GRAPHICAL ABSTRACTS

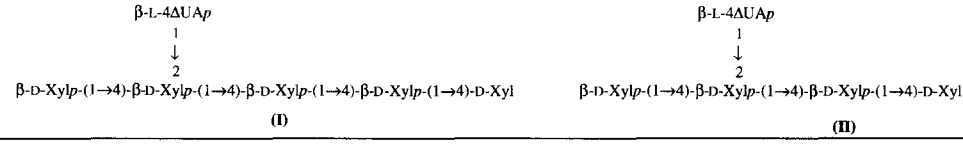
Carbohydr. Res. **1997**, *300*, 95

Oligosaccharides obtained by enzymatic hydrolysis of birch kraft pulp xylan: Analysis by capillary zone electrophoresis and mass spectrometry

Annika Rydlund [a,b], Olof Dahlman [a,*]

[a] *Swedish Pulp and Paper Research Institute, P.O. Box 5604, S-11486 Stockholm, Sweden*
[b] *ABB Corporate Research, S-72178 Västerås, Sweden*

The unsaturated acidic oligosaccharides I and II were identified in a *Trichoderma reesei* endoxylanase pI 9 hydrolysate of an unbleached birch kraft pulp.



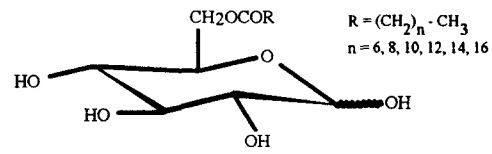
Carbohydr. Res. **1997**, *300*, 103

Chemoenzymatic synthesis of glucose fatty esters

Ines Redmann [a], Michel Pina [a], Bernard Guyot [a], Pierre Blaise [b], Marie Farines [b], Jean Graille [a,*]

[a] *Laboratoire de Lipotechnie, Centre de Coopération Internationale en Recherche Agronomique pour le Dèveloppement (CIRAD), Département Cultures Pérennes, BP 5035, F-34032 Montpellier, France*
[b] *Laboratoire de Chimie Organique des Substances Naturelles, Université de Perpignan, Avenue de Villeneuve, F-66860 Perpignan, France*

D-Glucose fatty esters at C-6 were obtained by chemoenzymatic synthesis involving 1,2-*O*-cyclohexylidene-α-D-glucofuranose followed by hydrolysis of the protecting group.



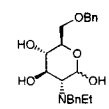
Carbohydr. Res. **1997**, *300*, 109

Potential HIV protease inhibitors: Preparation of di-*N*-alkylated 2-, 6-, and 2,6-aminodeoxy-derivatives of D-glucose by direct displacement and by a novel reductive-alkylation procedure

Jiaqiang Cai [a], Bruce E. Davison [a,*], C. Robin Ganellin [a], Suvit Thaisrivongs [b], Keith S. Wibley [a]

[a] *Department of Chemistry, Christopher Ingold Laboratories, University College London, 20 Gordon Street, London WC1H 0AJ, England, UK*
[b] *Pharmacia and Upjohn, Inc., Kalamazoo, MI 49001, USA*

The syntheses of the title compounds (**11**), (**15**), and (**23**) are described.



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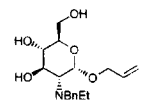

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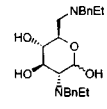

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Carbohydr. Res. **1997**, *300*, 127

Chemical and chemo-enzymatic synthesis of the α-Neu*p*5Ac-(2 → 6)-β-D-Gal*p*NAc-(1 → 4)-β-D-Glc*p*NAc-(1 → 2)-α-D-Man*p* element that is part of N-linked carbohydrate chains of human lutropin

Paul B. van Seeventer [a], János Kerékgyártó [a,b], Johannes A.L.M. van Dorst [a], Koen M. Halkes [a], Johannis P. Kamerling [a], Johannes F.G. Vliegenthart [a,*]

