## GRAPHICAL ABSTRACTS

*Carbohydr. Res.* **1997**, *298*, 1

### Exo-anomeric effects on energies and geometries of different conformations of glucose and related systems in the gas phase and aqueous solution

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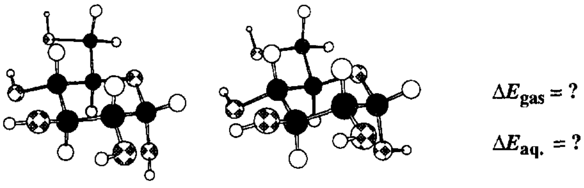
[b] *United States Department of Agriculture, Agricultural Research Service, 1100 Robert E. Lee Blvd., P.O. Box 19687, New Orleans, LA 70179-0687, USA*




*Carbohydr. Res.* **1997**, *298*, 51

### Subsite structure of the β-glucosidase from *Aspergillus niger*, evaluated by steady-state kinetics with cello-oligosaccharides as substrates

Terutaka Yazaki [a], Masatake Ohnishi [a,*], Souji Rokushika [b], Gentaro Okada [c]

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Subsite structure, affinities ($A_i$) and subsites (i), of *A. niger* β-glucosidase was estimated: $A_1 = 1.3$, $A_2 = 5.2$, $A_3 = 0.65$, $A_4 = -0.10$, $A_5 = -0.65$, and $A_6 = -0.26$ (kcal/mol).

*Carbohydr. Res.* **1997**, *298*, 59

### Separation and analysis of cyclodextrins by capillary zone electrophoresis

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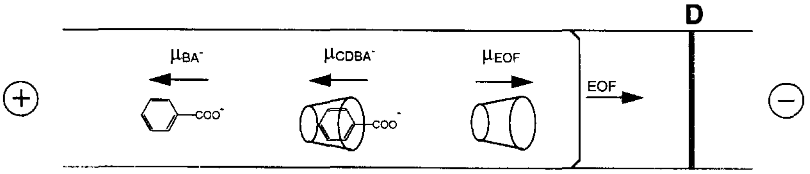


*Carbohydr. Res.* **1997**, *298*, 65

### Transglycosylation in a two-phase aqueous–organic system with catalysis by a lipid-coated β-D-galactosidase

Toshiaki Mori, Sanae Fujita, Yoshio Okahata *

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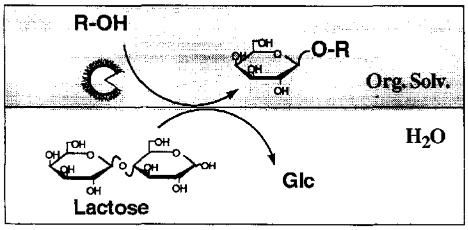


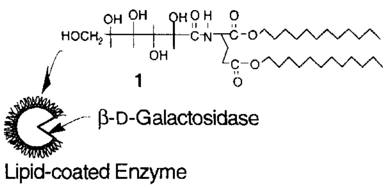

Carbohydr. Res. **1997**, *298*, 85

**Long-chain acetals derived from sucrose as a new class of surfactants**

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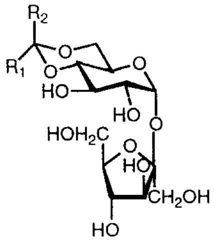


$R_1$ = alkyl chain

$R_2$ = H, $CH_3$

Sucrose long-chain acetals

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**Synthesis and anomeric configuration of 2-(erythrofuranosyl)benzimidazole C-nucleoside analogues**

Mohammed A.E. Sallam [a,*], El-sayed I. Ibrahim [b], Khaled A.A. El-Eter [a], John M. Cassady [c]

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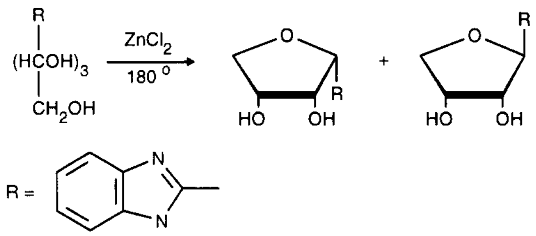
[b] *Chemistry Department, Faculty of Science, Suez-Canal University, Ismailia, Egypt*

[c] *College of Pharmacy, The Ohio State University, Columbus, OH 43210, USA*

The α and β anomers of 2-(D-erythrofuranosyl)benzimidazole nucleosides were prepared from the D-*arabino* or D-*ribo* acyclic-sugar nucleoside precursors, respectively. The α-L-enantiomer was prepared from the L-*arabino* precursor.




Carbohydr. Res. **1997**, *298*, 105

**X-Ray and conformational analysis of arabinan**

Akella Radha, Rengaswami Chandrasekaran *

*Whistler Center for Carbohydrate Research, Smith Hall, Purdue University, West Lafayette, IN 47907-1160, USA*

Possible molecular structures and packing arrangements for the plant polysaccharide arabinan are proposed on the basis of X-ray diffraction data and molecular modeling calculations.

$\rightarrow$ [5)-α-L-Ara*f*-(1 $\rightarrow$ $]_n$

Carbohydr. Res. **1997**, *298*, 117

**The correlation between adhesion of schizophyllan to yeast glucan and its effect on regeneration of yeast protoplast**

Makoto Hisamatsu *, Takahashi Mishima, Katsunori Teranishi, Tetsuya Yamada

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Schizophyllan, a water-soluble (1 $\rightarrow$ 3)-β-D-glucan with a triple helical conformation, adheres to yeast glucan and curdlan gel. As the molecular weight decreases, the adhesion and its ability to promote the regeneration of yeast protoplasts are reduced.

*Carbohydr. Res.* **1997**, *298*, 123

**Synthesis and reactions of 5-(D-*arabino*-tetrahydroxybutyl)-3-(2,3-dihydro-1,3,4-oxadiazole-2-thion-5-yl)-2-methylfuran and 5-(D-*arabino*-tetrahydroxybutyl)-3-(2-substituted amino-1,3,4-oxadiazol-5-yl)-2-methylfuran**

Seham Y. Hassan, Hassan M. Faidallah, Abdel Moneim El-Massry, Mohamed M. El-Sadek *
*Chemistry Department, Faculty of Science, Alexandria University, Ibrahimia, Alexandria 21321, Egypt*

The title oxadiazolefuran derivative (**2**) reacted with arylamines to give the title arylamino derivatives (**3–6**).

*Carbohydr. Res.* **1997**, *298*, 127

**Synthesis of 2-deoxy-2-fluoro-glucotropaeolin, a thioglucosidase inhibitor**

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[a] *Centre de Recherche sur les Macromolécules Végétales, CNRS, and Université Joseph Fourier, BP 53, F-38041 Grenoble, France*
[b] *Institut de Chimie Organique et Analytique, Université d'Orléans, BP 6759, F-45067 Orléans, France*

$S_N2$-Displacement of the anomeric bromine atom in 3,4,6-tri-*O*-acetyl-2-deoxy-2-fluoro-α-D-glucopyranosyl bromide with the tetrabutylammonium salt of triphenylmethanethiol afforded the corresponding trityl 1-thio-β-D-glucoside which led to the fully protected *S*-acetyl-2-fluoro-1-thio-β-D-glucose derivative, and then to the free thiol **5** by selective *S*-deacetylation at low temperature. 2-Fluoro-glucotropaeolin **1** was obtained by a conventional procedure from **5**.