



## CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:  
RP140224

Project Title:  
PPAR-Delta Regulation of Wnt/B-Catenin To Drive Colon Cancer

Award Mechanism:  
Individual Investigator

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

### Lay Summary:

Colon cancer is the second most common cause of cancer death in the United States. Despite progress in prevention and treatment of colon cancer, the 5-year death rate from this disease remains almost 40%. Clearly, better measures to treat and prevent colon cancer are needed. Improved understanding of the mechanisms underlying the formation of colon cancer will provide key information needed to develop new treatment and preventive measures for this commonly fatal disease. Levels of the protein PPAR-d (peroxisome proliferator-activated receptor-delta) are increased in human colon cancer cells. However, the role of PPAR-d in colon cancer and other types of cancer remains unclear. Clarifying the role of PPAR-d in cancer is important for two main reasons. First, if evidence shows that PPAR-d promotes colon cancer, drugs could be developed to repress PPAR-d and thus prevent colon cancer development. Second, drugs that stimulate PPAR-d are currently under development for noncancer indications, such as weight loss; it is critically important to determine whether such drugs might increase colon cancer risk. The goal of our proposed project is to clarify how PPAR-d influences colon cancer development through regulation of mechanisms in colon cells that are known to propel cancer development. The information gained from the proposed studies is expected to improve our understanding of how colon cancer develops and could possibly lead to the development of new class of anticancer drugs that act by inhibiting PPAR-d to suppress colon cancer formation. Additionally, the proposed work should provide important information regarding the risk of stimulating PPAR-d for noncancer indications, such as weight loss.