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Low-Molecular-Weight Proteins of Human Cytomegalovirus

[In this study I propose to search for HCMV encoded small proteins and study their functions in the pathogenesis of the virus.]

Human cytomegalovirus (HCMV) is the leading cause of morbidity and mortality among infants and immunocompromised patients, in particular, allogeneic transplant recipients, cancer patients undergoing chemotherapy and AIDS patients. In addition, HCMV DNA can convert normal cells to an oncogenic phenotype and HCMV infection has been reported to modulate the function of a number of cellular proteins often associated with malignant cancer phenotypes. HCMV studies therefore are important for both clinical and basic cancer research.

The long-term goal of this study is to understand the nature of the interaction between the virus and its host cell, which may provide insight into the pathogenesis of HCMV. This virus has the potential to encode many small proteins and study their impact on the virus-host interaction and contribution to the physiological dysfunction of infected cells. Elucidation of their functions may lead to novel therapeutic and preventive strategies for the control of viral disease.