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Special Issue

Glycomimetics

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Editor: Todd L. Lowary

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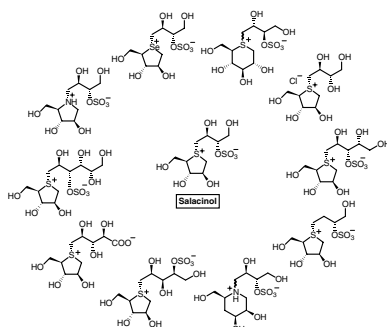
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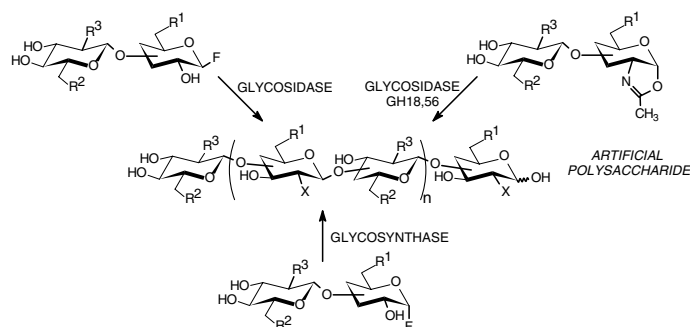
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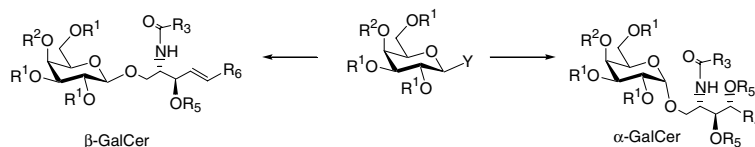
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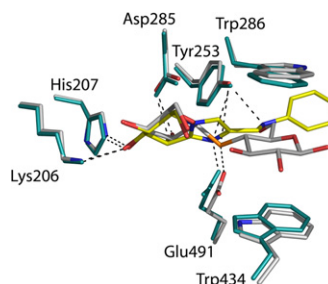
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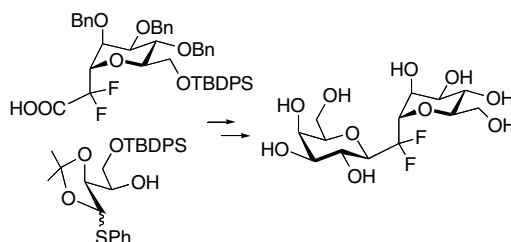
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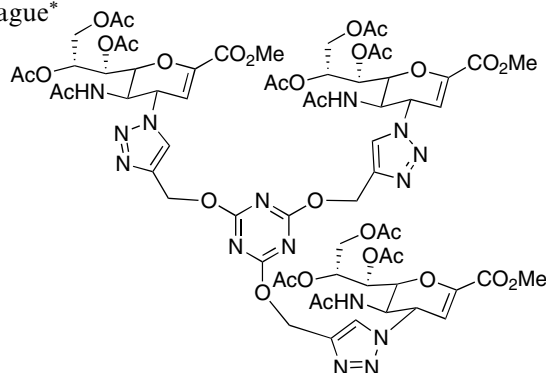
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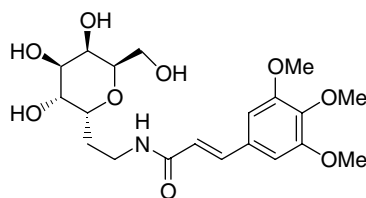
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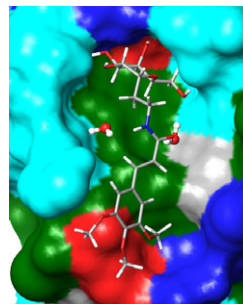
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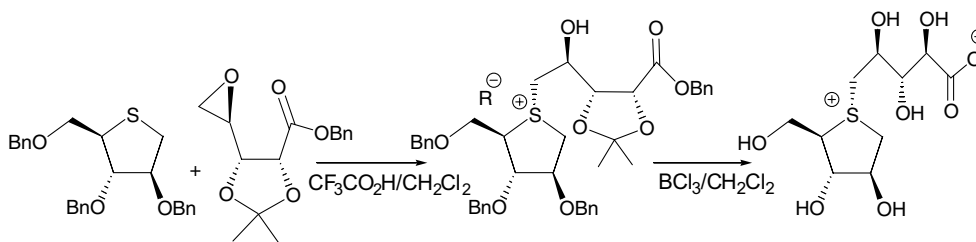
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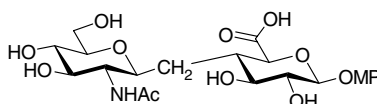
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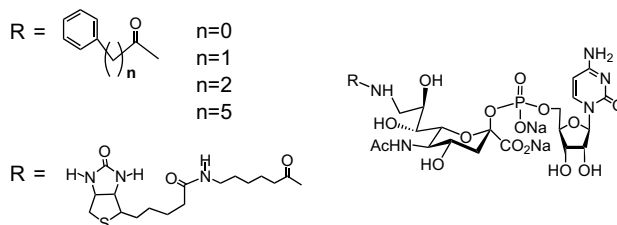
MP = *p*-methoxyphenyl



