

THE EFFECT OF DIPYRIDAMOLE ON THE MULTIPLICATION OF VACCINIA VIRUS
IN RK₁₃ CELLS

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Dipyridamole possesses a broad antiviral spectrum against several RNA and DNA viruses (1, 2, 3).

The aim of the present studies was to examine the influence of dipyridamole on multiplication of vaccinia virus (Lister strain) in RK₁₃ cells. The substance was added to the maintenance medium (in concentrations of 0.1, 1, 10 and 25 μ M) for 1 hr before infection, or for a 1-hr adsorption period of the virus; or after virus adsorption for the entire period of incubation of the infected cultures. In each of these variants, the infectious titres of the virus (4) were determined 48 hr after infection. A drop of titre, statistically significant and proportional to the concentration of dipyridamole, occurred exclusively in the variant in which dipyridamole was added after virus adsorption for the entire period of incubation. At the highest concentration of dipyridamole used (25 μ M), inhibition of viral titre reached about 95%.

The dependence of vaccinia virus multiplication on dipyridamole concentration and three doses of inoculum (66, 6 600 and 660 000 plaque forming units per 300 000 cells) was also examined. At low concentrations of dipyridamole the degree of virus inhibition depended on the dose of inoculum. At a 25 μ M concentration of dipyridamole this dependence became less pronounced and, irrespective of the infecting dose of the virus, inhibition of its multiplication was beyond 90%.

References

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