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(54) Title: MICROORGANISMS FOR THERAPY

(57) Abstract: Recombinant *vaccinia* viruses useful as tumor-specific delivery vehicle for cancer gene therapy and vaccination. Therapeutic methods and microorganisms therefore are provided. The microorganisms are designed to accumulate in immunoprivileged tissues and cells, such as in tumors and other proliferating tissue and in inflamed tissues, compared to other tissues, cells and organs, so that they exhibit relatively low toxicity to host organism. The microorganisms also are designed or modified to result in leaky cell membranes of cells in which they accumulate, resulting in production of antibodies reactive against proteins and other cellular products and also permitting exploitation of proliferating tissues, particularly tumors, to produce selected proteins and other products. Methods for making tumor specific antibodies and also methods of making gene products encoded by the microorganism as well as antibodies reactive therewith are provided.



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