

Carbohydrate Research Vol. 344, No. 3, 2009

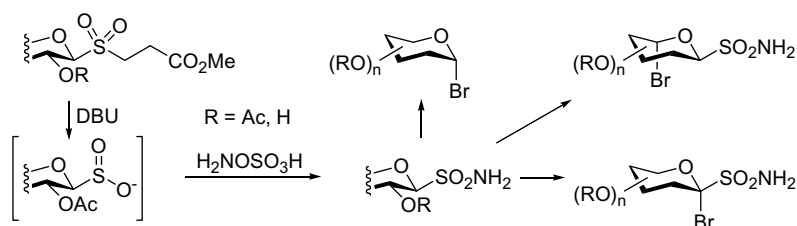
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Full Papers

Synthesis of anomeric sulfonamides and their behaviour under radical-mediated bromination conditions

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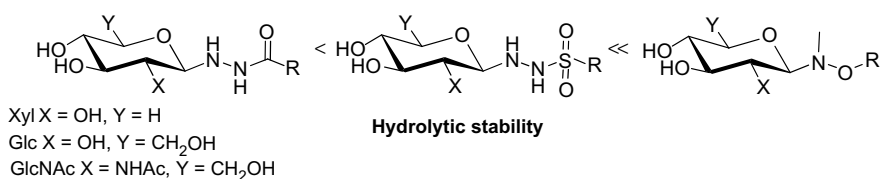
Katalin Czifrák, László Somsák *



Stability studies of hydrazide and hydroxylamine-based glycoconjugates in aqueous solution

pp 278–284

Anna V. Gudmundsdottir, Caroline E. Paul, Mark Nitz *



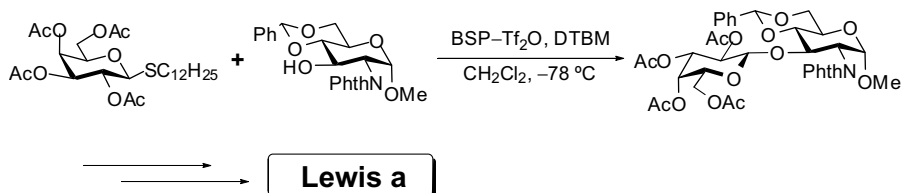
Hydrazides and *N*-methylhydroxylamines are useful reagents for conjugation to unprotected mono- and oligosaccharides. Investigation of their association constants as well as their hydrolysis rates provides insight into their applicability.



Pre-activation of fully acetylated dodecyl thioglycosides with BSP-Tf₂O led to efficient glycosylation at low temperature

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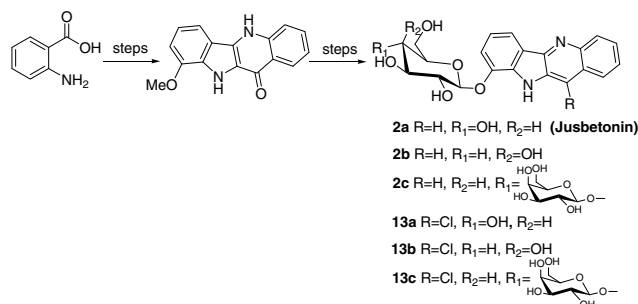
Sang-Hyun Son, Chiharu Tano, Tetsuya Furuie, Nobuo Sakairi *



Efficient synthesis of jusbetonin, an indolo[3,2-*b*]quinoline glycoside, and its derivatives

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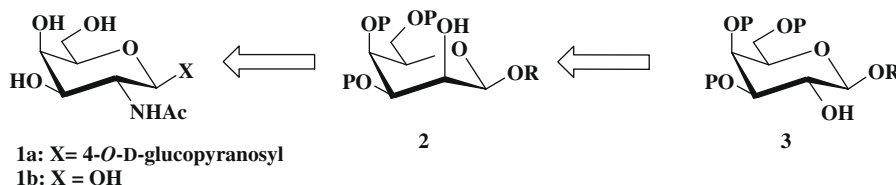
Zhongwei Zhang, Shixi Wang, Shengbiao Wan, Sumei Ren, Wei Li, Tao Jiang *



Stereoselective entry into the D-GalNAc series starting from the D-Gal one: a new access to N-acetyl-D-galactosamine and derivatives thereof

