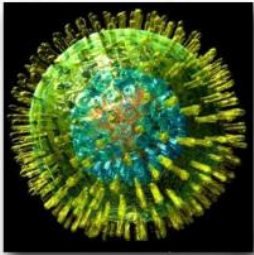


# 学术报告

Accelerating the Development of Vaccines and Biologics:  
from bench to clinic



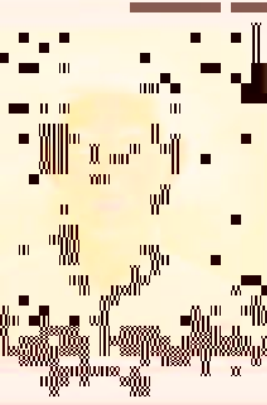
## 1. Towards the Development of a Cytomegalovirus (CMV) vaccine by Dr. Tongming Fu

### 2. Disrupting the Molecular Recognition

Abstract: Cytomegalovirus (CMV) is a major human pathogen that causes congenital CMV infection, which is a leading cause of hearing loss and mental retardation. The development of a CMV vaccine is a high priority. In this study, we have identified a novel epitope on the CMV gB protein that is highly conserved among all CMV strains. This epitope is located in the cytoplasmic tail of the gB protein, which is a region that is not exposed to the immune system. We have shown that this epitope is recognized by a monoclonal antibody (mAb) that is highly specific for CMV. This mAb is able to block the interaction between the gB protein and its receptor, thereby preventing the virus from entering the cell. This study provides a new approach for the development of a CMV vaccine that is based on the disruption of the molecular recognition between the virus and its receptor.



Introduction: Cytomegalovirus (CMV) is a major human pathogen that causes congenital CMV infection, which is a leading cause of hearing loss and mental retardation. The development of a CMV vaccine is a high priority. In this study, we have identified a novel epitope on the CMV gB protein that is highly conserved among all CMV strains. This epitope is located in the cytoplasmic tail of the gB protein, which is a region that is not exposed to the immune system. We have shown that this epitope is recognized by a monoclonal antibody (mAb) that is highly specific for CMV. This mAb is able to block the interaction between the gB protein and its receptor, thereby preventing the virus from entering the cell. This study provides a new approach for the development of a CMV vaccine that is based on the disruption of the molecular recognition between the virus and its receptor.



Conclusion: This study provides a new approach for the development of a CMV vaccine that is based on the disruption of the molecular recognition between the virus and its receptor. The identification of a novel epitope on the CMV gB protein that is highly conserved among all CMV strains is a significant finding. This epitope is located in the cytoplasmic tail of the gB protein, which is a region that is not exposed to the immune system. We have shown that this epitope is recognized by a monoclonal antibody (mAb) that is highly specific for CMV. This mAb is able to block the interaction between the gB protein and its receptor, thereby preventing the virus from entering the cell. This study provides a new approach for the development of a CMV vaccine that is based on the disruption of the molecular recognition between the virus and its receptor.

