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Special Issue

Synthesis and Structure of Glycans

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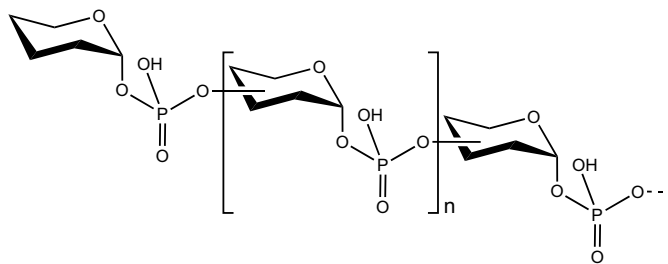
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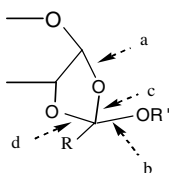
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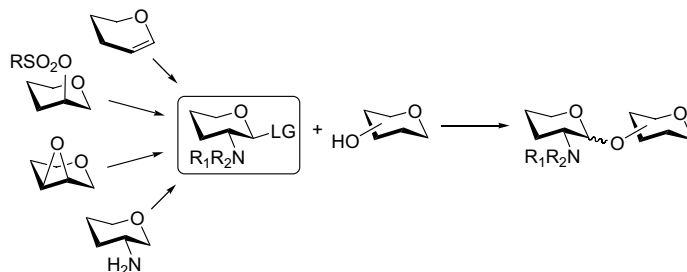
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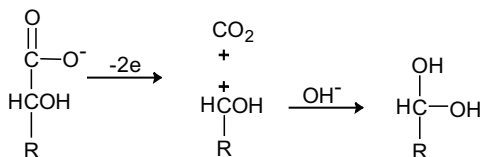
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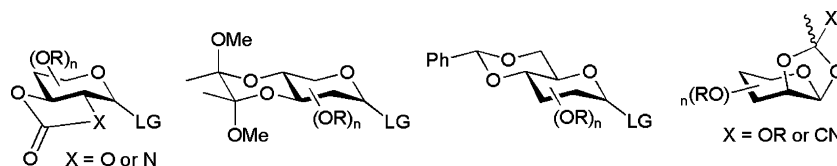
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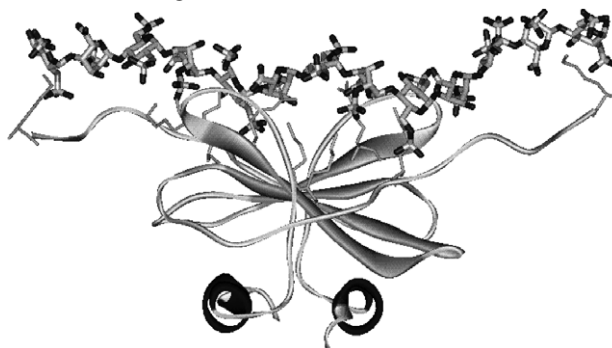
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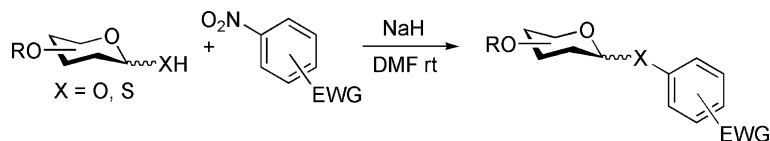


