



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Award ID:
RP100402

Project Title:
The role of IGFBP2 in acute myeloid leukemia

Award Mechanism:
Individual Investigator

Principal Investigator:
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Entity:
The University of Texas Southwestern Medical Center

Lay Summary:

We propose to study the regulation of the development of acute myeloid leukemia (AML) by a secreted protein, IGF Binding Protein 2 (IGFBP2). Based on clinical observations and our preliminary studies, we hypothesize that IGFBP2 supports the activity of AML stem cells (AML-SCs); the AML-promoting IGFBP2 may be produced by both bone marrow environment and AML-SCs. In Aim 1, we will determine whether IGFBP2 is expressed in human AML-SCs and differentiated AML cells, and how this expression is related to AML development. In Aim 2, we will examine the IGFBP2 expression in human AML bone marrow environment, and apply the state-of-art imaging tools to study the dynamic relationship between AML-SCs and IGFBP2-producing stroma cells in the bone marrow. Furthermore, we will determine how IGFBP2 regulates the AML-SC activity by identifying the cellular mediator of IGFBP2 in AML-SCs in Aim 3.