

Chiral Pool Synthesis of 4a-Substituted Carbocyclic Cyclopentanoid Nucleoside Precursors, I

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Z. Naturforsch. **54b**, 1068–1078 (1999); received May 21, 1999

Nucleosides, Carbohydrates, X-Ray Data

A suitable protected D-ribo-1,4-lactone derivative has been used for the straightforward chiral pool synthesis of cyclopentanoid nucleoside precursors. Thus, epoxidation followed by deoxygenation or regioselective ring opening led to nucleoside precursors modified at the positions C(4), C(4a) and C(4,4a) as well as side-chain modified derivatives. The structures of the key intermediates were determined by X-ray analyses.