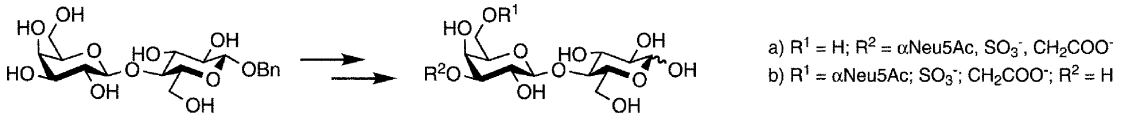
Graphical Abstracts

Carbohydr. Res. **2002,** *337*, 473

Human milk oligosaccharides: an enzymatic protection step simplifies the synthesis of 3′- and 6′-*O*-sialyllactose and their analogues

Anna Rencurosi,[a] Laura Poletti,[a] Marco Guerrini,[b] Giovanni Russo,[a] Luigi Lay[a]

[a]*Department of Organic and Industrial Chemistry, University of Milan, via G. Venezian, I-21-20133 Milan, Italy*
[b]*Institute of Chemistry and Biochemistry 'G. Ronzoni', via Colombo, I-81-20131, Milan, Italy*

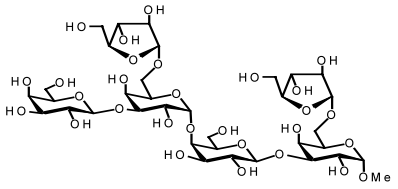


Carbohydr. Res. **2002,** *337*, 485

Synthesis of oligosaccharide derivatives related to those from sanqi, a Chinese herbal medicine from *Panax notoginseng*

Feng Yang, Yuguo Du

Research Center for Eco-Environmental Sciences, Academia Sinica, PO Box 2871, Beijing 100085, PR China

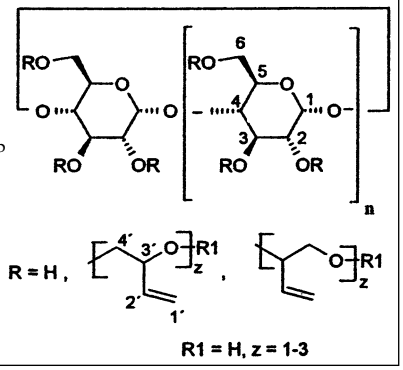


Carbohydr. Res. **2002,** *337*, 493

Synthesis and characterization of water-soluble hydroxybutenyl cyclomaltooligosaccharides (cyclodextrins)

Charles M. Buchanan,[a] Susan R. Alderson,[a] Curtis D. Cleven,[a] Daniel W. Dixon,[a] Robert Ivanyi,[b] Juanelle L. Lambert,[a] Douglas W. Lowman,[a] Rick J. Offerman,[a] Jozsef Szejtli,[b] Lajos Szente[b]

[a]*Eastman Chemical Company, Research Laboratories, PO Box 1972, Kingsport, TN 37662, USA*
[b]*Cyclolab, PO Box 435, Budapest H-1525, Hungary*

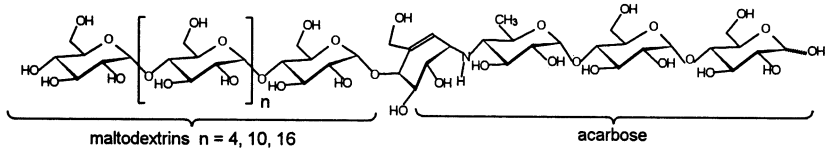


Carbohydr. Res. **2002,** *337*, 509

Addition of maltodextrins to the nonreducing-end of acarbose by reaction of acarbose with cyclomaltohexaose and cyclomaltodextrin glucanyltransferase

Seung-Heon Yoon, John F. Robyt

Laboratory of Carbohydrate Chemistry and Enzymology, Department of Biochemistry, Biophysics and Molecular Biology, Iowa State University, Ames, IA 50011, USA



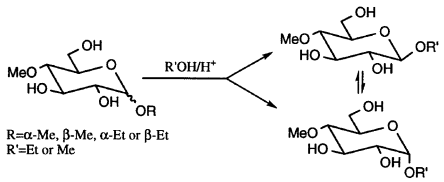
Carbohydr. Res. **2001,** *337*, 517

Transglucosidation of methyl and ethyl D-glucopyranosides by alcoholysis

Per J. Garegg,[a] Karl-Jonas Johansson,[a] Peter Konradsson,[a] Bengt Lindberg,[a] Zygmunt Trumpakaj[b]

[a]*Arrhenius Laboratory, Department of Organic Chemistry, Stockholm University, S-106 91 Stockholm, Sweden*
[b]*Department of Chemistry, University of Gdansk, PL-80-952 Gdansk, Poland*

The initial rate constants for the formation of the two products, during the transglucosidation, have been determined.