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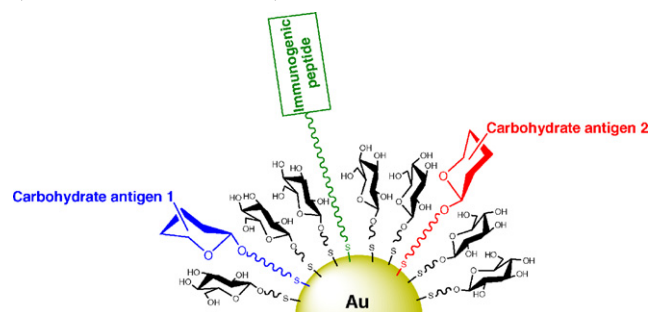
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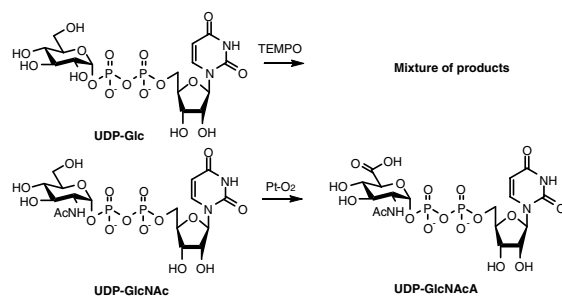
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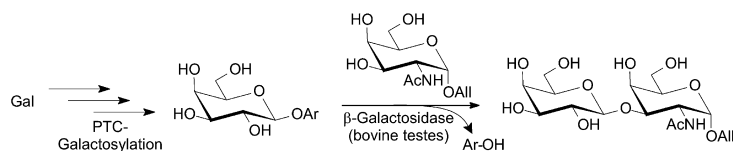
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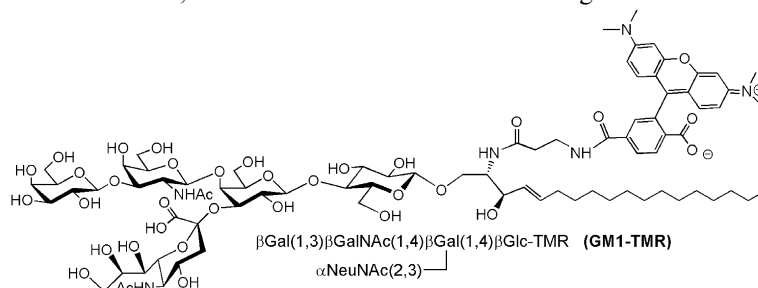
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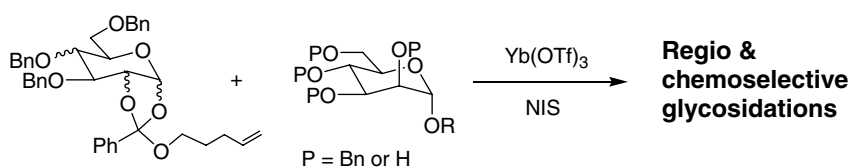
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A study of *n*-pentenylorthoesters having *manno*, *gluco* and *galacto* configurations in regioselective glycosylations

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K. N. Jayaprakash and Bert Fraser-Reid*

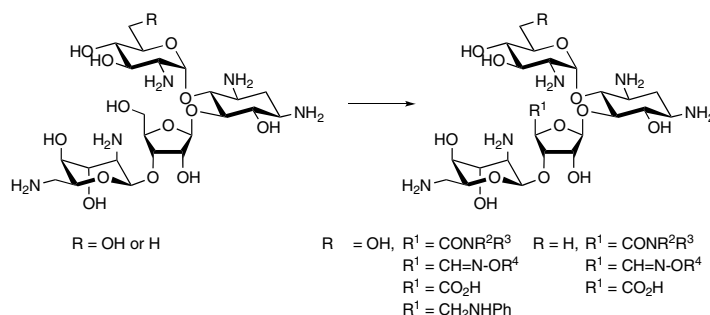


Mannosidyl diols can be regio and chemoselectively glycosidated in high yields with *manno*, *gluco* and *galacto* *n*-pentenyl orthoesters under the agency of ytterbium triflate and *N*-iodosuccinimide.

