

## GRAPHICAL ABSTRACTS

*Carbohydr. Res.* **1997**, 300, 199

### Determination of the absolute configuration of monosaccharides by $^1\text{H}$ NMR spectroscopy of their per-*O*-(*S*)-2-methylbutyrate derivatives

William S. York \*, Stephen Hantus, Peter Albersheim, Alan G. Darvill

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The enantiomeric forms of several monosaccharides are distinguishable by high-field  $^1\text{H}$  NMR spectroscopy of their per-*O*-(*S*)-2-methylbutyrate derivatives.

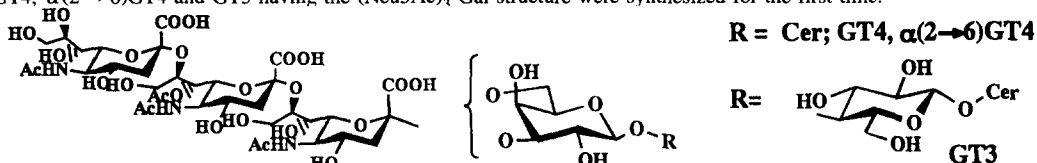
*Carbohydr. Res.* **1997**, 300, 207

### A synthetic approach to the c-series gangliosides containing sialyl- $\alpha$ (2 $\rightarrow$ 8)sialyl- $\alpha$ (2 $\rightarrow$ 8)sialic acid: Synthesis of ganglioside GT4, $\alpha$ (2 $\rightarrow$ 6)GT4 and GT3

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Gangliosides GT4,  $\alpha$  (2  $\rightarrow$  6)GT4 and GT3 having the (Neu5Ac)<sub>4</sub>-Gal structure were synthesized for the first time.



*Carbohydr. Res.* **1997**, 300, 219

### Branch-structure difference in starches of A- and B-type X-ray patterns revealed by their Naegeli dextrans

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Naegeli dextrans prepared from starches that display A-, B-, and C-type X-ray patterns have different structures. The structures of the Naegeli dextrans indicate that the A-type starch amylopectin has a scattered branch structure and the B-type has a clustered branch structure.

*Carbohydr. Res.* **1997**, 300, 229

### Biosynthetic implications of NMR analyses of alginate homo- and heteropolymers from New Zealand brown seaweeds

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The NMR analysis of homopolymeric blocks from several algal alginates are shown to have first-order Markov distributions of D-mannuronosyl and L-guluronosyl residues. This is consistent with a biosynthetic pathway that involves a C-5 epimerisation at the monomer level.

**Rhamnogalacturonan II from the leaves****of *Panax ginseng* C.A. Meyer as a macrophage Fc receptor expression-enhancing polysaccharide**

Kwang-Soon Shin, Hiroaki Kiyohara, Tsukasa Matsumoto, Haruki Yamada \*

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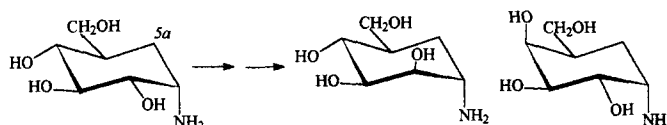
A structure of macrophage Fc receptor expression-enhancing polysaccharide from the leaves of *Panax ginseng* C.A. Meyer has been characterised to be a rhamnogalacturonan II type polysaccharide containing a characteristic nonasaccharide sequence.

**Lectin-deficient ricin toxin intoxicates cells bearing the D-mannose receptor**Arthur E. Frankel <sup>a,\*</sup>, Tao Fu <sup>a</sup>, Christopher Burbage <sup>a</sup>, Edward Tagge <sup>b</sup>, Billie Harris <sup>b</sup>, Joseph Vesely <sup>b</sup>, Mark C. Willingham <sup>c</sup><sup>a</sup> *Department of Medicine, Medical University of South Carolina, Charleston, SC 29425, USA*<sup>b</sup> *Department of Surgery, Medical University of South Carolina, Charleston, SC 29425, USA*<sup>c</sup> *Department of Pathology, Medical University of South Carolina, Charleston, SC 29425, USA*

Insect-derived ricin toxin B chain mutant [W37S/Y78H/Y248H] reassociated with plant RTA was selectively cytotoxic to mammalian cells bearing the D-mannose receptor. These results show intracellular D-galactose binding is not required for ricin intoxication.

**Preparation and biological activity of manno-****and galacto-validamines, new 5a-carba-glycosylamines as  $\alpha$ -glycosidase inhibitors**

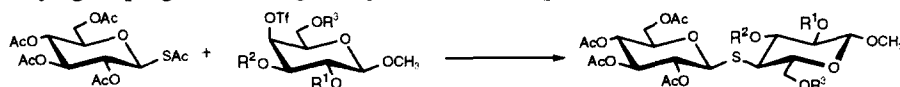
Yukihiko Kameda \*, Kanae Kawashima, Masayoshi Takeuchi, Kyoko Ikeda, Naoki Assano, Katsuhiko Matsui

*Department of Biochemistry, Faculty of Pharmaceutical Sciences, Hokuriku University, Kanazawa city, 920-11, Japan***Synthesis of methyl 4-thio- $\beta$ -cellobioside.****A reinvestigation**

Vincent Moreau, Jens Chr. Norrild, Hugues Driguez \*

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The effect of protecting groups borne by  $\beta$ -glucoside acceptors involved in thioglycosylation reactions, has been studied. Benzyl groups gave the highest yield of the expected disaccharide.



# Synthesis of 3- $\beta$ -D-ribofuranosyl-1H-pyrazole-4-carboxamide

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An efficient synthesis of 3- $\beta$ -D-ribofuranosyl-1H-pyrazole-4-carboxamide utilizing enaminone glycoside.

