

BNDB – A DATABASE FOR STORING AND RETRIEVING PROTEOMICS DATA

Fernandes, H.R.²;Faria-Campos, A.C.¹;Franco, G.R.¹;Campos, S.V.A.²

¹Laboratorio de Genética Bioquímica, Instituto de Ciências Biológicas, UFMG

²Laboratório de Universalização de Acesso, Instituto de Ciências Exatas, UFMG

The methods used in proteomic analysis vary significantly and to identify a protein it is often necessary to perform a series of experiments, comparing results to those found in proteomic databases. These analysis are usually performed manually and the data is stored in flat-files or formats associated to proteomic equipments. In this work, we have designed and implemented a database named BNDb (Biomolecules Nucleus Database) to store raw and processed proteomic data, using a relational database. This model allows us to have a complete picture of the experimental process, making it easier to access all data related to a specific experiment and to verify how this data relates to other experimental data. A web interface has been implemented in order to speed up the upload of raw data and the retrieving of information about the inserted data. A set of scripts to parse the files produced by equipments of analysis directly has been implemented, aiming to decrease the time of analysis and the loss of data produced by such machines. BNDb stores data from *Schistosoma mansoni*, *Tittyus serrulatus* and *Phoneutria nigriventer*. The construction of this database will contribute significantly to the initiatives of organizing the proteomics knowledge, making the access to the information easier and more useful.