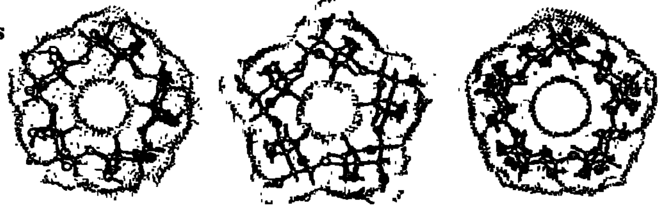
*Tetrahedron: Asymmetry* **1994**, *5*, 2045

### Cyclodextrins, Cyclomannins, and Cyclogalactins with five and six (1→4)-linked Sugar Units : a comparative Assessment of their Conformations and Hydrophobicity Potential Profiles

Frieder W. Lichtenthaler, Stefan Immel

*Institut für Organische Chemie*
*Technische Hochschule*
*Petersenstraße 22*
*D-64287 Darmstadt (Germany)*



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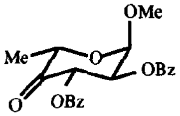
*Tetrahedron: Asymmetry* **1994**, *5*, 2061

### The Synthesis of Novel Mimics of the Sialyl Lewis X Determinant

Nigel. M. Allanson. Alan H. Davidson, Christopher D. Floyd, Fionna M. Martin
British Biotech Pharmaceuticals Ltd, Watlington Rd, Oxford, OX4 5LY, UK

Dissacharide mimics of the $sLe^x$ ligands have been prepared as antagonists against binding to E-selectin. The stereochemistry of nucleophilic addition to the keto group of the fucosyl ketone 7 is determined by the conditions employed. Lewis acid mediated conditions give rise to attack from the *Re* face while the addition of metal promoted dianions proceeds via attack from the *Si* face.



7

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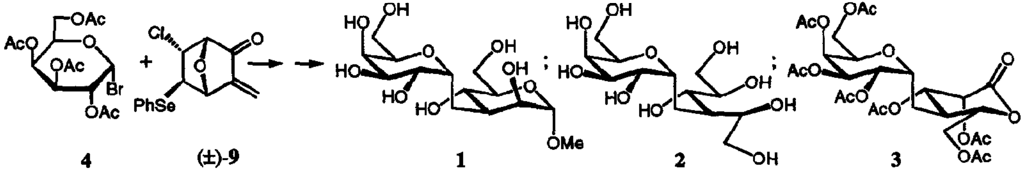
*Tetrahedron: Asymmetry* **1994**, *5*, 2077

### Synthesis of α-D-(1→3) and α-D-(1→4)-C-linked Galactosides of D-Mannose Derivatives. Conformation of α-C-Galactosides.

Rafael Ferritto and Pierre Vogel*, *Section de Chimie de l'Université de Lausanne, BCH Dorigny, CH-1015 Lausanne, Switzerland.*



4 (±)-9 1 2 3

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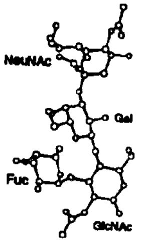
*Tetrahedron: Asymmetry* **1994**, *5*, 2093

### Sialyl Le$^X$ Structures In *O*-Glycans Attached to Lysosomal Membrane Glycoproteins, Lamp-1 and Lamp-2. Comparison to Those In *N*-Glycans.

Kentaro Maemura and Minoru Fukuda
*the Glycobiology Program, La Jolla Cancer Research Foundation*
*10901 North Torrey Pines Road, La Jolla, CA 92037*

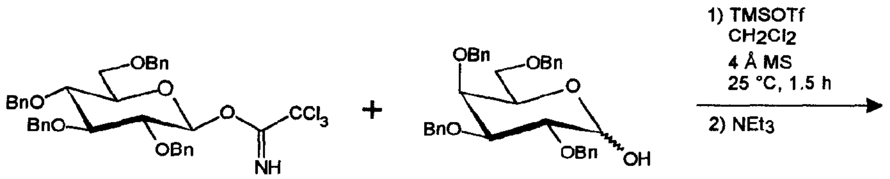
The structures of *O*-glycans and *N*-glycans were determined on lysosomal membrane glycoproteins, lamp-1 and lamp-2 isolated from HL-60 cells. The *O*-glycans were found to express as much sialyl Le$^X$ structure as *N*-glycans.



