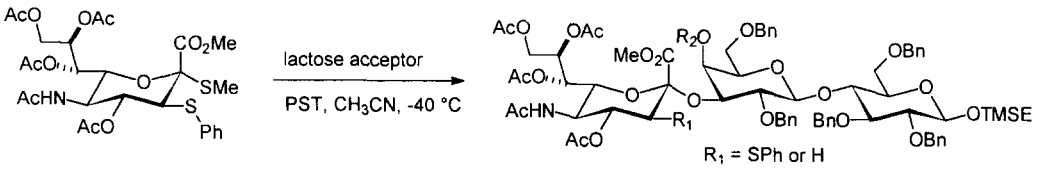
GRAPHICAL ABSTRACTS

Carbohydr. Res. **1997**, *302*, 123

Studies on α-sialylation using sialyl donors with an auxiliary 3-thiophenyl group

Valeri Martichonok, George M. Whitesides *
Department of Chemistry, Harvard University, 12 Oxford Street, Cambridge, MA 02138, USA



Carbohydr. Res. **1997**, *302*, 139

Non-mesogenic crystal structure of a synthetic 1-D-glucosamide bolaamphiphile

Mitsutoshi Masuda *, Toshimi Shimizu
Department of Organic Materials, National Institute of Materials and Chemical Research, 1-1 Higashi, Tsukuba, Ibaraki 305, Japan

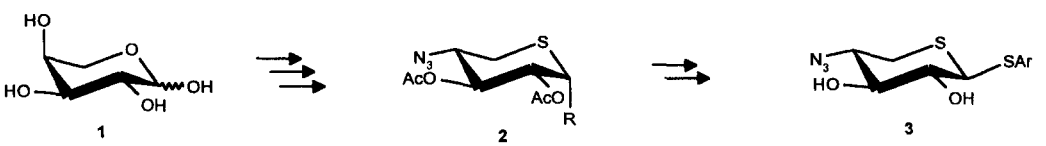
Synthetic 1-glucosamide bolaamphiphile self-assembled to form a head-to-head layered structure with an all-*trans* *n*-alkylene link, which was stablized by three-dimensional hydrogen-bonding network.

Carbohydr. Res. **1997**, *302*, 149

Synthesis of 4-cyanophenyl 4-azido-4-deoxy-1,5-dithio-β-D-xylopyranoside

Éva Bozó, Sándor Boros, János Kuszmann *
Institute for Drug Research, P.O.B. 82, H-1325 Budapest, Hungary

L-arabinose **1** was converted via donor **2** into the target compound **3** possessing antithrombotic activity

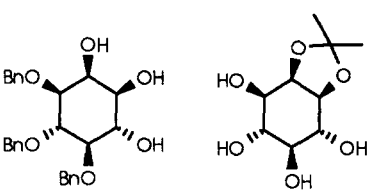


Carbohydr. Res. **1997**, *302*, 163

Synthesis of optically active *myo*-inositol derivatives starting from phytic acid

Corinne Blum [b], Nicola Rehnberg [a], Bernard Spiess [b], Gilbert Schlewer [b,*]
[a] *Perstorp Pharma, S-284 80 Perstorp, Sweden*
[b] *Laboratoire de Pharmacochimie Moléculaire du CNRS, Faculté de Pharmacie, 74, route du Rhin, 67401 Illkirch, France*

Phytic acid was transformed into (+)-D-1,2-*O*-isopropylidene *myo*-inositol and (−)-D-3,4,5-tri-*O*-benzyl *myo*-inositol, two key intermediates in the synthesis of optically active *myo*-inositol derivatives and related compounds.



Carbohydr. Res. **1997**, *302*, 169

Formation and characterisation of a physical chitin gel

Laurent Vachoud, Nathalie Zydowicz, Alain Domard *

Laboratoire d'Etude des Matériaux Plastiques et des Biomatériaux - UMR–CNRS 5627, Université Claude Bernard LYON I, F-69622 Villeurbanne, France

The formation of *N*-acetyl chitosan gels in acetic acid–water–propanediol solution is reported. The influence of parameters such as temperature, initial acetylation degree, molecular weight of chitosan and the nature of the alcohol, on the acetylation reaction and gelation is studied.

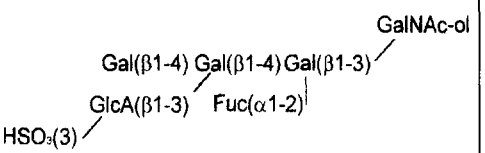
Carbohydr. Res. **1997**, *302*, 179

Primary structure of seven sulfated oligosaccharide-alditols released by reductive β-elimination from oviducal mucins of *Rana temporaria* Characterization of the sequence HSO_3(3)GlcA(β1–3)Gal

Doina Florea [a], Emmanuel Maes [b], Gérard Strecker [b,*]

[a] *Department de Biochimie, Université de Bucarest, Spl. Independentei No. 91–95, 75201 Bucarest, Romania*

[b] *Laboratoire de Chimie Biologique et Unité Mixte de Recherche No. 111, Centre Nationale de la Recherche Scientifique, Université des Sciences et Technologies de Lille, 59650 Villeneuve d'Ascq, France*



