

### Carbohydrate Research Vol. 339, No. 9, 2004

## **Contents**

#### **REVIEW**

Fluorinated cyclitols as useful biological probes of phosphatidylinositol metabolism David J. A. Schedler\* and David C. Baker\*

pp 1585-1595



Deoxfluoro cyclitols

### **FULL PAPERS**

Sulfatase-catalyzed assembly of regioselectively O-sulfonated  $\emph{p}$ -nitrophenyl  $\alpha$ -D-gluco- and  $\alpha$ -D-mannopyranosides

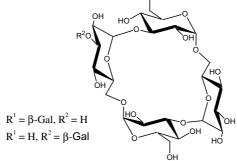
pp 1597-1602

Hirotaka Uzawa,\* Yoshihiro Nishida, Kenji Sasaki, Takehiro Nagatsuka, Hideo Hiramatsu and Kazukiyo Kobayashi

### Enzymatic synthesis of a β-D-galactopyranosyl cyclic tetrasaccharide by β-galactosidases

pp 1603-1608

Takanobu Higashiyama,\* Hikaru Watanabe, Hajime Aga, Tomoyuki Nishimoto, Michio Kubota, Shigeharu Fukuda, Masashi Kurimoto and Yoshio Tsujisaka <sub>OR</sub>¹



# Carbohydrate carbonyl mobility—the key process in the formation of $\alpha$ -dicarbonyl intermediates

pp 1609-1618

Oliver Reihl, Thorsten M. Rothenbacher, Markus O. Lederer and Wolfgang Schwack\*

The formation pathway of the dideoxyosone 4 was established and syntheses for the quinoxalines of the dideoxyosones 3 and 13 are described.

# Desulfation of sulfated galactans with chlorotrimethylsilane. Characterization of $\beta$ -carrageenan by $^1H$ NMR spectroscopy

pp 1619-1629

Adriana A. Kolender and María C. Matulewicz\*

# Chemical structure of aeromonas gum—extracellular polysaccharide from *Aeromonas nichidenii* 5797

pp 1631-1636

Xiaojuan Xu, Dong Ruan, Yong Jin, Alexander S. Shashkov, Sof'ya N. Senchenkova, Michelle Kilcoyne, Angela V. Savage and Lina Zhang\*

# The structure of the carbohydrate backbone of the lipopolysaccharide of *Pectinatus frisingensis* strain VTT E-79104

pp 1637–1642

Evgeny Vinogradov,\* Jianjun Li, Irina Sadovskaya, Said Jabbouri and Ilkka M. Helander

β-Ara4N-(1-*P*-6)-α-GlcN-(1-4)-α-Kdo-(2-4)<sub>|</sub>
α-Gal-(1-2)-α-Man-(1-4)-α-Man-(1-5)-α-Kdo-(2-6)-β-GlcN-(1-6)-α-GlcN1*P*
**R**-3)-α-Gal-(1-2)-α-Man-(1-6)-
$$\frac{1}{2}$$
(3-2)-α-Kdo

where R is H or 4-O-Me- $\alpha$ -L-Fuc-(1-2)-4-O-Me- $\beta$ -Hep-(1-3)- $\alpha$ -GlcNAc-(1-2)- $\beta$ -Man-(1-3)- $\beta$ -ManNAc-(1-4)- $\alpha$ -Gal-(1-4)- $\beta$ -Hep-(1-3)- $\beta$ -GalNAc-(1- where Hep is a residue of D-glycero-D-galacto-heptose.

Characterisation of the core part of the lipopolysaccharide O-antigen of Francisella novicida (U112) pp 1643–1648 Evgeny Vinogradov\* and Malcolm B. Perry

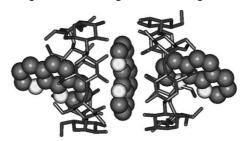
$$\begin{array}{c} \alpha\text{-Glc-}(1\rightarrow 3) \\ R\rightarrow 4)\text{-}\beta\text{-Man-}(1\rightarrow 4)\text{-}\alpha\text{-Man-}(1\rightarrow 5)\text{-Kdo-}(2\rightarrow 6)\text{-}\beta\text{-GlcN-}(1\rightarrow 6)\text{-GlcN} \\ \alpha\text{-GalNAc-}(1\rightarrow 2) \\ \hline \alpha\text{-Glc-}(1\rightarrow 2) \\ \end{array}$$

where R is an O-chain, linked via a  $\beta$ -bacillosamine residue.

# Interaction between $\beta$ -cyclodextrin and 1,10-phenanthroline: uncommon 2:3 inclusion complex in the solid state

pp 1649-1654

Yu Liu,\* Guo-Song Chen, Heng-Yi Zhang, Hai-Bin Song and Fei Ding



### NOTE

Structure of an acidic O-specific polysaccharide from marine bacterium Shewanella fidelis KMM 3582 $^{\rm T}$  containing  $N^{\epsilon}$ -[(S)-1-carboxyethyl]- $N^{\alpha}$ -(D-galacturonoyl)-L-lysine

pp 1655-1661

Michelle Kilcoyne, Andrei Perepelov, Alexander S. Shashkov, Evgeny L. Nazarenko, Elena P. Ivanova, Natalya M. Gorshkova, Raisa P. Gorshkova and Angela V. Savage\*

$$\rightarrow$$
3)- $\beta$ -D-GalpNAc-(1 $\rightarrow$ 4)- $\beta$ -D-GlcpA-(1 $\rightarrow$ 3)- $\beta$ -D-GalpNAc-(1 $\rightarrow$ 2)- $\alpha$ -D-GalpA-(1 $\rightarrow$ 6 | 2S,8S-AlaLys

#### OTHER CONTENTS

Erratum p 1663
Erratum p 1665

\*Corresponding author

#### **COVER**

Well-defined glycoforms of glycoproteins can easily be obtained by oxidative coupling of synthetic thioaldoses with proteins that have a cysteine moiety in lieu of an asparagine residue carrying natural N-linked oligosaccharides. In vitro glycosylation offers several advantages such as quantitative conjugation, incorporation of oligosaccharides that display high bioactivities and the possibility of using convenient bacterial or yeast protein expression systems. The figure is related to Geert-Jan Boons' *Carbohydrate Research Award* paper, Carbohydr. Res., **2004**, *339*, 181–193.



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