## The Use of *O*-Glycosyl Trichloroacetimidates in The Synthesis of Unsymmetrical Trehalose Analogues.

*Tetrahedron: Asymmetry* **1994,** *5,* 2109

Tor E.C.L. Rønnow, Morten Meldal, and Klaus Bock*.
Carlsberg Laboratory, Department of Chemistry, Gamle Carlsberg Vej 10, DK-2500 Valby (Denmark).



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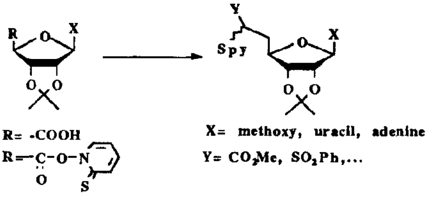
## Stereocontrolled Radical Reactions in Carbohydrate and Nucleoside Chemistry.

*Tetrahedron: Asymmetry* **1994,** *5,* 2123

Derek H.R. Barton,[a] Stephane D. Géro,[b] Béatrice Quiclet-Sire*[b], Mohammad Samadi[b]. [a]*Department of Chemistry, Texas A&M University, College Station, Texas 77843, U.S.A.*[b] *Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France.*



*The radicals, generated by photolysis of 2,3-dimethyl ketals of N-hydroxy-2-thiopyridone uronic esters, reacted stereoselectively with electron deficient olefins leading to highly functionalised chain-elongated pentofuranosides, hexapyranosides and pentafuranosyl-nucleosides through the 4,5 and 4' radicals, respectively.*

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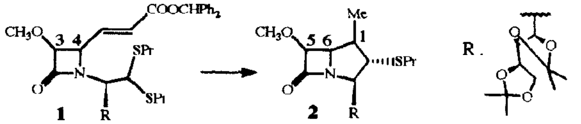
## THE USE OF RADICAL DECARBOXYLATION IN THE PREPARATION OF 1-METHYLCARBAPENEM ANTIBIOTIC PRECURSORS FROM D-GLUCOSAMINE.

*Tetrahedron: Asymmetry* **1994,** *5,* 2137

J. Anaya[a*], D.H.R.Barton[b], M.C. Caballero[a], S.D.Gero[c], M. Grande[a], N.M. Laso[a*] and J.I.M. Hernando[a]. [a]Departamento de Química Orgánica. Universidad de Salamanca, 37008 Salamanca, Spain. [b]Department of Chemistry, Texas A&M University, College Station, Texas 77843, USA. [c]Institut de Chimie des Substances Naturelles, C.N.R.S., 91198 Gif-sur-Yvette, France



Radical cyclization and radical decarboxylation were used for the transformation of β-lactams **1** into 1-methylcarbapenem antibiotic precursors **2** starting with *D*–glucosamine.

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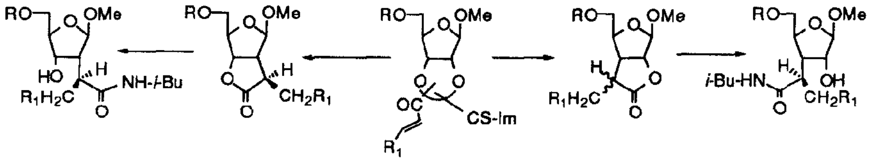
## RADICAL CYCLIZATIONS ON SUGAR TEMPLATES: STEREOSELECTIVE SYNTHESIS OF FUSED γ-BUTYROLACTONES OF CARBOHYDRATES.

*Tetrahedron: Asymmetry* **1994,** *5,* 2141

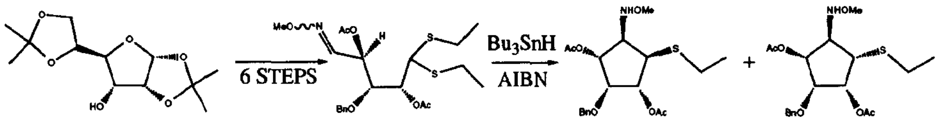
**Sonsoles Velázquez and María-José Camarasa**
Instituto de Química Médica (C.S.I.C.), Juan de la Cierva 3, 28006-Madrid, Spain



*Tetrahedron: Asymmetry* **1994,** *5,* 2155

### The Use Of Free Radical Cyclization In The Synthesis Of Compounds Related To The Mannostatins.

A. H. Ingall,[a] P. R. Moore[b] and S. M. Roberts.[b]
a Fisons Pharmaceuticals, Bakewell Road, Loughborough, LE11 0RH.
b Department of Chemistry, Exeter University, Exeter, Devon, EX4 4QD.