Carbohydr. Res. **1997**, *302*, 191

The alkaline xylanase III from *Fusarium oxysporum* F3 belongs to family F / 10

Paul Christakopoulos [a,b,*], Wim Nerinckx [b], Dimitris Kekos [a], Basil Macris [a], Marc Claeyssens [b]

[a] *Department of Chemical Engineering, National Technical University of Athens, 5 Iroon Polytechniou Str., Zografou Campus, Athens 15700, Greece*

[b] *Department of Biochemistry, Physiology and Microbiology, Faculty of Sciences, University of Gent, K.L. Ledeganckstraat 35, B-9000 Gent, Belgium*

Xylanase III from *Fusarium oxysporum* F3 was purified to homogeneity by ion-exchange chromatography and gel filtration, and was functionally characterised. The enzyme displays remarkable stability at pH 9.0, appears to be a true *endo*-β-1,4-xylanase, and shows high sequence homology with xylanases of family F/10.

Carbohydr. Res. **1997**, *302*, 197

Lactobacillus helveticus Lh59 secretes an exopolysaccharide that is identical to the one produced by *Lactobacillus helveticus* TN-4, a presumed spontaneous mutant of *Lactobacillus helveticus* TY1–2

Francesca Stingele [a], Jérôme Lemoine [b], Jean-Richard Neeser [a,*]

[a] *Nestlé Research Center, P.O. Box 44, Vers-chez-les-Blanc, CH-1000 Lausanne 26, Switzerland*

[b] *Université des Sciences et Techniques de Lille, F-59655 Villeneuve d'Ascq, France*

The structure of the exopolysaccharide produced by *Lactobacillus helveticus* Lh59 is presented. This structure is identical to the one of an EPS produced by *L. helveticus* TN-4, which was claimed to be a spontaneous mutant of strain TY1–2.

β-D-Gal*p*-(1→4)-β-D-Glc*p*
1
↓
3
→3)-α-D-Gal*p*-(1→3)-α-D-Glc*p*-(1→3)-β-D-Glc*p*-(1→5)-β-D-Gal*f*-(1→

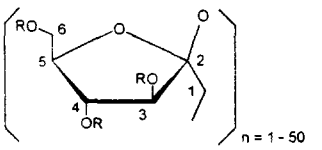
Carbohydr. Res. **1997**, *302*, 203

Distribution of substituents in *O*-carboxymethyl and *O*-cyanoethyl ethers of inulin

Dorine L. Verraest [a,*], Joop A. Peters [a], Hennie C. Kuzee [b], Harry W.C. Raaijmakers [b], Herman van Bekkum [a]

Laboratory of Organic Chemistry and Catalysis, Delft University of Technology, Julianalaan 136, 2628 BL Delft, The Netherlands

[b] *Coöperatie Cosun U.A., Industrial Inulin derivatives, Oostelijke Havendijk 15, 4704 RA Roosendaal, The Netherlands*



1 R = H or CH_2COONa

2 R = H or CH_2CH_2CN

The distribution of substituents in the fructose units and along the polymer chains of the derivatives **1** and **2** was studied using ^{13}C NMR spectroscopy and HPLC analysis.

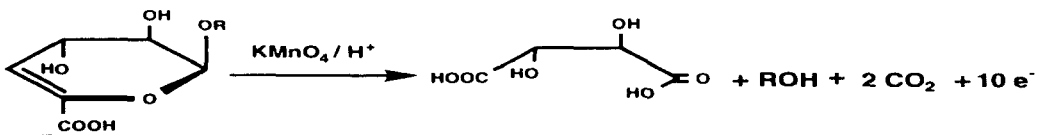
Carbohydr. Res. **1997**, *302*, 213

The contribution to kappa number from hexeneuronic acid groups in pulp xylan

Jiebing Li, Göran Gellerstedt *

Division of Wood Chemistry, Royal Institute of Technology, S-10044 Stockholm, Sweden

10 μmol Of hexeneuronic acid would theoretically be equal to 1.0 kappa number units. We have found that the actual value is 0.84–0.86 units.



Carbohydr. Res. **1997**, *302*, 219

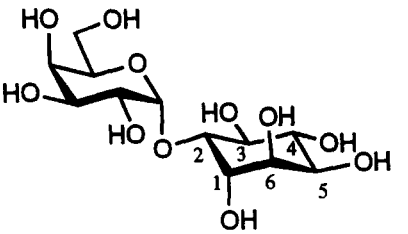
A new glycoside, 1D-2-*O*-α-D-galactopyranosyl-*chiro*-inositol from jojoba beans

Kazutoshi Ogawa [a], Toshiyuki Watanabe [b], Yoko Ikeda [c], Shinichi Kondo [c,*]

[a] *Department of Fundamental Science, College of Science and Engineering, Iwaki Meisei University, Iwaki, Fukushima 970, Japan*

[b] *Laboratory of Food Science, Faculty of Education, Fukushima University, Fukushima, Fukushima 960, Japan*

[c] *Institute of Microbial Chemistry, 3-14-23 Kamiosaki, Shinagawa-ku, Tokyo 141, Japan*



A new inositol glycoside, 1D-2-*O*-α-D-galactopyranosyl-*chiro*-inositol has been isolated from jojoba plant, *Simmondsia chinensis*.

