

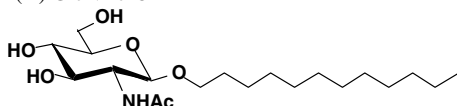
## Contents

### FULL PAPERS

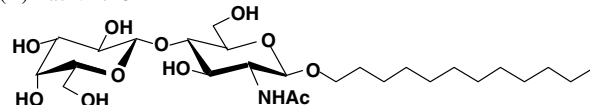
- Glycosylation of dodecyl 2-acetamido-2-deoxy- $\beta$ -D-glucopyranoside and dodecyl  $\beta$ -D-galactopyranosyl-(1 $\rightarrow$ 4)-2-acetamido-2-deoxy- $\beta$ -D-glucopyranoside as saccharide primers in cells** pp 831–838

Toshinori Sato,\* Minako Takashiba, Rumi Hayashi, Xingyu Zhu and Tatsuya Yamagata

(A) GlcNAc-C12



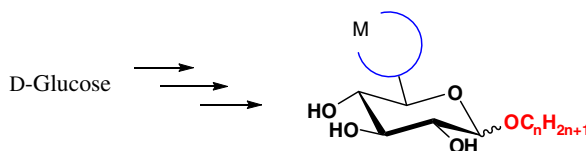
(B) LacNAc-C12



- Synthesis of sugar-based chelating surfactants for metal removal from wastewater**

pp 839–847

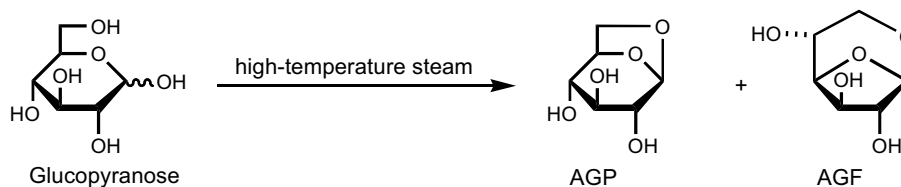
Nadège Ferlin, Diego Grassi, Carlos Ojeda, Mariano J. L. Castro, Eric Grand,\* Alicia Fernández Cirelli\* and José Kovensky\*



- Thermochemical transformation of glucose to 1,6-anhydroglucose in high-temperature steam**

pp 848–854

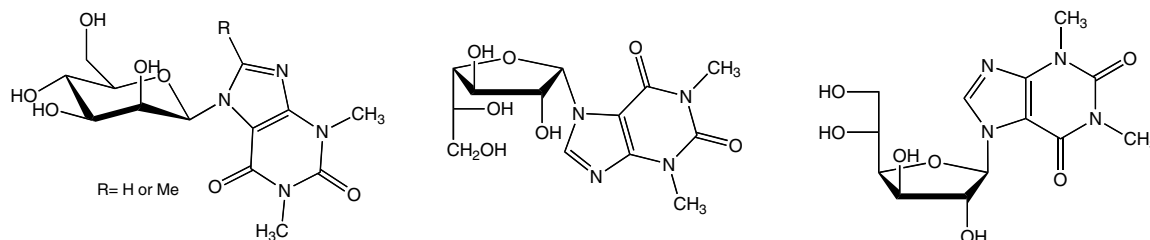
Masahide Sasaki, Kenji Takahashi, Yui Haneda, Hiroe Satoh, Akiyoshi Sasaki, Atsushi Narumi, Toshifumi Satoh, Toyoji Kakuchi and Harumi Kaga\*



# Synthesis of new mannosyl, galactosyl and glucosyl theophylline nucleosides with potential activity as antagonists of adenosine receptors. DEMA-induced cyclization of glycosylideneiminouracils

pp 855–864

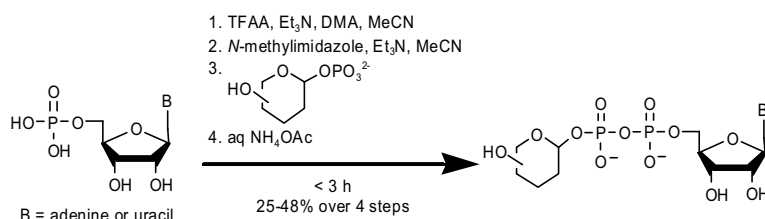
Rodrigo Rico-Gómez,\* J. Manuel López-Romero, Jesús Hierrezuelo, José Brea, M. Isabel Loza and Maykel Pérez-González