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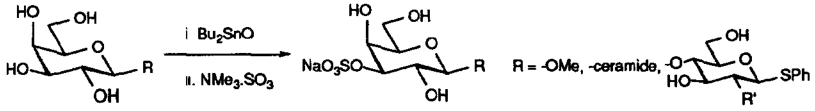
*Tetrahedron: Asymmetry* **1994,** *5,* 2163

### DIBUTYLSTANNYLENE ACETALS: USEFUL INTERMEDIATES FOR THE REGIOSELECTIVE SULFATION OF GLYCOSIDES.

Bénédicte Guilbert, Nicola J. Davis, Melanie Pearce, Robin T. Aplin and Sabine L. Flitsch*, The Dyson Perrins Laboratory, South Parks Road, Oxford OX1 3QY, Great Britain



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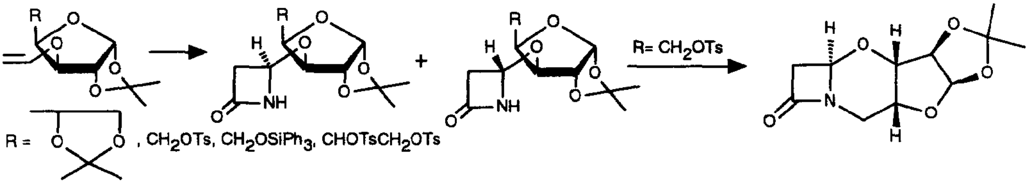
*Tetrahedron: Asymmetry* **1994,** *5,* 2179

### Asymmetric Induction in [2+2]Cycloaddition of Chlorosulfonyl Isocyanate to 1,2-*O*-Isopropylidene -3-*O*-vinyl-glycofuranoses.

Zbigniew Kałuża*, Bartłomiej Furman, Madhumeeta Patel[†] and Marek Chmielewski. Institute of Organic Chemistry, Polish Academy of Sciences, 01-224 Warsaw, Poland. [†]Stevens Institute of Technology, Hoboken, N.J. 07030, USA



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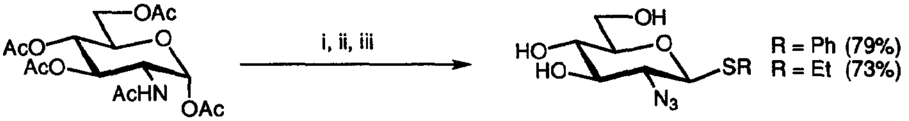
*Tetrahedron: Asymmetry* **1994,** *5,* 2187

### FACILE PREPARATION OF GLYCOSYL DONORS FOR OLIGOSACCHARIDE SYNTHESIS 2-AZIDO-2-DEOXYHEXOPYRANOSYL BUILDING BLOCKS

Therese Buskas, Per J. Garegg, Peter Konradsson*, and Jean-Luc Maloisel
Department of Organic Chemistry, Arrhenius Laboratory, Stockholm University, S-106 91 Stockholm, Sweden



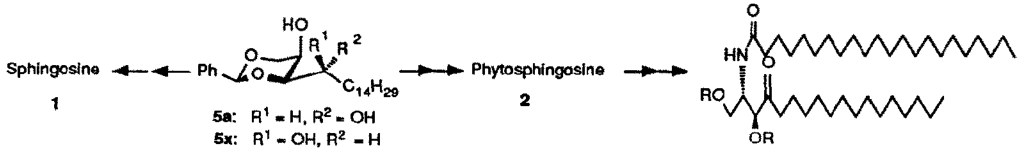
(i) RSSiMe$_3$, ZnI$_2$, ClCH$_2$CH$_2$Cl, (ii) NaOH 1M (iii) N$_3$OTf, DMAP, MeOH

Also with 4-pentenyl β-D-glucoside. Also in galactose and mannose series.