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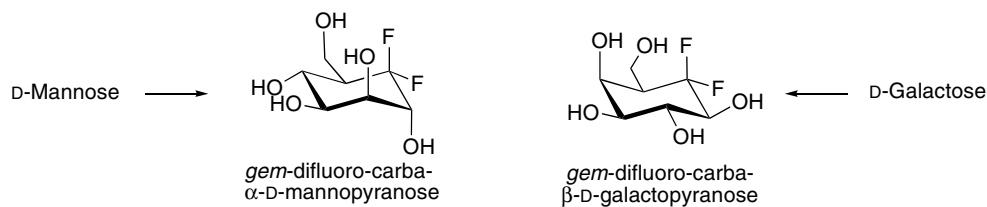
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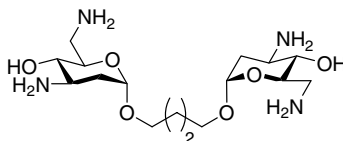
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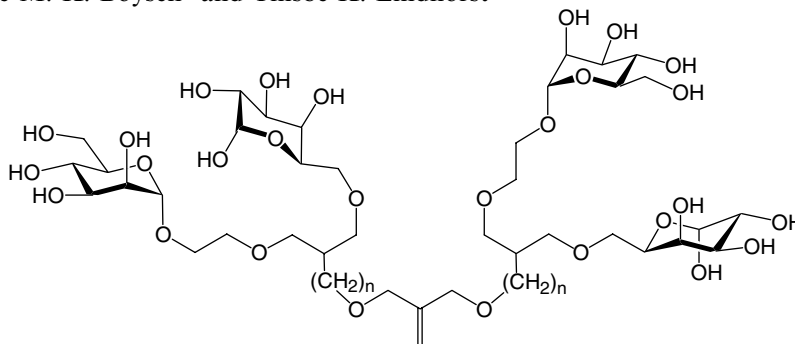
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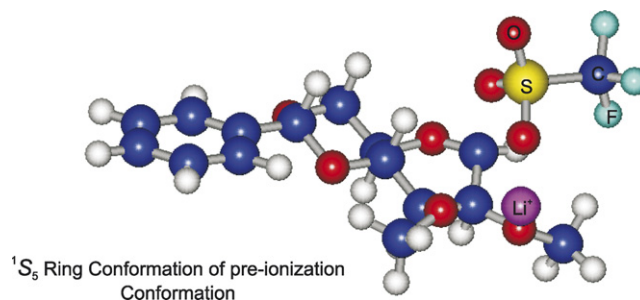
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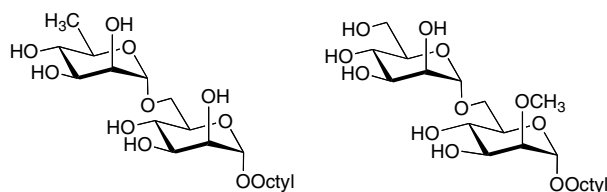
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Dennis M. Whitfield

