Graphical Abstracts

Carbohydr. Res. **2003,** *338*, 2779

A new synthesis of the oligosaccharide domain of acarbose

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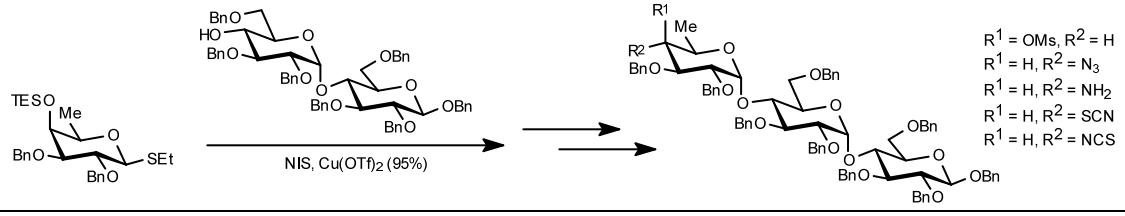

Carbohydr. Res. **2003,** *338*, 2793

Studies on the endogenous L-selectin ligands: systematic and highly efficient total synthetic routes to lactamized-sialyl 6-*O*-sulfo Lewis X and other novel gangliosides containing lactamized neuraminic acid

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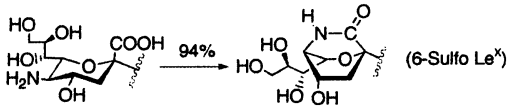
The completely stereocontrolled total synthesis of lactamized-sialyl 6-sulfo Lewis X and its antigenic reactivity are described.



Carbohydr. Res. **2003,** *338*, 2813

Synthesis of two heptasaccharide analogues of the lentinan repeating unit

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β-D-Glc*p*-(1→3)-β-D-Glc*p*-(1→3)-β-D-Glc*p*-(1→3)-β-D-Glc*p*-(1→3)[-β-D-Glc*p*-(1→3)-β-D-Glc*p*-(1→6)]-β-D-Glc*p*
β-D-Glc*p*-(1→3)-[β-D-Glc*p*-(1→6)]-β-D-Glc*p*-(1→3)-β-D-Glc*p*-(1→3)-β-D-Glc*p*-(1→3)[-β-D-Glc*p*-(1→6)]-α-D-Glc*p*-1→OAll

Carbohydr. Res. **2003,** *338*, 2825

Utilization of nosylepimines of 1,6-anhydro-β-D-hexopyranoses for the preparation of halogenated aminosaccharides

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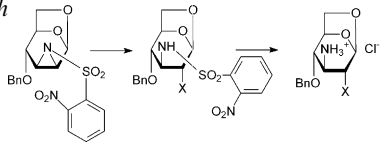

Carbohydr. Res. **2003,** *338*, 2835

The effect of (1→3)-β-D-glucans, carboxymethylglucan and schizophyllan on human leukocytes in vitro

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[b]*CPN, Tvardkova 1191, 562 01 Usti nad Orlici, Czech Republic*
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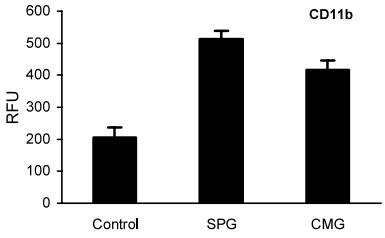

Carbohydr. Res. **2003,** *338*, 2841

cDNA cloning of an alginate lyase from abalone, *Haliotis discus hannai*

Eri Shimizu, Takao Ojima, Kiyoyoshi Nishita

Laboratory of Biochemistry and Biotechnology, Graduate School of Fisheries Sciences, Hokkaido University, Hakodate, Hokkaido 041-8611, Japan

An alginate lyase, HdAly, was isolated from abalone *Haliotis discus hannai* by ammonium sulfate fractionation followed by TOYOPEARL CM-650M column chromatography. cDNA for the HdAly was cloned and the amino acid sequence was determined. Recombinant HdAly was expressed by using the cloned cDNA and pET-3a bacterial expression system.

Carbohydr. Res. **2003,** *338*, 2853

An isocratic separation of underivatized gentamicin components, ^{1}H NMR assignment and protonation pattern

Wojciech Lesniak,[a,c] John Mc Laren,[a] Wesley R. Harris,[d] Vincent L. Pecoraro,[c] Jochen Schacht[a,b]

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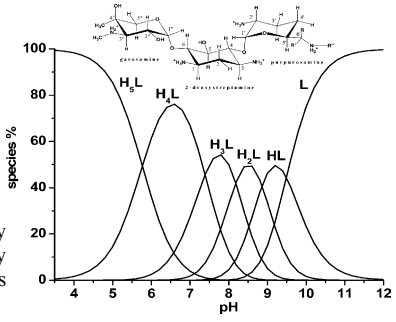

A simple method for the separation of the major components of commercial gentamicin by HPLC was developed. The protonation pattern of the separated gentamicins was determined by potentiometry, ^{15}N and ^{1}H NMR. The full proton NMR assignment for gentamicin C-1 was achieved through the use of ^{1}H 1D and 2D ^{1}H–^{1}H COSY measurements.

