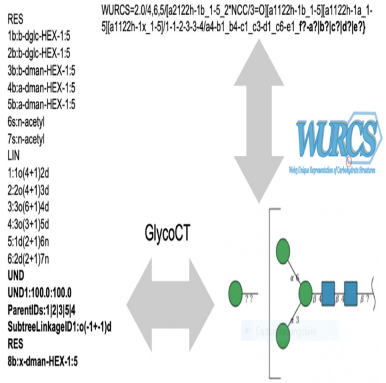
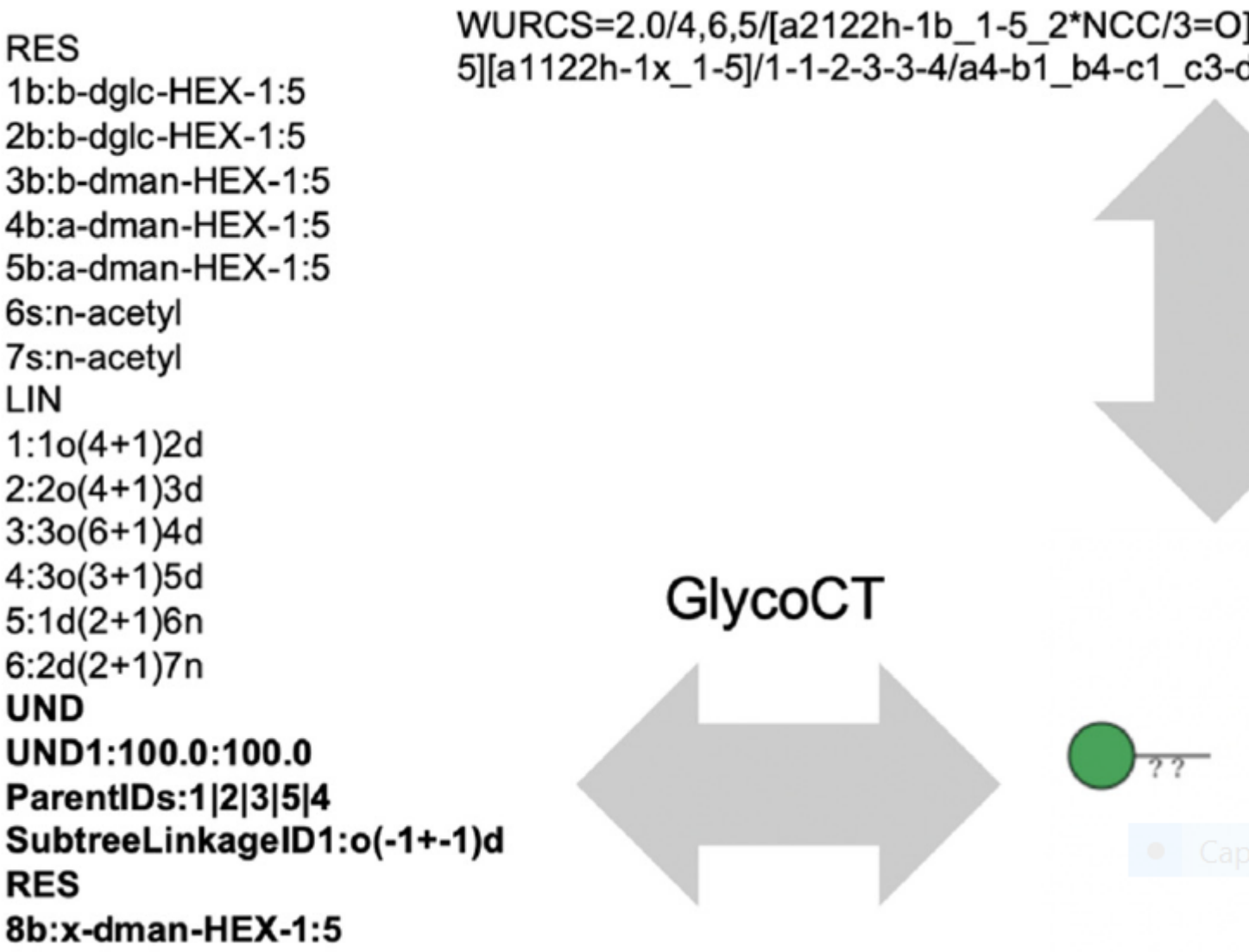


SugarDrawer: A Web-Based Database Search Tool with Editing Glycan Structures

Description

Abstract: In life science fields, database integration is progressing and contributing to collaboration between different research fields, including glycosciences. The integration of glycan databases has greatly progressed collaboration worldwide with the development of the international glycan structure repository, GlyTouCan. This trend has increased the need for a tool by which researchers in various fields can easily search glycan structures from integrated databases.



The authors have developed a web-based glycan structure search tool, SugarDrawer, which supports the depiction of glycans including ambiguity, such as glycan fragments that contain underdetermined linkages, and a database search for glycans drawn on the canvas. This tool provides an easy editing feature for various glycan structures in just a few steps using template structures and pop-up windows which allow users to select specific information for each structure element. This tool has a unique feature for selecting possible attachment sites, which is defined in the Symbol Nomenclature for Glycans (SNFG). In addition, this tool can input and output glycans in WURCS and GlycoCT formats, which are the most commonly-used text formats for glycan structures.

Category

1. News