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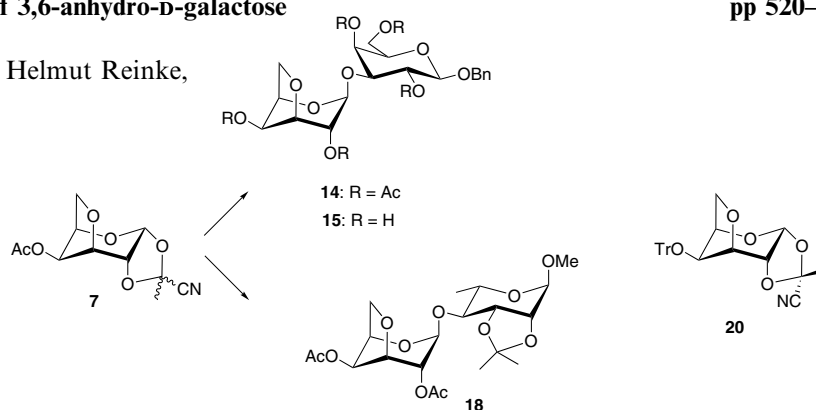
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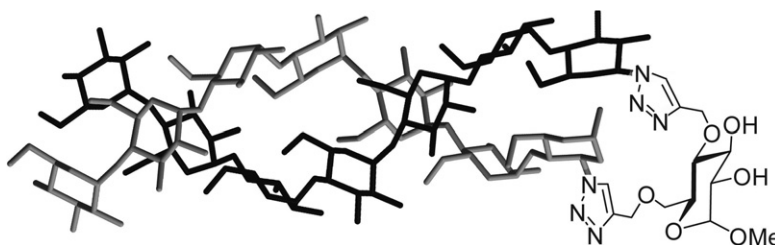
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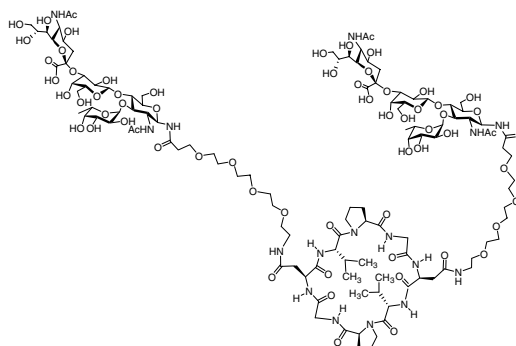
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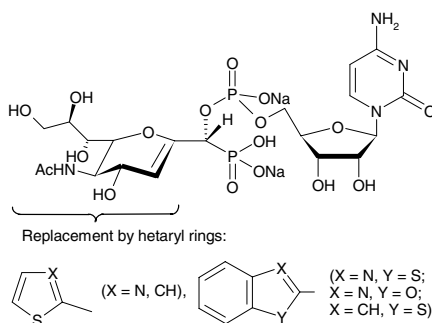
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Potential sialyltransferase inhibitors based on neuraminyl substitution by hetaryl rings

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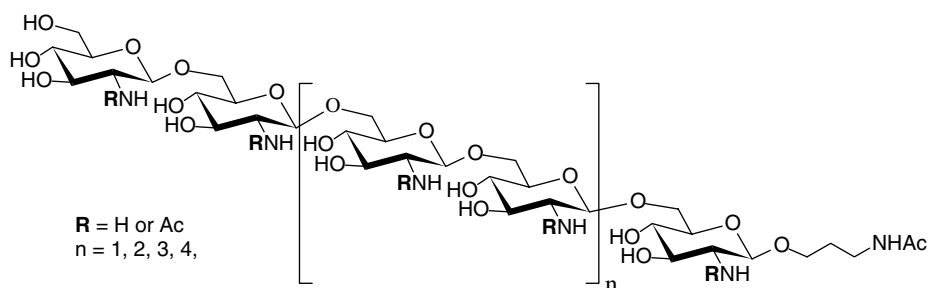
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Synthesis of β -(1 \rightarrow 6)-linked glucosamine oligosaccharides corresponding to fragments of the bacterial surface polysaccharide poly-*N*-acetylglucosamine

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Marina L. Gening, Yury E. Tsvetkov, Gerald B. Pier and Nikolay E. Nifantiev*

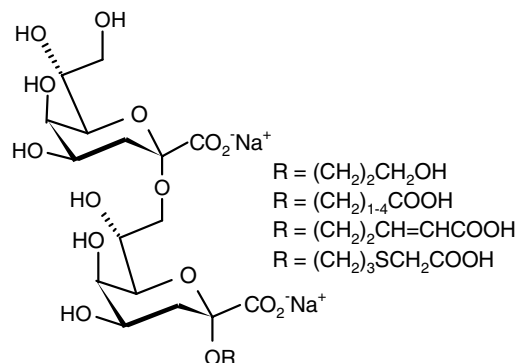


Synthesis of spacer-containing chlamydial disaccharides as analogues of the α -Kdo p -(2 \rightarrow 8)- α -Kdo p -(2 \rightarrow 4)- α -Kdo p trisaccharide epitope

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Georg Sixta, Andreas Hofinger and Paul Kosma*

The chemical synthesis of Kdo disaccharide spacer glycosides containing a terminal carboxyl group is described.

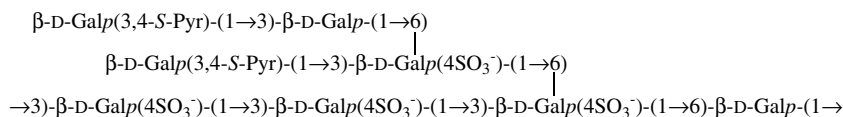


Structure of a highly pyruvylated galactan sulfate from the Pacific green alga *Codium yezoense* (Bryopsidales, Chlorophyta)

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Maria I. Bilan, Ekaterina V. Vinogradova, Alexander S. Shashkov and Anatolii I. Usov*

A putative structural fragment of the polysaccharide:

