# Exopolygalacturonate lyase from *Thermotoga maritima*: cloning, characterization and organic synthesis application

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Unsaturated trisaccharide obtained from the  $\beta$ -elimination reaction on  $\alpha$ - $(1 \rightarrow 4)$ -polygalacturonate, catalyzed by a lyase from *Thermotoga maritima* (yield 60%).

HO HO OH O OH OHO OH

#### Structural analysis of the lipopolysaccharide from

Carbohydr. Res. 2002, 337, 1435

Neisseria meningitidis strain BZ157 galE: localisation of two phosphoethanolamine residues in the inner core oligosaccharide

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The structure of the phase-variable lipopolysaccharide (LPS) from the group B *Neisseria meningitidis* strain BZ157 *galE* was elucidated.

# Determination of structural peculiarities of dexran, pullulan and γ-irradiated pullulan by Fourier-transform IR spectroscopy

Carbohydr. Res. 2002, 337, 1445

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Fourier-transform IR spectroscopy was employed to study the structural and conformational properties and short-range interactions of dextran, pullulan and  $\gamma$ -irradiated pullulan.

### The properties of enzyme-hydrolyzed cellulose in aqueous sodium hydroxide

Carbohydr. Res. 2002, 337, 1453

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Pure natural cellulose modified with cellulase is allowed to react with sodium hydroxide in a muller, and changes in structure and properties are investigated by FTIR and DSC. The modified cellulose ( $\overline{DP} > 350$ ) dissolved at 9% (wt) sodium hydroxide at -10 °C at 6% pulp consistency.

#### LaPSvS1, a $(1 \rightarrow 3)$ - $\beta$ -galactan sulfate and its effect on angiogenesis in vivo and in vitro

Carbohydr. Res. 2002, 337, 1459

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A highly sulfated branched  $(1 \rightarrow 3)$ - $\beta$ -galactan (LaPSvS1) exhibits good antiangiogenic and antiinflammatory effects in CAM-assays. In vitro results reveal that LaPSvS1 interacts with the FGF-2 system correlating with the in vivo effect of LaPSvS1 on FGF-2 induced angiogenesis.

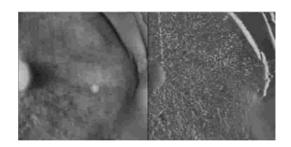
## LaPSvS1, a $(1 \rightarrow 3)$ - $\beta$ -galactan sulfate and its effect on angiogenesis in vivo and in vitro

Carbohydr. Res. 2002, 337, 1467

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Analyses of the internal structure of spherulites crystallized from high-amylose maize starch were obtained using light, electron, and atomic force microscopy (AFM).



Synthesis and characterization of 4,6-*O*-butylidene-*N*-(2-hydroxybenzylidene)-β-D-glucopyranosylamine: crystal

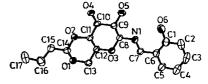
Carbohydr. Res. 2002, 337, 1477

structures of 4,6-O-butylidene- $\alpha$ -D-glucopyranose, 4,6-O-butylidene- $\beta$ -D-glucopyranosylamine and 4,6-O-butylidene-N-(2-hydroxybenzylidene)- $\beta$ -D-glucopyranosylamine

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# Sugar interaction with metal ions. The coordination behavior of neutral galactitol to Ca(II) and lanthanide ions

Carbohydr. Res. 2002, 337, 1485

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The crystal structures of  $CaCl_2 \cdot C_6H_{14}O_6 \cdot 4H_2O$  and  $2EuCl_3 \cdot C_6H_{14}O_6 \cdot 14H_2O$  have been determined. The results show that the structures of calcium and lanthanide ions–galactitol complexes are different. The IR spectra of Dy-, Er-galactitol are similar to Pr-, Nd-, Sm-, Eu-galactitol complexes, which show that those lanthanide ions have the same coordination mode to galactitol.

## Side products of glycosidation with selected 2-acetamido-2-deoxy-D-glucopyranosides

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Allyl 2-acetamido-4,6-*O*-benzylidene-2-deoxy-3-*O*-formyl-α-D-glucopyranoside, *N*-acetyl-2,3,4-tri-*O*-acetyl-L-fucopyranosylamine and products of *O*-acetyl group migration were found as side products during glycosidation of selected 2-acetamido-2-deoxy-D-glucopyranosides.

#### Simultaneous regioselective protection of phenyl

Carbohydr. Res. 2002, 337, 1499

#### 1-thioglucosides at the C-3 and C-6 or at the C-2 and C-6 hydroxy groups

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School of Science and Technology, Kwansei Gakuin University, 2-1 Gakuen, Sanda 669-1337, Japan

HO SPh ROTF HO SPh HO SPh HO SPh RO SPh HO SPh R = Si(CHMe<sub>2</sub>)<sub>3</sub> or SiPh<sub>2</sub>t-Bu 
$$R = Si(CHMe_2)_3$$
 or SiPh<sub>2</sub>t-Bu

# Fungal cell wall galactomannan isolated from *Apodus deciduus*

Carbohydr. Res. 2002, 337, 1503

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<sup>a</sup>Centro de Investigaciones Biológicas, CSIC, Velázquez 144, ES-28006 Madrid, Spain

The repeating unit of the polysaccharide isolated from Apodus deciduus is:

 $[\rightarrow 6)$ - $\alpha$ -D-Manp- $(1\rightarrow)_{-130}$ 

 $\alpha$ -D-Galf-(1 $\rightarrow$ 2)- $\alpha$ -D-Galf-1

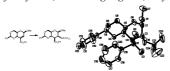
Structural studies on C-2 substitution in a new set of synthetic aminodideoxy sugars: the steric bulk at C-2 influences the puckering of the pyranose ring

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