

HEMORRHAGIC FEVER VIRUSES

Pichinde Virus/An 4763 Punta Toro A Virus/Adames

Methodology

Viruses and Cell Lines Used in Primary Drug Screening. Pichinde and Punta Toro A viruses were employed in this portion of the work. The virus strains were An 4763 and Adames, respectively. The cell lines were African green monkey kidney cells (BSC-1; Pichinde virus) and adult Rhesus monkey kidney cells (LLC-MK₂; Punta Toro A virus).

Methods for Assay of Antiviral Activity. The methodologies employed with the hemorrhagic fever viruses (inhibition of viral cytopathic effect—*visual CPE*; increase in neutral red dye uptake—*NR*; time-of-addition study) were identical to those used with influenza viruses described in the preceding Section. Values of IC₁₀₀ were determined by virus titer.

Reference Drug. Ribavirin was again the reference compound employed in the efficacy testing work.

Results

Virutases exhibited substantial efficacy against both hemorrhagic fever viruses, particularly so against Punta Toro A virus. Virus titer experiments established that the IC₅₀ and IC₁₀₀ values for the former material were in fact 5-27 µg/mL and 270 µg/mL, respectively. The addition of Virutases 1 h before virus exposure, at the time of virus exposure, and 1 h after virus exposure resulted in similar levels of inhibition of viral infection. When the Virutase compounds were added at 2 h after virus exposure or longer, it was only weakly inhibitory. These data, reminiscent of the findings for influenza viruses, suggest that some early event in the virus replication cycle was inhibited; previous work has established that the operative mechanism is in fact the inhibition of viral fusion.