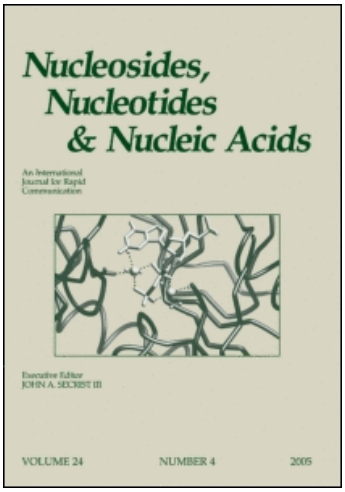

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Novel Acyclic Analogues of 3'-Azido-3' Deoxythymidine 1-Hydroxy-3-Azido-2-Propoxymethyl Derivatives

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NOVEL ACYCLIC ANALOGUES OF 3'-AZIDO-3' DEOXYTHYMIDINE

1-HYDROXY-3-AZIDO-2-PROPOXYMETHYL DERIVATIVES

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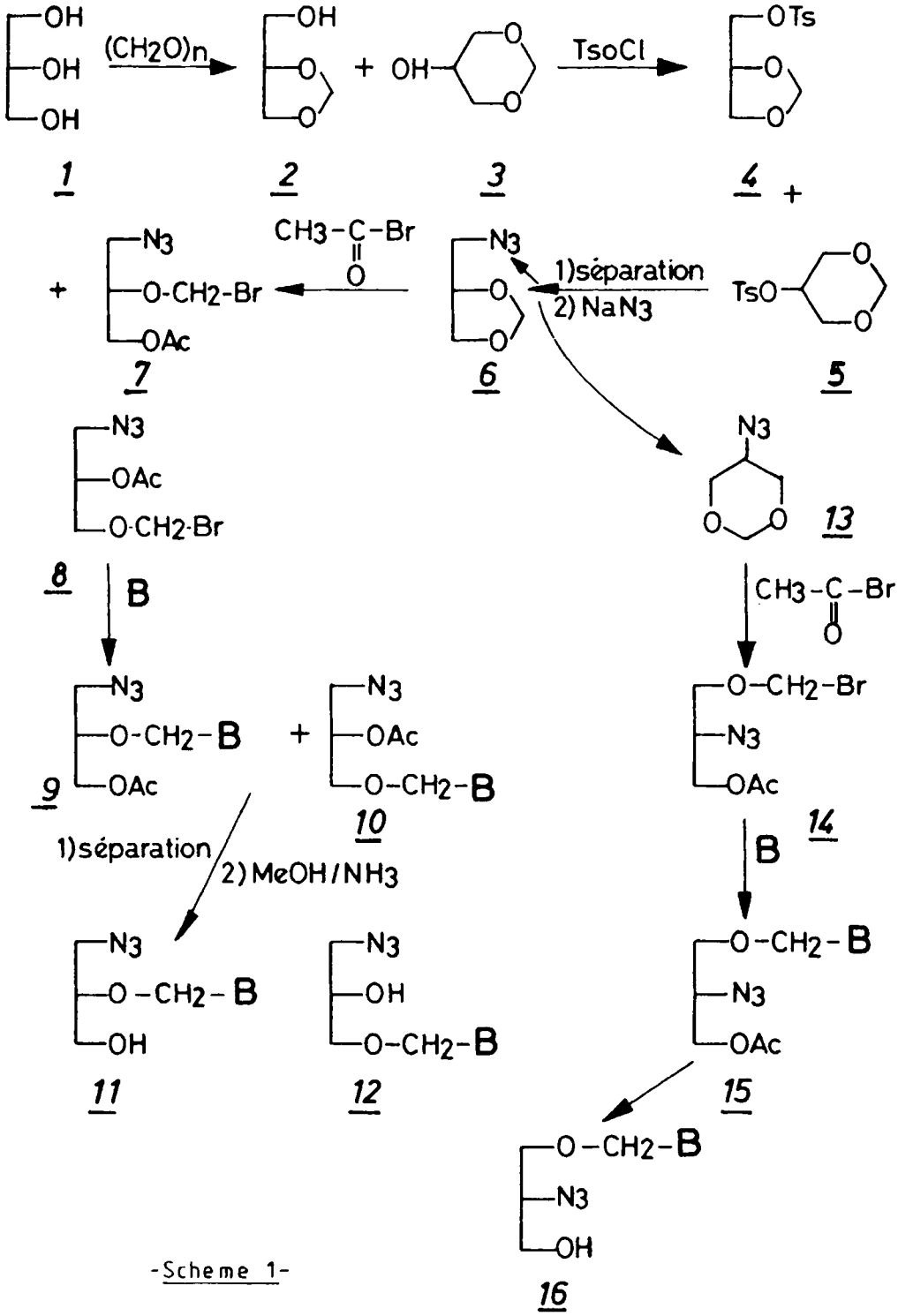
Abstract. Starting from glycerol, 1-hydroxy-3-Azido-2-propoxymethyl pyrimidines (T, U, C) are synthesized.

The 3'-Azido-3'-Deoxythymidine (AZT) is a very potent *in vitro* inhibitor of the replication of HTLV III (Human T-Lymphototropic virus). The combination between AZT and acyclovir exhibit a synergetic antiretroviral effect (1) . Thus we have prepared some novel acyclic analogues of AZT to investigate their inhibitory properties.

The reaction of D-glycerol with para-formaldehyd catalysed by para-Toluene sulfonic acid has been reported (2) to give a mixture of glycerol formal 2 and 3. The hydroxyl group is reacted with Tosyl chloride. After separation of the two isomers 4 and 5 , azide salt is reacted with 3-Tosyloxy-glycerol formal 4 to give 3-azido glycerol formal 6. Treatment of cyclic formal at room temperature with acetyl bromide results in acylative cleavage of the C(2)-O bond in a good yield. The condensation of the two isomers bromomethyl ether acetates 7 and 8 with



-Scheme 1-

silylated pyrimidines (T, C, U) produced a mixture of species 9 and 10 which were separated by chromatography. Deacetylation of 9 and 10 conducted respectively to 11 and 12 in a good yield (Scheme 1).

The acyclonucleoside 16 is obtained from 5 with the same protocole

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