



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Award ID:
RP110248

Project Title:
Augmenting T cell-based melanoma immunotherapy by targeting
oncogenic BRAF

Award Mechanism:
Individual Investigator

Principal Investigator:
Hwu, Patrick

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

Lay Summary:

In this project, we are studying the interplay between melanoma cancer cells and our body's immune system. We hope to understand how changes in the melanoma cell's genetic material (mutations) cause the cancer cells to grow and modify its surrounding environment that further helps its own growth while suppressing immune responses. Besides inducing uncontrolled growth, we have found that these mutations can also result in immune suppression in the tumor and surrounding tissues. We will use pharmacological agents to inhibit the activity of the mutated proteins in an attempt to decrease the ability of the cancer cell to modify its environment. We will combine these targeted therapies with immune stimulating agents in an attempt to enhance antitumor immune responses. We anticipate that targeted therapies which inhibit the effects of these mutations will lead to decrease of this immune suppression thereby enhancing the effects of immune therapies. These studies can lead to the ability to rationally combine immune-based therapies with targeted therapies. The insights we gain from this project may be applicable to other cancers as well.