

**STUDY OF INTERFERON REGULATION IN VESICULAR STOMATITIS VIRUS  
INFECTED L929 CELLS** A. Varble, W. Hammond, and M. Ferran\*, Department of  
Biological Sciences [ajv8634@rit.edu](mailto:ajv8634@rit.edu)

Interferon (IFN) is a key component of a virally-infected cells innate immune defense. IFN causes surrounding cells to enter an anti-viral state and prevent the viral infection from spreading. The overall focus of our work is to further understand IFN gene regulation by Vesicular Stomatitis Virus (VSV). Wild type VSV suppressed the IFN antiviral response while the T1026R1 mutant induces large amounts of IFN in infected cells. Our lab is interested in determining how the virus regulates this antiviral response and which virus components are responsible. A former student in the lab discovered that VSV regulates NF-kB, a transcription factor that is essential for IFN gene regulation. He used immunofluorescence to determine if NF-kB was activated in VSV infected cells. The goal of my work was to confirm the findings using a more sensitive Elisa based Trans AM assay. Currently, the difference between NF-kB activation in wild type and T1026R1 infected cells has been confirmed. Recombinant viruses still must be tested to achieve a more detailed understanding of the mechanism used by the virus to regulate NF-kB. Various NF-kB inhibitors, such as BAY, will also be tested. This data, along with data generated by other students in the lab will lead to valuable insights into the way VSV combats the production of IFN.