*Tetrahedron: Asymmetry* **1994,** *5,* 2195

## Sphingosine and phytosphingosine from D-Threose
## Synthesis of a 4-Keto-Ceramide

Robert Wild and Richard R. Schmidt
Fakultät Chemie, Universität Konstanz, Postfach 5560 M 725, D-78434 Konstanz, Germany



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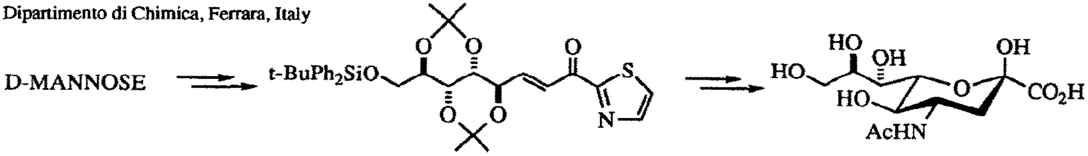
*Tetrahedron: Asymmetry* **1994,** *5,* 2209

## SYNTHESIS OF A SIALIC ACID ANALOG WITH THE ACETAMIDO GROUP AT C-4

A. Dondoni,* A. Boscarato, and A. Marra
Dipartimento di Chimica, Ferrara, Italy



An isomer of *N*-acetylneuraminic acid with the acetamido group at C-4 has been synthesized through stereoselective1,4-conjugate addition of trimethylsilyl azide to a 2-thiazolyl α,β-enone bearing a protected D-mannose moiety at C-β.

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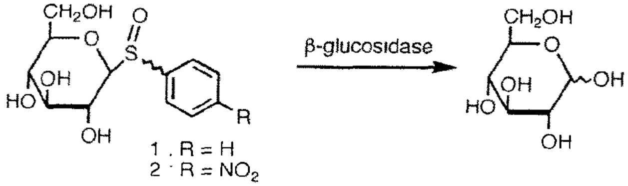
*Tetrahedron: Asymmetry* **1994,** *5,* 2213

## Diastereoselective Cleavage of β-Glucosylsulfoxides by β-Glucosidase

Olaf Karthaus, Shin-ichiro Shoda, Shiro Kobayashi
Tohoku University, Aoba, Sendai , Japan



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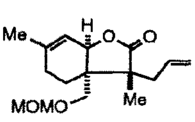
*Tetrahedron: Asymmetry* **1994,** *5,* 2217

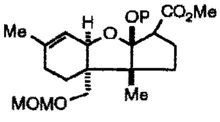
## A SYNTHETIC STUDIES ON THE TRICHOTHECENE FAMILY FROM D-GLUCOSE

Jun Ishihara, Rie Nonaka, Yuki Terasawa, Kin-ichi Tadano,*
and Seiichiro Ogawa
Department of Applied Chemistry, Keio University, Hiyoshi, Yokohama 223, Japan

Compounds 1 and 2 as promising intermediates for total synthesis of the trichothecenes were synthesized from D-glucose both in enantiomerically pure forms.



1

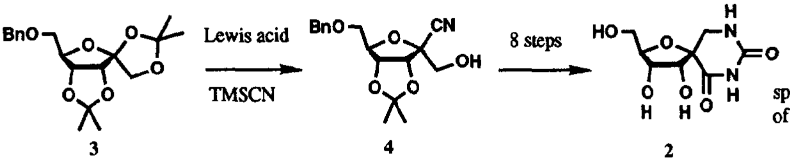


2 R = Si($t$-Bu)Me$_2$

*Tetrahedron: Asymmetry* **1994,** *5,* 2233

## Stereocontrolled Synthesis of Spirodihydrouracil Nucleoside

Hiromi Sano,* Shigeru Mio,* Junko Kitagawa, and Soji Sugai
Agroscience Research Laboratories, Sankyo Co. Ltd., 1041 Yasu-cho,
Yasu-gun, Shiga-ken 520-23, Japan



3 4 2

spirodihydrouracil derivative of (+)-hydantocidin

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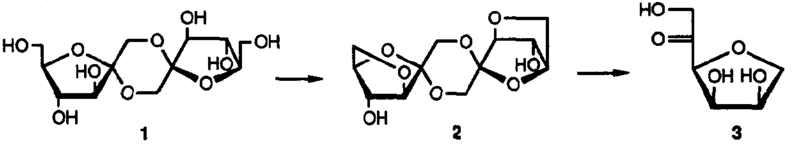
*Tetrahedron: Asymmetry* **1994,** *5,* 2241

## DIFRUCTOSE DIANHYDRIDES AS SYNTHETIC INTERMEDIATES. A SYNTHESIS OF 3,6-ANHYDRO-*keto*-D-FRUCTOSE

Jacques Defaye and José M. García Fernández, CNRS and CEA, Département de Recherche Fondamentale sur la Matière Condensée/SESAM, Centre d'Etudes de Grenoble, F-38054 Grenoble, France

A convenient synthesis of the title α-hydroxyketone 3 from readily available α-D-fructofuranose β-D-fructofuranose 1,2':2,1'-dianhydride (1) is described.



