

Carbohydrate Research Vol. 340, No. 8, 2005

Contents

FULL PAPERS

Syntheses of chlorogenin 6α-O-acyl-3-O-β-chacotriosides and their antitumor activities

pp 1453-1459

Yichun Zhang, Yingxia Li,* Tiantian Guo, Huashi Guan, Jiwei Shi, Qiang Yu and Biao Yu*

$$\alpha$$
-L-Rha-(1-4)
$$\beta$$
-D-Glc-O-3
$$\overline{H}$$

$$\overline{O}$$

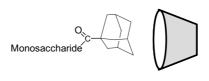
$$R = H, acyl$$



Adamantoylated monosaccharides: new compounds for modification of the properties of cyclodextrin-containing materials

pp 1461-1468

Cécile Binkowski, Vincent Lequart,* Frédéric Hapiot, Sébastien Tilloy, Roméo Cecchelli, Eric Monflier and Patrick Martin



β-cyclodextrin

An enzymatically produced novel cyclic tetrasaccharide, $cyclo{-}\{\rightarrow 6\}$ - α -D-Glcp-(1 $\rightarrow 4$)- α -D-Glcp-(1 $\rightarrow 6$)- α -D-Glcp-(1 $\rightarrow 4$)- α -D-Glcp-(1 $\rightarrow 6$)-maltose), from starch

pp 1469-1474

Kazuhisa Mukai,* Hikaru Watanabe, Kazuyuki Oku, Tomoyuki Nishimoto, Michio Kubota, Hiroto Chaen, Shigeharu Fukuda and Masashi Kurimoto

The complete structure of the core carbohydrate backbone from the LPS of marine halophilic bacterium *Pseudoalteromonas carrageenovora* type strain IAM 12662^T

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Alba Silipo, Rosa Lanzetta, Michelangelo Parrilli, Luisa Sturiale, Domenico Garozzo, Evgeny L. Nazarenko, Raisa P. Gorshkova, Elena P. Ivanova and Antonio Molinaro*

α-Hep3P-(1
$$\rightarrow$$
5)-α-Kdo4P-(2 \rightarrow 6)-Lipid A α-Glc-(1 \rightarrow 4)-β-Gal-(1 \rightarrow 4)

Structure of an acidic polysaccharide from the marine bacterium *Pseudoalteromonas aliena* type strain KMM 3562^T containing two residues of L-serine in the repeating unit

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Eva-Lisa Nordmark, Andrei V. Perepelov, Alexander S. Shashkov, Evgeny L. Nazarenko, Raisa P. Gorshkova, Elena P. Ivanova and Göran Widmalm*

Isolation, characterization and structural determination of a unique type of arabinogalactan from an immunostimulatory extract of *Chlorella pyrenoidosa*

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Erick Reyes Suárez, Jaroslav A. Kralovec, Miguel D. Noseda, H. Stephen Ewart, Colin J. Barrow, Michael D. Lumsden and T. Bruce Grindley*

Molecular dynamics and atomic charge calculations in the study of heparin conformation in aqueous solution

pp 1499-1507

Camila F. Becker, Jorge A. Guimarães and Hugo Verli*

Conformation
$$A$$
 $\theta = 91.9^{\circ}$
 $\phi_2 = 145^{\circ}$

Conformation θ
 $\theta = 89.1^{\circ}$
 $\phi_2 = 87.1^{\circ}$

The structure of the antigenic O-polysaccharide of the lipopolysaccharide of *Edwardsiella ictaluri* strain MT104

pp 1509-1513

Evgeny Vinogradov, Ludmila Nossova, Malcolm B. Perry* and William W. Kay

 $[\rightarrow 4)$ - α -D-Glc- $(1\rightarrow 4)$ - α -D-GalNAc- $(1\rightarrow 3)$ - β -D-GalNAc- $(1\rightarrow 4)$ - β -D-Gal- $(1\rightarrow]_n$

Correlation between antitumor activity, molecular weight, and conformation of lentinan

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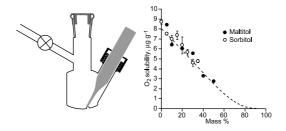
Lina Zhang,* Xuelian Li, Xiaojuan Xu and Fanbo Zeng

The correlation between antitumor activity, molecular weight, and conformation of lentinan was investigated. The triple helix sample exhibited a relatively high inhibition ratio against the Sarcoma 180 tumor, whereas the bioactivity of its single flexible chains was negligible.

Oxygen solubility and permeability of carbohydrates

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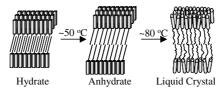
Michael J. Whitcombe,* Roger Parker and Stephen G. Ring



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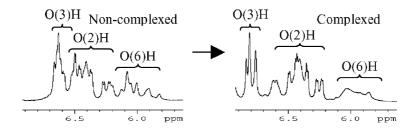
Caroline A. Ericsson, Louise C. Ericsson and Stefan Ulvenlund*



¹H NMR studies on the hydrogen-bonding network in mono-*altro*-β-cyclodextrin and its complex with adamantane-1-carboxylic acid

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Birgit Hakkarainen, Kahee Fujita, Stefan Immel, Lennart Kenne and Corine Sandström*



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Sebastien G. Gouin, Wayne Pilgrim, Richard K. Porter* and Paul V. Murphy*



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Ernestas Gaidamauskas,* Eugenijus Norkus, Jūratė Vaičiūnienė, Debbie C. Crans, Tapani Vuorinen, Janė Jačiauskienė and Gintaras Baltrūnas

Structure of the O-specific polysaccharide from Shewanella japonica type strain KMM $3299^{\rm T}$ containing the rare amino sugar Fuc4NAc

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

New cyclomaltoheptaose (β -cyclodextrin) derivative 2-O-(2-hydroxybutyl)cyclomaltoheptaose: preparation and its application for the separation of enantiomers of drugs by capillary electrophoresis

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Ming-gang Zhao, Ai-you Hao,* Jian Li, Yun-he Wei and Peng Guo

Mass spectrometric decompositions of cationized β-cyclodextrin

pp 1567-1572

Rafał Frański,* Błażej Gierczyk, Grzegorz Schroeder, Sebastian Beck, Andreas Springer and Michael Linscheid

The main fragmentation pathways of $[\beta\text{-CD+Cat}]^{2+}$ ions studied (Cat stands for divalent cation) consist of consecutive losses of sugar units. The rupture of C–C bond in sugar units, which occurs via hydrogen atom transfer from the fragment ion formed to the eliminated species, was also observed.

*Corresponding author

(1) Supplementary data available via ScienceDirect

COVER

Model of blood group A trisaccharide in the binding site of the *Dolichos biflorus* lectin as established by a combination of theoretical and experimental approaches. Molecular modeling of the oligosaccharide demonstrated that two different conformations could be adopted by the trisaccharide in the binding site. NMR experiments using transferred nuclear Overhauser effects (TRNOE) displayed intermolecular contacts (blue arrows) corresponding to only one of the two theoretical conformations. This work is a collaboration between Anne Imberty (CERMAV, Grenoble) and Thomas Peters (University of Lübeck) and was presented during the XXIInd International Carbohydrate Symposium (Glasgow, 2004) on the occasion of the Whistler award.

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