

Contents

iii Graphical Abstracts

Regular Papers

- Y. Dai, R.M. Whittall, C.A. Bridges (Edmonton, Canada), Y. Isogai (La Jolla, CA, USA), O. Hinds-gaul (Edmonton, Canada; La Jolla, CA, USA) and L. Li (Edmonton, Canada)** 1 Matrix-assisted laser desorption ionization mass spectrometry for the analysis of mono-sulfated oligosaccharides
- S. Hantus, M. Pauly, A.G. Darvill, P. Albersheim and W.S. York (Athens, GA, USA)** 11 Structural characterization of novel L-galactose-containing oligosaccharide subunits of jojoba seed xyloglucans
- U.K. Saha (Konstanz, Germany), L.S. Griffith (Bonn, Germany), J. Rademann, A. Geyer and R.R. Schmidt (Konstanz, Germany)** 21 An *N*-acetylglucosamine containing glycopeptide — synthesis and structure assignment
- S.O. Nortey, W.-N. Wu and B.E. Maryanoff (Spring House, PA, USA)** 29 Synthesis of hydroxylated derivatives of topiramate, a novel antiepileptic drug based on D-fructose: Investigation of oxidative metabolites
- M. Desjardins, L.E. Brammer Jr. and T. Hudlicky (Gainesville, FL, USA)** 39 A practical multigram-scale synthesis of *allo*-inositol
- G. Schwarzmann, P. Hofmann and U. Pütz (Bonn, Germany)** 43 Synthesis of ganglioside GM1 containing a thioglycosidic bond to its labeled ceramide(s). A facile synthesis starting from natural gangliosides
- A.A. Kolender, C.A. Pujol, E.B. Damonte, M.C. Matulewicz and A.S. Cerezo (Buenos Aires, Argentina)** 53 The system of sulfated α -(1 $\rightarrow$ 3)-linked D-mannans from the red seaweed *Nothogenia fastigiata*: Structures, antiherpetic and anticoagulant properties
- I.J. Bruno, N.M. Kemp, P.J. Artymiuk and P. Willett (Sheffield, UK)** 61 Representation and searching of carbohydrate structures using graph-theoretic techniques
- T. Sawabe, M. Ohtsuka and Y. Ezura (Hakodate, Japan)** 69 Novel alginate lyases from marine bacterium *Alteromonas* sp. strain H-4
- Preliminary communication**
- Y.A. Knirel (Borstel, Germany; Moscow, Russian Federation), H. Moll (Borstel, Germany), J.H. Helbig (Dresden, Germany) and U. Zähringer (Borstel, Germany)** 77 Chemical characterization of a new 5,7-diamino-3,5,7,9-tetraoxynonulosonic acid released by mild acid hydrolysis of the *Legionella pneumophila* serogroup 1 lipopolysaccharide
- Notes**
- T. Kraus, M. Buděšínský and J. Závada (Prague, Czech Republic)** 81 A simple synthesis of hexakis(6-*O*-carboxymethyl- 2,3-di-*O*-methyl)cyclomaltohexaose and heptakis(6-*O*-carboxymethyl- 2,3-di-*O*-methyl)cyclomaltoheptaose
- B. Bendiak (Denver, CO, USA)** 85 Preparation, conformation, and mild hydrolysis of 1-glycosyl-2-acetylhydrazines of the hexoses, pentoses, 2-acetamido-2-deoxyhexoses, and fucose
- H. Moll (Borstel, Germany), Y.A. Knirel (Borstel, Germany; Moscow, Russian Federation), J.H. Helbig (Dresden, Germany) and U. Zähringer (Borstel, Germany)** 91 Identification of an α -D-Man p -(1 $\rightarrow$ 8)-Kdo disaccharide in the inner core region and the structure of the complete core region of the *Legionella pneumophila* serogroup 1 lipopolysaccharide

