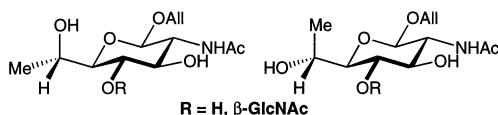


# Evaluation of steric effects on the exocyclic conformations of 6-C-methyl-substituted 2-acetamido-2-deoxy- $\beta$ -D-glucopyranosides

*Carbohydr. Res.* **2002**, 337, 83

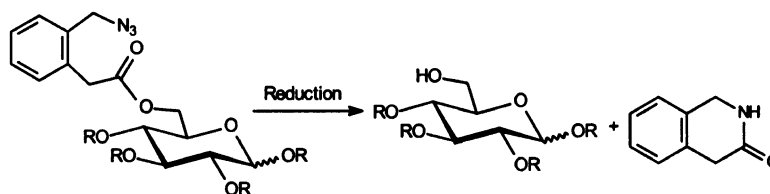
Jihane Achkar, Isabel Sanchez-Larraz, Alexander Wei

*Department of Chemistry, Purdue University, 1393 Brown Building, West Lafayette, IN 47907-1393, USA*


# (2-Azidomethyl)phenylacetyl as a new, reductively cleavable protecting group for hydroxyl groups in carbohydrate synthesis

*Carbohydr. Res.* **2002**, 337, 87

Jinghua Xu, Zhongwu Guo

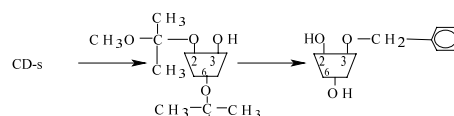
*Department of Chemistry, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106, USA*


# Mixed acetals of cyclodextrins. Preparation of hexakis-, heptakis- and octakis[2,6-di-O-(methoxydimethyl)methyl]- $\alpha$ -, $\beta$ - and $\gamma$ -cyclodextrins

*Carbohydr. Res.* **2002**, 337, 93

 András Lipták,<sup>a,b</sup> Lóránt Jánossy,<sup>a</sup> Anikó Borbás,<sup>b</sup> József Szejtli<sup>c</sup>
<sup>a</sup>*Institute of Biochemistry, University of Debrecen, PO Box 55, H-4010 Debrecen, Hungary*
<sup>b</sup>*Research Group for Carbohydrates of the Hungarian Academy of Sciences, PO Box 55, H-4010 Debrecen, Hungary*
<sup>c</sup>*Cyclolab R.D., PO Box 435, H-1525 Budapest, Hungary*

The proton-catalyzed addition of 2-methoxypropene to cyclodextrins resulted in hexakis-, heptakis- and octakis[2,6-di-O-(methoxydimethyl)methyl]- $\alpha$ -,  $\beta$ - and  $\gamma$ -cyclodextrins. Hexakis(3-O-benzyl)- $\alpha$ -CD was prepared by benzylation of the acetal derivative.



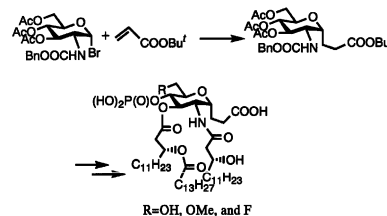
# Practical stereoselective synthesis of $\alpha$ -linked C-glucosamine propionic acid esters: conversion to GLA-60 derivatives

*Carbohydr. Res.* **2002**, 337, 97

Takanori Wakabayashi, Masao Shiozaki, Shin-ichi Kurakata

*Exploratory Chemistry Research Laboratories, Sankyo Co. Ltd., Hiromachi 1-2-58, Shinagawa-ku, Tokyo 140-8710, Japan*

Radical C-glycosylation of glucosamine derivatives by acrylic acid esters gave corresponding 3-( $\alpha$ -C-glucosyl)-propionate derivatives in moderate yields. One of them was used as a versatile synthon for GLA-60 derivatives.



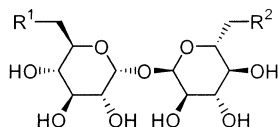
## Synthesis and biological evaluation of trehalose analogs as potential inhibitors of mycobacterial cell wall biosynthesis

*Carbohydr. Res.* **2002**, 337, 105

Jerry D. Rose,<sup>a</sup> Joseph A. Maddry,<sup>a</sup> Robert N. Comber,<sup>b</sup> William J. Suling,<sup>a</sup> Larry N. Wilson,<sup>a</sup> Robert C. Reynolds<sup>a</sup>

<sup>a</sup>*Southern Research Institute, Drug Discovery Division, 2000 Ninth Avenue South, PO Box 55305, Birmingham, AL 35255-5305, USA*

<sup>b</sup>*Croda Inc., 180 Northfield Avenue, Edison, NJ 08837, USA*



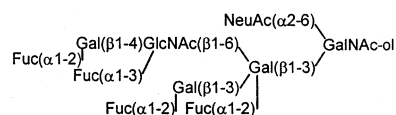
CH<sub>3</sub>(CH<sub>2</sub>)<sub>7</sub>NH-, CH<sub>3</sub>(CH<sub>2</sub>)<sub>10</sub>C(NH)NH-, etc.

