



## CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:  
RP150231

Project Title:  
Function of Fibroblasts and Collagen I in Pancreas Cancer

Award Mechanism:  
Individual Investigator

Principal Investigator:  
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Entity:  
The University of Texas M.D. Anderson Cancer Center

### Lay Summary:

Pancreatic cancer is the fourth leading cause of cancer death in the US, with an estimated 46,420 new cases and 39,590 deaths in the United States in 2014. It is projected to be the second leading cause of American cancer deaths by 2030. Within 5 years following diagnosis, 93.3% of these patients succumb to the disease. This disease is devastating and currently specific therapies are lacking, leading to rapid death of all patients, coupled with pain and severe despair. The annual economic toll of pancreatic cancer is estimated between \$2.6 and \$4.9 billion dollars to the US healthcare system. New ideas and research focus are required to better serve our patients because all previous strategies have failed or offered only minimal progress. One of the reasons why effective therapies are lacking for pancreas cancer lies in its poorly understood etiology, and in its unique abundance of non-cancer cell content in the tumors, also known as stroma, which results from our body's response to cancer cells. Previous descriptive studies had uniformly suggested that all such response ultimately aid cancer cells to kill patients. But such linear thinking was challenged recently and it is clear now that we must perform a careful auditing of the functional role of tumor stroma in pancreatic cancer. Such effort will avoid irrelevant and costly clinical trials and refocus our efforts to help patients based on knowledge derived from careful and informative science. This grant application takes a step towards that effort and proposes to study the functional role of fibroblasts in pancreatic cancer progression and metastasis. Fibroblasts are mesenchymal cells that are present in large numbers in pancreatic tumors, and likely even more than cancer cells. We expect new biology and targets for potential therapy to emerge from this focused effort.