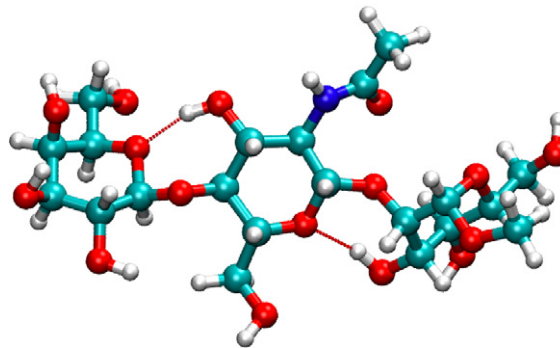


Comparative ^1H NMR and molecular modeling study of hydroxy protons of β -D-Galp-(1 \rightarrow 4)- β -D-Glc p NAc-(1 \rightarrow 2)- α -D-Man p -(1 \rightarrow O)(CH $_2$) $_7$ CH $_3$ analogues in aqueous solution

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Philippe F. Rohfritsch, Martin Frank, Corine Sandström, Lennart Kenne, Johannes F. G. Vliegthart and Johannes P. Kamerling*

Systematic modifications at Gal 2-C (H, NHAc, NHPr) and Gal 6-C (H, NH $_2$) resulted in alterations of the Gal 4-OH, Gal 3-OH, and GlcNAc 3-OH areas, as demonstrated by ^1H NMR analysis and molecular modeling studies.

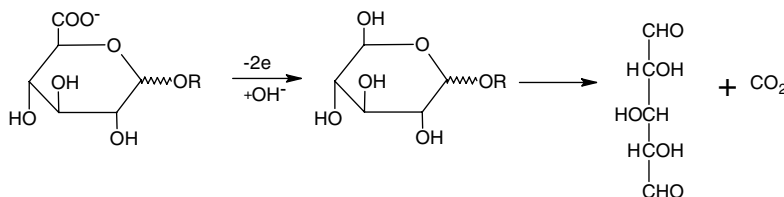


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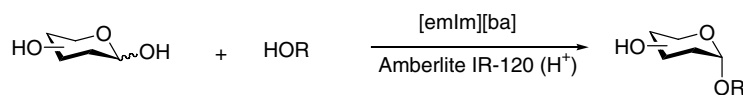
Jonathan A. Stapley and James N. BeMiller*



Glycosylation in room temperature ionic liquid using unprotected and unactivated donors

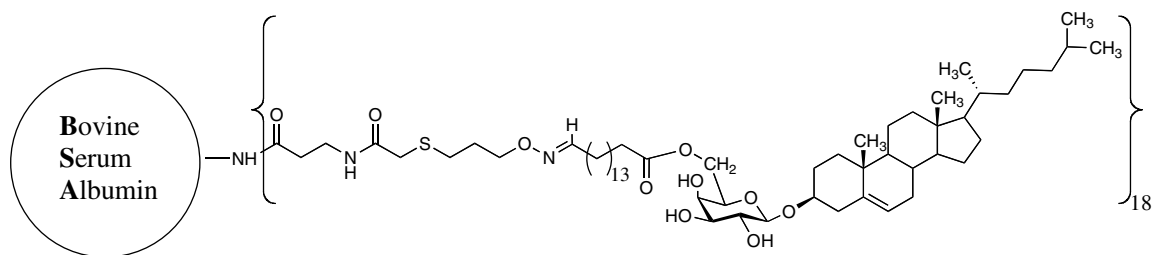
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Tae-Joon Park, Michel Weïwer, Xuejun Yuan, Sultan N. Baytas, Eva M. Munoz, Saravanababu Murugesan and Robert J. Linhardt*

**Synthesis of an experimental glycolipoprotein vaccine against Lyme disease**

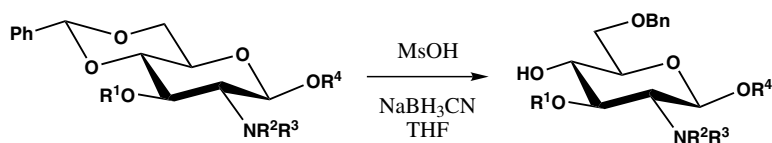
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Vince Pozsgay* and Joanna Kubler-Kielb

