

Das DNA-Bank-Netzwerk – Eine Struktur für alle Fälle?

Gabriele Dröge, Holger Zetzsche, Birgit Gemeinholzer
Biodiversitätsinformatik und Labore
Botanischer Garten und Botanisches Museum Berlin-Dahlem
Königin-Luise-Str. 6-8, 14195 Berlin
{g.droege, h.zetzsche, b.gemeinholzer}@bgbm.org

The DNA Bank Network comprises four DNA banks of major biological research collections in Germany. A DNA bank is a technically optimized service facility for the storage of documented DNA as well as a new type of collection. Here we present the structure of the network's database system including all specially created, modified and applied software components. The shared web portal facilitates and visualises DNA data and specimen information of all available DNA samples. That includes a reference to the organism from which DNA was extracted and which had to be deposited in a scientific collection. Additionally, links to inferred molecular data are given if those are published in sequence databases. Unique identifiers are used to connect single DNA datasets with specimen data and links to digital multimedia units. Wrapper software as for the GBIF portal was applied to visualise data directly from multiple data sources. The DNA module was newly designed to record and manage DNA data. The module is as well made to set online references to specimen databases and molecular data sets. Numerous specimen databases of all relevant types can be linked to the DNA module. Furthermore, a DNA extension of ABCD schema (BioCASE Provider Software) was designed to enable a transfer of DNA data online via wrapper. The presented database architecture is appropriate to deal with any kinds of specimen and DNA databases compatible with GBIF. Therefore the network's webportal holds the potential to become a central internet platform for biological DNA banks.