

Synthesis and Properties of Dioxolane Deoxynucleoside Analogues

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Racemic 2',3'-dideoxynucleoside analogues 1, 2 and chiral 2'-deoxynucleoside analogues 3 have been prepared. Their structures were confirmed by PMR spectroscopy and X-ray analysis. These analogues were found to be inactive against HIV-1 (CEM) and HSV, HCMV, VZV (HFF) at concentration up to 100 μ g/ml and were nontoxic towards CEM and HFF cells. The absence of activity is probably due to the fact that 1-3 are not being recognized by cellular and viral kinases. Triphosphate of 2 was shown to be a chain terminator for several DNA polymerase.

