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Abstract.

Confirmation in the Microorganisms' Identification by Universal Primers as Taxonomic Tool at National Collection of Microbial Strains and Cell Cultures.

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Abstract: The National Collection of Microbial Strains and Cell Cultures (Colección Nacional de Cepas Microbianas y Cultivos Celulares as original name, WFCC registration CDBB-500) aims to preserve and identify reference strains and isolates of biotechnological significance. The taxonomic identification of microorganism is necessary to verify, classify and organize the different strains. The target of this work is confirm the taxonomic classification of CDBB-500 strains, sequencing with universal primers (16S for bacteria and ITS regions for fungi) and a BLAST search (NCBI software). The identification obtained was compared with the originally taxonomic classification or with the findings from the physiological and biochemical tests. A total of 86 strains were sequenced, and only 59 strains (69%) have a priori identification. The molecular identification with the universal primers confirmed the taxonomic classification of 47 strains (80%) with a match to genus and species. Five species (8%) are newly described, that is reason that taxonomic confirm was genus level. Four strains (7%), grouped on the same order, are genus with the same phenotypic characteristics. Three strains (5%) did not match, one of them has not valid classification and the other two are under study to solve the differences.

Key words: Culture Collection, Microorganisms, Identification, Sequencing.

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