Graphical Abstracts

Galactose dialdehyde: the forgotten candidate for a protein cross-linker?

Carbohydr. Res. **2001,** *334*, 1

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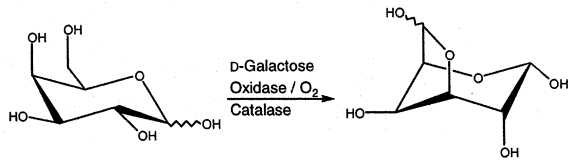
Oxidation of D-galactose gave a bicyclic dialdehyde. With ^{13}C labeling, a comparison of physicochemical properties was made with the protein cross-linker, glutaraldehyde.



Syntheses of model compounds related to an antigenic epitope in pectic polysaccharides from *Bupleurum falcatum* L.

Carbohydr. Res. **2001,** *334*, 7

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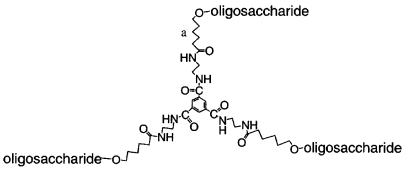
Oligo-valent clustering di-, trisaccharides related to an antigenic epitope in pectic polysaccharides from *Bupleurum falcatum* L. were synthesized as part of our investigations of biological interest.



Water-soluble and water-insoluble glucans produced by *Escherichia coli* recombinant dextransucrases from *Leuconostoc mesenteroides* NRRL B-512F

Carbohydr. Res. **2001,** *334*, 19

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The glucan produced by recombinant DSRS was mostly water-soluble, and contained about 65% 6-linked Glc*p*, 10% 3,6-linked Glc*p*, and 15% 4-linked Glc*p*. The glucan produced by recombinant dextransucrase DSRT5 was mostly water-insoluble, and contained about 50% 6-linked Glc*p* and 40% 3-linked Glc*p*.

Effect of fiber orientation in dynamic FTIR study on native cellulose

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Cellulose sheets with different fiber orientations were studied by dynamic FTIR spectroscopy in order to investigate the deformation behavior of cellulose and its relation to molecular straining.

Isolation and NMR characterization of rosacelose, a novel sulfated polysaccharide from the sponge *Mixylla rosacea*

Carbohydr. Res. **2001,** *334*, 39

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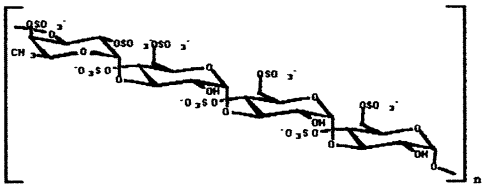
Rosacelose, a new anti-HIV polysaccharide composed of glucose and fucose sulfate, has been isolated from aqueous extract of the marine sponge *Mixylla rosacea*. Extensive use of ^{1}H and ^{13}C multidimensional NMR spectroscopy, combined with chemical analysis, have allowed to establish a linear polysaccharide structure mainly composed of 4,6-disulfated 3-*O*-glycosylated α-D-glucopyranosyl and 2,4-disulfated 3-*O*-glycosylated α-L-fucopyranosyl residues (in a 3:1 molar ratio).



(1)

Negative-ion electrospray ionisation–mass spectrometry (ESI–MS) as a tool for analysing structural heterogeneity in *kappa*-carrageenan oligosaccharides

Carbohydr. Res. **2001,** *334*, 49

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The neocarrabiose type oligosaccharides enzymically, produced from *kappa*-carrageenan by *kappa*-carrageenase, were investigated by electrospray ionisation mass spectroscopy (ESI–MS). The technique was used without any need for derivatisation of the oligosaccharides and the effect of NaCl content was studied.

The cations and anions of cyclobutanetetraone poly(phenylhydrazones)

Carbohydr. Res. **2001,** *334*, 61

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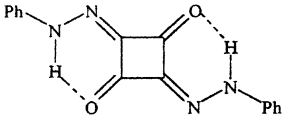
Six cyclobutanetetraone poly(arylhydrazones) have been treated with acids and bases, and the structures of the resulting anions and cations studied by UV–Vis absorption and NMR spectroscopy. In acid media, all the hydrazones studied formed cations, which exhibited bathochromic shifts due to the extension of their resonance systems. However, in bases, only some (those which could enolize) formed anions that exhibited hypsochromic shifts; the others were unaltered.



1

Crystal structure and solid state ^{13}C NMR analysis of *N*-(methyl 3,4,6-tri-*O*-acetyl-α, and β-D-glucopyranosid-2-yl)-oxamide derivative of *p*-chloroaniline, *N*,*N*-diethylamine, *N*-methylaniline and *N*-ethylaniline

Carbohydr. Res. **2001,** *334*, 71

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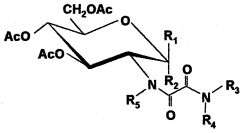

1 R_1= H, R_2= OMe, R_3 = H, R_4 = pClPh, R_5 = H
2 R_1= H, R_2= OMe, R_3 = Et, R_4 = Et, R_5 = H
3 R_1= OMe, R_2= H, R_3= Me, R_4 = Ph, R_5 = OAc
4 R_1= OMe, R_2= H, R_3= Et, R_4 = Ph, R_5 = OAc