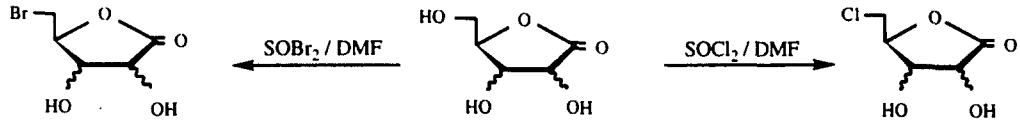
[a] *Bijvoet Center, Department of Bio-Organic Chemistry, Utrecht University, P.O. Box 80.075, NL-3508 TB Utrecht, The Netherlands*
[b] *Institute of Biochemistry, L. Kossuth University, P.O. Box 55, H-4010 Debrecen, Hungary*

The structural element α-Neu*p*5Ac-(2 → 6)-β-D-Gal*p*NAc-(1 → 4)-β-D-Glc*p*NAc-(1 → 2)-α-D-Man*p*, has been prepared by chemical and chemo-enzymatic synthesis in the form of its propyl glycoside.

Carbohydr. Res. **1997**, *300*, 139

Regioselective halogenation of pentono-1,4-lactones. Efficient synthesis of 5-chloro- and 5-bromo-5-deoxy derivatives

Véronique Bouchez, Imane Stasik, Daniel Beaupère *, Raoul Uzan
Laboratoire de Chimie Organique, Université de Picardie Jules Verne, 33 rue Saint-Leu, F-80039 Amiens, France

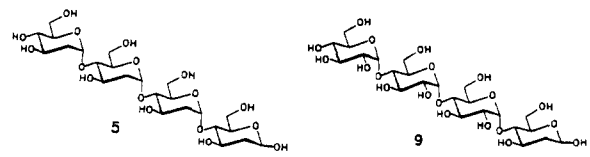


Carbohydr. Res. **1997**, *300*, 153

Specificity of amylases and cyclodextrin-glucanotransferase in reactions with 2-deoxy-maltooligosaccharides

Britta Evers [a], Miroslav Petříček [b], Joachim Thiem [a,*]
[a] *Institut für Organische Chemie, Universität Hamburg, Martin-Luther-King-Platz 6, D-20146 Hamburg, Germany*
[b] *Department of Molecular Biology, Institute of Microbiology, Academy of Sciences of the Czech Republic, Videnska 1083, 142 20 Prague 4, Czech Republic*

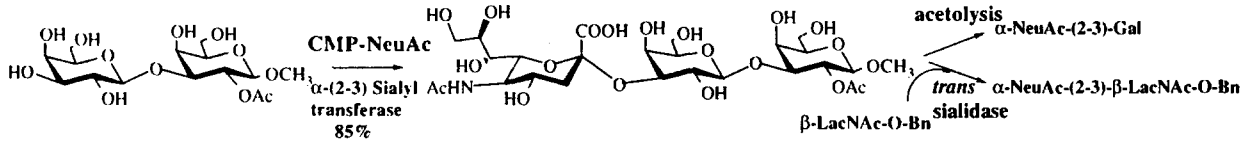
Various 2-deoxy-maltooligomers could be obtained by either selective degradation employing amylases or by transfer reactions with CGTs.



Carbohydr. Res. **1997**, *300*, 161

Porcine liver (2 → 3)-α-sialyltransferase: substrate specificity studies and application of the immobilized enzyme to the synthesis of various sialylated oligosaccharide sequences

André Lubineau, Karine Bassett-Carpentier, Claudine Augé *
Institut de Chimie Moléculaire d'Orsay, U.R.A. C.N.R.S. 462, Université de Paris-Sud, BT 420, F-91405 Orsay, France



Carbohydr. Res. **1997**, *300*, 169

The measurement of affinity between ligand and antibody using ligand-induced antibody fluorescence change

Cornelis P.J. Glaudemans *, Charles E. Miller, Eugenia M. Nashed
NIDDK, National Institutes of Health, Bethesda, MD 20892, USA

Computational analysis shows that affinity measurements using ligand-induced protein fluorescence change [*Carbohydr. Res.* **33** (1974) 377–382] give reliable data for K_as for values in the order of from *ca.* 10^2 M^{-1} to *ca.* 10^7 M^{-1}.