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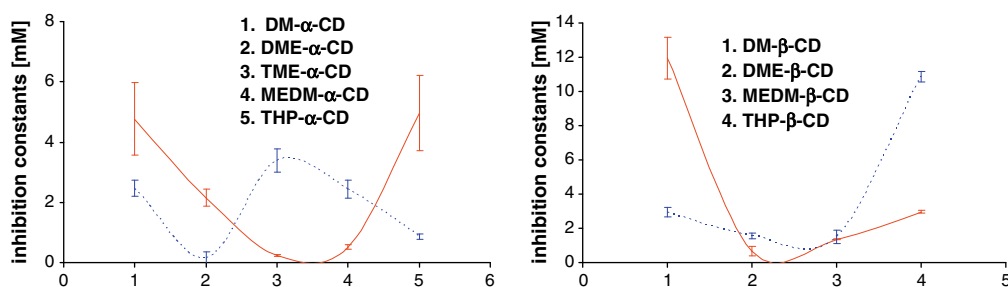
Lorenzo Guazzelli, Giorgio Catelani *, Felicia D'Andrea, Alessia Giannarelli



The influence of selected O-alkyl derivatives of cyclodextrins on the enzymatic decomposition of L-tryptophan by L-tryptophan indole-lyase

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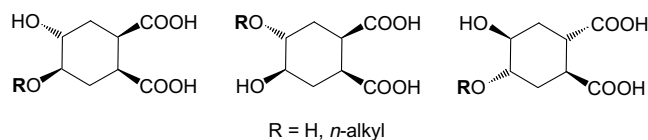
Tomasz Gubica, Elżbieta Winnicka, Andrzej Temeriusz *, Marianna Kańska



Novel easily accessible glucosidase inhibitors: 4-hydroxy-5-alkoxy-1,2-cyclohexanedicarboxylic acids

pp 311–321

Barbora Brazdova, Nikmala S. Tan, Nataliya M. Samoshina *, Vyacheslav V. Samoshin *

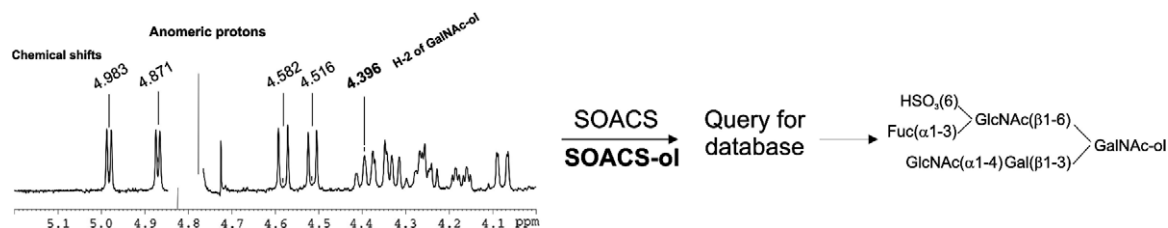


Glycosidases are very important enzymes involved in a variety of biochemical processes with a special importance to biotechnology, food industry, and pharmacology. Novel structurally simple inhibitors derived from cyclohexane-1,2-dicarboxylic acids were synthesized and tested toward several fungal glycosidases from *Aspergillus oryzae* and *Penicillium canescens*. The presence of at least two carboxylic groups and one hydroxy group was essential for efficient inhibition. Significant selective inhibition was observed for α - and β -glucosidases, which magnitude depended on configuration of substituents and increased for β -glucosidase with lengthening of the inhibitor's alkoxy group.

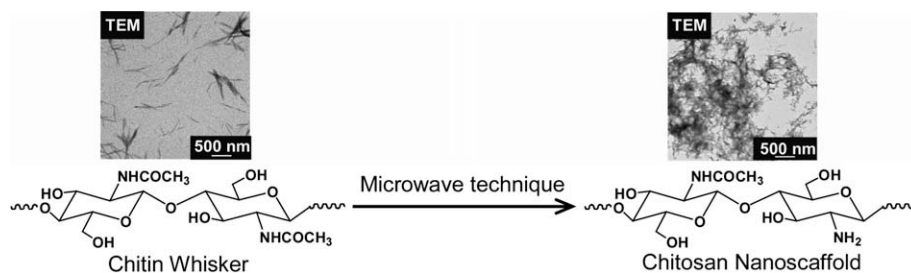


SOACS index: an easy NMR-based query for glycan retrieval

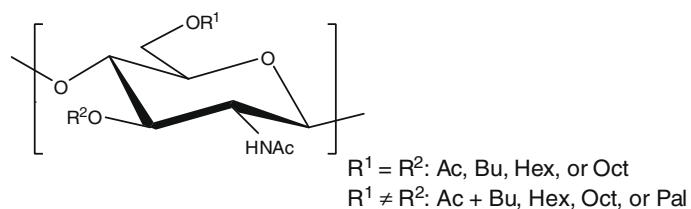
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Emmanuel Maes ^{*}, Fanny Bonachera, Gerard Strecker, Yann Guerardel**Microwave technique for efficient deacetylation of chitin nanowhiskers to a chitosan nanoscaffold**

