



CANCER PREVENTION & RESEARCH  
INSTITUTE OF TEXAS

Award ID:  
RP110028

Project Title:  
Role of DNA Methyltransferase 3B in normal and malignant hematopoiesis

Award Mechanism:  
Individual Investigator

Principal Investigator:  
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Entity:  
Baylor College of Medicine

Lay Summary:

Overwhelming evidence has associated changes in DNA methylation with malignancies, supporting the recent use of new so-called "epigenetic therapies" for some cancers. While these drugs have some efficacy, we understand only poorly how these work, and how to improve them. We will study mice that are deficient for an enzyme which methylates DNA, in order to understand what the role of the DNA methylation is in normal blood-forming stem cells. We will also study the role of this DNA methylation enzyme in generating mouse tumors, by introducing a cancer-causing gene into mice in which the DNA methylase is deleted or mutated. We will then examine the impact on both cancer development as well as DNA methylation. These studies will reveal the specific roles of these DNA methylases in normal and malignant blood development.