[J. Chem. Res.(*S*), **1993**, 2-3; (*M*), **1993**, 101-112.] [Lab. of Medicinal Chemistry]

Diversity of Intramolecular Rearrangements of Uracil Derivatives to Pyrazolones and Hydantoins governed by a Prominent 5-Substituent Effect.

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Ring transformations described in our previous papers involved an initial nucleophilic attack of the terminal reactive site of the 5-substituents at the 6-position of the uracil ring and a subsequent *N(1)*-*C(6)* bond cleavage. Recently we have found the occurrence of two types of intramolecular rearrangement, uracil-to-pyrazole and uracil-to-hydantoin. Unlike the former rearrangement, the latter is unprecedented on account of the involvement of an *N(3)*-*C(4)* bond cleavage which occurs *via* an initial nucleophilic attack at the *C-4* carbonyl group.

[Tetrahedron Lett., **34**, 4835-4836 (1993)] [Lab. of Medicinal Chemistry]

Reductive Cleavage of the Ribose Moiety in Purine Nucleosides Using Diisobutylaluminum Hydride: A New Method for the Preparation of Acyclonucleosides.

YUKIO KITADE, KOSAKU HIROTA, YOSHIFUMI MAKI

Reaction of purine nucleosides, such as 2',3'-*O*-isopropylideneinosine and 2',3'-*O*-isopropylideneadenosine, with diisobutylaluminum hydride (DIBALH) in dry tetrahydrofuran resulted in the reductive cleavage of the ribose moiety at the anomeric position to give the corresponding 9-(2',3'-*O*-isopropylideneribityl)purines in good yields.

[Tetrahedron Lett., **34**, 6579-6580 (1993)] [Lab. of Medicinal Chemistry]

Synthesis of a Ring-Scission Analogue of Neplanocin A as a Potential Inhibitor of S-Adenosylhomocysteine Hydrolase.

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The ring scission analogue of neplanocin A, acycloneplanocin A, as a potential *S*-adenosylhomocysteine hydrolase inhibitor was synthesized *via* the reductive cleavage of 2',3'-*O*-isopropylideneadenosine by diisobutylaluminum hydride (DIBALH).