



CANCER PREVENTION & RESEARCH
INSTITUTE OF TEXAS

Award ID:
RP180801

Project Title:
Targeting the Menopause Transition to Decrease the Risk for Obesity-Associated Postmenopausal Breast Cancer

Award Mechanism:
High Impact/High Risk

Principal Investigator:
Giles, Erin

Entity:
Texas A&M University

Lay Summary:

Women who are overweight or obese have an increased risk for developing breast cancer after menopause. There are suggestions that an inexpensive, FDA-approved drug used to treat diabetes (called metformin) may also help decrease the risk of developing breast cancer in women who are overweight/obese, or those with diabetes. Using an animal model, we have shown that weight gain during menopause, combined with pre-existing obesity, increases tumor development and growth. We have further shown that treating these same animals with metformin long-term can decrease this breast cancer risk. In this grant, our goal is to determine whether we can specifically target metformin to a narrow window of time immediately after menopause when weight gain occurs. Further, we will also be testing a novel hypothesis that may explain how metformin works to decrease tumor growth, and will identify characteristics of both tumors and the host that may help us identify which breast cancers/women will respond best to metformin treatment. Together, this research could help us identify a very specific window of time where we could intervene to significantly decrease breast cancer risk.