CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
RP110319

Project Title:
Targeting Dendritic Cells to Block Immunosuppression in Breast Cancer

Award Mechanism:
Individual Investigator

Principal Investigator:
Liu, Yong-Jun

Entity:
Baylor Research Institute

Lay Summary:

Breast cancer remains the second most common cancer-related death among women. Patients with hormone-receptor and her2-neu negative (triple negative) breast cancer respond poorly to current therapies. Many breast tumor antigens have been identified and studied in mice and humans, which suggest that the immune system is capable of mounting tumor-eliminating responses and hence, immunotherapy poses as a promising form of therapy for breast cancer. Major obstacles in developing effective immunotherapy for breast cancer are the neglect of incorporating the utility of the innate immune system and the lack of understanding of the tumor microenvironment, where many immune cell types are recruited to mount “bad inflammation”. We urgently need to develop new concepts in cancer immunotherapy. Since pDCs play key roles in anti-viral innate immunity, understanding how the breast tumor microenvironment alters the function of pDCs will help to generate new concepts and methods for developing more effective therapy for breast cancers.