GRAPHICAL ABSTRACTS

Carbohydr. Res. **1997**, *299*, 103

Fractionation and characterization of 4-sulfobutyl ether derivatives of cyclomaltoheptaose (β-cyclodextrin)

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[b] *CyDex, L.C., 7304 West 130th Street, Suite 370, Overland Park, KS 66213, USA*

4-Sulfobutyl ether derivatives of cyclomaltoheptaose (β-cyclodextrin) of ds 1–10 were prepared, separated by anion-exchange chromatography, analyzed by capillary electrophoresis, and characterized by ^{1}H NMR spectroscopy and FAB mass spectrometry.

Carbohydr. Res. **1997**, *299*, 111

Isolation and characterization by NMR spectroscopy of three monosubstituted 4-sulfobutyl ether derivatives of cyclomaltoheptaose (β-cyclodextrin)

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Three isomeric monosubstituted 4-sulfobutyl ether derivatives of cyclomaltoheptaose (β-cyclodextrin) were separated by anion-exchange chromatography and characterized by 2D NMR spectroscopy.

Carbohydr. Res. **1997**, *299*, 119

Structure of the capsular polysaccharide of *Clostridium perfringens* Hobbs 5 as determibed by NMR spectroscopy

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NMR spectroscopy revealed that the capsular polysaccharide of the title organism was a hexasacchar-ide repeating unit:

$$[\rightarrow 4)\text{Glc}p\beta(1\rightarrow 3)\text{Gal}p\text{NAc}\beta(1\rightarrow 4)\text{Glc}p\text{A}\beta(1\rightarrow 3)\text{Glc}p\text{NAc}\beta(1\rightarrow 2)\text{Gal}p\alpha(1\rightarrow 3)\text{Man}p\beta(1\rightarrow)]_n$$

Carbohydr. Res. **1997**, *299*, 129

Heterocyclic derivatives of sugars: An NMR study of the formation of 1-glycosyl-3,5-dimethyl-1*H*-pyrazoles from hydrazones

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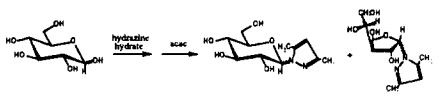
Reducing sugars with hydroazine hydrate, then butan-2,4-dione give mixtures of 1-glycosyl-3,5,-dimethyl-pyrazoles.



Carbohydr. Res. **1997**, *299*, 143

Authentic standards for the reductive-cleavage method. The positional isomers of partially methylated and acetylated or benzoylated 1,5-anhydro-D-xylitol

Larry E. Elvebak II [a], Vippra Knowles [b], Gary R. Gray [b,*]
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[b] *The Department of Chemistry, University of Minnesota, Minneapolis, MN 55455, USA*

The title compounds were obtained in pure form from 1,5-anhydro-D-xylitol by sequential partial methylation, benzoylation, and fractionation by HPLC. Debenzoylation and acetylation yielded the corresponding acetates.

Carbohydr. Res. **1997**, *299*, 151

Authentic standards for the reductive-cleavage method. The positional isomers of partially methylated and acetylated or benzoylated 1,5-anhydro-L-rhamnitol

Larry E. Elvebak II [a], Paula Wittmeyer [b], Gary R. Gray [b,*]
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The title compounds were obtained in pure form from 1,5-anhydro-L-rhamnitol by sequential methylation, benzoylation, and fractionation by HPLC. Debenzoylatin and acetylation yielded the corresponding acetates.

Carbohydr. Res. **1997**, *299*, 159

Synthesis of colitose-containing oligosaccharide structures found in polysaccharides from *Vibrio cholerae* O139 synonym Bengal using thioglycoside donors

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The syntheses of the tetrasaccharide below as well as the two possible monocolitose-containing trisaccharide structures thereof using colitose thioglycoside donors are described.

α-Col *p*-(1 → 2)-β-D-Gal *p*-(1 → 3)-[α-Col *p*-(1 → 4)]-β-D-Glc *p*NAc-(1 → $OCH_2(CH_2)_7COOME$

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Synthesis and evaluation of 1,5,6-trideoxy-6,6-difluoro-1,5-imino-D-glucitol (1,6-dideoxy-6,6-difluoronojirimycin) as a glucosidase inhibitor

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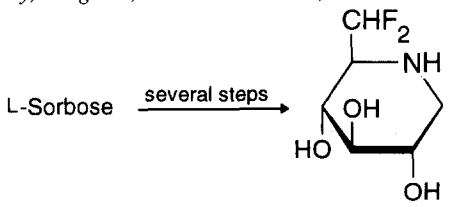

Carbohydr. Res. **1997**, *299*, 171

Synthesis of two analogues of the Sd[a] determinant. Replacement of the sialic acid residue by a sulfate or a carboxymethyl group

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Two analogues of the Sd[a] determinant tetrasaccharide have been synthesized aimed at the investigation of the physiological role of this carbohydrate moiety. These saccharides, having two different anionic substitutes for the sialic acid residue, are; β-D-Gal*p*NAc-(1 → 4)-3-*O*-SO_3H-β-D-Gal*p*-(1 → 4)-β-D-Glc*p*NAc-(1 → O)$(CH_2)_5NH_2$ and β-D-Gal*p*NAc-(1 → 4)-3-*O*-CH_2COOH-β-D-Gal*p*-(1 → 4)-β-D-Glc*p*NAc-(1 → O)$(CH_2)_5NH_2$.

Carbohydr. Res. **1997**, *299*, 181

Synthesis of the Sd[a] determinant and two analogous tetrasaccharides

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To contribute to the possibilities to study into more detail the biological significance of Sd[a]-containing glycans as occurring in Tamm-Horsfall glycoprotein three spacer-linked tetrasaccharides (**1-3**) have been synthesized.

	Hex	
β-D-Hex	1	Gal*p*NAc
1 ↓ 4	2	Gal*p*
	3	Glc*p*NAc

α-Neu*p*5Ac-(2→3)-β-D-Gal*p*-(1→4)-β-D-Glc*p*NAc-(1→O)$(CH_2)_5NH_2$

Carbohydr. Res. **1997**, *299*, 197

Structural analysis of the capsular antigen of *Escherichia coli* O8 : K41 : H11

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The primary structure of the acidic capsular antigen of *Escherichia coli* O8 : K41 : H11 was shown to be composed of branched pentasaccharide repeating units with the structure:

→4)-α-D-Gal*p*-(1→6)-β-D-Glc*p*-(1→3)-β-D-Gal*p*NAc-(1→
3 2
↑ ↑
1 1
β-D-Glc*p*A β-D-Glc*p*

Carbohydr. Res. **1997**, *299*, 203

The application of various protic acids in the extraction of (1 → 3)-β-D-glucan from *Saccharomyces cerevisiae*

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(1 → 3)-β-D-Glucans that are known as biological response modifiers were extracted from *Saccharomyces cerevisiae* with HOAc, HO(C=O)H, and H_3PO_4. By analysis of the glucan phosphates derived from the (1 → 3)-β-D-glucans, it is determined that primary structure is not affected by type of acid; however, molecular mass, size, polydispersity, and intrinsic viscosity of the glycan phosphate vary with pK_a of the acid employed.