

Contents of Volume 334

iii Graphical abstracts

Rapid Communication

Rob Schoevaart, Tom Kieboom (Leiden, The Netherlands)

- 1 Galactose dialdehyde: the forgotten candidate for a protein cross-linker?

Full Papers

Noriyasu Hada, Tomoko Ogino, Haruki Yamada, Tadahiro Takeda (Tokyo, Japan)

- 7 Syntheses of model compounds related to an antigenic epitope in pectic polysaccharides from *Bupleurum falcatum* L.

Kazumi Funane, Tadashi Ishii, Mayumi Matsushita (Ibaraki, Japan), Kazuyuki Hori (Akita, Japan), Kouichi Mizuno, Hidenari Takahara, Yoshiaki Kitamura, Mikihiro Kobayashi (Ibaraki, Japan)

- 19 Water-soluble and water-insoluble glucans produced by *Escherichia coli* recombinant dextranases from *Leuconostoc mesenteroides* NRRL B-512F

Barbara Hinterstoesser (Vienna, Austria), Margaretha Åkerholm, Lennart Salmén (Stockholm, Sweden)

- 27 Effect of fiber orientation in dynamic FTIR study on native cellulose

Paola Cimino, Giuseppe Bifulco, Agostino Casapullo, Ines Bruno, Luigi Gomez-Paloma, Raffaele Riccio (Fisciano, Italy)

- 39 Isolation and NMR characterization of rosacellose, a novel sulfated polysaccharide from the sponge *Mixylla rosacea*

Dag Ekeberg, Svein Halvor Knutsen, Marit Sletmoen (Ås, Norway)

- 49 Negative-ion electrospray ionisation–mass spectrometry (ESI–MS) as a tool for analysing structural heterogeneity in *kappa*-carrageenan oligosaccharides

Hassan S. El Khadem, M. Ashraf Shalaby (Washington, DC, USA), Bruce Coxon (Bethesda, MD, Gaithersburg, MD, USA)

- 61 The cations and anions of cyclobutanetetraone poly(phenylhydrazones)

Andrzej Temeriusz, Romana Anulewicz, Iwona Wawer, Tadeusz M. Krygowski, Bogusława Piekarska-Bartoszewicz, Magdalena Rowińska (Warsaw, Poland)

- 71 Crystal structure and solid state ¹³C NMR analysis of *N*-(methyl 3,4,6-tri-*O*-acetyl- α , and β -D-glucopyranosid-2-yl)-oxamide derivative of *p*-chloroaniline, *N,N*-diethylamine, *N*-methylaniline and *N*-ethylaniline

iii Graphical abstracts

Full Papers

Graham E. Driver, John D. Stevens (Sydney, Australia)

- 81 Preparation of 1,2-*O*-isopropylidene derivatives of α -D-galactoseptanose, β -L-altroseptanose, and 3-*O*-methyl- α -D-guloseptanose

Limin Yang, Ying Zhao, Yizhuang Xu, Xianglin Jin, Shifu Weng, Wen Tian, Jinguang Wu, Guangxian Xu (Beijing, China)

- 91 Complexation of trivalent lanthanide cations by D-ribose in the solid state. The crystal structure and FT-IR study of $\text{PrCl}_3 \cdot \alpha$ -D-ribose-5 H₂O

Christoph Albermann, Wolfgang Piepersberg, Udo F. Wehmeier (Wuppertal, Germany)

- 97 Synthesis of the milk oligosaccharide 2'-fucosyllactose using recombinant bacterial enzymes

E.V. Chandrasekaran, Ram Chawda, Conrad Piskorz, Robert D. Locke, Alyssa Ta, Ghamande Sharad, Kunle Odunsi, Shashikant Lele, Khushi L. Matta (Buffalo, NY, USA)

- 105 Human ovarian cancer, lymphoma spleen, and bovine milk GlcNAc: β 1,4Gal/GalNAc transferases: two molecular species in ovarian tumor and induction of GalNAc β 1,4Glc synthesis by α -lactalbumin

