TITLE: COMPUTERIZATION AND MANAGEMENT OF BIOLOGICAL COLLECTIONS OF MICROORGANISMS FROM THE CATHOLIC UNIVERSITY OF BRASÍLIA, DF, BRAZIL

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ABSTRACT:

A collection of microorganism culture is a genetic resource center dedicated to the preservation, storage and distribution of information and biological material, which can be potentially used for environmental restoration and biotechnological application. The aim of this work was to generate a database for the collections of microorganisms from the Catholic University of Brasilia, in order to support research and teaching activities. The collections are associated to the Postgraduate Program in Genomic Sciences and Biotechnology and to the Undergraduate Course in Biology (Laboratory of Algae Ecophysiology and Laboratory of Aquatic Biodiversity), and concentrate strains of soil bacteria, algae and cyanobacteria, most of them coming from the Cerrado Domain. At the Laboratory of Genomic Sciences are stored soil and freshwater strains, in addition *Escherichia coli* strains. These microbiological samples are cryopreserved at -80 °C, in cryopreservation tubes, in polycarbonate boxes. Among them, the genera *Acidobacterium*, *Mucilaginibacter* (bacteria from Amazon soil), *Variovorax*, *Kitasartepora*, *Bradyrhizobium*, *Methylovirgula*, *Sphingomonas*, *Actinocorallia*, *Betaproteobacteria* and *Burkholdeira* (bacteria from serpentine soils). Collections of algae and cyanobacteria preserved in formaldehyde are stored in snap cap bottles. In the label, the most representative taxon in the material is chosen. This collection contains samples from several Cerrado conservation units (CU), such as State Park Terra Ronca (PETER), National Park of Chapada dos Veadeiros (PNCV), Park National of Brasília, among others. The algae and cyanobacteria germplasm bank contains species maintained in liquid and solid culture media, besides cryopreservation (in liquid N), most of which are desmids and cyanobacteria, also from CUs and anthropic areas, such as *Microcystis aeroginosa*, *M. panniformis*, *Micrasterias*, *Temnogametum*, *Cryptomonas*, *Closterium* and *Zygnema*. The data were computerized based on the Darwin Core model, using the Microsoft Excel 2010 software. Taxa identification, tipping code, geographical location of the collection site, and culture and / or storage conditions were recorded. A total of 1069 samples were recorded, being 340 bacteria of and 729 of algae. In the future, the data will be transferred to the Microsoft Access software, which allows data filtering by creating forms with pictures of each taxon.

Keywords: collections, Cerrado, bacteria, algae, desmids

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