Novel Cytomegalovirus Vaccine

Tech ID: 32414 / UC Case 2017-090-0

TECHNOLOGY DESCRIPTION

Human cytomegalovirus (CMV) infects half of the population of the United States, resulting in lifelong persistent infection. CMV infects 20,000 – 40,000 infants born every year in the United States, resulting in permanent disabilities in twenty percent of those infected. Additionally, CMV infections are a tremendous burden in immunocompromised and transplant patients. Currently, there is no approved vaccine for the treatment of adult or congenital CMV-associated disease. The invention disclosed includes a repertoire of viral peptides (and their sequences) purified from the HLA-E proteins in cells infected with a human CMV strain. These identified peptide sequences could serve as candidates for the development of a CMV vaccine. The novelty of this approach lies in the use of peptides/immunogens presented by the HLA-E major histocompatibility complex I, which has not been used before. This work is currently in the pre-clinical development stage.

ADVANTAGES

- Identification of novel HLA-E associated viral peptides to serve as potential immunogens for a CMV vaccine.
- HLA-E associated immunogens have been shown to elicit both natural killer cell and T-cell responses, important for innate and adaptive immunity and subsequent host protection.

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

Cytomegalovirus Vaccine, CMV, HLA-E proteins

CATEGORIZED AS

- Medical
  - Vaccines

RELATED CASES

2017-090-0

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