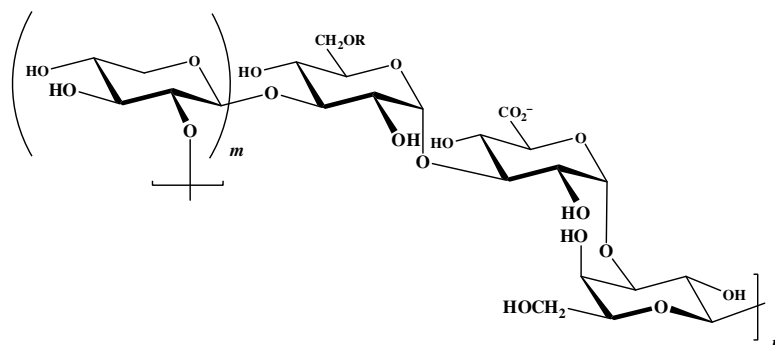
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Tipparat Lertwattanaseri, Naoya Ichikawa, Tetuo Mizoguchi, Yasuyuki Tanaka, Suwabun Chirachanchai ^{*}**Preparation and physical properties of chitin fatty acids esters**

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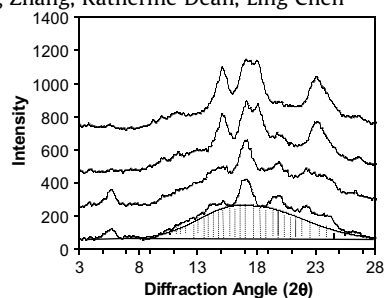
Byung Y. Yang ^{*}, Qiong Ding, Rex Montgomery**Isolation and characterization of poly- and oligosaccharides from the red microalga *Porphyridium* sp.**

pp 343–349

Shimona Geresh, Shoshana (Malis) Arad, Oshrat Levy-Ontman, Wang Zhang, Yoram Tekoah, Robert Glaser ^{*}

Effect of annealing and pressure on microstructure of cornstarches with different amylose/amylopectin ratios

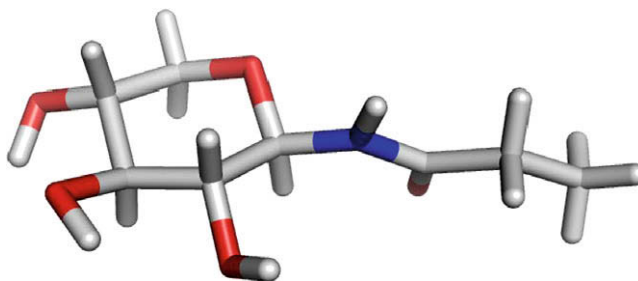
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Hongsheng Liu, Long Yu ^{*}, George Simon, Xiaoqing Zhang, Katherine Dean, Ling Chen

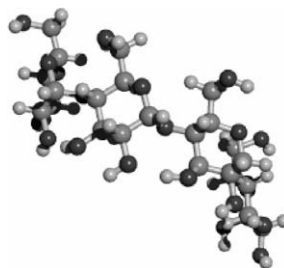
X-ray diffraction patterns of cornstarches with different amylose contents (from top to bottom: waxy, normal corn, G50, and G80). The portion of the dashed indicates the amorphous area.

Examination of the effect of structural variation on the N-glycosidic torsion (ϕ_N) among *N*-(β -D-glycopyranosyl)acetamido and propionamido derivatives of monosaccharides based on crystallography and quantum chemical calculations

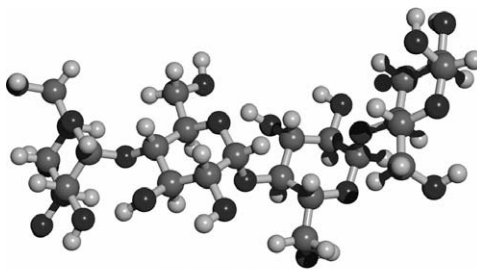
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Mohamed Mohamed Naseer Ali, Udayanath Aich, Serge Pérez, Anne Imberty ^{*}, Duraikkannu Loganathan ^{*}
DFT conformation and energies of amylose fragments at atomic resolution. Part 1: syn forms of α -maltotetraose

pp 362–373

Udo Schnupf, J.L. Willett, Wayne Bosma, Frank A. Momany ^{*}*gg-gg-gg-gg-c* $\Delta E = 0.3$ kcal/mol
DFT conformation and energies of amylose fragments at atomic resolution. Part 2: 'band-flip' and 'kink' forms of α -maltotetraose

