

A SYSTEM OF EFFICIENT, COST-EFFECTIVE, AND CUSTOMIZABLE VACCINES FOR USE WITH MULTIPLE VACCINE CANDIDATES

Most vaccines created today are costly to produce. In addition, the creation of new vaccines to combat emerging diseases such as novel influenza strains such as H1N1 and SARS is slow and not able to meet the demand early in the disease cycle.

The current invention developed by researchers at the University of Missouri is a new vaccine platform utilizing inactivated spores that is easy to customize to a disease of interest. The time between identification of an emerging pathogen to vaccine creation can be shortened to as little as 3 weeks. By utilizing bacterial cells that to high titers in simple growth medium, large batches of vaccine can be made in little time with immunogenic proteins surface displayed on the spores. Cost and time savings are achieved because no protein purification steps are required. The spores are easily inactivated and stable in the absence of refrigeration. Bacterial spores are recognized by the immune system as foreign and have the natural ability to stimulate the immune system and lead to effective immune responses. Thus our platform system should not need the use of adjuvants to produce a robust immune response. Lastly, we have the ability to express proteins from different antigen sources to create a multivalent vaccine against multiple pathogens.

POTENTIAL AREAS OF APPLICATIONS:

- Vaccine development and production

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INVENTOR(S): George C. Stewart; Brian M. Thompson

CONTACT INFO: Harriet F. Francis, MS; J.D.; francish@missouri.edu; 573.884.0374

Per Stromhaug, Ph.D., MBA; stromhaugpe@missouri.edu; 573.884.3553