

Cytomegalovirus Infection of Human Blood Cells

Lena Einhorn and Åke Öst

From the Departments of Virology, National Bacteriological Laboratory and Karolinska Institutet; and the Department of Pathology, Karolinska Hospital, Stockholm, Sweden

Isolates of human cytomegalovirus (CMV), passaged one to 10 times in vitro, regularly induced CMV early antigens (EAs) in human leukocytes. Most CMV EA-positive leukocytes were monocytes. A small proportion of the cells appeared to be polymorphonuclear cells or lymphocytes. EA-positive cells were detected as long as cells in the culture remained viable (seven to 13 days). There was no clear evidence of viral production during this period. In contrast, EA-positive leukocytes were only rarely found after exposure to the CMV laboratory strain Ad169, although this strain generally had a higher EA-inducing capacity than did isolates in human lung fibroblasts. CMV strain Ad169 may have been adapted to fibroblasts through the many in vitro passages in these cells, and the strain appears to be unsuitable for investigation of susceptibility to CMV.