

Gonadotropin Glycomics Database

Shylaja Apala¹, Alok Tripathi¹, Naveen Rudra¹, Dipti Patel¹, Farooq Sheikh¹, George Bousfield², Li Jia²
¹Department of Computer Science, ²Department of Biological Sciences; Wichita State University, Wichita, KS 67260

Background and Objective: A web based portal/database (<http://glycomics.dyn.wichita.edu>) has been developed to store, manage and display oligosaccharide mass spectrometry data. The main objective of this portal/database is to characterize all the glycosylation sites in multiply glycosylated gonadotropins.

Methods: The Glycomics portal/database is being developed using ASP.NET and MYSQL. ASP.NET is used as front end to develop the website and MYSQL is used as back end to maintain the data. The portal/database stores the sequences of peptide moiety of glycopeptides to help identify glycopeptide as the expected peptide mass can be predicted from the amino acid sequence. Information about oligosaccharide structure from the composition of oligosaccharide hydrolysates is also present in the Portal/database, which are used to distinguish among common hexose: galactose, mannose, glucose, fucose, amino sugars, GalNAc, GlcNAc, and sialic acid.

Results: This database/portal provides a simple and systematic user interface, which in turn will enable the user to study the results of the experiments performed in various laboratories. This database/portal accommodates 2509 data entries and 173 structures with 20 registered users from nine laboratories.

Discussion and Conclusions: Our ultimate goal is to merge the current portal/database into the Consortium for Functional Glycomics (<http://www.functionalglycomics.org/static/consortium>).

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