Cytomegalovirus Vaccine Backbone That Cannot Be Reactivated

Title: Cytomegalovirus Vaccine Backbone that Cannot be Reactivated.

Invention: This technology describes a Cytomegalovirus (CMV) vaccine vector with mutations or deletions in newly-found intronic promoters that are important for CMV reactivation.

Background: Cytomegalovirus (CMV) is a virus within the herpes family that is extremely common. Nearly 50% of adults will have contracted CMV by the time they reach 40 years old. Once contracting CMV, it lays dormant within the body and can become reactivated later in life. While most people have no symptoms of CMV, it can cause issues in pregnant woman because it can be passed on to the fetus and cause developmental and mental problems. It also causes problems during transplantations and causes higher morbidity and mortality rates. Currently, antivirals are used to control infections in transplant patients but these come with adverse side effects and can only be given in lower amounts for a short period of time. Outside of antivirals there are almost no recommended treatment options and there is no vaccination that has been approved to prevent CMV infections.

Applications:
- CMV vaccination.
- Other viral vaccines using CMV backbones.

Advantages:
- Reduces risk of reactivation
- Potential for vaccination applications

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