	iii	Graphical Abstracts
M.L. Ramos, M.M. Caldeira and V.M.S. Gil (Coimbra, Portugal)	97	NMR spectroscopy study of the complexation of D-gluconic acid with tungsten(VI) and molybdenum(VI)
A. Mechaly, T. Baasov, V. Belakhov and Y. Shoham (Haifa, Israel)	111	An efficient chemical-enzymatic synthesis of 4-nitrophenyl β -xylobioside: a chromogenic substrate for xylanases
A.E.J. De Nooy, M. Pagliaro (Zeist, The Netherlands), H. Van Bakkum (Delft, The Netherlands) and A.C. Besemer (Zeist, The Netherlands)	117	Autocatalytic oxidation of primary hydroxyl functions in glucans with nitrogen oxides
T. Shimokawa, S. Yoshida, I. Kusakabe (Ibaraki, Japan), T. Takeuchi, K. Murata (Tokyo, Japan) and H. Kobayashi (Ibaraki, Japan)	125	Some properties and action mode of (1 $\rightarrow$ 4)- α -L-gulonon lyase from <i>Enterobacter cloacae</i> M-1
J. Lee and R.I. Hollingsworth (East Lansing, MI, USA)	133	Oligosaccharide β -glucans with unusual linkages from <i>Sarcina ventriculi</i>
K. Klarskov, K. Piens (Gent, Belgium), J. Ståhlberg (Uppsala, Sweden), P.B. Høj (Glen Osmond, Australia), J. Van Beeumen and M. Claeysens (Gent, Belgium)	143	Cellobiohydrolase I from <i>Trichoderma reesei</i> : Identification of an active-site nucleophile and additional information on sequence including the glycosylation pattern of the core protein
A.W. Heinen, J.A. Peters and H. Van Bakkum (Delft, The Netherlands)	155	The oxidation of fructose on Pt/C catalysts. The formation of D-threo-hexo-2,5-diulose and the effect of additives
C. Karlsson, P.-E. Jansson (Huddinge, Sweden), G. Widmalm (Stockholm, Sweden) and U.B. Skov Sørensen (Copenhagen, Denmark)	165	Structural elucidation of the capsular polysaccharide from <i>Streptococcus pneumoniae</i> type 18B
N. Asano, A. Kato, H. Kizu, K. Matsui (Kanazawa, Japan), R.C. Griffiths, M.G. Jones, A.A. Watson and R.J. Nash (Aberystwyth, UK)	173	Enzymatic synthesis of the glycosides of calystegines B ₁ and B ₂ and their glycosidase inhibitory activities
V.Ph. Anufriev, G.V. Malinovskaya, V.A. Denisenko, N.I. Uvarova, G.B. Elyakov (Vladivostok, Russia), S.-I. Kim and N.-I. Baek (Taejon, Korea)	179	Synthesis of ginsenoside Rg ₃ , a minor constituent of Ginseng <i>Radix</i>
M. Rozenberg, A. Loewenschuss and Y. Marcus (Jerusalem, Israel)	183	IR spectra and hydrogen bonding in tetratols
	iii	Graphical Abstracts
Rapid communication		
H. Ito, H. Ishida, M. Kiso and A. Hasegawa (Gifu, Japan)	187	First total synthesis of ganglioside GT1a α
Regular papers		
A.D. Cox, J.-R. Brisson, P. Thibault and M.B. Perry (Ottawa, Canada)	191	Structural analysis of the lipopolysaccharide from <i>Vibrio cholerae</i> serotype O22

