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## Carbohydrate Research





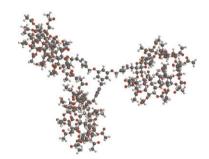
### Carbohydrate Research Vol. 344, No. 2, 2009

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#### **FULL PAPERS**

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Synthesis of 2-deoxy cyclic and linear oligosaccharides by oligomerization of monomers

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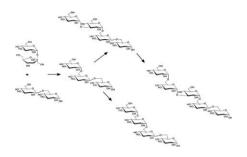
Somak Paul, Srinivasarao Raghothama, Narayanaswamy Jayaraman \*



#### Acceptor products of alternansucrase with gentiobiose. Production of novel oligosaccharides for food and feed and elimination of bitterness

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Gregory L. Côté \*

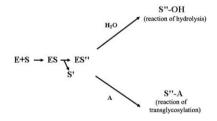


#### An endo-(1-3)-β-p-glucanase from the scallop Chlamys albidus: catalytic properties, cDNA cloning and secondarystructure characterization

pp 191-197

Svetlana N. Kovalchuk \*, Irina Yu. Bakunina, Yulia V. Burtseva, Viktor I. Emelyanenko, Natalia Yu. Kim, Konstantin V. Guzev, Valeri B. Kozhemyako, Valeri A. Rasskazov, Tatyana N. Zvyagintseva

> Endo-(1-->3)-β-D-glucanase from the scallop Chlamys albidus (EC 3.2.1.39) catalyzes two reactions:



#### New oligosaccharides prepared by acid hydrolysis of the polysaccharides from Nerium indicum Mill and their anti-angiogenesis activities

pp 198-203

Ke Hu, Qin Liu, Shunchun Wang \*, Kan Ding \*

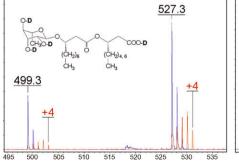
Three oligosaccharides (OJ1-OJ3) were obtained by acid degradation of crude polysaccharides from Nerium indicum Mill. The study of chemical and spectroscopic methods demonstrated that they were  $\beta$ -D-Galp- $(1\rightarrow [4)-\beta$ -D-Galp-(0]1),  $\beta$ -D-Galp- $(1\rightarrow [4)-\beta$ -D-Galp- $(1\rightarrow [34)$ -D-Galp (0]2) and another new oligosaccharide,  $\beta$ -D-Galp- $(1\rightarrow [4)-\beta$ -D-Galp- $(1\rightarrow [34)-\beta$ -D-Galp (0]2) and another new oligosaccharide,  $\beta$ -D-Galp- $(1\rightarrow [34)-\beta$ -D-Galp- $(1\rightarrow [3$  $(1\rightarrow [4)-\beta-\text{D-Gal}p-(1\rightarrow ]_{9}4)-\text{D-Gal}p$  (OJ3). Angiogenesis test showed that OJ2 and OJ3 blocked cell tube formation of HMEC-1.

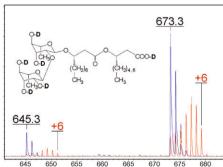


#### MALDI-TOF mass spectrometry of naturally occurring mixtures of monorhamnolipids and dirhamnolipids

pp 204-209

Neil P.J. Price \*, Karen J. Ray, Karl Vermillion, Tsung-Min Kuo





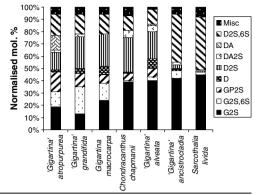


## Chemotaxonomy of New Zealand red algae in the family Gigartinaceae (Rhodophyta) based on galactan structures from the tetrasporophyte life-stage

pp 210-216

Ruth Falshaw \*, Richard H. Furneaux

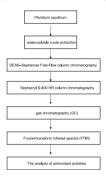
Differences in the structures of the galactans from 15 endemic New Zealand *Gigartina* species indicate seven chemotaxonomically distinct groupings that are aligned to those determined by *rbcL* sequence analysis reported in the literature.



#### Antioxidant activity of a water-soluble polysaccharide purified from Pteridium aquilinum

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Wentao Xu, Fangfang Zhang, YunBo Luo, Liyan Ma, Xiaohong Kou, Kunlun Huang \*



#### Synthesis and rheological properties of hydrogels based on amphiphilic alginate-amide derivatives

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Frédéric Vallée, Christophe Müller, Alain Durand, Sarah Schimchowitsch, Edith Dellacherie, Christian Kelche, Jean Christophe Cassel, Michèle Leonard \*

The properties of amphiphilic ester and amide derivatives of alginate are determined and compared in terms of solubility and stability towards hydrolysis and rheological behaviour.

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Fong Lam Chu, Varoujan A. Yaylayan \*

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Robert C. Binkley, Jessica C. Ziepfel, Klaus B. Himmeldirk \*

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Polina I. Abronina, Vadim V. Kachala, Leonid O. Kononov \*

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Anna Taglienti \*, Paolo Sequi, Massimiliano Valentini \*

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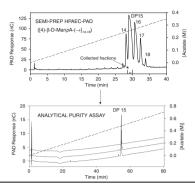
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Ernestas Gaidamauskas, Eugenijus Norkus \*, Eugenijus Butkus, Debbie C. Crans, Giedrė Grincienė

Preparation of high purity monodisperse oligosaccharides derived from mannuronan by size-exclusion chromatography followed by semi-preparative high-performance anion-exchange chromatography with pulsed amperometric detection

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Simon Ballance \*, Olav Andreas Aarstad, Finn Lillelund Aachmann, Gudmund Skjåk-Bræk, Bjørn E. Christensen



Agarose and gellan as morphology-directing agents for the preparation of selenium nanowires in water

pp 260-262

Sanghoo Lee, Sahwan Hong, Baeho Park, Seung R. Paik, Seunho Jung '

$$H_2SeO_3 + 2C_6H_8O_6 \xrightarrow{\text{Agarose}} Se \downarrow + 2C_6H_6O_6 + 3H_2O_8$$

\*Corresponding author

(i)+ Supplementary data available via ScienceDirect

#### COVER

Shown is a fluorescence image of cell-surface glycans in a 3-day old zebrafish larva. Dierent colors represent glycans biosynthesized at dierent 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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