# Stereospecific synthesis of sugar-1-phosphates and their conversion to sugar nucleotides

pp 865–874

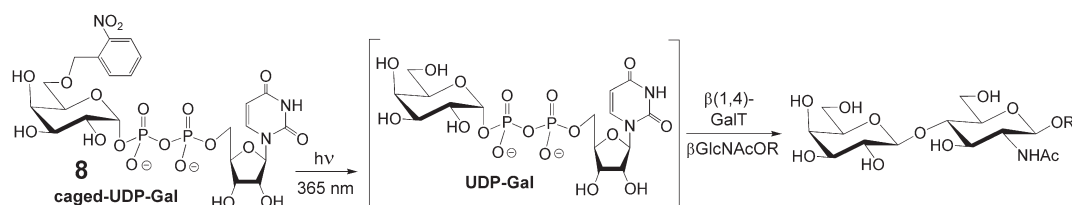
Shannon C. Timmons and David L. Jakeman\*



# Synthesis and photolytic activation of 6''-O-2-nitrobenzyl uridine-5'-diphosphogalactose: a 'caged' UDP-Gal derivative

pp 875–881

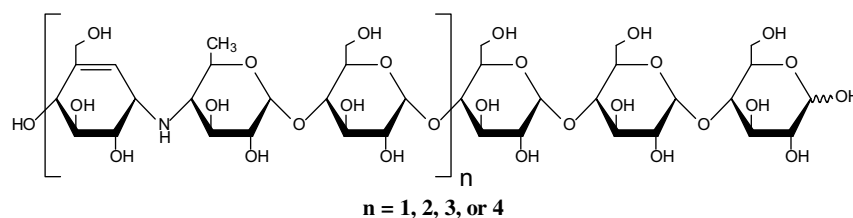
Karin Mannerstedt and Ole Hindsgaul\*



# Four acarviosin-containing oligosaccharides identified from *Streptomyces coelicoflavus* ZG0656 are potent inhibitors of $\alpha$ -amylase

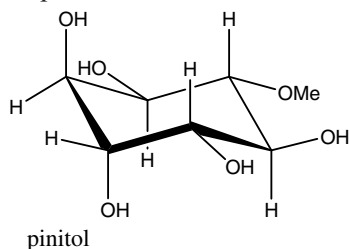
pp 882–892

Peng Geng, Feng Qiu, Yuanyuan Zhu and Gang Bai\*



## Identification and quantitative determination of carbohydrates in ethanolic extracts of two conifers using $^{13}\text{C}$ NMR spectroscopy pp 893–902

Emilie Duquesnoy, Vincent Castola\* and Joseph Casanova



We developed a method for the direct identification and quantification of carbohydrates in raw vegetable extracts using  $^{13}\text{C}$  NMR spectroscopy. Carbohydrates represented from 15% to 35% of the crude extracts and pinitol was the principal constituent.

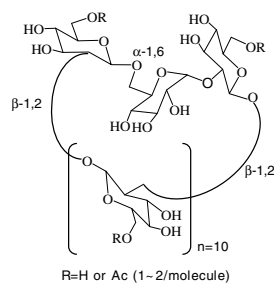
## Gelatinization and freeze-concentration effects on recrystallization in corn and potato starch gels pp 903–911

Felicidad Ronda and Yrjö H. Roos\*

The effects of freezing temperature on the recrystallization behaviour of corn and potato starch gels in water or glucose or lactose (10% w/w) solutions were studied. The extent of starch recrystallization was evaluated by differential scanning calorimetry (DSC). The recrystallization of amorphous starch during storage was enhanced by freeze-concentration of gels at temperatures above  $T'_m$ .

## Novel acetylated $\alpha$ -cyclosophorotridecaose produced by *Ralstonia solanacearum* pp 912–918

Eunae Cho, Sanghoo Lee and Seunho Jung\*



Novel acetylated  $\alpha$ -cyclosophorotridecaose ( $\alpha$ -C13)

## Effect of solvent exchange on the supramolecular structure, the molecular mobility and the dissolution behavior of cellulose in LiCl/DMAc pp 919–928

Daisuke Ishii, Daisuke Tatsumi\* and Takayoshi Matsumoto

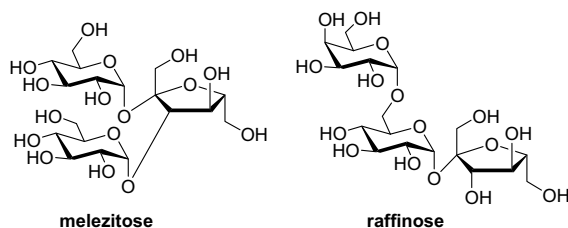
The effect of solvent exchange, a pretreatment for the dissolution of native cellulose in lithium chloride/*N,N*-dimethylacetamide (LiCl/DMAc), on the supramolecular structure and the molecular mobility of cellulose was investigated.

