

Glycobiology World Congress

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New tools to study and perturb the glycocalyx

Thomas J Boltje

Radboud University Nijmegen, Netherlands

Our research is focused on identifying the specific structure and function of sugar molecules present on the surface of cells. To achieve this we develop tools to block the biosynthesis of these molecules and metabolic precursors to follow and perturb the function of sugars. In addition we assemble oligosaccharides by chemical synthesis to construct a screening platform that can also be used to do SAR studies. The preparation of oligosaccharides is challenging and hence we develop new chemical methodologies to make the process of glycosylation faster and more stereo selective. The most important application of these technologies is to enable the design and synthesis of glycol medicine that target aberrant glycosylation patterns on cancer cells and pathogenic bacteria either by small molecule glycolmimetics or oligosaccharide glycovaccines.

Biography

Thomas J Boltje obtained his PhD degree in 2011 from the University of Georgia under the supervision of G J Boons. After a short Postdoctoral period at the Radboud University Nijmegen (The Netherlands), he started his Current Position as a tenure track Assistant Professor of Chemical Biology in 2013 at the same university.

t.boltje@science.ru.nl

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