

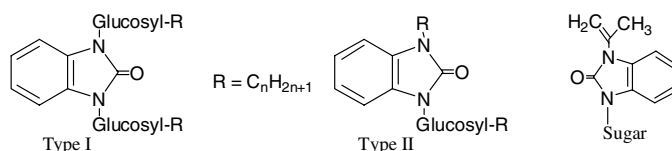
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### FULL PAPERS

#### Towards the synthesis of new benzimidazolone derivatives with surfactant properties

pp 421–433

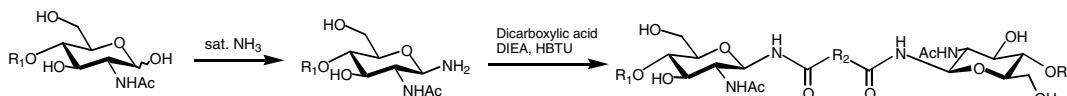
Brahim Lakhri, Abdelhafid Benksim, Mohamed Massoui, El Mokhtar Essassi, Vincent Lequart,\*  
Nicolas Joly, Daniel Beaupère, Anne Wadouachi and Patrick Martin



#### Efficient synthesis of spacer-N-linked double-headed glycosides carrying *N*-acetylglucosamine and *N,N'*-diacetylchitobiose and their cross-linking activities with wheat germ agglutinin

pp 434–442

Yoshinori Misawa, Ryuichi Masaka, Kayo Maeda, Megumi Yano, Takeomi Murata,  
Hirokazu Kawagishi and Taichi Usui\*



*N*-linked double-headed glycoside

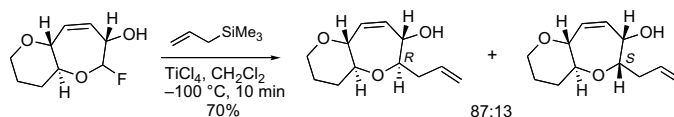
- 2: R<sub>1</sub> = H, R<sub>2</sub> = -(CH<sub>2</sub>)<sub>3</sub>-
- 3: R<sub>1</sub> = H, R<sub>2</sub> = -(CH<sub>2</sub>)<sub>4</sub>-
- 4: R<sub>1</sub> = H, R<sub>2</sub> = -(CH<sub>2</sub>)<sub>5</sub>-
- 5: R<sub>1</sub> = H, R<sub>2</sub> = -(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>-
- 6: R<sub>1</sub> = GlcNAc residue, R<sub>2</sub> = -(CH<sub>2</sub>)<sub>4</sub>-
- 7: R<sub>1</sub> = GlcNAc residue, R<sub>2</sub> = -(CH<sub>2</sub>)<sub>5</sub>-
- 8: R<sub>1</sub> = GlcNAc residue, R<sub>2</sub> = -(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>-



#### Synthesis of trans-fused tetrahydrooxepins: stereoselective allylation of sulfur or fluoro-substituted tetrahydrooxepins

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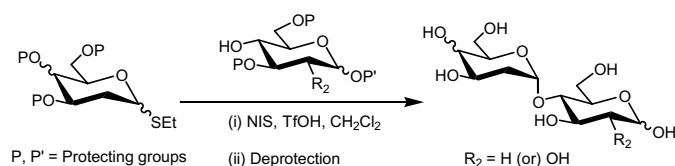
Shoji Kobayashi,\* Makiko Hori and Masahiro Hirama



**Synthesis of 2-deoxy-D-arabinolxyo-hexopyranosyl disaccharides**

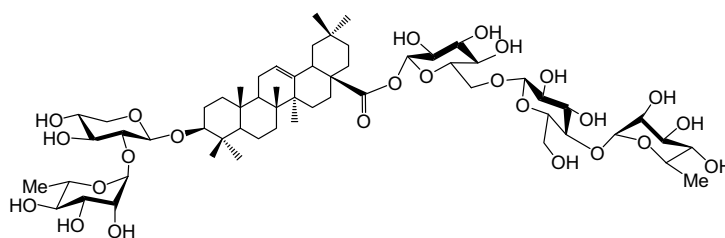
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Somak Paul and Narayanaswamy Jayaraman\*