Carbohydr. Res. **1997**, *302*, 223

Synthesis of 6′-GM2, a regioisomer of ganglioside GM2, for studying the mechanism of action of GM2 activator

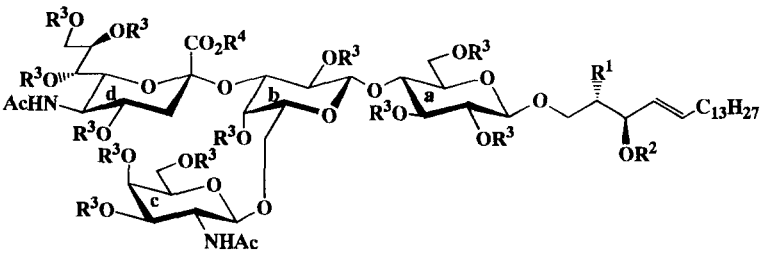
Hideharu Ishida [a], Yuko Ito [a], Eiji Tanahashi [a], Yu-Teh Li [b], Makoto Kiso [a,*], Akira Hasegawa [a]

[a] *Department of Applied Bioorganic Chemistry, Gifu University, Gifu 501-11, Japan*

[b] *Department of Biochemistry, Tulane University School of Medicine New Orleans, LA 70112, USA*

$R^1 = NHCO(CH_2)_{16}CH_3$,

$R^2 = R^3 = R^4 = H$

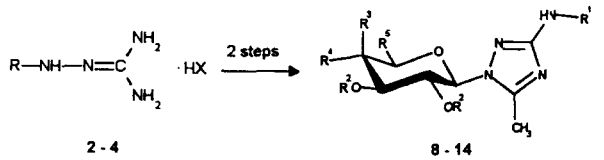


Carbohydr. Res. **1997**, *302*, 229

Cyclization reactions of N^1-(glycopyranosylamino)guanidines

Zoltán Györgydeák [a,*], Wolfgang Holzer [b], Joachim Thiem [c]

[a] *Kossuth Lajos Tudományegyetem, Szerves Kémiai Tanszék, Pf. 20, H-4010 Debrecen, Hungary*
[b] *Institut für Pharmazeutische Chemie der Universität Wien, Pharmaziezentrum, Althanstraße 14, A-1090 Wien, Austria*
[c] *Institut für Organische Chemie der Universität Hamburg, Martin Luther-King-Platz 6, D-20146 Hamburg, Germany*



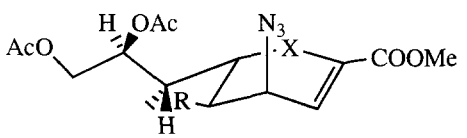
Carbohydr. Res. **1997**, *302*, 237

A regio- and stereo-selective introduction of azide at C-4 of 2,3-unsaturated *N*-acetylneuraminic acids

Gaik B. Kok, Mark von Itzstein *

Department of Medicinal Chemistry, Victorian College of Pharmacy, Monash University (Parkville Campus), 381 Royal Pde., Parkville, Victoria, Australia 3052

Azidation of the peracetate methyl esters of 4-*epi*-Neu5Ac2en and 6-thio-4-*epi*-Neu5Ac2en using Pd(0) as catalyst has been achieved.



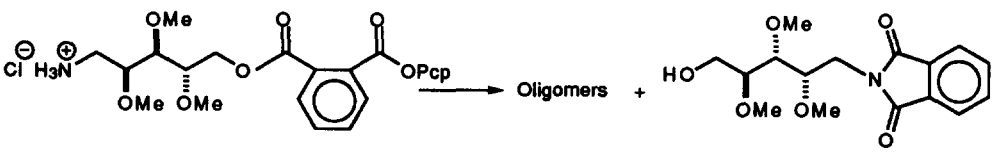
X	R
O	NHAc
S	NHAc

Carbohydr. Res. **1997**, *302*, 241

Synthesis and condensation reactions of 1-amino-1-deoxy-2,3,4-tri-*O*-methyl-5-*O*-[(pentachlorophenoxy)phthaloyl]-L-arabinitol

Inmaculada Molina Pinilla, Manuel Bueno Martínez, Juan A. Galbis *

Departamento de Química Orgánica y Farmacéutica, Facultad de Farmacia, Universidad de Sevilla, E-41071 Sevilla, Espagne



Carbohydr. Res. **1997**, *302*, 245

Regio- and stereo-selectivity in homogeneous catalytic hydrogenation of 2,5-diketo-D-*threo*-hexonic acid

Zdenko Hameršak [a], Nediljko Pavlović [b], Vladimir Delić [b], Vitomir Šunjić [a,*]

[a] *Ruđer Bošković Institute, Bijenička 54, P.O.B. 1016, HR-10000 Zagreb, Croatia*
[b] *Department of Biosynthesis and Biotechnology, PLIVA d.d., Research Institute, Prilaz baruna Filipovića 25, HR-10000 Zagreb, Croatia*