



# Biobanking and Accreditation:

Enabling Trusted  
Scientific Research





## INTERNATIONAL STANDARD FOR BIOBANKING

### ISO 20387:2018

#### **Biotechnology – Biobanking – General Requirements for Biobanking**

It specifies general requirements for the competence, impartiality and consistent operation of biobanks including quality control requirements to ensure biological material and data of appropriate quality.



## SCOPE:

- Applicable to **biobanks** storing biological materials from humans, animals, plants, and microorganisms.
- Ensures **quality** and **competence** in biobank operations.
- Covers:



**Governance  
and  
organizational  
structure**



**Personnel  
Competence**



**Facilities and  
environmental  
conditions**



**Equipment  
and  
traceability**



**Documentation  
and records**



**Process control**  
(collection, acquisition,  
preparation, preservation,  
storage, and distribution)



**Ethics and  
confidentiality**



**Financial  
stability**



The background of the slide is a composite image. It features a glowing blue DNA double helix structure in the center, superimposed over a blurred image of a server room with rows of server racks and glowing lights. The bottom half of the slide has a dark teal background with a wavy line separating it from the image above. There are also faint, stylized plus signs in the bottom left and right corners.

Accredited biobanks are biorepositories that meet specific **international quality and competence standards**, typically through **third-party assessment**.

Accreditation confirms that a biobank:

- Has robust **quality management systems**.
- Follows **standard operating procedures (SOPs)**.
- Ensures **traceability, sample integrity, and data security**.
- Complies with **ethical and legal standards**.



# ACTIVITIES OF BIOBANKING COVERED



**Sample  
Collection**



**Sample  
acquisition &  
reception**



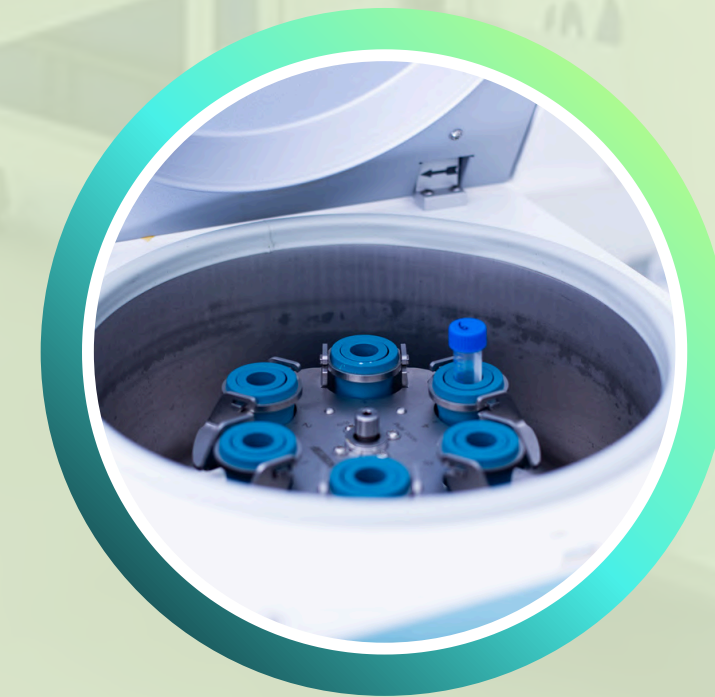
**Sample  
Processing &  
Storage**



**Data  
Management**



**Ethical & Legal  
Considerations**



**Distribution  
& Use**



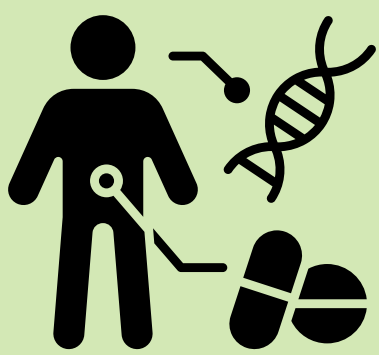
# Importance of Biobanking



1

## Medical Research

Enables discovery of disease mechanisms and biomarkers.



2

## Personalized Medicine

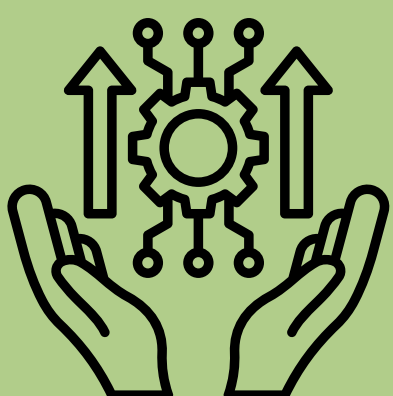
Biobanks play a vital role in personalized medicine by enabling researchers to study how individual genetic makeup and other factors influence disease susceptibility and response to treatment.



3

## Public Health

Facilitates large-scale studies (e.g., COVID-19 biobanks).



4

## Advancing Research

Biobanks are crucial for advancing medical and scientific research by providing researchers with access to high-quality biospecimens and associated data.



5

## Understanding Diseases

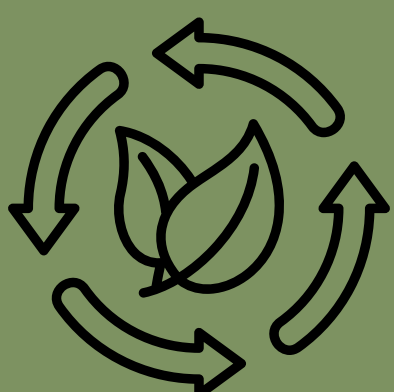
Help scientists understand the causes and mechanisms of diseases, leading to the development of new diagnostic tools, therapies, and preventive strategies.



6

## Drug Development

Support the development of new drugs and therapies by providing the necessary biological materials for preclinical and clinical trials.



7

## Plants Material

Acting as a vital safeguard for genetic diversity and a resource for future adaptation and recovery efforts.



# TYPES OF BIOBANKS

- **Population-based:** General public (e.g., UK Biobank).
- **Disease-specific:** Focused on conditions like cancer or Alzheimer's.
- **Hospital/Clinical:** Linked to ongoing patient care.
- **Virtual Biobanks:** Coordinate samples/data across locations via digital systems.
- **Others:** Biobanks for biological materials from animals, plants, and microorganisms.



# INTRODUCTION TO APAC

**APAC's primary role is to manage and expand a mutual recognition arrangement (MRA) among accreditation bodies in the Asia Pacific region. The MRA facilitates the acceptance of conformity assessment results (e.g. test reports, calibration certificates, inspection reports, and certification) across the region and with other regions around the world.**

**Conformity assessment results that are produced by conformity assessment bodies (CABs) that have been accredited by one APAC MRA signatory are accepted by all the other APAC MRA signatories. This mutual recognition and acceptance of conformity assessment results reduces the need to undertake duplicate testing, inspection or certification, thus saving time and money, increasing economic efficiency and facilitating international trade.**