**Synthesis of flaccidoside II, a bidesmosidic triterpene saponin isolated from Chinese folk medicine Di Wu**

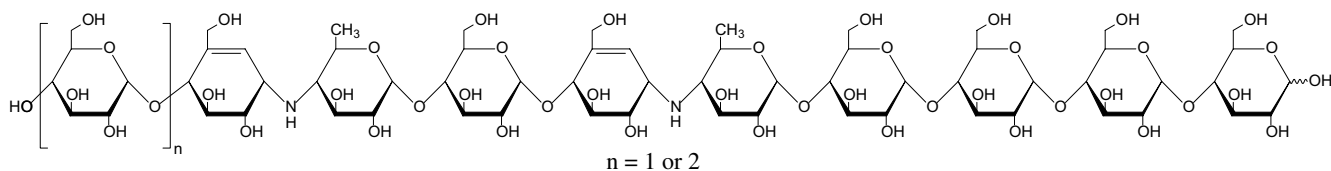
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Shuihong Cheng, Yuguo Du,\* Feihong Bing and Guobin Zhang

**Two novel aminooligosaccharides isolated from the culture of *Streptomyces coelicoflavus* ZG0656 as potent inhibitors of  $\alpha$ -amylase**

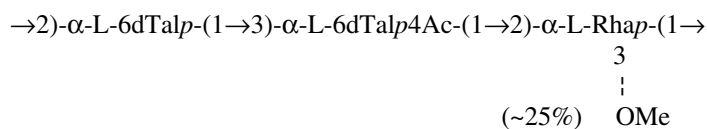
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Peng Geng and Gang Bai\*

**Structural studies of the O-polysaccharide chain from the lipopolysaccharide of symbiotically enhanced mutant Mlo-13 of *Mesorhizobium loti* NZP2213**

pp 477–482

Anna Turska-Szewczuk, Marta Palusinska-Szyszk and Ryszard Russa\*



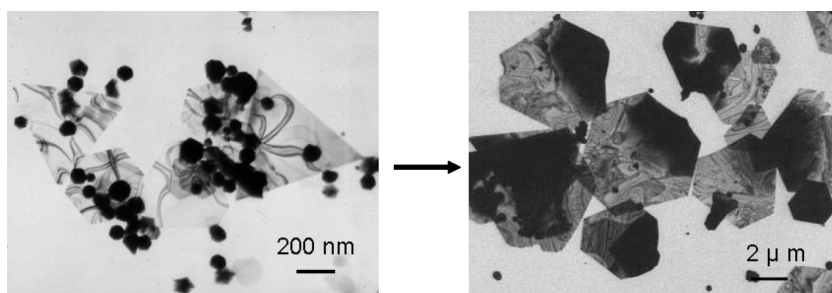
## pp 483–488

$$\begin{array}{c} \rightarrow 3)-\beta\text{-D-GalpNAc}(1\rightarrow 4)\text{-}\beta\text{-D-GalpNAc}(1\rightarrow 4)\text{-}\beta\text{-D-GlcNAc}(1\rightarrow 4)\text{-}\alpha\text{-L-Rhap}(1\rightarrow \\ | \\ \text{D-Gro}(1\rightarrow \text{P} \end{array}$$

Vasileios G. Charalampopoulos, John C. Papaioannou,\* Glikeria Kakali and Haido S. Karayianni


$$\begin{array}{ccccccc}
 \longrightarrow & {}^6\text{Man}_2^1 & \longrightarrow & {}^6(\text{Man})_2^1 & \longrightarrow & {}^6\text{Man}_2^1 & \longrightarrow & {}^6(\text{Man})_2^1 & \longrightarrow \\
 & \uparrow & & \uparrow & & \uparrow & & \uparrow & \\
 & (\text{Man})_2^1 & \xrightarrow{0 \sim 3} & & & \text{Man}_2^1 & & \text{Man}_2^1 & \\
 & \uparrow & & & & \uparrow & & \uparrow & \\
 & \text{Man}^1 & & & & \text{Man}_2^1 & & \text{Man}_2^1 & \\
 & & & & & \uparrow & & \uparrow & \\
 & & & & & \text{Glu}^1 & \longrightarrow & {}^6\text{Man}_2^1 & 
 \end{array}$$

