Graphical Abstracts

Carbohydr. Res. **2003,** *338*, 1023

Efficient synthesis of a heptasaccharide, the repeating unit of the O-chain lipopolysaccharide produced by *Xanthomonas campestris* strain 642

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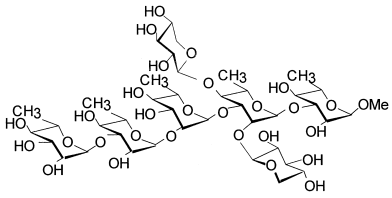

Carbohydr. Res. **2003,** *338*, 1033

First synthesis of β-D-Gal*f*-(1→3)-D-Gal*p*—the repeating unit of the backbone structure of the O-antigenic polysaccharide present in the lipopolysaccharide (LPS) of the genus *Klebsiella*

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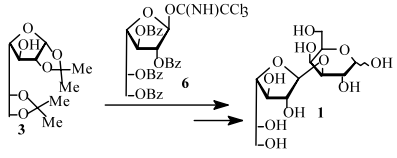

Carbohydr. Res. **2003,** *338*, 1039

Practical synthesis of the 2-acetamido-3,4,6-tri-*O*-acetyl-2-deoxy-β-D-glucosides of Fmoc-serine and Fmoc-threonine and their benzyl esters

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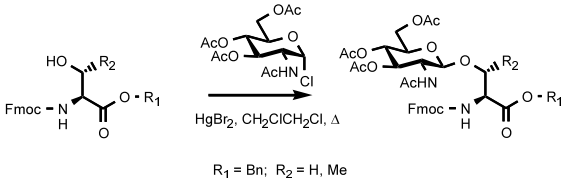

Carbohydr. Res. **2003,** *338*, 1045

Synthesis of Lewis X trisaccharide analogues in which glucose and rhamnose replace *N*-acetylglucosamine and fucose, respectively

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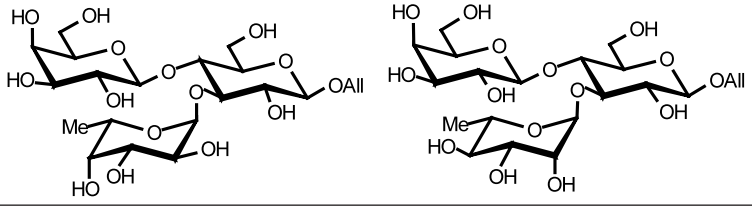

Carbohydr. Res. **2003,** *338*, 1055

Structure and serological characterization of 5,7-diamino-3,5,7,9-tetradeoxy-non-2-ulosonic acid isolated from lipopolysaccharides of *Vibrio parahaemolyticus* O2 and O-untypable strain KX-V212

Noritaka Hashii, Yasunori Isshiki, Takehiro Iguchi, Kazuhito Hisatsune, Seiichi Kondo

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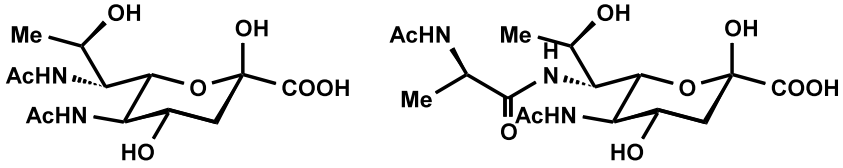

Carbohydr. Res. **2003,** *338*, 1063

Structural analysis of the carbohydrate backbone of *Vibrio parahaemolyticus* O2 lipopolysaccharides

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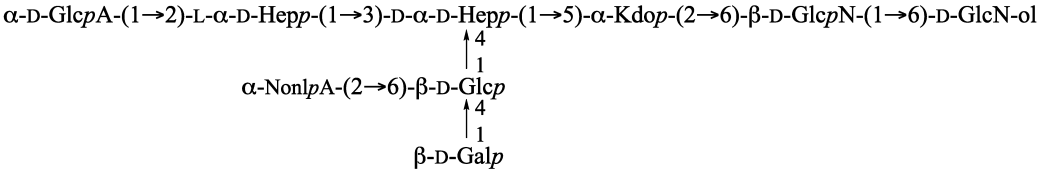

Carbohydr. Res. **2003,** *338*, 1073

Pentafluoropropionyl and trifluoroacetyl groups for temporary hydroxyl group protection in oligomannoside synthesis

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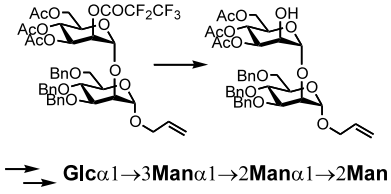

Carbohydr. Res. **2003,** *338*, 1083

The kinetics of periodate oxidation of carbohydrates 2. Polymeric substrates

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A study of periodate oxidation on a series of dextran oligomers and polymers is carried out by isothermal calorimetry. The dependence of the kinetic rates on molecular weight of dextran samples is interpreted in terms of different reactivity rates, due to the presence of two kinds of sites with different reactivities.

Carbohydr. Res. **2003,** *338*, 1097

Relation between the secondary structure of carbohydrate residues of α_1-acid glycoprotein (orosomucoid) and the fluorescence of the protein

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The correlation between secondary structure of the carbohydrate residues of α_1-acid glycoprotein and the fluorescence of the protein have been studied. We compared the fluorescence intrinsic parameters such as lifetime, quantum yield and radiative and non-radiative constants of the sialylated and asialylated forms of the protein.