## NOTES

**Reactivity of melezitose and raffinose under Mitsunobu reaction conditions**

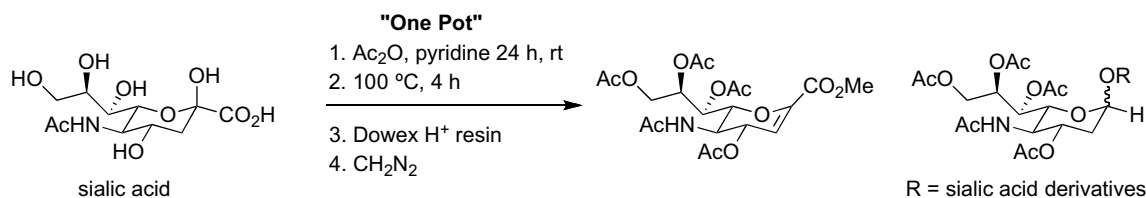
pp 929–935

Céline Besset, Stéphane Chambert, Yves Queneau,\* Sébastien Kerverdo, Hervé Rolland and Jérôme Guilbot

**Investigation into an efficient synthesis of 2,3-dehydro-*N*-acetyl neuraminic acid leads to three decarboxylated sialic acid dimers**

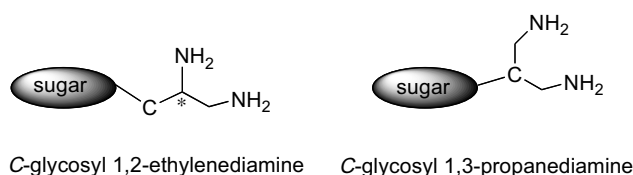
pp 936–940

Evan J. Horn, Jonel P. Saludes and Jacquelyn Gervay-Hague\*

**A general route to pendant *C*-glycosyl 1,2- and 1,3-diamines**

pp 941–950

Yoko Inaba, Tomomi Fujimoto, Hiroshi Ono, Makoto Obata, Shigenobu Yano and Yuji Mikata\*

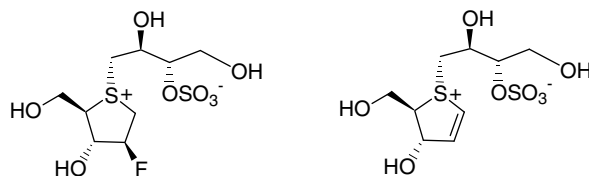


Practical and convenient preparations of *C*-glycosyl 1,2- and 1,3-alkanediamines are described. The methods reported here serve as general routes to access carbohydrate–diamine conjugates with *C*-glycosyl linkages.

**Synthesis of 2-deoxy-2-fluoro and 1,2-ene derivatives of the naturally occurring glycosidase inhibitor, salacinol, and their inhibitory activities against recombinant human maltase glucoamylase**

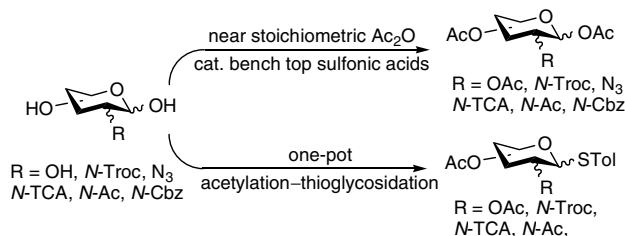
pp 951–956

Niloufar Choubdar, Lyann Sim, David R. Rose and B. Mario Pinto\*



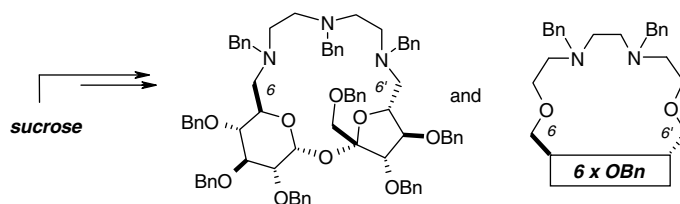
## Versatile acetylation of carbohydrate substrates with bench-top sulfonic acids and application to one-pot syntheses of peracetylated thioglycosides pp 957–964

Chin-Sheng Chao, Min-Chun Chen, Shih-Che Lin and Kwok-Kong T. Mong\*



## Synthesis and complexation properties towards the ammonium cation of aza-coronand analogues containing sucrose pp 965–969

