



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Award ID:
RP100119

Project Title:
A molecularly targeted anticancer therapeutic strategy premised upon
attack of aberrant Wnt pathway responses

Award Mechanism:
Individual Investigator

Principal Investigator:
Lum, Lawrence

Entity:
The University of Texas Southwestern Medical Center

Lay Summary:

The growth-promoting cellular programs controlled by the Wnt signaling molecules are high priority therapeutic targets given their frequent participation in tumorigenesis. The recalcitrance of underlying mechanisms that support aberrant Wnt pathway activities to chemical perturbation has limited our ability to test the therapeutic potential of this approach. Our recent identification of two classes of compounds that target distinct Wnt pathway components, both not previously known to be druggable, affords two unanticipated opportunities to disengage aberrant Wnt signaling in cancerous cells. Lung and colorectal cancer are particularly appropriate subjects for these studies, given their association with aberrant Wnt signaling and ~24% of all annual cancer incidents in the state of Texas. Our findings will galvanize a transition from chemotherapeutic agents generally toxic to all rapidly dividing cells and broadly prescribed today as front-line therapy, to small molecules that can be individually matched to counter the effects of specific genetic lesions.