three Specific Aims:

- Specific Aim 1 – To perform genetic association analysis using both SNPs and haplotypes of genes with the inflammation pathways that have been implicated in pancreatic cancer; we will study 384 LD and haplotype tag SNPs in 1,200 pancreatic ductal adenocarcinoma cases and 1,200 age and gender matched healthy clinic-based controls without a personal history of cancer (except nonmelanoma skin cancer).
- Specific Aim 2 – To evaluate whether inflammation-related gene variants interact with exposure to two key factors, cigarette smoking, and NSAIDs, to influence risk for pancreatic ductal adenocarcinoma.
- Specific Aim 3 – To assess the influence of polymorphisms in candidate inflammation-related genes on survival in surgically treated pancreatic ductal adenocarcinoma patients adjusted for age, gender, stage, and chemoradiation treatment.

My primary mentors are Dr. Gloria Petersen and Dr. Michael Sarr. Dr. Gloria Petersen, the primary investigator of the Pancreatic Cancer Spore at Mayo Clinic, and Dr. Michael Sarr, the Vice-Chair for Research in the Department of Surgery, have both assisted a multi-disciplinary team of seven to help guide the education required and the execution of the research for this grant. (Of note, I have completed the didactic requirements for a Masters degree in clinical research and plan on submitting my thesis in 2010.) I have spent valuable time with each of the mentors on my team in the areas of bioinformatics, biostatistics, genetic epidemiology, and genotyping learning and developing the skills necessary for a successful and independent research career.

The grant has been instrumental in supporting the genotyping of initially 768 SNPs and then a second genotyping round of an additional 768 SNPs. The grant also provided financial support for the statistical analysis of the large amount of data that is generated from genotyping.

In addition, the funding allowed for access to important bioinformatics software that was used to help with gene selection from inflammatory pathways.

I am pleased to announce that Specific Aims 1 and 3 are complete. The results from Specific Aim 1 were significant in that nine SNPs in that nitric oxide synthase 1 gene were found to have an association with pancreatic cancer. We are currently in the process of replicating this data. Specific aim 2 is currently in the analysis phase, evaluating the risk of NSAIDS and smoking on pancreatic cancer. Specific Aim 3 resulted in uncovering three genes that were associated with decreased survival in operatively-treated patients.

Currently, one review in genetic epidemiology is published. A second manuscript focusing on Specific Aim 1 is currently in submission, the final analysis on Specific Aim 2 is in progress, and a third manuscript reporting on the findings from Specific Aim 3 is in preparation. Finally, a second review of genetic epidemiology is almost complete. This grant has allowed me to set the stage for a long-term research career. I am now in year four-of-five on my NIH KL2 funding and plan on submitting an NIH RO1 grant in 2011.

I extend my sincerest gratitude to the Board of Trustees for selecting our research as one of the funded research projects in 2008. You will continue to see the results of our work presented at the SSAT national meetings in the future.

Respectfully and with gratitude,

A handwritten signature in black ink, appearing to read 'Kaye M. Reid Lombardo', written in a cursive style.

Kaye M. Reid Lombardo, M.D. FACS  
Assistant Professor of Surgery

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