

Leah Novinger
Grad Research Day Abstract
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Title:

Characterization of tumor associated antigens using a patient derived phage displayed breast cancer cDNA library and autologous serum

Abstract:

Autoantibodies to tumor proteins in patient serum may serve as a biomarker in breast cancer diagnosis or as a potential targeted therapeutic. The tumor associated antigens (TAAs) to which they bind may be of further diagnostic or prognostic value. In order to identify TAAs, a phage displayed cDNA library was created from a patient breast cancer tumor. Expressed protein fragments were tested with autologous patient serum to identify potential TAAs using a modified technique based on serological analysis of recombinant cDNA expression libraries (SEREX). Results will be presented. Future plans are to create several single chain antibody libraries derived from the peripheral blood, tumor, tumor draining lymph nodes (i.e. sentinel nodes) and non-tumor draining lymph node of the same patient and identify binders to known TAAs for that patient. The identification of TAAs and single chain antibodies has potential for the development of customized diagnostic and therapeutic tools in the treatment of breast cancer.