CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
RP110252

Project Title:
Deciphering the mechanisms of EGFR-regulated Warburg effect during tumorigenesis

Award Mechanism:
Individual Investigator

Principal Investigator:
Lu, Zhimin

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

Lay Summary:

Overexpression of epidermal growth factor receptor (EGFR) has been detected in many human tumors and is correlated with a poor clinical prognosis; however, whether EGFR activation promotes tumor cell metabolism and tumor progression by regulating any key glycolytic genes remains unknown. In this proposed study, we aim to elucidate the mechanisms of EGF-induced regulation of the pyruvate kinase M2 isoform (PKM2), which is exclusively expressed in tumor tissue. The experiments described in this proposal will further elucidate the mechanisms of PKM2 regulation and the role of the involved signaling components in tumor metabolism, formation, and progression, which may help us identify molecular markers of prognosis and develop more effective cancer therapies.