

Applications

- Development of a vaccine or treatment using antibody-based therapeutics
- Robust screening assay to identify antibodies with “spread inhibition”
- Low-cost evaluation of mono- and poly-clonal antibody-based therapeutics
- Evaluation of animal and human responses to experimental vaccines

Advantages

- GFP provides accurate quantitative measure of spread of HCMV
- Enhances drug discovery- broad range of antibodies can be tested
- Improves chances for successful vaccine development
- Potential to be used to measure viral spread in other cell types
- Reduced development and manufacturing costs
- NOT made from human blood

Inventors

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Market Need

Current methods to determine the efficacy of anti-virals for the treatment and prevention of Human Cytomegalovirus (HCMV) negatively impact on the discovery of new drugs—they are expensive, slow and labor intensive. Complicating the development of new drugs are the “dry pipelines” and reduced R&D budgets of major pharmaceutical companies-yet demand for new anti-viral agents grows as resistance to older drugs continues to develop. Companies are looking for low-cost and reliable methods to identify and test potential new drug candidates.

Technology Summary

With the development of a novel GFP-reporter assay, VCU researchers are now able identify specific antibodies having “spread inhibition” activities and to quantitatively measure and compare such activities. Quantification will facilitate direct comparison of one antibody to another which may serve to identify optimal antibodies for therapeutic use and desirable epitopes for inclusion in prophylactic vaccines. This new assay provides an efficient and effective way to evaluate animal and human responses to vaccines and also to evaluate and compare mono- and poly-clonal antibody-based therapeutics. The technology reduces drug development costs by providing a good quantitative measure of “spread” to aid in the development of vaccines or antibody-based prophylactics.

Technology Status

In vitro studies performed validating the assay testing

This technology is available for licensing to industry for further development and commercialization.