Research Plan Summary

Immunotherapy utilizing bi-specific proteins or engineered T cells to induce T cell mediated killing of cancer are promising new approaches to cancer treatment. However, the lack of cell surface protein antigens that are common to multiple cancer types yet have limited or no expression in normal tissue remains a major barrier to development. Altered glycosylation is a near universal feature of cancer; however generation of monoclonal antibodies specific to complex carbohydrates has proven to be very challenging. **We have created a novel class of immunotherapeutic bi-specific peptides that target carbohydrate antigens common to multiple solid and hematopoietic cancers. Here we propose to investigate the efficacy and toxicity of a bi-specific molecule in animal model.**