A. Poveda (Madrid, Spain), M. Santamaría (Tenerife, Spain), M. Bernabé, A. Prieto, M. Bruix (Madrid, Spain), J. Corzo (Tenerife, Spain) and J. Jiménez-Barbero (Madrid, Spain)	209	Studies on the structure and the solution conformation of an acidic extracellular polysaccharide isolated from <i>Bradyrhizobium</i>
A. Poveda (Madrid, Spain), M. Santamaría (Tenerife, Spain), M. Bernabé, A. Rivera (Madrid, Spain), J. Corzo (Tenerife, Spain) and J. Jiménez-Barbero (Madrid, Spain)	219	Solution conformation and dynamics of an extracellular polysaccharide isolated from <i>Bradyrhizobium</i> as deduced from ¹ H-NMR off resonance ROESY and ¹³ C-NMR relaxation measurements
S. Hamai and N. Satoh (Akita, Japan)	229	Inclusion effects of cyclomaltohexa- and heptaose (α - and β -cyclodextrins) on the acidities of several phenol derivatives
C. Birk, J. Voss and J. Wirsching (Hamburg, Germany)	239	Preparation, structural elucidation and reactions of benzyl 2-deoxy-3,5-di- <i>O</i> -methyl-1,4-dithio- <i>L</i> -threo-pentofuranoside and synthesis of the corresponding 2'-deoxy-4'-thionucleosides
T. Yoshida (Baltimore, MD, USA)	249	Synthesis of a set of highly clustered monosulfated galactopyranosides
C. Marino, O. Varela and R.M. de Lederkremer (Buenos Aires, Argentina)	257	Facile synthesis of glycofuranosyl isothiocyanates
J.M. García Fernández, C. Ortiz Mellet, V.M. Díaz Pérez, J. Fuentes (Sevilla, Spain), J. Kovács and I. Pintér (Budapest, Hungary)	261	Synthesis of (1 $\rightarrow$ 6)-carbodiimide-tethered pseudooligosaccharides <i>via</i> aza-Wittig reaction
É. Bozó, S. Boros and J. Kuzsmann (Budapest, Hungary)	271	Synthesis of 4-cyanophenyl 1,5-dithio- β -D-glucopyranoside and its 6-deoxy, as well as 6-deoxy-5-ene derivatives as oral antithrombotic agents
A. Prieto, J.A. Leal, A. Poveda, J. Jiménez-Barbero, B. Gómez-Miranda, J. Domenech, O. Ahrazem and M. Bernabé (Madrid, Spain)	281	Structure of complex cell wall polysaccharides isolated from <i>Trichoderma</i> and <i>Hypocrea</i> species
A. Gamini, R. Toffanin, E. Murano and R. Rizzo (Trieste, Italy)	293	Hydrogen-bonding and conformation of agarose in methyl sulfoxide and aqueous solutions investigated by ¹ H and ¹³ C NMR spectroscopy
S. Kitamura, H. Isuda (Kyoto, Japan), J. Shimada, T. Takada (Ibaraki, Japan), T. Takaha, S. Okada (Osaka, Japan), M. Mimura and K. Kajiwara (Kyoto, Japan)	303	Conformation of cyclomaltooligosaccharide ("cycloamylose") of dp21 in aqueous solution
A. Larsson and M. Rasmusson (Göteborg, Sweden)	315	Electrokinetic characterisation of cationic amylopectin starch; screening by salt and screening by nanosized silica particles
M. Lahaye, M. Brunel and E. Bonnin (Nantes, France)	325	Fine chemical structure analysis of oligosaccharides produced by an ulvan-lyase degradation of the water-soluble cell-wall polysaccharides from <i>Ulva</i> sp. (Ulvales, Chlorophyta)
Notes		
A. Temeriusz, B. Piekarska-Bartoszewicz and I. Wawer (Warsaw, Poland)	335	Synthesis and characterization by ¹³ C-CP-MAS- and high resolution ¹ H-, ¹³ C-NMR of new ureido sugars, derivatives of methyl 2-amino-2-deoxy- β -D-glucopyranose and dipeptides
T. Yui, T. Nabekura (Miyazaki, Japan) and K. Ogawa (Osaka, Japan)	341	Chain conformational analysis of beijeran by <i>n-h</i> map calculations

H. Stêpowska and A. Zamojski (Warsaw, Poland)	347	Synthesis of methyl D- and L- <i>glycero-α-D-manno</i> -heptofuranosides
Y. Edashige and T. Ishii (Ibaraki, Japan)	357	Rhamnogalacturonan I from xylem differentiating zones of <i>Cryptomeria japonica</i>
	I	Author index
	III	Subject index
	IX	Contents of Volume 304