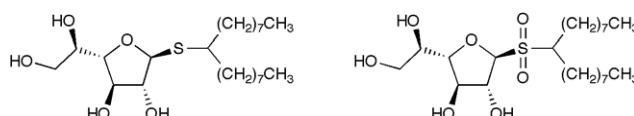


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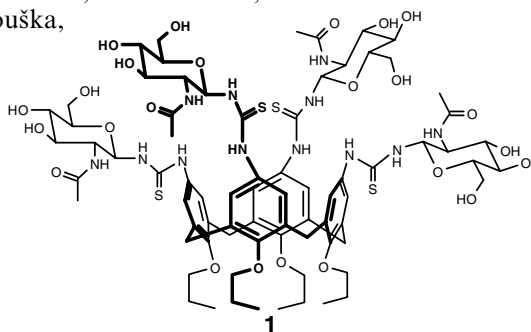
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**Synthesis and biological evaluation of galactofuranosyl alkyl thioglycosides as inhibitors of mycobacteria** pp 1773–1780

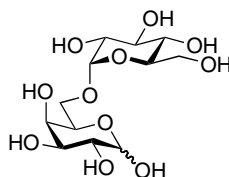
Chris B. Davis, Regan D. Hartnell, Paul D. Madge, David J. Owen, Robin J. Thomson, Andrew K. J. Chong, Ross L. Coppel and Mark von Itzstein*

***N*-Acetyl-D-glucosamine substituted calix[4]arenes as stimulators of NK cell-mediated antitumor immune response** pp 1781–1792

Karel Křenek, Markéta Kuldová, Katarína Hulíková, Ivan Stibor, Pavel Lhoták, Miroslav Dudič, Jan Budka, Helena Pelantová, Karel Bezouška, Anna Fišerová and Vladimír Křen*

**The synthesis of 2-, 3-, 4- and 6-*O*- α -D-glucopyranosyl-D-galactopyranose, and their evaluation as nutritional supplements for pre-term infants** pp 1793–1804

Peter J. Meloncelli, Tracey M. Williams, Peter E. Hartmann and Robert V. Stick*

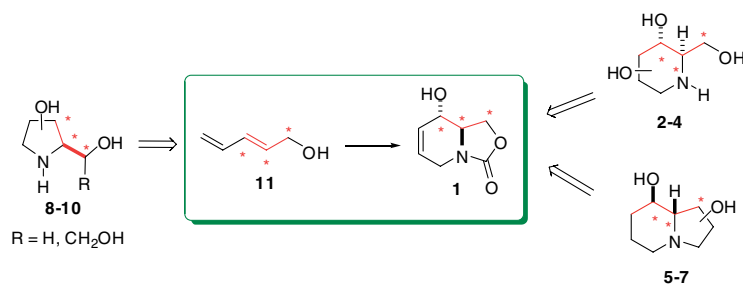


Four methods have been screened for the synthesis of various structural isomers of *O*- α -D-glucopyranosyl-D-galactopyranose. One of these isomers, namely 6-*O*- α -D-glucopyranosyl-D-galactopyranose, showed some potential as a nutritional supplement for pre-term infants.

Synthesis and NMR experiments of (4,5,6-¹³C)-deoxymannojirimycin. A new entry to ¹³C-labeled glycosidase inhibitors

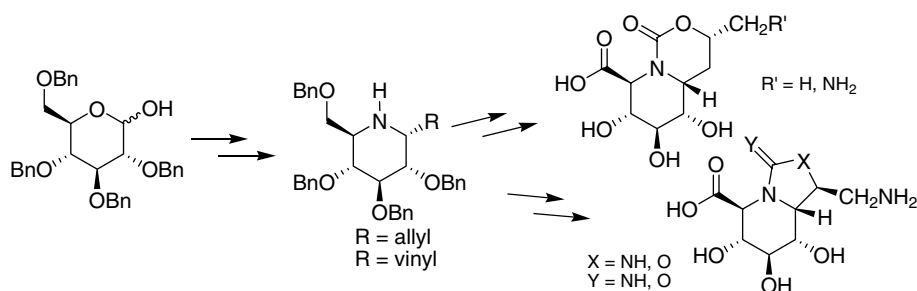
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Caterina Murruzzu, Mònica Alonso, Angeles Canales, Jesus Jiménez-Barbero* and Antoni Riera*


Synthesis and biological evaluation of a small library of nojirimycin-derived bicyclic iminosugars

