



CANCER PREVENTION & RESEARCH  
INSTITUTE OF TEXAS

Award ID:  
RP120217

Project Title:  
Role of IL-17 family cytokines in colon inflammation and cancer

Award Mechanism:  
Individual Investigator

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

Lay Summary:

Colorectal cancer, the third most common malignancy worldwide, is greatly affecting the health in Texas state with 9000 cases diagnosed each year and approximately 3400 deaths. Chronic intestinal inflammation is a major risk factor in the development of colon cancer. However, the regulation of inflammation during colon development is poorly understood. We as well as other groups have recently identified IL-17-producing T helper (TH17) cells as a new lineage of T cells that mediate tissue inflammation. Targeting IL-17 has given promising results in clinical trials against autoinflammatory diseases. Interestingly, colorectal cancer patients with high expression of the TH17 genes have been shown to have poor prognosis. In agreement with the human studies, we and other groups have found IL-17 is a pathogenic factor in animal models of colon cancer; IL-17-deficient mice exhibited inhibition of colon cancer development. Based on these data, we propose to study the function and regulation of TH17 responses in colon cancer models. Our proposed work will provide basis for early diagnosis and therapeutic development on colon cancer.