SYNTHESIS OF DINUCLEOTIDE-LIKE COMPOUNDS CONTAINING

A 5'-DEOXY-5'-ADENOSINEACETIC ACID

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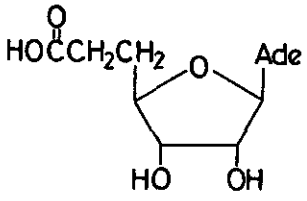
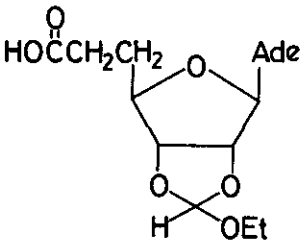
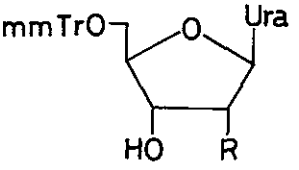
5'-Deoxy-5'-adenosineacetic acid (5'-AAA) (1), which was first synthesized by Follmann[1], is known as a useful model nucleotide of 5'-AMP. For the biological and physicochemical interests, we synthesized 3'-Uridinyl 5'-deoxy-5'-adenosineacetate (5) [by condensation of a 2',3'-O-ethoxymethylene-5'-AAA (2) with 2'-O-benzyl-5'-O-monomethoxytrityluridine (3) followed by hydrogenolysis in 80% acetic acid] and N-(2'-deoxy-2'-uridinyl)-5'-deoxy-5'-adenosineacetamide (6) [by condensation of (1) with 2'-amino-2'-deoxy-5'-O-monomethoxytrityluridine (4) followed by treatment with 80% acetic acid]. The spectroscopical evidences for the structure of these di-nucleotide-like compounds, which have a carboxy ester or a amide linkages instead of a phosphate group, are given.



(1)

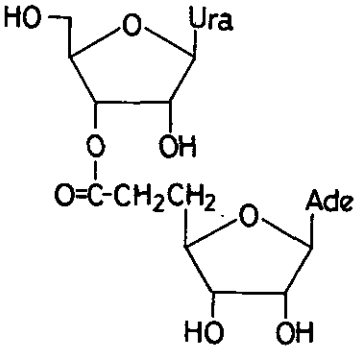


(2)

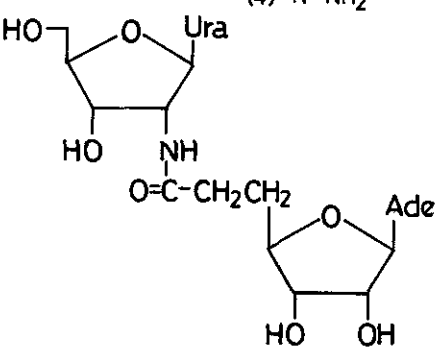


(3) R=OBy

(4) R=NH2



(5)



(6)

1) T.E. Walker, H. Follmann, and H.P.C. Hogenkamp, Carbohyd. Res., 27, 225 (1973).