

Brazilian Clone Collection Center (BCCCenter): A Sequencing Facility and a Repository Center for Biotechnological Applications

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Abstract:

The Brazilian Clone Collection Center (BCCCenter) is the repository of cosmids, ESTs and shotgun clones of several genome projects developed in Brazil including *Xylella fastidiosa*, *Chromobacterium violaceum*, *Xanthomonas citri* subsp. *citri*, sugarcane, coffee and eucalyptus. The Center has the capability to produce, store and distribute DNA libraries clones. Through robotic colony manipulator it can provide service of colony picking, large scale plate replication, clones re-array from existing plates and gridding of large libraries onto nylon macro-arrays. The Center is also a sequencing facility that can certify clones by sequencing and can attend the scientific and industrial communities in their needs for DNA sequencing. Actually the facility can sequence DNA clones using an ABI3730XL sequencer, which delivers 1,152 sequences at every twenty-four hours with an average length of 800bp. A new generation sequencer that enables whole genome sequencing in high-throughput and large scale is expected to be incorporated. In order to become a bioresource and repository center that can provide high quality biological materials for biotechnological applications, the Center has the aim to produce and store cosmid and BAC libraries from plants and microbes of biological and biotechnological interest, including metagenomic libraries, attending requests from the scientific and industrial communities. It will also act strategically by producing cosmid or BAC libraries from organisms that are strategic for biotechnological applications or for the preservation of Brazilian biodiversity. All these clones can be gridded onto nylon membranes and can also have their ends sequenced. The Center is intended to be certified and accredited at national and international level. Supported by FAPESP, FINEP and CNPq

Key words: Biotechnology, Cosmid and BAC Clones, Genomic Resource Center, Repository Center, Sequencing Facility