

PubMed

U.S. National Library of Medicine
National Institutes of Health



Display Settings: Abstract

[Cancer Epidemiol Biomarkers Prev.](#) 2011 May 17. [Epub ahead of print]

Genetic and Viral Etiology of Glioblastoma--a Unifying Hypothesis.

[Pandey JP.](#)

Authors' Affiliation: Department of Microbiology and Immunology, Medical University of South Carolina, Charleston, South Carolina.

Abstract

Growing body of evidence implicates human cytomegalovirus (HCMV) in the etiology of glioblastoma (GBM). Although HCMV is a ubiquitous herpesvirus, only a minority of those infected develop GBM, suggesting the involvement of host genetic factors in susceptibility to HCMV-induced/spurred GBM. HCMV has evolved a large repertoire of strategies for decreasing the efficacy of the host immune response and interfering with viral clearance. One strategy involves the generation of proteins that have functional properties of the Fc γ receptor (Fc γ R), which may enable the virus to evade host immunosurveillance by avoiding the effector consequences of antibody binding, such as antibody-dependent cellular cytotoxicity. Results of binding studies involving HCMV-encoded Fc γ R and genetically different immunoglobulin G proteins suggest that GM genes--genetic determinants of immunoglobulin γ chains--could modulate this viral strategy and thus serve as functional risk factors for the development of GBM, potentially unifying its seemingly disparate infectious, immune, and genetic etiologies. *Cancer Epidemiol Biomarkers Prev*; 20(6); 1-3. ©2011 AACR.

PMID: 21586624 [PubMed - as supplied by publisher]

LinkOut - more resources