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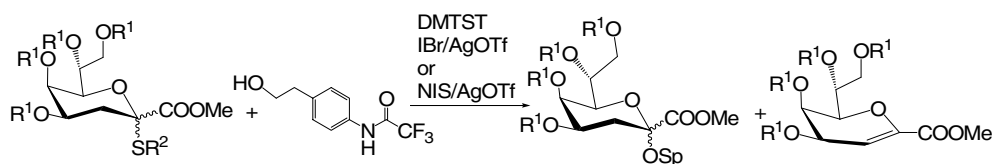
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Karin Mannerstedt, Kerstin Ekelöf and Stefan Oscarson*



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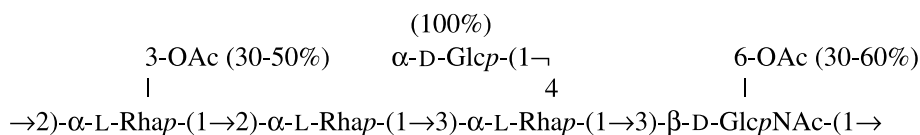
Evgeny Vinogradov

PS-4-β-ManNAc3NAcAN-4-β-GlcNAc3NAcAN-4-α-GalNAc-4-β-ManNAc3NAcA-3-β-FucNAc4N-6-α-GlcN-inner core

O-Acetylation in the O-specific polysaccharide isolated from *Shigella flexneri* serotype 2a

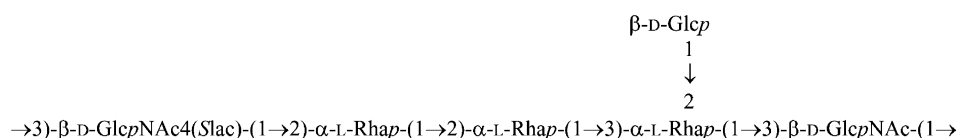
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Joanna Kubler-Kielb,* Evgeny Vinogradov, Chiayung Chu and Rachel Schneerson

**Structure of the O-polysaccharide of *Escherichia coli* O150 containing 2-acetamido-4-O-[(S)-1-carboxyethyl]-2-deoxy-D-glucose**

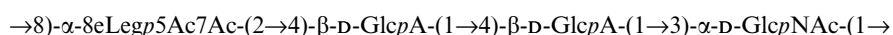
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Andrei V. Perepelov,* Weiqing Han, Sof'ya N. Senchenkova, Sergei D. Shevelev, Alexander S. Shashkov, Lu Feng, Yanqun Liu, Yuriy A. Knirel and Lei Wang

**Structure of the O-antigen of *Providencia stuartii* O20, a new polysaccharide containing 5,7-diacetamido-3,5,7,9-tetra-deoxy-L-glycero-D-galacto-non-2-ulosonic acid**

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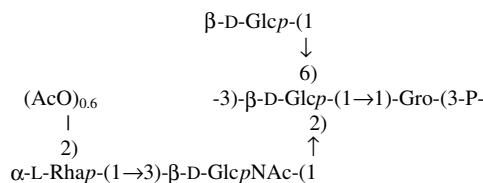
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A novel teichoic acid from the cell wall of *Streptomyces* sp. VKM Ac-2275

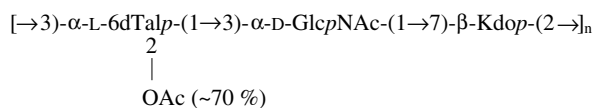
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Galina M. Streshinskaya,* Alexander S. Shashkov, Sof'ya N. Senchenkova, Olga V. Bueva, Oleg S. Stupar and Ludmila I. Evtushenko


**The structure of the O-polysaccharide from the lipopolysaccharide of *Providencia alcalifaciens* O36 containing 3-deoxy-D-manno-oct-2-ulosonic acid**

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Nina A. Kocharova, Olga G. Ovchinnikova,* Agnieszka Torzewska, Alexander S. Shashkov, Yuriy A. Knirel and Antoni Rozalski



*Corresponding author

 Supplementary data available via ScienceDirect
COVER

The image shows the ball-and-stick representation of a potent *n*-butyl thiazoline inhibitor of *Q*-GlcNAcase, bound in the active centre of the enzyme. The work is the result of collaboration between the groups of Professors David Vocadlo (Simon Fraser University, British Columbia, Canada) and Gideon Davies (University of York, UK). The image, generated with PYMOL (DeLano Scientific LLC, <http://pymol.sourceforge.net/>), shows the observed electron density as a blue “wire-cage” inside the active centre pocket represented by the smooth surface.

Professor Davies was presented with the Roy L Whistler Award of the International Carbohydrate Organization at the XXIIIrd International Carbohydrate Symposium in Whistler in 2006.

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