Carbohydr. Res. **2003,** *338*, 2863

Chain conformation of sulfated derivatives of β-glucan from sclerotia of *Pleurotus tuber-regium*

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Water-insoluble (1→3)-β-D-glucans having different M_w values from the sclerotia of *P. tuber-regium* were sulfated to afford water-soluble derivatives. The modified β-glucans were shown by SEC-LLS and viscometry to have a more expanded flexible chain in aqueous solution than the native polysaccharides.

Carbohydr. Res. **2003,** *338*, 2871

Acid hydrolysis of native and annealed starches and branch-structure of their Naegeli dextrins

Yuta Nakazawa, Ya-Jane Wang

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Eight commercial starches, including common corn, waxy corn, wheat, tapioca, potato, Hylon V, Hylon VII, and mung beanstarch, were annealed by a multiple-step process, and their gelatinization characteristics were determined.

Carbohydr. Res. **2003,** *338*, 2883

Volumetric behaviour of maltose–water, maltose–glycerol and starch–sorbitol–water systems mixtures in relation to structural relaxation

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[b]*Institute of Food Research, Colney, Norwich NR4 7UA, UK*

Excess volume of maltose- and starch-based systems are related to volume change due to structural relaxation of vitreous materials.

Carbohydr. Res. **2003,** *338*, 2889

Acetan:glucomannan interactions—a molecular modeling study

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The weak gelation behavior of the deacylated acetan:glucomannan (konjac mannan) complex stems from its ability to form a coaxial double helix.

Carbohydr. Res. **2003,** *338*, 2899

Consequences of rigidity and conformational locking in a 4,4-dimethyl-1,3-dioxolane ring system during protection of internal diol

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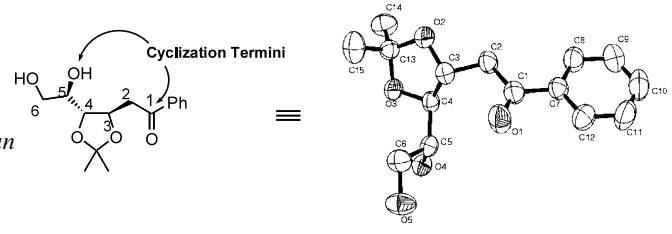

Carbohydr. Res. **2003,** *338*, 2905

Phase-variation of the truncated lipo-oligosaccharide of *Neisseria meningitidis* NMB phosphoglucomutase isogenic mutant NMB-R6

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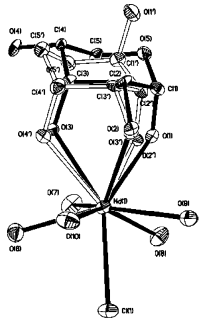
Wyeth Vaccines Research, 211 Bailey Road, West Henrietta, NY 14586, USA

The dominant LOS types produced by NMB-R6 (Pgm isogenic mutant) expressed a deep-truncated inner-core region, GlcNAc-(1→2)-LDHepII-(1→3)-LDHepI-(1→5)-Kdo→lipid A, with one PEA unit attached at either O-6 or O-7 of LDHepII, or with two simultaneously PEA moieties attached at O-3 and O-6 or O-3 and O-7 of the same unit. Some LOS molecules were observed to carry Glc at O-4 of LDHepI and at O-3 of LDHepII. A glycoconjugate vaccine comprised of NMB-R6 LOSs is currently being evaluated in our laboratory.

Carbohydr. Res. **2003,** *338*, 2913

Metal ion interactions with sugars. The crystal structure and FT-IR study of the $NdCl_3$–ribose complex



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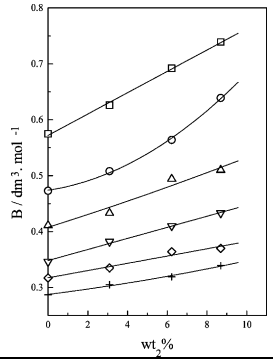
Carbohydr. Res. **2003,** *338*, 2921

Viscosity B-coefficients and activation parameters for viscous flow of a solution of heptanedioic acid in aqueous sucrose solution



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