

IBRC, a New Look at a Virgin Ecosystem

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Abstract:

Iranian Biological Resource Center, (IBRC) was established in 2009 as the national BRC, and now comprises four departments that *Department of Microorganisms* is one of the most important one. The main missions are: 1-Isolation, Identification and long-term Preservation of native microorganisms from different groups, different sources and diverse ecological places. 2- Authentication of the already isolated and identified microorganisms. 3. Providing the required legislation and regulations in order to simplify the microorganisms exchange between IBRC and international BRC's. 4. Registration of the novel strains isolated and identified by researchers and research institutes to protect their rights (copyright laws) 5. Supporting the domestic BRC's in areas of Q.C., Authentication and Backing up their deposited microorganisms. 6. and foundation the National Network of BRC's. In order to achieve the missions, IBRC high-qualified young scientists are working on two research projects. Collecting the native microorganisms from different ecological locations of the country has began and now more than 500 isolated strains have been collected at IBRC which 20 strains of them have been fully identified as the new type-species strain and are long-term preserved at the IBRC. Identification Division comprises three main labs: Phenotypic Identification, Chemotaxonomy and Molecular Identification and almost 70% of required facilities have been provided. The ID lab technically is able to perform complete process of fully identification. On the preservation area, IBRC is fully equipped with all needed facilities. Cryopreservation and Freeze Drying are two main methods which are being used to long-term preservation of the microorganisms, where Master-, Seed- and Lot-system is applied in order to prevent unintentional mutations during the subcultures of the strains. Informatics is the other supportive unit which manages and maintains the produced data in IBRC. Geographical backup is an alternative method to protect the cultures from force majeure accidents. With all of this, IBRC keenly looks for collaborations with international BRC's and bio-networks. Upgrading the technical knowledge, setting up the cutting edge developments and techniques in Bio-Banking and Bio-Networking are the most interesting arias for IBRC.

Key words: BRC, Culture Collection, Identification, Long-Term Preservation