Dongwei Wei, Weiping Qian,\* Yi Shi, Shaohua Ding and Yan Xia



## New enzyme-based method for analysis of water-soluble wheat arabinoxylans

pp 521–529

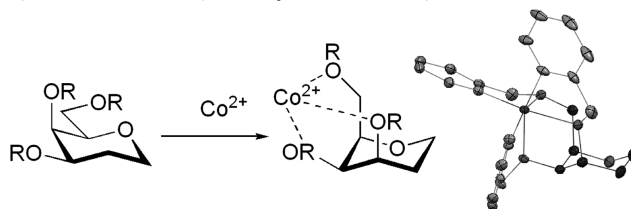
Liisa Virkki, Henry Ndegwa Maina, Liisa Johansson and Maija Tenkanen\*

An enzyme-assisted method employing an efficient enzyme mixture for the total hydrolysis of AX was developed. Enzymatic hydrolysis (EH) is a gentle method during which no unwanted sugar destruction occurs. Following EH, liberated monosaccharides were analysed by gas chromatography (GC) and liquid chromatography using HPAEC–PAD. The results were compared with acid methanolysis (AM) and acid hydrolysis (AH).

## Synthesis and X-ray crystal structures of two transition metal complexes based on functionalised 1,5-anhydro-2-deoxy-D-galactitol and methyl 2-deoxy- $\alpha$ -D-galactopyranoside

pp 530–535

Federico Cisnetti, Régis Guillot, Nada Ibrahim, François Lambert, Michel Thérissod and Clotilde Polcar\*



We report two crystal structures of transition metal complexes with ligands based on two *galacto* pyranoid scaffolds. The coordinating sites are discussed in comparison with those found in carbohydrate–metal and polyol–metal complexes.

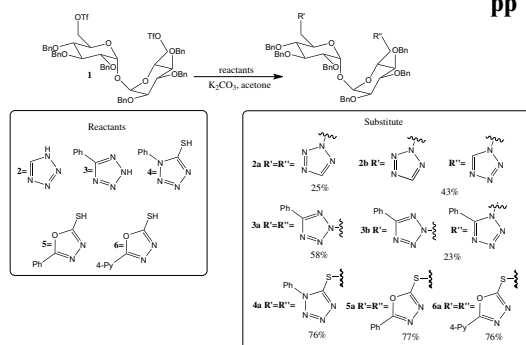


## NOTES

### Synthesis of new heterocyclic derivatives of $\alpha,\alpha$ -trehalose

pp 536–540

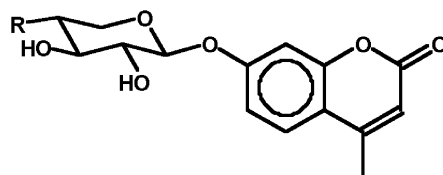
Inácio Luduvico,\* Mara R. C. Couri, Leandro J. dos Santos, Maria A. F. Prado, Rossimiriam P. Freitas Gil and Rosemeire B. Alves



## An alternative approach for the synthesis of fluorogenic substrates of *endo*- $\beta$ -(1 $\rightarrow$ 4)-xylanases and some applications

pp 541–548

Mária Vršanská, Wim Nerinckx, Marc Claeysens and Peter Biely\*

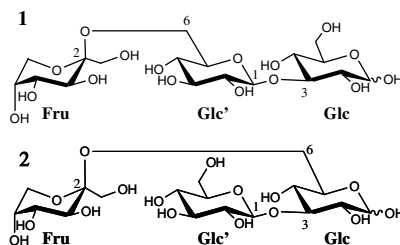


R = D-xylosyloxy (1) or xylobiosyloxy (2)

**Two novel oligosaccharides isolated from a beverage produced by fermentation of a plant extract**

pp 549–554

Naoki Kawazoe, Hideki Okada, Eri Fukushi, Akira Yamamori, Shuichi Onodera, Jun Kawabata and Norio Shiomi\*