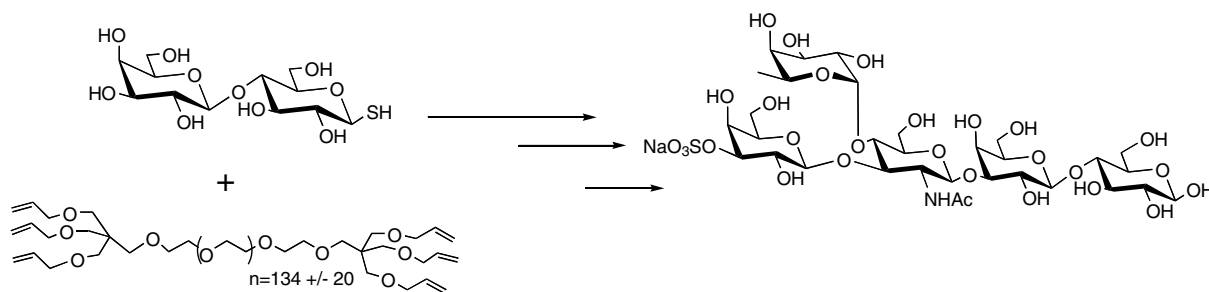
Slawomir Jarosz\* and Bartosz Lewandowski



The aza-coronand analogues with the sucrose scaffold were prepared and their complexation ability towards ammonium cation were determined.

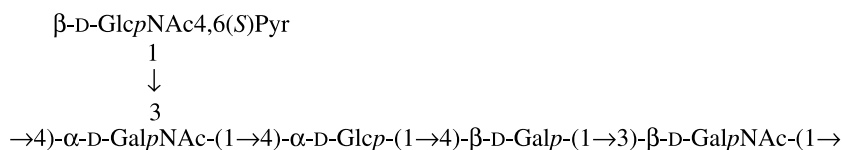
## Chemo-enzymatic supported synthesis of the 3-sulfated Lewis<sup>a</sup> pentasaccharide on a multimeric polyethylene glycol pp 970–976

Annie Malleron and Christine Le Narvor\*



## The O-polysaccharide of *Escherichia coli* O112ac has the same structure as that of *Shigella dysenteriae* type 2 but is devoid of O-acetylation: a revision of the *S. dysenteriae* type 2 O-polysaccharide structure pp 977–981

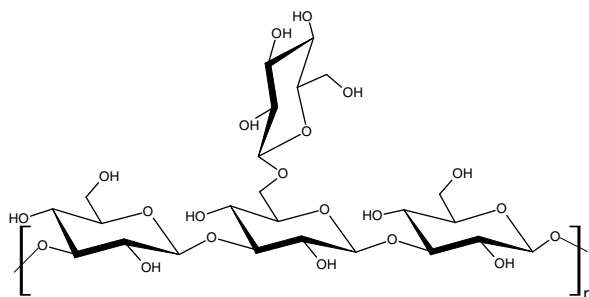
Andrei V. Perepelov,\* Andrej Weintraub, Bin Liu, Sof'ya N. Senchenkova, Alexander S. Shashkov, Lu Feng, Lei Wang, Göran Widmalm and Yuriy A. Knirel



---

**The structure and conformation of a water-insoluble (1→3)-, (1→6)-β-D-glucan from the fruiting bodies of *Pleurotus florida*** pp 982–987

Dilip Rout, Soumitra Mondal, Indranil Chakraborty and Syed S. Islam\*



\*Corresponding author

i\* Supplementary data available via ScienceDirect

**COVER**

The graphic represents a molecular dynamics simulation of water density around the disaccharide α-D-Araf-(1→5)-α-D-Araf-OCH<sub>3</sub>, highlighting the interglycosidic linkage. The red clouds represent regions where the probability of finding an oxygen atom is high while the gray clouds are for hydrogen atoms. This work is the result of a collaboration in the Alberta Ingenuity Centre for Carbohydrate Science and Department of Chemistry at the University of Alberta between the groups of Pierre-Nicolas Roy and Todd L. Lowary (Castillo, N.; Roy, P. N.; Lowary, T. L. Manuscript in Preparation).

© 2008 T. L. Lowary. Published by Elsevier Ltd.

---

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

---

Abstracted/Indexed in: Chem. Abstr.: Curr. Contents: Phys., Chem. & Earth Sci. Life Sci. Current Awareness in Bio. Sci. (CABS). Science Citation Index. Full texts are incorporated in CJELSEVIER, a file in the Chemical Journals Online database which is available on STN® International. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®

---



ISSN 0008-6215