Carbohydr. Res. **2002,** *337*, 523

Effect of calcium ions on the organization of iota-carrageenan helices: an X-ray investigation

Srinivas Janaswamy, Rengaswami Chandrasekaran

Whistler Center for Carbohydrate Research, Food Science Building, Purdue University, West Lafayette, IN 47907-1160, USA

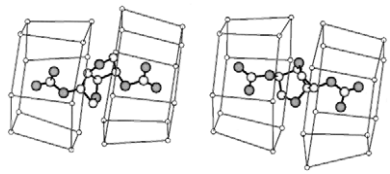
X-ray fiber diffraction analysis confirms that calcium ι-carrageenan forms a threefold, right-handed, half-staggered, parallel, double helix stabilized by interchain hydrogen bonds. According to the detailed structural results, three helices are packed in a trigonal unit cell. Strong interactions between the sulfate groups of neighboring helices, mediated by calcium ions and water molecules, are responsible for stabilizing the three-dimensional structure.

Carbohydr. Res. **2002,** *337*, 537

Crystal structure of the cyclomaltohexaose (α-cyclodextrin) complex with isosorbide dinitrate. Guest-modulated channel-type structure

Kazuaki Harata,[a] Kenji Kawano[b]

[a]*Biological Information Research Center, National Institute of Advanced Industrial Science and Technology, Tsukuba Central 6, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8566, Japan*
[b]*Department of Clinical Pharmaceutics, Niigata College of Pharmacy, Kamishinei-cho, Niigata 950-2081, Japan*



Carbohydr. Res. **2002,** *337*, 549

Monte Carlo docking simulations of cyclomaltoheptaose and dimethyl cyclomaltoheptaose with paclitaxel

Hyunmyung Kim,[a] Jungwon Choi,[b] Hyun-Won Kim,[c] Seunho Jung[a]

[a]*Department of Microbial Engineering, Konkuk University, 1 Hwayang-dong, Gwangjin-gu, Seoul 143-701, South Korea*
[b]*Department of Chemistry, The University of Suwon, San 2-2 Wawoo-ri, Bongdam-eup, Hwasung city, Kyunggi 445-743, South Korea*
[c]*Department of Biochemistry and Institute of Basic Medical Sciences and Medical Engineering Institute, Yonsei University, Wonju College of Medicine, Wonju 220-701, South Korea*

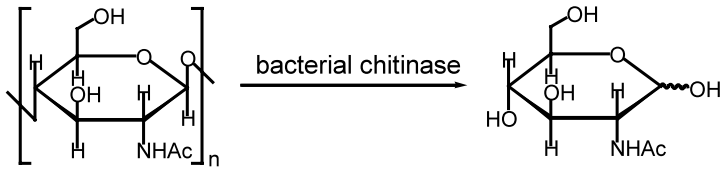
The molecular basis for the remarkable enhancement of the solubility of paclitaxel by *O*-dimethylcyclomaltoheptaose (DM-β-CD) over cyclomaltoheptaose (β-cyclodextrin, β-CD) was investigated with Monte Carlo docking–minimization simulation.

Quantitative production of 2-acetamido-2-deoxy-D-glucose from crystalline chitin by bacterial chitinase

Carbohydr. Res. **2001,** *337*, 557

Rath Pichyangkura,[a] Sanya Kudan,[a] Kamontip Kuttiyawong,[a] Mongkol Sukwattanasinitt,[b] Sei-ichi Aiba[c]

[a]*Department of Biochemistry, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand*
[b]*Center for bioactive Compounds, Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand*
[c]*The Special Division for Human Life Technology, National Institute of Advanced Industrial Science and Technology, Osaka 563-8577, Japan*



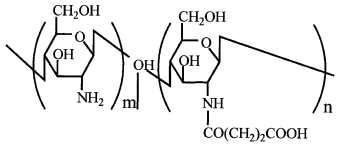
Depolymerization of *N*-succinyl-chitosan by hydrochloric acid

Carbohydr. Res. **2002,** *337*, 561

Yoshinori Kato, Hiraku Onishi, Yoshiharu Machida

Department of Drug Delivery Research, Hoshi University, 2-4-41 Ebara, Shinagawa-ku, Tokyo 142-8501, Japan

The optimal conditions for MW manipulation of *N*-succinyl-chitosan were room temperature with 7.5 M hydrochloric acid or 40 °C with 3.3 M hydrochloric acid.



***N*-Succinyl-chitosan**

Confirmation of the structure of tetra-*O*-(*tert*-butyldimethylsilyl)-D-glucono-1,4-lactone formed by silylation of D-glucono-1,5-lactone

Carbohydr. Res. **2002,** *337*, 565

Janak Singh,[a] John DiMarco,[b] Thomas P. Kissick,[a] Prashant Deshpande,[a] Jack Z. Gougoutas[b]

[a]*Process Research and Development, Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ 08543, USA*
[b]*Material Science, Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, NJ 08543, USA*

The structure of tetra-*O*-(*tert*-butyldimethylsilyl)-D-glucono-1,4-lactone made by the silylation of D-glucono-1,5-lactone was confirmed by single-crystal X-ray analysis.