Carbohydr. Res. **2003,** *338*, 1103

A conformational model of per-*O*-acetyl-cyclomalto-heptaose (-β-cyclodextrin) in solution: detection of partial inversion of glucopyranose units by NMR spectroscopy

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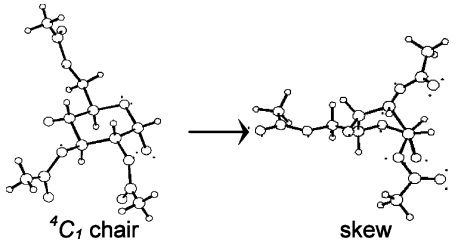

Carbohydr. Res. **2003,** *338*, 1109

A fluorescence study of the interactions between sodium alginate and surfactants

Miguel G. Neumann, Carla C. Schmitt, Eduardo T. Iamazaki

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The interaction between alginate and surfactants of opposite charge form induced micelles at surfactant concentrations below the CMC. The pre-micelles are less hydrophobic character than the real micelles and are not formed with surfactants of the same charge, confirming the electrostatic character of the interaction.

Carbohydr. Res. **2003,** *338*, 1115

New derivatives of D-mannaric and galactaric acids. Synthesis of a new stereoregular Nylon 66 analog from carbohydrate-based monomers having the D-*manno* configuration

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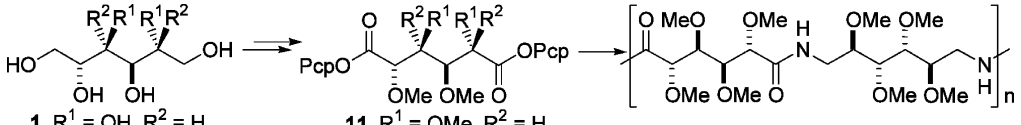

Carbohydr. Res. **2003,** *338*, 1121

An unusual course of thioglycoside activation with bromine: synthesis and crystal structure of 4-*O*-acetyl-2-bromo-2,3,6-trideoxy-3-*C*-methyl-3-trifluroacetamido-α-L-altropyranosyl bromide

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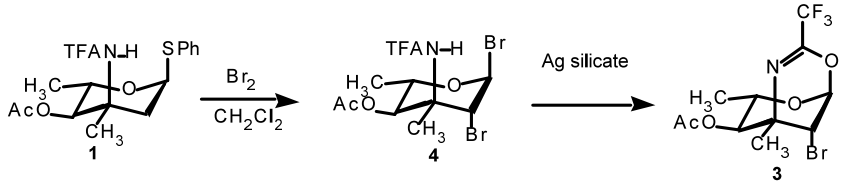

Carbohydr. Res. **2003,** *338*, 1127

Specificity of yeast (*Saccharomyces cerevisiae*) in removing carbohydrates by fermentation

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Fermented	Partially Fermented	Resistant to Fermentation	
D-glucose	D-ribose	D-xylose	melezitose
D-fructose	D-glucuronic acid	D-rhamnose	isomaltotriose
D-mannose	isomaltose	L-sorbose	isomaltotetraose
D-galactose	α,α-trehalose	leucrose	maltotetraose
maltose	maltotriose	melibiose	acarbose
sucrose	raffinose	Me-β-D-glucopyranoside	
turanose	Me α-D-glucopyranoside		
	Ph α- and β-D-glucopyranoside		

Carbohydr. Res. **2003,** *338*, 1133

Modification of di- and tetrasaccharides from shark cartilage keratan sulphate by refined anhydromethanolic hydrochloric acid-treatments and evaluation of their specific desulphation

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Highly sulphated keratan di- and tetrasaccharide were prepared by keratanase II-digestion of keratan sulphate (KS) of shark cartilage. Desulphation by MeOH–HCl treatment was followed by HPLC, CE and methylation analysis, indicating that 6-*O*-sulphate groups of Gal moieties are cleaved faster than those of GlcNAc moieties.

Carbohydr. Res. **2003,** *338*, 1139

Determination of the diadic composition of alginate by means of circular dichroism: a fast and accurate improved method

Ivan Donati, Amelia Gamini, Gudmund Skjåk-Bræk, Amedeo Vetere, Cristiana Campa, Anna Coslovi, Sergio Paoletti

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The diadic composition of commercial alginates has been obtained from their respective circular dichroism spectra by means of a linear combination of the spectra of the three limiting diads, namely GG, MM and alternating. Results were found in excellent agreement with the composition parameters obtained by ^{1}H NMR spectroscopy.

Carbohydr. Res. **2003,** *338*, 1143

Enantioseparation using cyclosophoraoses as a novel chiral additive in capillary electrophoresis

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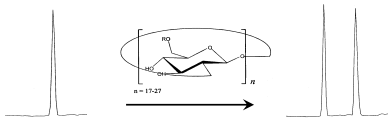
Cyclosophoraoses (cyclic-(1→2)-β-D-glucans) produced by *Rhizobium meliloti* functioned as a novel chiral selector in capillary electrophoresis.The enantiomers of terbutaline, amethopterin, thyroxine and *N*-acetylphenylalanine were separated by adding neutral or anionic cyclosophoraoses to the background electrolyte.



R = H; neutral cyclosophoraose

R = $PO_3CH_2CHOHCH_2OH$, or H; anionic cyclosophoraose