
ANALYSIS OF MODIFIED VACCINIA ANKARA TROPISM AND GROWTH CONDITIONS

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Vaccinia is a large enveloped virus belonging to the poxvirus family. It has linear, double stranded DNA, averaging about 190 kbp in length. Although vaccinia's origin is unknown, it is closely related to cowpox, smallpox and horsepox. It is used as a vaccine for smallpox. Recombinant vaccinia is also used a vaccine for multiple other diseases. We employed a mutant form of the virus, modified vaccinia Ankara (MVA), which has a limited host range and limited virulence compared to the wild-type vaccinia, which infects almost all cell types. MVA was established to infect the hamster cell line BHK-21. This cell line was used to test culture conditions and to determine the tissue culture infectious dose 50% (TCID50), which is the measure of the results. This work was undertaken to establish how different culture and infection conditions affect virus growth. This study reports several factors that influence growth and preliminary results for infection rates in several cell lines.