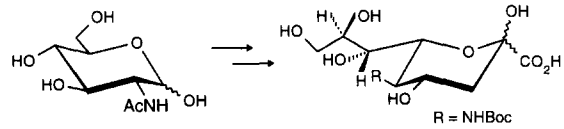
Carbohydr. Res. **1997**, *300*, 171

A facile synthesis of a useful 5-*N*-substituted-3,5-dideoxy-D-*glycero*-D-*galacto*-2-nonulosonic acid from 2-acetamido-2-deoxy-D-glucose

Wen-Yang Wu, Betty Jin, David C.M. Kong, Mark von Itzstein *

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

A short, efficient synthesis of Neu5Boc from 2-acetamido-2-deoxy-D-glucose is presented.



Carbohydr. Res. **1997**, *300*, 179

Formation of ferulic acid dehydrodimers through oxidative cross-linking of sugar beet pectin

Alexander Oosterveld [a], John H. Grabber [b], Gerrit Beldman [a], John Ralph [b], Alphons G.J. Voragen [a,*]

[a] *Wageningen Agricultural University, Department of Food Science, P.O. Box 8129, 6700 EV Wageningen, The Netherlands*
[b] *U.S. Dairy Forage Research Center, USDA-Agricultural Research Service, 1925 Linden Drive West, Madison, WI 53706-1108, USA*

Ferulic acid containing sugar beet pectin was cross-linked with H_2O_2 and peroxidase, which resulted in the formation of predominantly 8-O-4 and 8-5 dehydrodimers of ferulic acid. Also smaller amounts of the 5-5 and 8-8 dehydrodimers were formed.

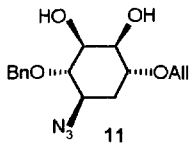
Carbohydr. Res. **1997**, *300*, 183

Synthesis of new anhydro and branched-chain cyclitols

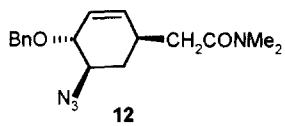
Zoltán G. Tóth, István F. Pelyvás *, Csaba Szegedi, Péter Benke, Erika Magyar, Tünde Miklovicz, Gyula Batta, Ferenc Sztaricskai *

Research Group of Antibiotics of the Hungarian Academy of Sciences, P.O. Box 70, Debrecen H-4010, Hungary

Novel azido (**11**) and branched-chain cyclitol derivatives (**12–14**) have been synthesized by the ring-cleavage of anhydrocyclitols (**4**, **9**, **10**) and the Claisen-rearrangement of suitable unsaturated derivatives (**3**, **7**, **8**).



11



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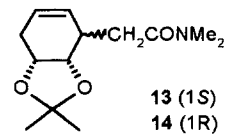

13 (1*S*)
14 (1*R*)

Carbohydr. Res. **1997**, *300*, 191

Structure of the O-polysaccharide from the LPS of a *Hafnia alvei* strain isolated from a patient with suspect yersinosis

Camilla Karlsson [a], Per-Erik Jansson [a,*], Ralfh Wollin [b]

[a] *Clinical Research Centre, Analytical Unit, Karolinska Institute, Huddinge Hospital, Novum, S-141 86 Huddinge, Sweden*
[b] *Swedish Institute for Infectious Disease Control, S-105 21 Stockholm, Sweden*

The carbohydrate backbone of the *Hafnia alvei* strain Y166/91 lipopolysaccharide (LPS) was studied and found to have the following structure

$[\rightarrow 3)$-β-D-Gal *p*-$(1 \rightarrow 3)$-α-D-Gal *p*-$(1 \rightarrow]_m[\rightarrow 3)$-α-D-Gal *p*-$(1 \rightarrow 3)$-β-D-Gal *f*-$(1 \rightarrow]_n$