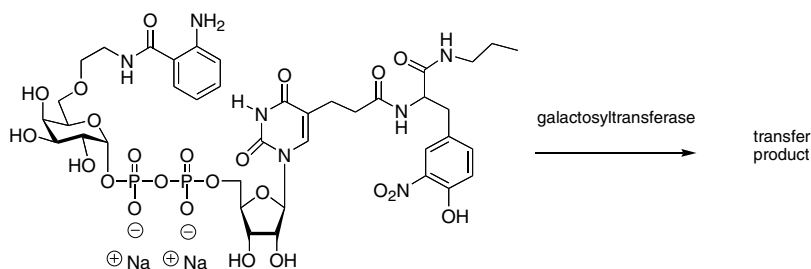
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Laura Cipolla,* Marcos Reis Fernandes, Maria Gregori, Cristina Airoidi and Francesco Nicotra


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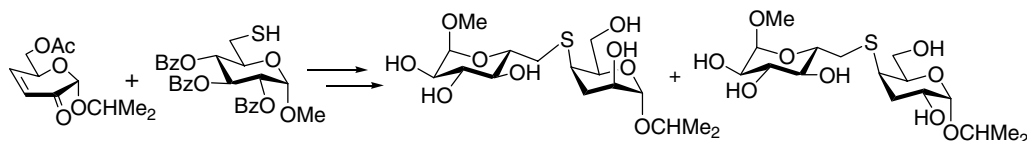
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Frank Schweizer


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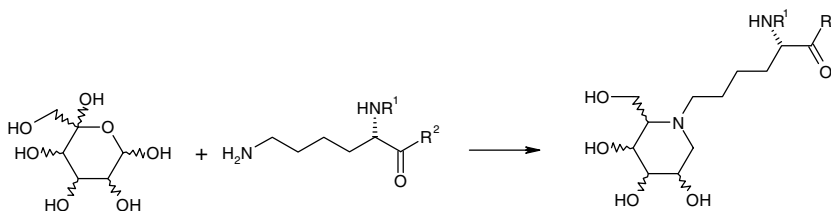
Maria Laura Uhrig, László Szilágyi, Katalin E. Kövér and Oscar Varela*



Iminoalditol-amino acid hybrids: synthesis and evaluation as glycosidase inhibitors

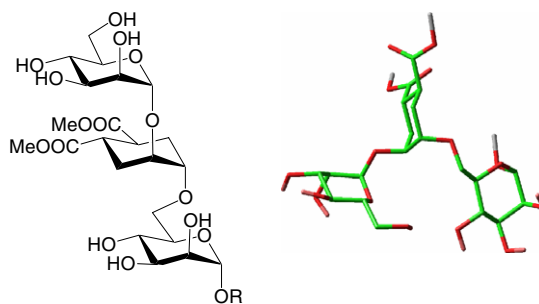
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Synthesis and conformational analysis of an α -D-mannopyranosyl-(1 $\rightarrow$ 2)- α -D-mannopyranosyl-(1 $\rightarrow$ 6)- α -D-mannopyranose mimic

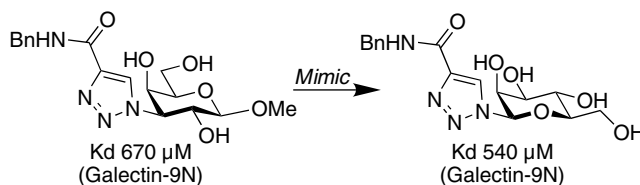
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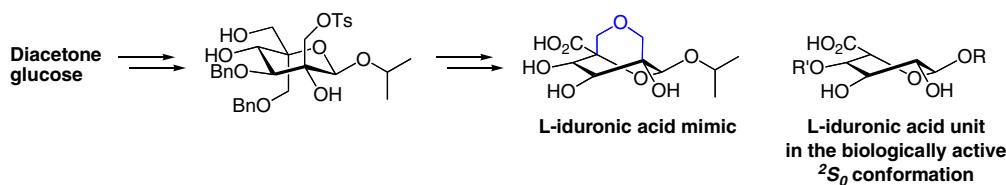
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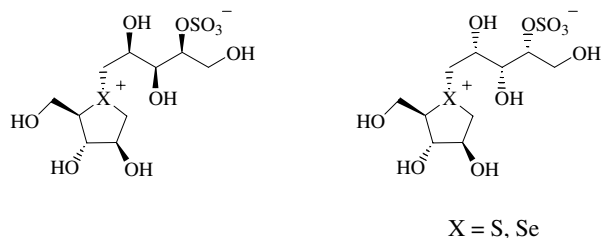
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Antonio J. Herrera, Marita T. Beneitez, Luis Amorim, F. Javier Cañada, Jesús Jiménez-Barbero, Pierre Sinaÿ and Yves Blériot*



