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[A0034]

Synthesis of Novel Acyclic Nucleoside and Acyclic Nucleoside Phosphonate Analogues of a Ring-Expanded ("Fat") Nucleobase Containing the Imidazo[4,5-*e*][1,3]diazepine Ring System

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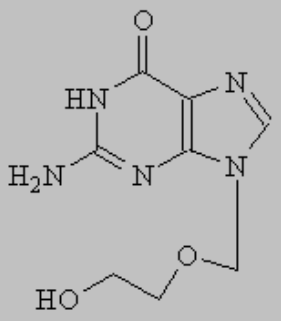
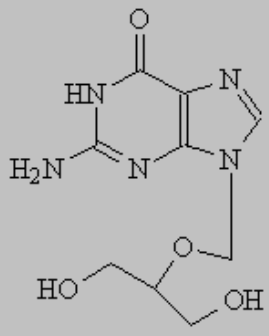
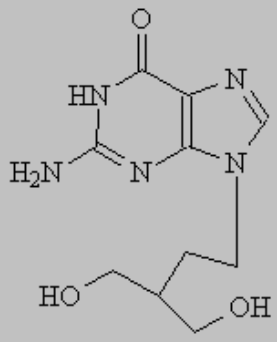
A number of acyclic nucleosides and nucleoside phosphonates have exhibited potent antiviral activities in recent years, and many of them have been approved by U.S. Food and Drug Administration (FDA) for a variety of viral infections. These include, but are not limited to, Acyclovir (**I**) for herpes simplex virus (HSV I and HSV II), Ganciclovir (**II**) for human cytomegalovirus (HCMV), Penciclovir (**III**) and Adefovir (PMEA) (**IV**) for hepatitis B virus (HBV). We have recently reported the synthesis and potent anti-HBV activity of a ring-expanded ("fat") nucleoside (**V**). We now report the synthesis of an acyclic nucleoside analogue (**VI**) as well as an acyclic nucleoside phosphonate analogue (**VII**) of the "fat" nucleoside **V**.



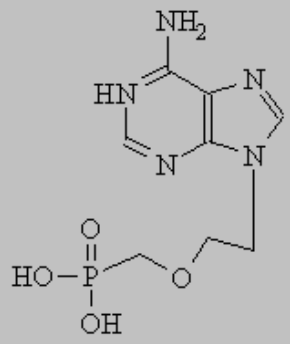
ACYCLOVIR (I)



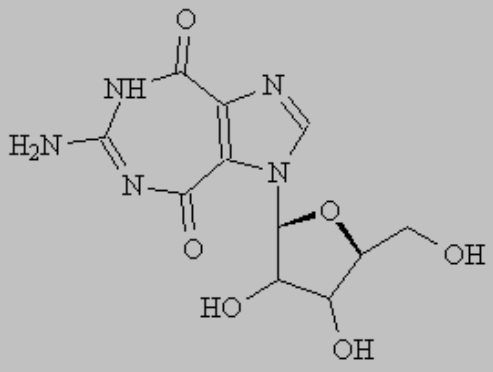
GANCICLOVIR (II)



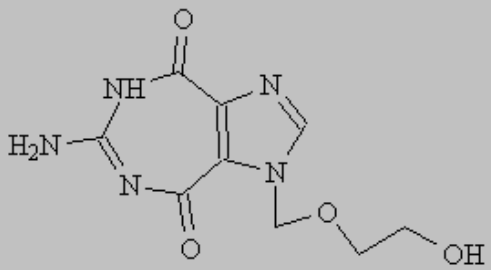
PENCICLOVIR (III)



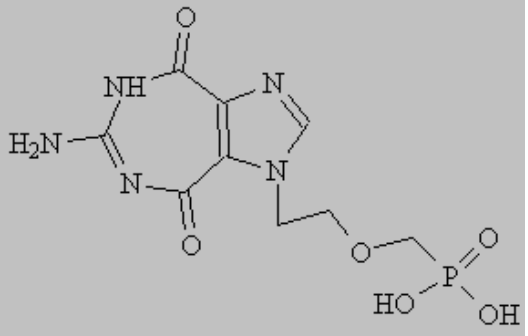
ADEFOVIR (IV)



(V)



(VI)



(VII)

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