## Species-specificity of amphibia carbohydrate chains: the *Bufo viridis* case study

*Carbohydr. Res.* **2002**, 337, 121

Alexandra Coppin, Emmanuel Maes, Gérard Strecker

*Laboratoire de Chimie Biologique, Centre National de la Recherche Scientifique, Université des Sciences et Technologies de Lille Flandres-Artois, Unité Mixte de Recherche no. 8576, Villeneuve d'Ascq F-59655, France*



Species-specific carbohydrate chains were purified from egg jelly coats of *Bufo viridis* and their primary structure established by <sup>1</sup>H–<sup>13</sup>C NMR spectroscopy. Several compounds are specific for the amphibian species.

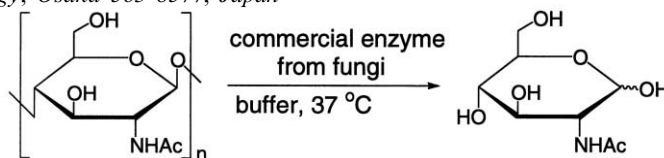
## Utilization of commercial non-chitinase enzymes from fungi for preparation of 2-acetamido-2-deoxy-D-glucose from β-chitin

*Carbohydr. Res.* **2002**, 337, 133

Mongkol Sukwattanasinitt,<sup>a</sup> Hong Zhu,<sup>b</sup> Hitoshi Sashiwa,<sup>b</sup> Sei-ichi Aiba<sup>b</sup>

<sup>a</sup>*Centre for Bioactive Compounds, Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand*

<sup>b</sup>*Green Biotechnology Research Group, The Special Division for Human Life Technology, National Institute of Advanced Industrial Science and Technology, Osaka 563-8577, Japan*



## Determination of the composition of the oligosaccharide phosphate fraction of *Pichia (Hansenula) holstii* NRRL Y-2448 phosphomannan by capillary electrophoresis and HPLC

*Carbohydr. Res.* **2002**, 337, 139

Vito Ferro,<sup>a</sup> Caiping Li,<sup>a</sup> Kym Fewings,<sup>a</sup> Maria C. Palermo,<sup>a</sup> Robert J. Linhardt,<sup>b</sup> Toshihiko Toida<sup>c</sup>

<sup>a</sup>*Department of Research & Development, Progen Industries Ltd, PO Box 28, Richlands BC, Qld 4077, Australia*

<sup>b</sup>*Department of Chemistry, Division of Medicinal and Natural Products Chemistry, Department of Chemical and Biochemical Engineering, University of Iowa, Iowa City, IA 52242, USA*

<sup>c</sup>*School of Pharmaceutical Sciences, Chiba University, 1-33 Yayoi, Inage, Chiba 263-8522, Japan*

α-D-Man6P-(1→3)-α-D-Man-(1→3)-α-D-Man-(1→3)-α-D-Man-(1→2)-D-Man  
α-D-Man6P-(1→3)-α-D-Man-(1→3)-α-D-Man-(1→2)-D-Man  
α-D-Man6P-(1→3)-α-D-Man-(1→2)-D-Man etc

## Use of $^1\text{H}$ cross-relaxation nuclear magnetic resonance spectroscopy to probe the changes in bread and its components during aging

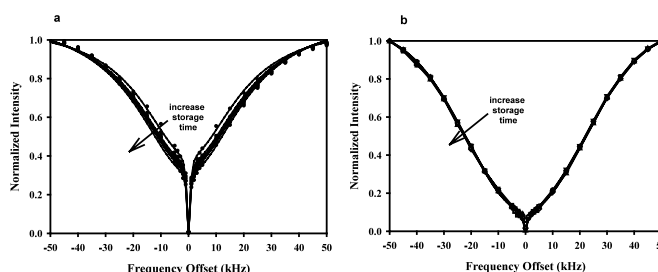
*Carbohydr. Res.* **2002**, *337*, 147

Yael Vodovotz,<sup>a</sup> Elena Vittadini,<sup>b</sup>  
Joseph R. Sachleben<sup>c</sup>

<sup>a</sup>Department of Food Science and Technology,  
The Ohio State University, 2015 Fyffe Court,  
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<sup>b</sup>NASA-Johnson Space Center, Houston, TX 77058, USA