- Sanghoo Lee, Dong-hyuk Seo (Seoul, South Korea), Hyun-Won Kim (Wonju, South Korea), Seunho Jung (Seoul, South Korea)** 119 Investigation of inclusion complexation of paclitaxel by cyclohenicosakis-(1 → 2)-(β -D-glucopyranosyl), by cyclic-(1 → 2)- β -D-glucans (cyclosophoraoses), and by cyclomaltoheptaoses (β -cyclodextrins)
- Cécile Vanhaverbeke, Alain Heyraud (Grenoble, France), Wafa Achouak, Thierry Heulin (Saint Paul-lez-Durance, France)** 127 Structural analysis of the exopolysaccharide from *Burkholderia caribensis* strain MWP71
- Arland T. Hotchkiss Jr, Stephanie L. Lecrinier, Kevin B. Hicks (Wyndmoor, PA, USA)** 135 Isolation of oligogalacturonic acids up to DP 20 by preparative high-performance anion-exchange chromatography and pulsed amperometric detection
- Jihad R. Albani (Villeneuve d'Ascq, France)** 141 Effect of binding of Calcofluor White on the carbohydrate residues of α_1 -acid glycoprotein (orosomucoid) on the structure and dynamics of the protein moiety. A fluorescence study

Notes

- Jiří Kroutil, Miloslav Černý, Tomáš Trnka, Miloš Buděšínský (Prague, Czech Republic)** 153 Synthesis of S-linked glucosaminy-4-thiohex-2-enopyranosides via allylic S_N2' substitution of a tosylhexenose
- Xingquan Ma, Biao Yu, Yongzheng Hui, Zehong Miao, Jian Ding (Shanghai, China)** 159 Synthesis of steroidal glycosides bearing the disaccharide moiety of OSW-1 and their antitumor activities

iii Graphical abstracts

Perspective

- Fabiana Sussich (Trieste, Italy), Catherine Skopec, John Brady (Ithaca, NY, USA), Attilio Cesàro (Trieste, Italy)** 165 Reversible dehydration of trehalose and anhydrobiosis: from solution state to an exotic crystal?

Full Papers

- Juan Xie, Annie Thellend, Hubert Becker, Anne Vidal-Cros (Paris, France)** 177 Synthesis and evaluation of a C-glycosyl nucleoside as an inhibitor of chitin synthase
- Toshihiro Kumazawa, Takayuki Kimura, Shigeru Matsuba, Shingo Sato, Jun-ichi Onodera (Yamagata, Japan)** 183 Synthesis of 8-C-glucosylflavones
- Emmanuel Poirot (Bethesda, MD, USA), Alex H.C. Chang (Bethesda, MD, Washington, DC, USA), Derek Horton (Washington, DC, USA), Pavol Kováč (Bethesda, MD, USA)** 195 Synthetic explorations towards 3-deoxy-3-fluoro derivatives of D-perosamine
- Toshihiro Kumazawa, Takayuki Kimura, Shigeru Matsuba, Shingo Sato, Jun-ichi Onodera (Yamagata, Japan)** 207 Cleavage of the C–C linkage between the sugar and the aglycon in C-glycosylphloroacetophenone, and the NMR spectral characteristics of the resulting di-C-glycosyl compound
- Shingo Sato, Toshihiro Kumazawa, Shigeru Matsuba, Jun-ichi Onodera, Masaaki Aoyama, Heitaro Obara, Hitoshi Kamada (Yamagata, Japan)** 215 Novel glycosylation of the nitroxyl radicals with peracetylated glycosyl fluorides using a combination of $BF_3 \cdot OEt_2$ and an amine base as promoters
- Wei Zou, Zerong Wang, Edith Lacroix (Ottawa, Canada), Shih-Hsiung Wu (Taipei, Taiwan, ROC), Harold J. Jennings (Ottawa, Canada)** 223 Multifunctionalized α,β -cyclopentenones from C-2 and C-4-ulopyranosyl compounds: a stereospecific rearrangement initiated by base
- Ken-ichi Akao, Yusei Okubo (Tokyo, Japan), Naoki Asakawa, Yoshio Inoue, Minoru Sakurai (Yokohama, Japan)** 233 Infrared spectroscopic study on the properties of the anhydrous form II of trehalose. Implications for the functional mechanism of trehalose as a biostabilizer
- Martin A.K. Williams, Gaëlle M.C. Buffet, Tim J. Foster, Ian T. Norton (Bedford, UK)** 243 Simulation of endo-PG digest patterns and implications for the determination of pectin fine structure
- Meimei Zhang, Yuguo Du, Fanzuo Kong (Beijing, People's Republic of China)** 251 Corrigendum

