FINAL DISSERTATION DEFENSE

Natalie Vandeven

Merkel Cell Carcinoma: Immunogenicity and the characterization of CD4 T cell responses to the Merkel cell polyomavirus

Merkel cell carcinoma (MCC) is a deadly skin cancer caused by the Merkel cell polyomavirus (MCPyV) in the majority of cases. Expression of MCPyV T-antigen oncoproteins is required for tumor survival and growth, providing ideal targets for the immune system. CD4 T cells are critical in orchestrating effect anticancer immunity, however, the study of tumor-specific CD4s has been limited by the ability to isolate and characterize these cells.

Using several strategies, we have identified 12 CD4 T cell MCPyV-epitopes and have generated HLA class-II tetramers, permitting for the first time, identification and isolation of MCPyV-specific CD4 T cells. One of these epitopes is highly conserved, population-prevalent and persistently expressed within MCC tumors, indicating that this epitope could be ideal for inclusion in a therapeutic cancer vaccine. Methods used to identify and characterize MCPyV-specific CD4 T cells could be applied more broadly to study CD4 T cell responses against other tumor-specific antigens such as other oncogenic viruses and neoantigens.

MONDAY, SEPTEMBER 18TH
3:00 PM
ORIN SMITH AUDITORIUM (UW - SLU)

Program: Medical Scientist Training Program

Department: Pathology

Lab PI: Paul Nghiem

Email: vandeven@uw.edu

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