

# 2008 Ohio Student Research Forum

The Ohio State University

August 7 - 8, 2008

## RESEARCH ABSTRACT FORM

**TITLE:** Analysis of Novel Viral Genes of Human Cytomegalovirus

**AUTHOR:** Tanisha Vázquez-García

**MENTOR(S):** Joanne Trgovcich

**INSTITUTION:** The Ohio State University, Columbus OH

---

The Human Cytomegalovirus (HCMV) is a large double stranded DNA virus (230 kb) classified in the *Betaherpesviridae* subfamily of herpes virus family. HCMV causes life-long infections in human populations. In immunocompromised hosts and infants, HCMV causes serious disease. There is a strong interest in defining the full spectrum of viral gene products. We hypothesize that this knowledge will lead to the development of better treatments for HCMV infections. We undertook a study to prove or disprove the existence of a novel viral gene discovered through the analysis of the HCMV transcriptome. Specifically, we are analyzing a HCMV cDNA clone called pIE934 that may code for a novel protein. This clone represents a transcript derived from the IRS1-US1 gene region that is known to be important for the virulence of HCMV. This clone is also interesting because it is both in sense and antisense orientation to the IRS1 and US1 genes, respectively. We are testing the hypothesis that pIE934 encodes for a novel viral protein that is expressed during natural infection. To accomplish this, we are generating a plasmid with the pIE934 sequences downstream and in frame with the gene sequences specifying glutathione-S-transferase (GST). Then we will generate and purify a fusion protein to make antibodies that will specifically recognize this protein. This antibody will be used to evaluate if the protein is generated in infected cells.