



CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
RP120495

Project Title:
North Texas Clinical Pharmacology Cancer Core

Award Mechanism:
Core Facility Support Awards

Principal Investigator:
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Entity:
Texas Tech University Health Sciences Center

Lay Summary:

There is an urgent need for translating basic cancer research results into improved care of our cancer patients and/or into better intervention tools to prevent cancer. This proposal is to establish a state-of-the-art core facility to help basic cancer researchers and physicians to better test new drugs or new therapy procedures by better understanding how cancer drugs work in the body, how the drugs treat cancer, and how to avoid unwanted effects of the cancer drugs. In general, the research team of this core facility will do research on what the cancer drugs do to the body and what the human body does to the drugs. Cancer therapy requires a delicate balance between enhancing anticancer effectiveness of the drugs and at the same time 'do no harm' to normal tissues. Although a cancer drug may be potentially effective, its clinical trial may fail because of inadequate design to achieve appropriate concentrations at the cancer sites or inappropriate timing and dose of drug administration. Today, cancer investigators in North Texas do not have adequate resources that specifically focus on these aspects of cancer drug development. The North Texas Clinical Pharmacology Cancer Core will fill this crucial gap. The Core has expertise and basic instrumentation to help cancer investigators with designing studies to optimize our understanding of drug movement in the body, the action of the drugs, and the best approaches to deliver the drugs. We propose to upgrade the core laboratory with state-of-the-art instrumentations to measure drug content, determine changes in drug effectiveness and potential for unwanted side effects, and develop drug formulations that may improve patient acceptance. In addition, the Clinical Pharmacology Cancer Core will exclusively focus its expertise and resources to meet the regional needs of cancer investigators in North Texas to better deliver the currently used cancer drugs to improve the outcome of patient care.