## GRAPHICAL ABSTRACTS

*Carbohydr. Res.* **1997**, *298*, 243

### Reductive cleavage of the positional isomers of benzoylated and methylated methyl α-D-mannopyranoside

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The positional isomers of partially methylated and benzoylated methyl α-D-mannopyranoside were subjected to reductive cleavage with $Et_3SiH$ and $Me_3SiOSO_2CF_3$. The tetra-*O*-benzoyl derivative, all tri-*O*-benzoyl positional isomers and the 2,4-di-*O*-benzoyl positional isomer were stable but the other positional isomers gave the respective 1,5-anhydro-D-mannitol derivatives.

*Carbohydr. Res.* **1997**, *298*, 251

### Proton NMR spectroscopy assignment of D-glucose residues in highly acetylated starch

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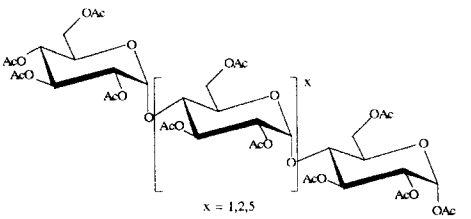


$^1H$ NMR assignments have been obtained for starch acetates using COSY and HOHAHA experiments in combination and by comparison with the spectra of peracetylated malto-oligosaccharides.

*Carbohydr. Res.* **1997**, *298*, 261

### Synthesis of 2″-oxidized derivatives of 5-deoxy-5-epi-5-fluoro-dibekacin and -arbekacin, and study on structure–chemical shift relationships of urethane(or amide)-type NH protons in synthetic intermediates

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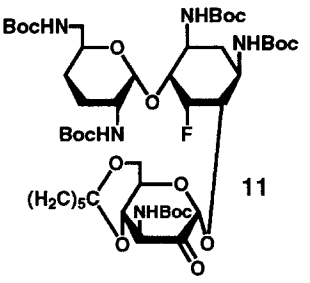
Two 2″-oxo dibekacin-analogs have been prepared via the *N*-Boc synthetic intermediates (as shown **11**). Relationships between the structure and the shift of *t*-butoxycarbonyl(= Boc)-N*H* protons were studied.




*Carbohydr. Res.* **1997**, *298*, 279

### Diastereoselectivity in the transglycosidation of methyl 2-deoxy-3,4,6-tri-*O*-methyl-2-(*N*-methylacetamido)-D- glucopyranoside, -galactopyranoside, and -mannopyranoside with racemic 2-butanol under reductive-cleavage conditions

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The title compounds were treated with selected Lewis acid promoters and the oxazolinium ions so formed were reacted with racemic 2-butanol. Time-course studies demonstrated that there was considerable diastereoselectivity in the formation of the resulting 2-butyl glycosides.

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# D-Glyconhydroximolactams strongly inhibit α-glycosidases

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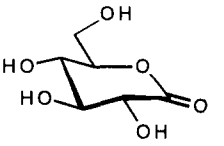
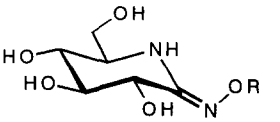
The neutral D-glyconolactones inhibit α-glucosidases weakly, while basic lactone analogues such as D-gluconhydroximolactam and some of its derivatives are strong α-glucosidase inhibitors.




R = H, $CH_2SCH_3$, C(O)NH-2-Cl-Ph