PublisherInfo		
PublisherName	:	BioMed Central
PublisherLocation	:	London
PublisherImprintName	:	BioMed Central

Cytomegalovirus control

ArticleInfo		
ArticleID	:	4416
ArticleDOI	:	10.1186/gb-spotlight-20020306-01
ArticleCitationID	:	spotlight-20020306-01
ArticleSequenceNumber	:	82
ArticleCategory	:	Research news
ArticleFirstPage	:	1
ArticleLastPage	:	2
ArticleHistory	:	RegistrationDate : 2002–3–6 OnlineDate : 2002–3–6
ArticleCopyright	:	BioMed Central Ltd2002
ArticleGrants	:	
ArticleContext	:	130593311

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The IE86 protein of human cytomegalovirus is an 'immediate early' viral protein that drives cells into S phase, but blocks cell division. In the March 5 Proceedings of the National Academy of Sciences, Song and Stinski describe a microarray analysis of the effects of IE86 expression on the human transcriptome (*Proc Natl Acad Sci USA* 2002, **99:**2836-2841). They infected human foreskin fibroblast cells with a replication-defective adenovirus encoding the IE86 protein, then isolated cellular RNA and hybridized it to oligonucleotide arrays containing about 12,000 human genes. Of these, 64 were activated more than four-fold by IE86 expression; half of these are implicated in cell proliferation and DNA replication. A number of the IE86-induced genes are known targets of the cell-cycle regulator E2F; it remains to be established how IE86-induced genes block cell cycle progression.

References

1. The human cytomegalovirus IE86 protein can block cell cycle progression after inducing transition into the S phase of permissive cells.

2. *Proceedings of the National Academy of Sciences* , [http://www.pnas.org]