

5th International Workshop

Advances in Science and
Technology of Bioresources

DECEMBER 2-4 2015
PUCÓN-CHILE
UNIVERSIDAD DE LA FRONTERA



ABSTRACTS BOOK



CONICYT
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**CONVENIO
DE DESEMPEÑO**
Internacionalización
Doctorados UFRO (FRO 1204)

BI@REN - UFRO
Scientific and Technological Bioresource Nucleus



5th International Workshop
Advances in Science and Technology of Bioresources
December 02-04, 2015
Universidad de La Frontera
Pucón, Chile

Abstracts Book

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PUBLIC SERVICE CULTURE COLLECTIONS OF MICROORGANISMS: ARE THEY IMPORTANT FOR BIOTECHNOLOGY?

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Microbiology as a scientific discipline recognised the need to preserve microorganisms for scientific studies establishing from its very beginning research culture collections (CC). Later on, to better serve different scientific fields and bioindustries with the increasing number of strains of scientific, medical, ecological and biotechnological importance public service CC were established with the specific aims to support their user communities. Currently, the more developed public service CC are recognised as microBiological Resources Centres (mBRC). mBRC are considered to be one of the key elements for sustainable international scientific infrastructure, which is necessary to underpin successful delivery of the benefits of biotechnology, whether within the health sector, the industrial sector or other sectors, and in turn ensure that these advances help drive economic growth. In more detail, mBRCs are defined by Organisation for Economic Co-operation and Development (OECD) as service providers and repositories of the living cells, genomes of organisms, and information relating to heredity and functions of biological systems. mBRCs contain collections of culturable organisms (e.g., microorganisms, plant, animal cells), replicable parts of these (e.g. genomes, plasmids, virus, cDNAs), viable but not yet culturable organisms, cells and tissues, as well as database containing molecular, physiological and structural information relevant to these collections and related bioinformatics. Thus mBRCs are fundamental to harnessing and preserving the world's microbial biodiversity and genetic resources and serve as an essential element of the infrastructure for research and development. mBRCs serve a multitude of functions and assume a range of shapes and forms. Some are large national centres performing a comprehensive role providing access to diverse organisms. Other centres play much narrower, yet important, roles supplying limited but crucial specialised resources. In the era of the knowledge-based bio-economy mBRCs are recognised as vital element to underpinning the biotechnology.