Molecular Bank

Molecular Bank
Molecular bank of Iranian Biological Resource Center presents a unique and reliable collection of all organisms' genetic materials from natural resources or cultivated species, cell line collection centers around the world as well as providers of cutting-edge molecular identification services.

Main Projects

- Structure analysis of nucleotide modifications
- Phylogenetic analysis based on the ITS sequences
- DNA and RNA sequencing
- DNA fingerprinting
- Cloning of functional genes in desired species
- DNA barcoding of animals using COI
- Bioinformatic analysis of molecular materials
- Advanced bioinformatic analysis of NGS

DNA Collections

- Deposition of recombinant vectors
- Human genomic DNA
- Yeast genomic DNA
- DNA databases
- Advanced DNA
- cDNA

Laboratories

- Microbiology lab
- Animals
- Insects
- Bacteria
- Human and animal cells
- Probes
- Markers
- cDNA libraries
- Human & animals genomic DNA
- Deposited genetic material collections

Plant Bank

Plant Bank
Plant bank of Iranian Biological Resource Center provides around 5000 accessions with a variety of plant species in different geographical areas around the world. Besides this collection, it also includes living collections and in vitro cultures, which are maintained under optimized conditions to achieve production of healthy and vigorous plants.

Main Projects

- Evaluation of the isolated seeds
- Propagation
- Micropropagation
- Mitosis and meiosis spread preparation
- Plant scientific name determination
- Phytochemical analysis
- Total phenol, flavonoid, protein analyses
- Evaluation of the antioxidant activities
- Phytochemical analysis with RP-HPLC

Laboratories

- Genetics lab
- Plant tissue culture and cryopreservation lab
- Phytochemical Lab
- Molecular Lab
- Cytogenetics Lab
- Yeast and Fungi expression vectors
- Mammalian expression vectors
- Plant transformation vectors
- Yeast and Fungi expression vectors
- Mammalian expression vectors
- Plant transformation vectors
- Yeast and Fungi expression vectors
- Mammalian expression vectors
- Plant transformation vectors

Plant Collections

- Deposited and named banks
- DNA barcoding
- Codification of plant materials
- Various morphological and cytological analyses
- Various plant species identification
- Various plant species propagation
- Various plant species regeneration
- Micropropagation of different plant species
- Plant scientific name determination
- Phytochemical analysis
- Total phenol, flavonoid, protein analyses
- Evaluation of the antioxidant activities
- Phytochemical analysis with RP-HPLC

Servicess

- Research service facilities
- Providing different kinds of plant materials
- In vitro conservation (short-term, medium-term, long-term)
- Diverse range of molecular analyses
- Mitosis and meiosis spread preparation
- Plant scientific name determination
- Zymogram
- PAGE and SDS-PAGE Electrophoresis
- Phytochemical analysis with RP-HPLC
- Total phenol, flavonoid, protein analyses
- Evaluation of the antioxidant activities
- Exchange of in vitro germplasm with other centers
- Micropropagation of different plant species
- Yeast and Fungi expression vectors
- Mammalian expression vectors
- Plant transformation vectors
- Yeast and Fungi expression vectors
- Mammalian expression vectors
- Plant transformation vectors

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Hi, welcome to the document. It seems to be about biological resources in Iran, specifically the establishment of an Iranian Biological Resource Center. The document discusses the importance of biological resources in Iran, their significance in research and development, and the establishment of the center to improve national research in this field. The center aims to be a pioneer in the collection, preservation, and studying of biological resources, as well as ensuring quality and hygiene. The text also mentions the efforts to remove research-related issues from faculty members, students, and lab staff. It highlights the role of the center in developing and consulting activities related to research.

The Iranian Biological Resource Network (IBRN) was established in 2010 to enhance national research in biology and biotechnology, and to achieve the objectives of the 20-year vision of Iran (taking the region’s first place in sciences and technology). The IBRN is headquartered in the Iranian Biological Resource Center (IBRC) and performs executive and consulting activities to develop research in Iran.

The IBRN is a member of the World Federation for Culture Collections (WFCC) and the International Committee on Systematics of Prokaryotes. It has stored nearly 30,000 biological samples in 27 collections, including collections of microorganisms, human cell lines, animal cells, and plant cells. The IBRN also has a quarantine cell culture lab to ensure the quality and safety of cell lines.

The IBRN is committed to providing comprehensive services in the field of biological resources, including cell culture collections, real-time PCR, biochemistry, and real-time PCR services. The center has a wide range of equipment and facilities, including cell storage rooms, preparation labs, immortalization cell culture labs, microbial quality control labs, biochemistry labs, and real-time PCR labs.

The IBRN is also involved in various research projects, such as the production of immortal cell line resources from Iranian ethnic groups and the establishment of various cell lines, including fibroblast, epithelial, and mesenchymal cell lines. The IBRN has also developed metagenomics approaches and unculture-based methods to study microbial communities.

In conclusion, the IBRN is a key player in the field of biological resources in Iran, providing comprehensive services and facilities to support research and development in the country. The center is committed to ensuring the quality and safety of cell lines and to providing comprehensive services to support research in this field.