Graphical Abstracts

Carbohydr. Res. **2003,** *338*, 1811

Starch biosynthesis: sucrose as a substrate for the synthesis of a highly branched component found in 12 varieties of starches

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Incorporation of ^{14}C-glucose into starch from [^{14}C]sucrose and the properties of the resulting alpha amylase α-limit dextrins (α-LDs).

Incorporation of ^{14}C-glucose into starch from ^{14}C-sucrose and the properties of the resulting HMW α-amylase limit dextrins (α-LDs)

Starches	Maize	Amz-5	Amz-7	Waxy Maize	Rice	Potato	Wheat	Barley	Rye	Lima Bean	Tapioca	Shoti
Total ^{14}C cpm	16,880	34,160	22,080	16,770	5,545	922	34,410	7,220	17,876	2,186	2,168	396
% α-LD	60.5	30.6	16.1	62.3	84.1	31.5	40.4	31.2	29.3	27.9	16.9	22.4
MW α-LD	5,023	4,003	2,367	5,753	5,510	4,846	3,469	4,311	3,809	3,841	3,290	2,578
% branching in α-LD	17.8	21.5	37.2	16.4	15.6	17.4	27.2	22.3	25.2	25.0	33.2	41.1

Carbohydr. Res. **2003,** *338*, 1823

Enhanced enzymatic hydrolysis of langostino shell chitin with mixtures of enzymes from bacterial and fungal sources

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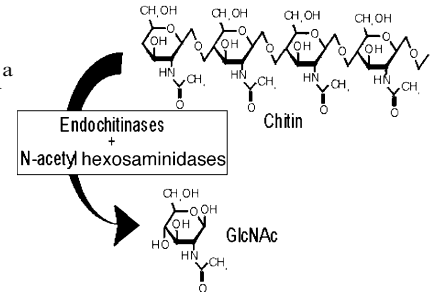

Carbohydr. Res. **2003,** *338*, 1835

Structure and serological characterization of the O-antigen of *Proteus mirabilis* O18 with a phosphocholine-containing oligosaccharide phosphate repeating unit

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α-D-Glc*p*
↓
4
6)-β-D-Glc*p*-(1→3)-β-D-Gal*p*-(1→3)-β-D-Glc*p*NAc-(1→3)-α-D-Glc*p*NAc-1-*P*-
4
↑
Cho*P*

Carbohydr. Res. **2003,** *338*, 1843

Structure of a highly substituted β-xylan of the gum exudate of the palm *Livistona chinensis* (Chinese fan)

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The gum from *Livistona chinensis* forms a low-viscosity solution, and its highly substituted glycanoxylan has a main chain of (1→4)-linked β-Xyl*p* units substituted at O-2, O-3, and O-2,3 by side-chains, some long, containing α-Glc*p*A-(1→2)-Xyl*p*, 4Me-α-Glc*p*A-(1→2)-Xyl*p*, α-Ara*f*, and α-Fuc*p*-(1→2)-Ara terminals. The presence of fucose in such a polysaccharide appears typical of gum exudates from palms (Arecaceae).

Carbohydr. Res. **2003,** *338*, 1851

Methylobacterium sp. isolated from a Finnish paper machine produces highly pyruvated galactan exopolysaccharide

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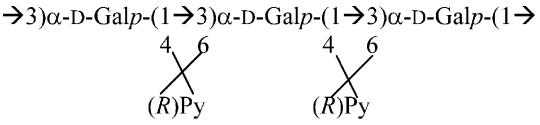

Carbohydr. Res. **2003,** *338*, 1861

Macromolecular and solution properties of Cepacian: the exopolysaccharide produced by a strain of *Burkholderia cepacia* isolated from a cystic fibrosis patient

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Light scattering, viscosity and potentiometric titration experiments defined the aggregation properties of the exopolysaccharide produced by a bacterial strain involved in cystic fibrosis pulmonary infections.

Carbohydr. Res. **2003,** *338*, 1869

Isolation and characterization of water-soluble hemicelluloses from flax shive

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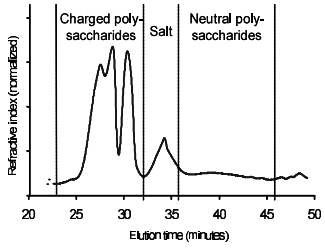

Water-soluble hemicelluloses (*O*-acetyl-4-*O*-methylglucuronoxylan and *O*-acetyl-glucomannan) were solubilized from flax shive by microwave treatment. The mixture of charged and neutral polysaccharides were effectively separated by aqueous size-exclusion chromatography.

Carbohydr. Res. **2003,** *338*, 1877

A novel approach to the stereocontrolled synthesis of *C*-vinyl β-D-galactopyranosides

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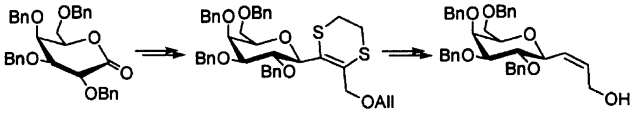

Carbohydr. Res. **2003,** *338*, 1881

Biochemical and catalytic properties of an endoxylanase purified from the culture filtrate of *Sporotrichum thermophile*

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An endo-β-1,4-xylanase (1,4-β-D-xylan xylanoxydrolase, EC 3.2.1.8) present in culture filtrates of *Sporotrichum thermophile* ATCC 34628 was purified to homogeneity by Q-Sepharose and Sephacryl S-200 column chromatographies.

Carbohydr. Res. **2003,** *338*, 1891

Elucidation of the O-chain structure from the lipopolysaccharide of *Agrobacterium tumefaciens* strain C58

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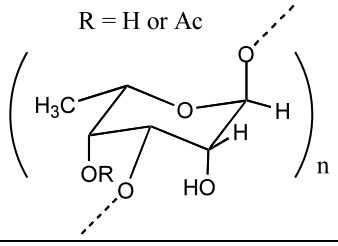

Carbohydr. Res. **2003,** *338*, 1895

Structure of the lipopolysaccharide of *Pseudomonas aeruginosa* O-12 with a randomly *O*-acetylated core region

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α-L-Rha-(1→6)-α-Glc-(1→4)┐ *P*-(O-6)┐ ┌(2-O)-*PP*Etn
α-Glc-(1→6)-β-Glc-(1→3)-α-GalN-(1→3)-α-Hep-(1→3)-α-Hep-(1→5)-α-Kdo
L-Ala-(N-2)┘ Cm-(O-7)┘ └(4-O)-*P*

Carbohydr. Res. **2003,** *338*, 1907

Cassia grandis Linn. f. seed galactomannan: structural and crystallographical studies

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Man–Gal ratio: 3.20 (HPLC); 3.15 (GLC); 3.13 (^{13}C NMR); 3.10 (^{1}H NMR) $M_w = 8.02 \times 10^5$; $M_w/M_n = 1.35$; $dn/dc = 0.15$; $[\eta] = 848$ mL/g. Unit cell parameters: $a = 9.00$; $b = 24.81$; $b = 24.81$ Å. Physico-Chemical, Methylation, periodate oxidation, Smith degradation, NMR and X-ray studies reveals that the gum has the basic structure of legume galactomannans with a β-(1→4)-linked main mannan backbone and α-(1→6)-galactosyl branching.