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Herpesvirus HVMA: A New Representative in the Group of the EBV-like B-Lymphotropic Herpesviruses of Primates*

B. A. Lapin, V. V. Timanovskaya, and L. A. Yakovleva

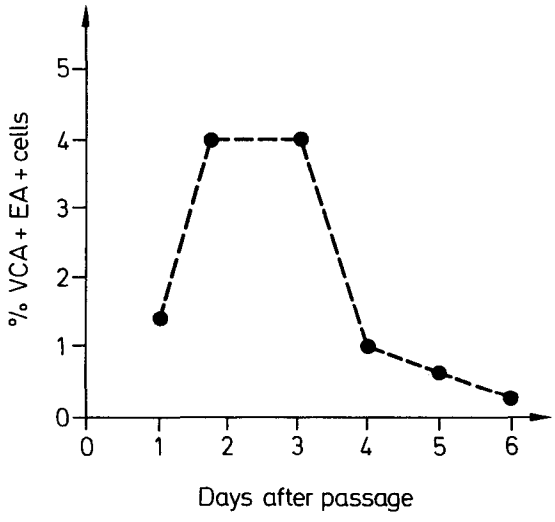
Isolation of EBV from an African baby with malignant lymphoma in 1964 was followed by a series of investigations resulting in the establishment of antibodies to viral capsid antigen (VCA EBV) in blood sera of different African and Asian monkey species [1–7].

Detection of VCA EBV antibodies that did not differ in different lymphotropic herpesviruses, as was established later, resulted in the notion that EBV was a ubiquitous virus and that monkeys could serve as a natural reservoir of the virus being the source of human infection.

B-lymphotropic herpesvirus HVP, antigenically and biologically related but not identical to EBV and sharing only 40% DNA homology with the latter, was isolated in our laboratory in 1973–1974 from lymphomatous hamadryas baboons [8–14]. Isolation of the virus HVP has been the basis for the idea on the existence of a family of the EBV-like B-lymphotropic herpesviruses of primates (human beings and different Old World monkey species). This idea has been confirmed by subsequent isolations of lymphotropic herpesviruses of chimpanzees [15], orangoutangs [16], gorillas [17], vervets [18], and macaques [19] by other investigators. The above viruses were produced in lymphoid cell suspension cultures established both from normal and (rarely) from sick monkeys with malignant lymphoma. It can be suggested that EBV-like B-lymphotropic herpesvirus would be revealed in other representatives of the Old World primates.

The present report describes isolation of a new lymphotropic herpesvirus of *M. arctoides* produced by lymphoid cell culture MAL-1, which has been established from *M. arctoides* peripheral blood lymphocytes.

A large number of cytoplasmatic IgM were detected in MAL-1 culture cells. This meant it was impossible to investigate them in an indirect immunofluorescent test using polyspecific anti-Ig-FITC conjugate. Antigens crossreacting with EA and VCA HVP were identified in MAL-1 cells by a direct immunofluorescence test using labeled FITC globulins of anti-VCA + EA + HVP-positive serum of hamadryas baboons. The percentage of EA + VCA + cells in MAL-1 culture varied depending on the period after passage (> 1%–4%). The maximum of antigen-positive cells was noted 48–72 h after the passage (Fig. 1).



* Institute of Experimental Pathology and Therapy, USSR Academy of Medical Sciences, Sukhumi, USSR

Electronmicroscopic investigation of ultrathin sections of MAL-1 cells has revealed herpesvirus particles. Molecularbiological investigations have shown moderate DNA homology of the isolated virus with the DNA of baboon herpesvirus (30%) and the DNA of the Epstein-Barr virus (20%).

Thus, the group of B-lymphotropic herpesviruses has been replenished with a new virus of *M. arctoides* monkeys, which has been named HVMA (herpesvirus *M. arctoides*).

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