

## Restrictions placed on the distribution and utilization of microorganisms by Access and Benefit Sharing legislations

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In 1992 in Rio de Janeiro, Brazil, during the United Nations Conference on Environment and Development (the Rio "Earth Summit"), the Convention on Biological Diversity (CBD) was opened for signature and in 1993 entered into force. The objectives of the Convention are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. Based on this third objective, the CBD established the concept of Access and Benefit Sharing (ABS), which defines how genetic resources can be accessed and how the benefits resulting from their use are shared between users and providers. In 2014 entered into force the Nagoya Protocol (NP) on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, which is the international framework for ABS. Therefore, Parties to the CBD and NP have sovereign rights over their genetic resources, have the authority to determine access to these resources and to implement the prior and informed consent and the mutually agreed terms. Currently, 139 countries are Parties to NP, so there are a wide range of different rules and requirements regarding the activities of depositing, sharing and utilizing genetic resources, which are common activities in biological collections. This means that curators must be aware of these requirements on genetic resources from different countries maintained by the collection. Many countries with great biodiversity, the so-called megadiverse countries, have opted for tight control and restrictions for accessing and sharing their genetic resources, which are set out in documents such as material transfer agreement (MTA) and mutually agreed terms (MAT). Consequently, international cultures collections are having difficulties in distributing microorganisms from these countries, which has resulted in some cases their removal from microbial catalogs and even the exclusion of strains coming from Brazil, India and South Africa to serve as type material for the validation of species names, as well described in the article How legislations affect new taxonomic descriptions by Manuela da Silva, Philippe Desmeth, Stephanus N Venter, Yogesh Shouche and Andrey Yurkov published in Trends Microbiology in 2023 (<https://doi.org/10.1016/j.tim.2022.10.010>).