1 2 3

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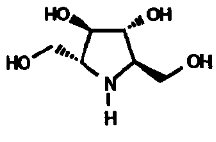
*Tetrahedron: Asymmetry* **1994,** *5,* 2251

## The Utility of 2,5-Dideoxy-2,5-imino-D-mannitol as a PFP Enzyme Inhibitor

Mukund S. Chorghade[1]*, Csaba T. Cseke[2] and Paul S. Liu[3]†
[1] Abbott Laboratories, North Chicago, IL 60064, [2] Dow Elanco, Indianapolis, IN 46268, [3] Marion Merrell Dow Research Center, Cincinnati, OH 45215

2,5-Dideoxy-2,5-imino-D-mannitol was synthesized from an arabinofuranose derivative. Mercuric acetate cyclization of an ene-carbamate was the key step. The compound proved to be an inhibitor of the pyrophosphate-fructose-6-phosphate-1-phosphotransferase (PFP) enzyme and has potential utility in the biorational design of herbicides.



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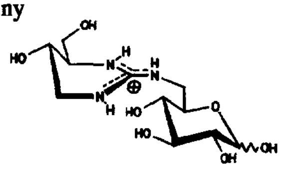
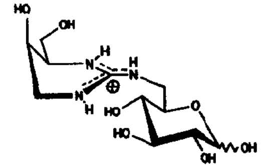
*Tetrahedron: Asymmetry* **1994,** *5,* 2255

## TWO CATIONIC ANALOGUES OF DISACCHARIDE HETEROLYSIS: POTENTIAL EPITOPES FOR PREPARING ANTIBODIES WITH SACCHARIDASE ACTIVITY.

Jochen Lehmann* and Beatrice Rob, Institut für Organische Chemie und Biochemie, Universität Freiburg, D 79104 Freiburg, Germany

Two disaccharide analogues containing the structural element of a guanidinium ion have been prepared.



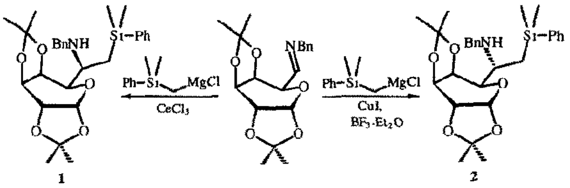


*Tetrahedron: Asymmetry* **1994,** *5,* 2261

## STEREOCONTROLLED HYDROXYMETHYLATION OF CARBOHYDRATE IMINES. FORMAL SYNTHESIS OF DESTOMIC ACID AND LINCOSAMINE

F L. van Delft, M de Kort, G.A van der Marel and J.H van Boom*
Leiden Institute of Chemistry, Gorlaeus Laboratories,
P.O. Box 9502, 2300 RA, Leiden, The Netherlands

Addition of [(dimethylphenylsilyl)methyl]magnesium chloride to 6-benzylimino-6-deoxy-1,2;3,4-di-*O*-isopropylidene-α-D-galactopyranose mediated by Ce(III)Cl$_3$ or CuI/BF$_3$·Et$_2$O proceeds with excellent diastereoselectivity to give the *syn* or *anti*-adduct **1** and **2**, respectively.



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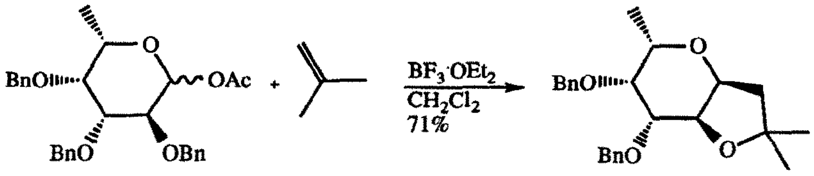
*Tetrahedron: Asymmetry* **1994,** *5,* 2265

## SYNTHESIS OF NOVEL FUSED RING *C*-GLYCOSIDES

**Daniel E. Levy,* Falguni Dasgupta, and Peng Cho Tang**
**Glycomed, Inc. 860 Atlantic Ave. Alameda, CA 94501**

**The Lewis acid mediated addition of olefins to *O*-benzyl protected sugars is studied. The results show the formation of *C*-glycosides with α selectivity and a propensity to cyclize with loss of a benzyl group.**