Synthesis and glycosidase inhibitory activities of chain-modified analogues of the glycosidase inhibitors salacinol and blintol pp 1888–1894

Ravindranath Nasi, Lyann Sim, David R. Rose and B. Mario Pinto*



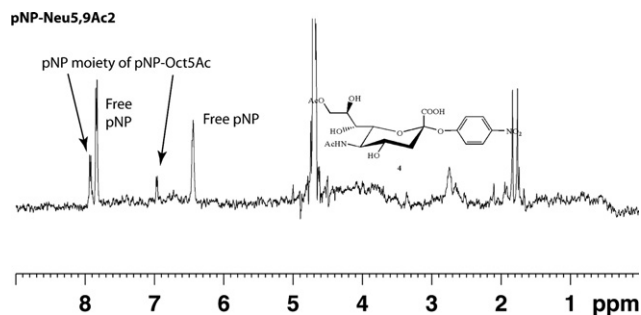
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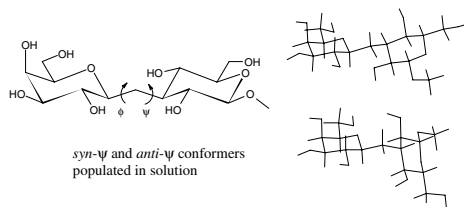
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Astrid Blume, Björn Neubacher, Joachim Thiem and Thomas Peters*



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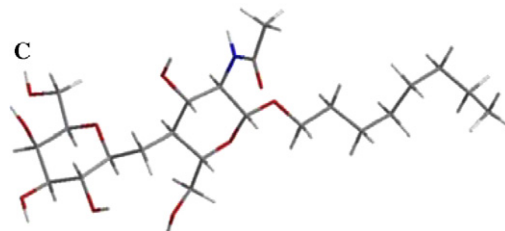
Paloma Vidal, Boris Vauzeilles, Yves Blériot, Matthieu Sollogoub, Pierre Sinaÿ, Jesús Jiménez-Barbero* and Juan F. Espinosa*



The conformation of the C-glycosyl analogue of *N*-acetyl-lactosamine in the free state and bound to a toxic plant agglutinin and human adhesion/growth-regulatory galectin-1 pp 1918–1928

Víctor García-Aparicio, Matthieu Sollogoub, Yves Blériot, Virginie Colliou, Sabine André, Juan L. Asensio, F. Javier Cañada, Hans-Joachim Gabius, Pierre Sinaÿ and Jesús Jiménez-Barbero*

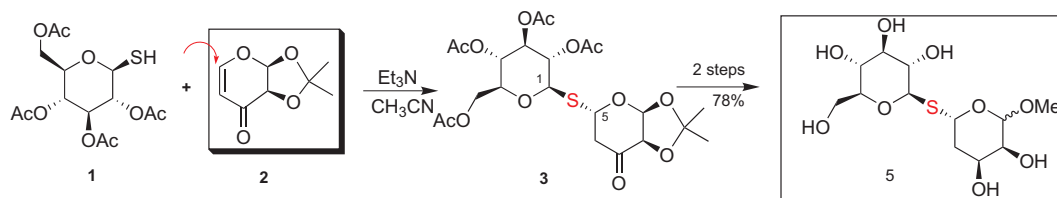
Galectin-1 selects a local minimum of the conformational distribution of the C-glycosyl analogue of *N*-acetyl lactosamine.



