

Bankhead-Coley Cancer Research Program

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Bridge (1-year project)*

Project Title: Targeting Negative Regulatory Pathways for Immunotherapy of B-cell Lymphomas

Project Summary: B-cell lymphomas are cancers that arise in lymphoid organs. They grow in the very same compartment where important cells of the immune system (T-lymphocytes) are located, indicating that B-cell lymphomas have developed mechanism(s) to avoid immune attack. As lymphoma expand, they further impair the function of immune cells, diminishing their ability to respond to immunotherapeutic strategies. Recently, we have identified two targets (Stat3 and Histone deacetylases) that by restraining inflammatory responses impose a significant barrier to our efforts to harness immune responses against B-cell lymphomas. In this grant, we aim to understand these barriers better in a particular type of lymphoma, named Mantle Cell Lymphoma (MCL). In addition, we will evaluate novel therapeutic strategies to overcome these barriers in MCL, an incurable B-cell malignancy. Key experiments include in vitro and in vivo studies in mouse models (Aims 1 and 2) and in human MCL cells (Aim 3) are proposed within this mechanistically-oriented and translational project that would result in innovative treatments for MCL and other B-cell malignancies.