

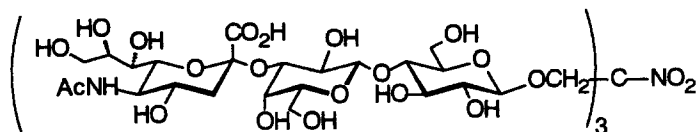
Carbohydr. Res. **1997**, 301, 1

Chemoenzymatic synthesis of a trimeric ganglioside GM₃ analogue

Marion A. Earle ^a, Sukhdev Manku ^a, Philip G. Hultin ^{a,*}, Hong Li ^b, Monica M. Palcic ^{b,*}

^a Department of Chemistry, University of Manitoba, Winnipeg, MN, Canada R3T 2N2

^b Department of Chemistry, University of Alberta, Edmonton, AB, Canada T6G 2G2



Carbohydr. Res. **1997**, 301, 5

NMR experiments for the detection of NOEs and scalar coupling constants between equivalent protons in trehalose-containing molecules

Ana Poveda ^a, Cristina Vicent ^b, Soledad Penadés ^b, Jesús Jiménez-Barbero ^{b,*}

^a Servicio Interdepartamental de Investigación, Universidad Autónoma de Madrid, Cantoblanco 28049 Madrid, Spain

^b Grupo de Carbohidratos, Instituto de Química Orgánica, C.S.I.C., Juan de la Cierva 3, 28006 Madrid, Spain

NOEs between chemically equivalent protons in trehalose-containing molecules have been measured by using selective ¹³C NMR editing experiments.

Carbohydr. Res. **1997**, 301, 11

Thermodynamics of the hydrolysis and cyclization reactions of α -, β -, and γ -cyclodextrin

Yadu B. Tewari ^{a,*}, Robert N. Goldberg ^a, Michikatsu Sato ^b

^a Biotechnology Division, National Institute of Standards and Technology, Gaithersburg, MD 20899, USA

^b Mercian Corporation, 9-1 Johnan 4 Chome, Fujisawa 251, Japan

A thermodynamic investigation of the hydrolysis and cyclization reactions of α -, β -, and γ -cyclodextrin has been performed using microcalorimetry and high-performance liquid-chromatography.

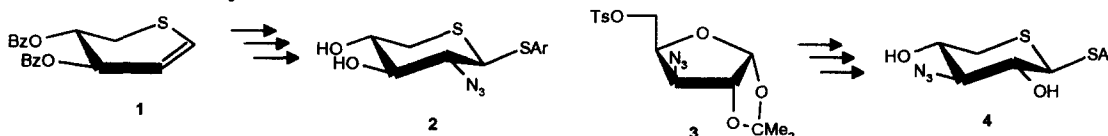
Carbohydr. Res. **1997**, 301, 23

Synthesis of 4-cyanophenyl 2-azido-2-deoxy- and 3-azido-3-deoxy-1,5-dithio- β -D-xylopyranosides

Éva Bozó, Sándor Boros, János Kuzsman ^{*}

Institute for Drug Research, P.O.B. 82, H-1325 Budapest, Hungary

The ene derivative **1** and azide **3** were converted into the title compounds **2** and **4**, respectively, possessing oral antithrombotic activity

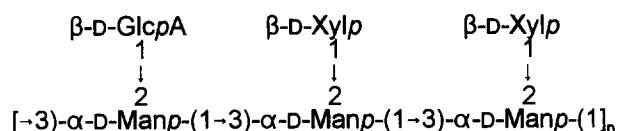


Structure of the ^{13}C -enriched *O*-deacetylated glucuronoxylomannan of *Cryptococcus neoformans* serotype A determined by NMR spectroscopy

Shuqun Sheng, Robert Cherniak *

Department of Chemistry (LBCS), Georgia State University, Atlanta, GA 30303-3083, USA

Using a ^{13}C -labeled polysaccharide, the structure of GXM was determined by NMR spectroscopic methods to be



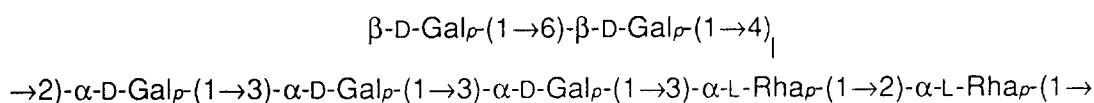
Structural characterisation of the exocellular polysaccharide produced by *Streptococcus thermophilus* OR 901

William A. Bubba^{a,*}, Tadasu Urashima^b, Reiko Fujiwara^b, Takayuki Shinnai^b, Hideko Ariga^b

^a Department of Biochemistry, The University of Sydney, Sydney, NSW, 2006, Australia

^b Department of Bioresource Chemistry, Obihiro University of Agriculture and Veterinary Medicine, Hokkaido, 080, Japan

A structure is proposed for the exocellular polysaccharide of *Streptococcus thermophilus* OR 901.