<sup>c</sup>Campus Chemical Instrumentation Center,  
The Ohio State University, Columbus, OH 43210, USA



## Solution properties of an $\alpha$ -(1 $\rightarrow$ 3)-D-glucan from *Lentinus edodes* and its sulfated derivatives

*Carbohydr. Res.* **2002**, *337*, 155

Pingyi Zhang, Lina Zhang, Shuyao Cheng

Department of Chemistry, Wuhan University, Wuhan 430072, China

$M_w$  dependencies of  $[\eta]$  and  $\langle S^2 \rangle^{1/2}$  of  $\alpha$ -(1  $\rightarrow$  3)-D-glucan and its sulfated derivatives in 0.25 M LiCl–Me<sub>2</sub>SO and aqueous 0.5 M NaCl, respectively, were obtained by light scattering and viscometry.

## Crystal and molecular structure of methyl 4-O-methyl- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)- $\beta$ -D-glucopyranoside

*Carbohydr. Res.* **2002**, *337*, 161

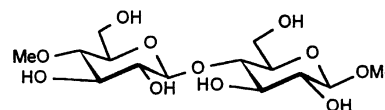
Iain D. Mackie,<sup>a</sup> Jürgen Röhring,<sup>b</sup> Robert O. Gould,<sup>a</sup> Jutta Pauli,<sup>c</sup> Christian Jäger,<sup>c</sup>  
Malcolm Walkinshaw,<sup>d</sup> Antje Potthast,<sup>b</sup> Thomas Rosenau,<sup>b</sup> Paul Kosma<sup>b</sup>

<sup>a</sup>Department of Chemistry, University of Edinburgh, Edinburgh EH9 3JJ, UK

<sup>b</sup>Christian Doppler-Laboratory, Institute of Chemistry, University of Agricultural Sciences, Muthgasse 18, A-1190 Vienna, Austria

<sup>c</sup>Laboratorium I.31, Federal Institution for Material Science and Testing,  
Richard-Willstaetter-Strasse 11, D-12489 Berlin, Germany

<sup>d</sup>Institute of Cell and Molecular Biology, University of Edinburgh, Edinburgh EH9 3JR, UK



The chemical synthesis and crystal structure of a model methyl cellobioside is described.

## An anhydrous polymorphic form of trehalose

*Carbohydr. Res.* **2002**, *337*, 167

Hiromasa Nagase,<sup>a</sup> Tomohiro Endo,<sup>a</sup> Haruhisa Ueda,<sup>a</sup> Masayuki Nakagaki<sup>b</sup>

<sup>a</sup>Department of Physical Chemistry, Hoshi University, 2-4-41 Ebara, Shinagawa-ku, Tokyo 142-8501, Japan

<sup>b</sup>Tokyo Institute of Colloid Science, 502 Higashi-Nakano 4-4-3, Nakano-ku, Tokyo 164-0003, Japan

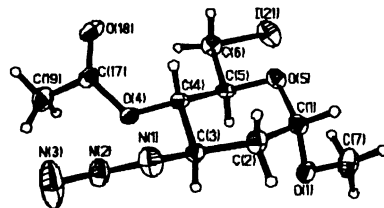
An anhydrous polymorphic form of  $\alpha,\alpha$ -trehalose was prepared from trehalose dihydrate by two different drying methods: (1) heating under vacuum and (2) heating in hot air. This form, designated T<sub>K</sub>, was characterized by X-ray powder diffraction analysis and differential scanning calorimetry.

**Synthesis, the crystal structure, and high-resolution NMR spectroscopy of methyl 4-*O*-acetyl-3-azido-2,3,6-trideoxy-6-iodo- $\alpha$ -D-arabino-hexopyranoside** *Carbohydr. Res.* **2002**, *337*, 175

Aleksandra Dąbrowska,<sup>a</sup> Antoni Konitz,<sup>b</sup> Zygfryd Smiatacz<sup>a</sup>

<sup>a</sup>Department of Chemistry, University of Gdańsk, 18/19 Sobieski Strasse, PL-80-952 Gdańsk, Poland

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The synthesis and crystal structure of methyl 4-*O*-acetyl-3-azido-2,3,6-trideoxy-6-iodo- $\alpha$ -D-arabino-hexopyranoside and its <sup>1</sup>H and <sup>13</sup>C NMR spectroscopy are reported. An interesting, nearby linear contact of 4.691(7) Å between an iodide atom and an azido group of a neighboring molecule was not found in CSD.

**A simple access to the D-mannosidase inhibitor, 1-deoxymannojirimycin**

*Carbohydr. Res.* **2002**, *337*, 183

Josef Spreitz, Arnold E. Stütz, Tanja M. Wrodnigg

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