

Pediatric Infectious Disease; Dr. Nayak

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### Evaluation of Influenza-Specific AIM Responses in Adult and Pediatric CD4+ T Cells

#### Background

The CDC estimated the disease burden of influenza during the 2017-2018 year was the highest it's been since the 2009 pandemic, resulting in an estimated 48.8 million infected and 79,000 deaths. To combat the growing threat of influenza, seasonal vaccines are released to prime the immune system against probable strains. The key to creating more effective flu vaccinations is a better understanding of the anti-influenza response of the immune system, including both cellular and serologic immunity.

#### Objective

The purpose of this research project was to investigate the upregulation of cytokine-independent activation-induced markers (AIM) on CD4+ T cells upon stimulation with various influenza peptide pools and controls in order to evaluate methods of detecting flu-specific immune reactions independent of cytokines.