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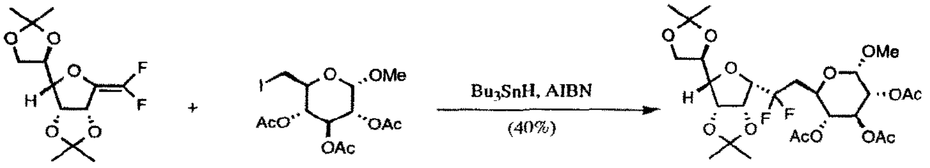
*Tetrahedron: Asymmetry* **1994,** *5,* 2269

## The Synthesis of Difluoromethylene-Linked C-Glycosides and C-Disaccharides

Timothée F. Herpin,[a] William B. Motherwell,[a]* Matthew J. Tozer[b]
a. Department of Chemistry, University College, 20 Gordon Street, London, WC1H 0AJ, UK.
b. James Black Foundation, 68 Half Moon Lane, Dulwich, London, SE24 9JE, UK.



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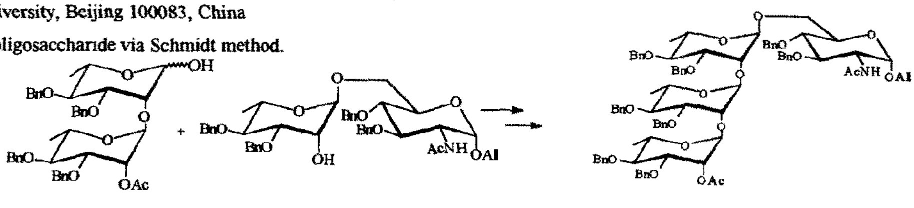
*Tetrahedron: Asymmetry* **1994,** *5,* 2283

## SYNTHESIS OF TETRASACCHARIDE FROM *SERRATIA MARCESCENS*

Jian Zhang, Jianmin Mao, Hongming Chen, Mengshen Cai*
Department of Organic chemistry, School of Pharmaceutical Sciences,
Beijing medical University, Beijing 100083, China

A glycosylation of oligosaccharide via Schmidt method.

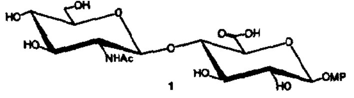


*Tetrahedron: Asymmetry* **1994,** *5,* 2291

## SYNTHESIS OF HYALURONIC ACID RELATED DI- AND TETRA-SACCHARIDES HAVING A GLUCURONIC ACID AT THE REDUCING END

Ted M. Slaghek[a], Teija K. Hyppönen[a], Tomoya Ogawa[b], Johannis P. Kamerling[a], and Johannes F. G. Vliegenthart[a,]*
[a] Bijvoet Center, Department of Bio-Organic Chemistry, Utrecht University, Utrecht, Netherlands; [b] The Institute of Physical and Chemical Research (RIKEN), Wako-shi, Saitama, Japan

The syntheses of the 4-methoxyphenyl (MP) glycosides of β-D-Glc*p*NAc-(1→4)-β-D-Glc*p*A and β-D-Glc*p*NAc-(1→4)-β-D-Glc*p*A-(1→3)-β-D-Glc*p*NAc-(1→4)-β-D-Glc*p*A are presented.



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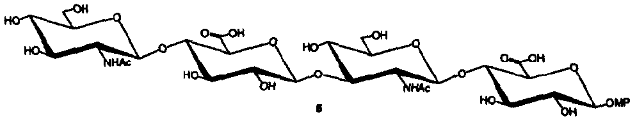

5

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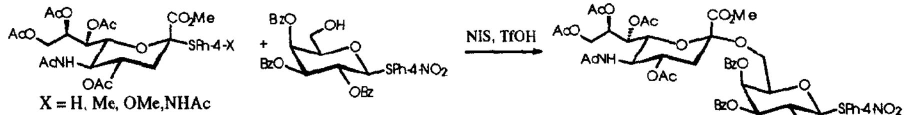
*Tetrahedron: Asymmetry* **1994,** *5,* 2303

## Mild Stereoselective Syntheses of Thioglycosides Under PTC Conditions and their Use as Active and Latent Glycosyl Donors.

S. Cao, S.J. Meunier, F.O. Andersson, M. Letellier and R.Roy*,
Department of Chemistry, University of Ottawa, Ottawa, ON., Canada K1N 6N5.

"Active" and "latent" thioglycosyl donors and acceptors were synthesized with complete anomeric inversions from glycosyl halides under mild PTC conditions The strategy was applied to sialic acid containing disaccharides.



X = H, Me, OMe,NHAc
(No reaction when X = $NO_2$)