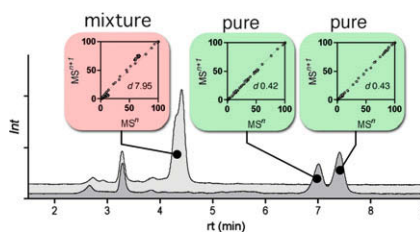
pp 374–383

Udo Schnupf, J.L. Willett, Frank A. Momany ^{*}*gg-gt-gg-gg-c* $\Delta E = 5.3$ kcal/mol

Ion-trap mass spectrometry unveils the presence of isomeric oligosaccharides in an analyte: stage-discriminated correlation of energy-resolved mass spectrometry

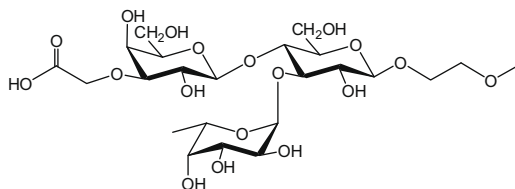
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Shusaku Daikoku, Ayako Kurimoto, Sachiko Mutsuga, Takuro Ako, Takuya Kanemitsu, Yuki Shioiri, Atsuko Ohtake, Rumiko Kato, Chikako Saotome, Isao Ohtsuka, Satomi Koroghi, Sujit K. Sarkar, Akifumi Tobe, Shin Adachi, Katsuhiko Suzuki, Osamu Kanie *

**Notes****Regioselective synthesis of a glycomimetic trisaccharide of Sialyl Lewis (sLe^x)**

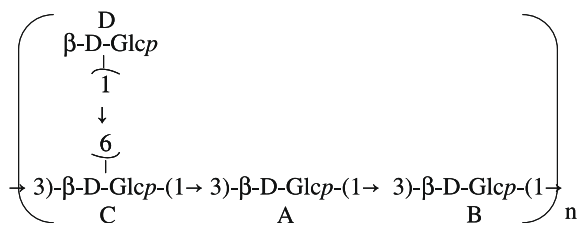
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Sameh E. Soliman, Rafik W. Bassily, Ramadan I. El-Sokkary, Joseph Banoub, Mina A. Nashed *

**An unambiguous structural elucidation of a 1,3-β-D-glucan obtained from liquid-cultured *Grifola frondosa* by solution NMR experiments**

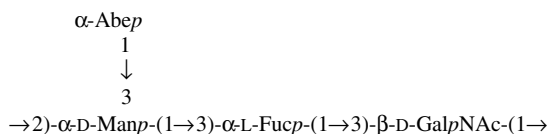
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Rui Tada, Yoshiyuki Adachi, Ken-ichi Ishibashi, Naohito Ohno *


**Structure of the O-polysaccharide of *Yersinia pseudotuberculosis* O:2b**

pp 405–407

Anna N. Kondakova *, Olga V. Bystrova, Rima Z. Shaikhutdinova, Sergey A. Ivanov, Svetlana V. Dentovskaya, Alexander S. Shashkov, Yuriy A. Knirel, Andrey P. Anisimov

*Yersinia pseudotuberculosis* O:2b O-polysaccharide repeating unit

*Corresponding author

 Supplementary data available via ScienceDirect

COVER

Shown is a fluorescence image of cell-surface glycans in a 3-day old zebrafish larva. Different colors represent glycans biosynthesized at different times in development. The glycans were imaged in live zebrafish using a two-step approach termed the bioorthogonal chemical reporter strategy. Embryos were first metabolically labeled with the unnatural monosaccharide *N*-azidoacetylgalactosamine, which targets the core position of mucin-type O-glycans; subsequently, the azide-containing glycans were reacted with a cyclooctyne–fluorophore conjugate by copper-free click chemistry, a step that was repeated multiple times to target temporally distinct glycan pools with different fluorophores. This work is the result of a collaboration between the Departments of Chemistry and Molecular and Cell Biology at the University of California, Berkeley [Laughlin, S. T.; Baskin, J. M.; Amacher, S. L.; Bertozzi, C. R. *Science* **2008**, 320, 664].

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