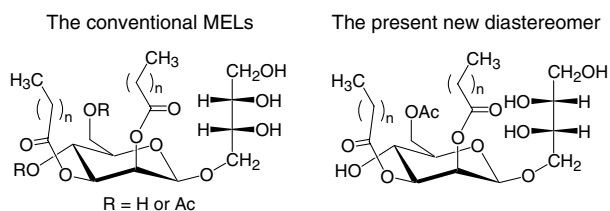


1:  $\beta$ -D-Fructopyranosyl-(2 $\rightarrow$ 6)- $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)-D-glucopyranose. 2:  $\beta$ -D-Fructopyranosyl-(2 $\rightarrow$ 6)-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 3)]-D-glucopyranose.

**A basidiomycetous yeast, *Pseudozyma tsukubaensis*, efficiently produces a novel glycolipid biosurfactant. The identification of a new diastereomer of mannosylerythritol lipid-B**

pp 555–560

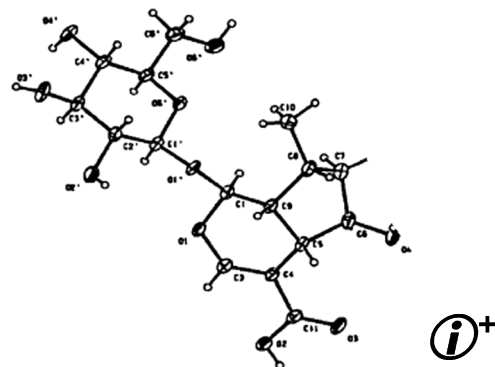
Tokuma Fukuoka, Tomotake Morita, Masaaki Konishi, Tomohiro Imura and Dai Kitamoto\*

**The structure of an iridoid glycoside, 8-deoxyshanzhiside, from *Lamiophlomis rotata***

pp 561–565

Maoxing Li, Zhengping Jia, Ruxue Zhang, Zhide Hu\* and Xuan Tian

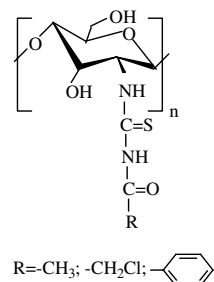
8-Deoxyshanzhiside was extracted from *Lamiophlomis rotata* (Benth.) Kudo. Extensive NMR spectroscopy techniques were used to fully assign the  $^1\text{H}$  and  $^{13}\text{C}$  spectra. X-ray investigation was used to identify its conformation, and absolute configuration.

**Synthesis of acyl thiourea derivatives of chitosan and their antimicrobial activities in vitro**

pp 566–570

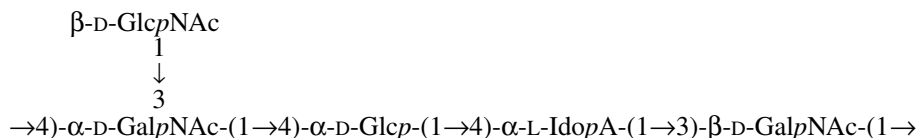
Zhimei Zhong, Rong Xing, Song Liu, Lin Wang, Shengbao Cai and Pengcheng Li\*

Acyl thiourea derivatives of chitosan were synthesized and characterized. The antimicrobial behavior of them against four species of bacteria and four crop-threatening pathogenic fungi were investigated in this paper.




**Structure of the O-polysaccharide of *Escherichia coli* O112ab containing L-iduronic acid****pp 571–575**

Andrei V. Perepelov,\* Bin Liu, Sofya N. Senchenkova, Alexander S. Shashkov, Lu Feng, Yuriy A. Knirel and Lei Wang



\*Corresponding author

 Supplementary data available via ScienceDirect**COVER**

The graphic represents a molecular dynamics simulation of water density around the disaccharide  $\alpha\text{-D-Araf} \text{-(1}\rightarrow 5) \text{-}\alpha\text{-D-Araf-OCH}_3$ , 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).

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