

## A NEW INITIATIVE FOR THE DEVELOPMENT OF WEB-BASED EUROPEAN CARBOHYDRATE DATA BASES

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In contrast to the genomic and proteomic area, no large data collections for carbohydrates have been compiled so far. The availability of such comprehensive databases, however, will be a prerequisite to successfully perform large-scale glycomics projects aiming to decipher new, so far unknown biological functions of glycans. For this purpose, common protocols and quality criteria for the generation of experimental data and guidelines of good practise for the establishment of databases are indispensable, especially for NMR-, MS- and HPLC-data, which are the key technologies for the identification and analysis of carbohydrates.

The Internet offers the unique chance to constitute a global and interactive peer-to-peer communication for scientific data. The recently started European initiative EUROCarbDB aims to provide a tool for streamlining European research in glycobiology through the development of bioinformatics standards, databases, algorithms and software components. To guarantee maximal synergetic effects other available bioinformatics and biomedical resources will be linked to the newly created databases and cross-referenced in an efficient way.

The interpretation of MS- and NMR spectra as well as HPLC profiles of glycans is extremely complicated without appropriate reference data. The development of appropriate algorithms, which enable a rapid and reliable automatic annotation and interpretation of MS- and NMR-spectra, is a major aim of the new project. This effort is comparable to the automation of nucleic acid sequencing that enabled the large scale genomics studies and will lead to a comparable impetus for glycomics.

The EUROCarbDB design study aims to create the foundations for databases and bioinformatics tools in the realm of glycobiology and glycomics, and will establish mainly the technical framework for bottom to top initiative where all interested research groups can feed in their primary data. The new infrastructure will constitute the nucleus for the creation of a depository for carbohydrate related data similar to the extensively used data collections in the area of genomics and proteomics.

The aims and current status of the project ([www.eurocarbdb.org](http://www.eurocarbdb.org)) will be presented.

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