Graphical Abstracts

Carbohydr. Res. **2001,** *335*, 71

Synthesis and transformations of new annulated pyranosides using the Pauson–Khand reaction

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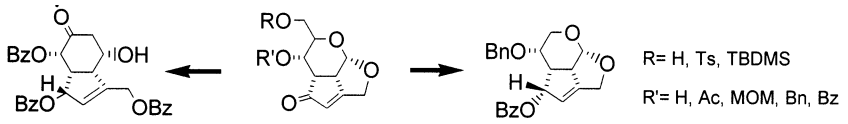

Carbohydr. Res. **2001,** *335*, 91

The aglycone of sulfogalactolipids can alter the sulfate ester substitution position required for hsc70 recognition

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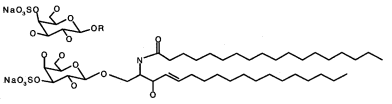

Hsp70 binding to sulfogalactolipids (SGLs) has been probed using a series of synthetic positional sulfated or phosphorylated glycolipid analogues containing either a long-chain bisalkyl hydrocarbon–2-(tetradecyl)hexadecane or C_{18} ceramide backbone. Recombinant hsc70 bound ceramide-based glycoconjugates having either 3′- or 4′-sulfogalactose but only the 4′-sulfogalactose positional isomer conjugated to the long-chain branched alkane. The 3′,4′-disulfate was poorly recognized, and tri-, and tetra-sulfated or phosphorylated galactolipids were not bound. These results highlight the importance of the aglycone and the position rather than the number of sulfate esters within the galactose ring. A 3′-SGL-based soluble inhibitor, in which the acyl chain of ceramide was replaced with an adamantyl group, inhibited binding of hsc70 to both 3′- and 4′-SGL species with and IC_{50} of 50 and 75 μM, respectively, indicating a shared sulfogalactose binding site.

Carbohydr. Res. **2001,** *335*, 101

Computer-assisted structural analysis of regular glycopolymers on the basis of ^{13}C NMR data

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A computer instrument was created to predict primary structures of regular glycopolymers based on ^{13}C NMR data. Verification on a variety of linear and branched polymers built up of residues linked by glycosidic, amidic and phospho-diester bonds showed a good convergency of predictions with data of independent structure research.

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The effect of peptide–pectin interactions on the gelation behaviour of a plant cell wall pectin

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Basic peptides, including a seven amino acid peptide taken from genomic data for a carrot hydroxyproline-rich glycoprotein (extensin) induced gelation of a native tomato cell wall pectin.

Carbohydr. Res. **2001,** *335,* 127

Two butylated aminooligosaccharides isolated from the culture filtrate of *Streptomyces luteogriseus*

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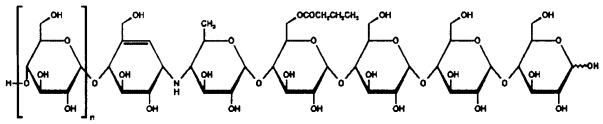

Butytatins M03: n = 0, M13: n = 1

Carbohydr. Res. **2001,** *335,* 133

Structural determination of an exocellular mannan from *Rhodotorula mucilaginosa* YR-2 using ab initio assignment of proton and carbon NMR spectra

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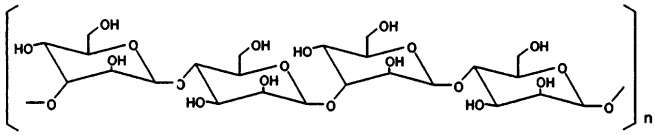
A structure of the polysaccharide chain of *Rhodotorula mucilaginosa* YR-2 is proposed.



Carbohydr. Res. **2001,** *335,* 141

Synthesis of 3-hexuloses from 1,2:5,6-di-*O*-isopropylidenehexitols

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