iii Graphical abstracts

Full Papers

- Ferenc Sajtos, János Hajkó, Katalin E. Kövér, András Lipták (Debrecen, Hungary) 253 Synthesis of the α -D-GlcpA-(1 $\rightarrow$ 3)- α -L-Rhap-(1 $\rightarrow$ 2)-L-Rha trisaccharide isolated from the cell wall hydrolyzate of the green alga, *Chlorella vulgaris*
- T. Mohan Das, Chebrolu P. Rao (Mumbai, India), Erkki Kolehmainen (Jyväskylä, Finland) 261 Synthesis and characterisation of *N*-glycosyl amines from the reaction between 4,6-*O*-benzylidene-D-glucopyranose and substituted aromatic amines and also between 2-(*o*-aminophenyl)benzimidazole and pentoses or hexoses
- Fabien P. Boulineau, Alexander Wei (West Lafayette, IN, USA) 271 Stereoselective synthesis of [¹³C]methyl 2-[¹⁵N]amino-2-deoxy- β -D-glucopyranoside derivatives
- Marielba Morillo (Mérida, Venezuela), Vincent Lequart, Eric Grand, Gérard Goethals (Amiens, France), Alfredo Usubillaga (Mérida, Venezuela), Pierre Villa, Patrick Martin (Amiens, France) 281 Synthesis of peracetylated chactriose
- Yi-Pin Lu, Hui Li, Meng-Shen Cai, Zhong-Jun Li (Beijing, China) 289 Synthesis of a divalent glycoside of an α -galactosyl disaccharide epitope involved in the hyperacute rejection of xenotransplantation
- Marie-Christine Scherrmann, Aurélie Boutboul, Bernard Estramareix, Anne-Sophie Hoffmann, André Lubineau (Orsay, France) 295 Binding properties and esterase activity of monoclonal antibodies elicited against sucrose 6-heptylphosphonate
- Akashi Ohtaki, Shin Kondo, Yoichiro Shimura, Takashi Tonozuka, Yoshiyuki Sakano, Shigehiro Kamitori (Tokyo, Japan) 309 Role of Phe286 in the recognition mechanism of cyclomaltooligosaccharides (cyclodextrins) by *Thermoactinomyces vulgaris* R-47 α -amylase 2 (TVAII). X-ray structures of the mutant TVAIIs, F286A and F286Y, and kinetic analyses of the Phe286-replaced mutant TVAIIs

Notes

- Gyöngyi Gyémánt, Anikó Tóth, István Bajza, Lili Kandra, András Lipták (Debrecen, Hungary) 315 Identification and structural analysis of synthetic oligosaccharides of *Shigella sonnei* using MALDI-TOF MS
- Hong-Min Liu, Fuyi Zhang, Jianye Zhang (Zhengzhou, China) 323 Stereoselective synthesis of methyl 4,6-*O*-benzylidene-2-*C*-methoxycarbonylmethyl- α -D-ribo-hexopyranosid-3-ulose, and its X-ray crystallographic analysis
- Paul V. Murphy, Julie L. O'Brien (Dublin, Ireland), Amos B. Smith III (Philadelphia, PA, USA) 327 Stereospecific synthesis of β -D-allopyranosides by dihydroxylation of β -D-erythro-2,3-dideoxyhex-2-enopyranosides
- Mona Suihko, Markku Ahlgrén, Paula Aulaskari, Juha Rouvinen (Joensuu, Finland) 337 Improved synthesis and characterization of 1,3,4,6-tetra-*O*-acetyl-2-(*N*-acetylacetamido)-2-deoxy- β -D-glucopyranose
- 343 Author Index of Volume 334
- 345 Subject Index of Volume 334
- 351 Contents of Volume 334