Dielectric analysis of food polysaccharides in aqueous solution

Shinya Ikeda, Hitoshi Kumagai *, Kozo Nakamura

Department of Applied Biological Chemistry, The University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113, Japan

The dielectric relaxation of typical ionic food polysaccharides, alginate and κ -carrageenan, were investigated in the frequency range from 10^3 Hz to 10^7 Hz. The concentration dependence of the dielectric increment and that of the relaxation time agreed well with the scaling law derived from the polyelectrolyte solution theory, the relaxation being ascribed to the fluctuation of the loosely bound counterions to the polyelectrolyte.

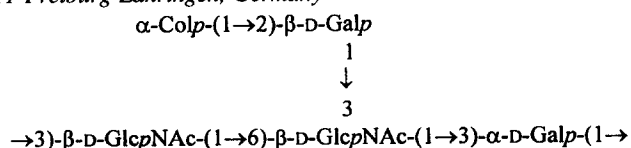
Structure of the *O*-specific polysaccharide of *Salmonella enterica* ssp. *arizonae* O50 (Arizona 9a,9b)

Sof'ya N. Senchenkova^a, Alexander S. Shashkov^a, Yuriy A. Knirel^{a,*}, Eberhard Schwarzmüller^b, Hubert Mayer^b

^a N.D. Zelinsky Institute of Organic Chemistry, Russian Academy of Sciences, Leninsky Prospekt 47, Moscow 117913, Russian Federation

^b Max Planck Institute for Immunobiology, Stübweg 51, D-79011 Freiburg-Zähringen, Germany

A structure of the *O*-specific polysaccharide of *Salmonella enterica* ssp. *arizonae* O50 (Arizona 9a,9b) is proposed.



Development of an immunoassay for larch arabinogalactan and its use in the detection of larch arabinogalactan in rat blood

Ernest V. Groman *, Daming Gou

Advanced Magnetics, Inc., 61 Mooney Street, Cambridge, MA 02138, USA

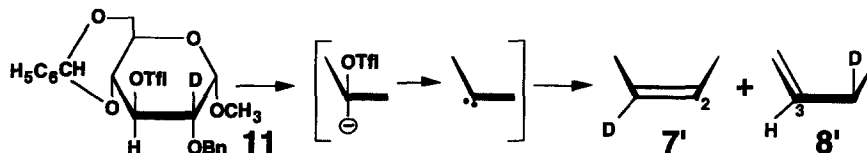
A sensitive immunoassay specific to Larch arabinogalactan is described. Anti-Larch arabinogalactan in antiserum is approximately 10^4 and 10^6 times more selective for Larch arabinogalactan than RCA lectin or rat liver asialoglycoprotein receptor, respectively. The selectivity of the assay for Larch arabinogalactan is less than $0.1 \mu\text{g/mL}$. The application of the assay for measuring arabinogalactan pharmacokinetics in rat blood is illustrated.

α -Hydrogen elimination in some 3- and 4-triflates of α -D-glycopyranosides

Ahmed El Nemr, Tsutomu Tsuchiya *

Institute of Bioorganic Chemistry, 3-34-17 Ida, Nakahara-ku Kawasaki 211, Japan

Treatment of **11** with MeLi in ether gave the 2,3- (**7'**) and 3,4-unsaturated products (**8'**) through carbene. Similar treatment of the 2-D-D-allo isomer gave only **7'** through deuterion-shift.



New molecular weight forms of arabinogalactan from *Larix occidentalis*

James H. Prescott, Ernest V. Groman *, Gyongyi Gulyas

Advanced Magnetics, Inc., 61 Mooney Street, Cambridge, MA 02138, USA

Arabinogalactan fractions were obtained from a crude extract of *Larix Occidentalis*. Two distinct molecular weight distributions were observed, with the fractions in the lower molecular weight distribution as small as 3 kDa. This is the first report of such a low molecular weight for Larch arabinogalactan. Fractions were identified as arabinogalactans with a sensitive immunoassay. The sub 9 kDa arabinogalactan fractions obtained from the crude extract have significantly lower galactose to arabinose ratios than the previously isolated sub 9 kDa arabinogalactans obtained from arabinogalactan (37 kDa) by chemical methods.