NOTES

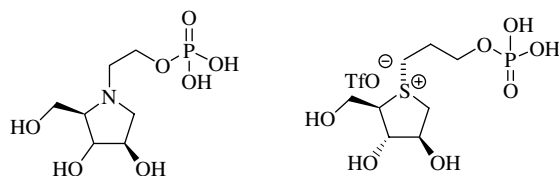
A click chemistry approach to glycomimetics: Michael addition of 2,3,4,6-tetra-*O*-acetyl-1-thio-β-D-glucopyranose to 4-deoxy-1,2-*O*-isopropylidene-L-glycero-pent-4-enopyranos-3-ulose – a convenient route to novel 4-deoxy-(1→5)-5-*C*-thiodisaccharides pp 1929–1933

Zbigniew J. Witczak,* David Lorchak and Nguyen Nguyen



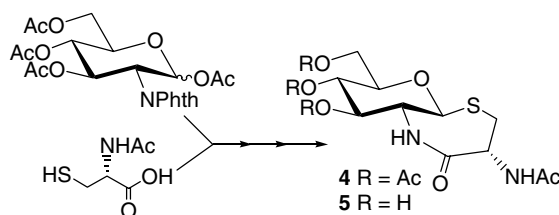
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Ramakrishna G. Bhat, Nag S. Kumar and B. Mario Pinto*



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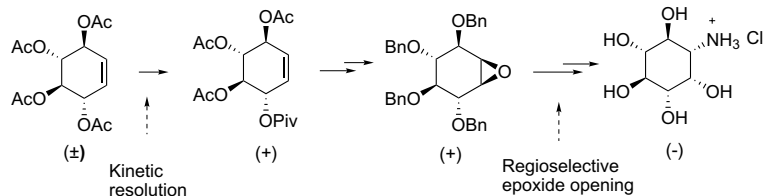
Rikard Slättegård, David W. Gammon and Stefan Oscarson*



Practical synthesis of (–)-1-amino-1-deoxy-*myo*-inositol from achiral precursors

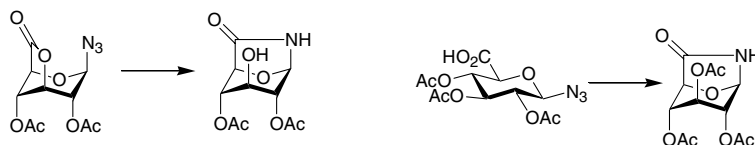
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Patricia Gonzalez-Bulnes, Josefina Casas, Antonio Delgado and Amadeu Llebaria*

**Synthesis of sugar-lactams from azides of glucuronic acid**

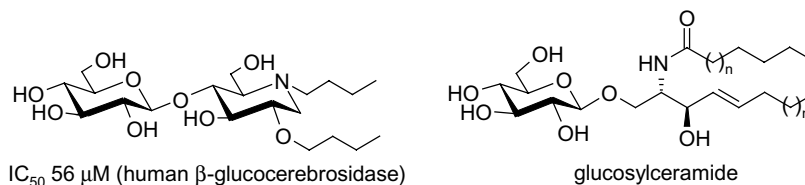
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Christina Loukou, Manuela Tosin, Helge Müller-Bunz and Paul V. Murphy*

**Synthesis of 4-O-glycosylated 1-deoxynojirimycin derivatives as disaccharide mimics-based inhibitors of human β -glucocerebrosidase**

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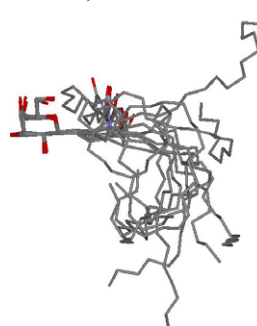
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**The conformational behaviour of the C-glycosyl analogue of sulfatide studied by NMR in SDS micelles**

pp 1966–1973

José Juan Hernández-Gay, Luigi Panza, Fiamma Ronchetti, F. Javier Cañada, Federica Compostella* and Jesús Jiménez-Barbero*

The C-glycosyl analogue of sulfatide displays similar conformation than its natural analogue, but distinct internal motion features.



The solution conformation of C-glycosyl analogues of the sialyl-Tn antigen**pp 1974–1982**

Víctor García-Aparicio, Adeline Malapelle, Zouleika Abdallah, Gilles Doisneau, José Ignacio Santos, Juan Luis Asensio, Francisco Javier Cañada, Jean Marie Beau* and Jesús Jiménez-Barbero*



Two C-glycosyl analogues of the sialyl-Tn antigen display ‘non-natural’ non-*exo*-anomeric conformers around the pseudoglycosidic linkage.

*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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