CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
RP170231

Project Title:
Identifying vulnerabilities in mutant p53 driven tumorigenesis

Award Mechanism:
Individual Investigator

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

Lay Summary:

Cancers arise from changes to normal cells that allow for uncontrolled and inappropriate growth. To accomplish this, most tumors disable the function of an important tumor suppressor, p53. Normally, p53 functions to stop cell division and the accumulation of damaged or abnormal cells. Tumors frequently make a mutant p53 that can no longer stop cells from dividing uncontrollably and that has additional activities that actually fuel tumor growth. In this study, we aim to understand these additional activities and how this altered p53 fuels growth of osteosarcomas, a tumor of the bone that often occurs in children and young adults, which commonly disrupt the p53 pathway. By understanding how an altered p53 protein works in promoting cancers, we hope to identify pathways and mechanisms that can be therapeutically targeted in the clinic to treat patients. Understanding these mechanisms is essential for developing new strategies to specifically and effectively treat cancers with mutant p53.