

# Biobanking

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## Introduction

Biobank is a depository for biomaterials for biomaterials from a representative portion of a representative portion of a human population.

- a) The Biobank acts as a vault with intricate detailed information pertaining to the individuals from whom biological materials have been collected.
- b) Data collection: Data collection and proper and proper cataloging are essential are essential components for the success components for the success of a Biobank [1-3].

## Types

- a) Tissue bank Tissue bank
  - I. Surgical tissues,
  - II. Transplant tissues
  - III. Transplant tissues
- b) Cancer / Tumor bank Cancer / Tumor bank
- c) Cord blood / Stem cell bank Cord blood / Stem cell bank
- d) Blood bank Blood bank – Dried Blood Spots Dried Blood Spots
- e) Body fluids Body fluids
  - i. Synovial,
  - ii. Urine,
  - iii. Sputum,
  - iv. Buccal scrapings,
  - v. scrapings,
  - vi. Sperm
- f) DNA / RNA bank DNA / RNA bank
- g) Cornea bank Cornea bank Functional Division

## Divisions

- Cell and Molecular Biology Cell and Molecular Biology
- a) Blood Center Blood Center
  - b) Pathology
  - c) Genetics
  - d) Bioengineering
  - e) Cryobiology
  - f) Bioinformatics
  - g) Ethics

## Indications

- a) Research work-biomedical experiments for a particular disease in a specific population.
- b) Routine work-health centers, hospitals, health centers, hospitals, blood transfusion centers and Public / Private pathological laboratories.
- c) Epidemiological work– monitoring in susceptible populations after disease outbreak, poisoning and / or pollution.

## Ethical /safety issues

For tissue banking, freely given informed patient consent is mandatory. Patient consent forms needs to be upgraded from time upgraded from time -to -time following IRB regulations.

- a) Model Consent Form
- b) Confidentiality
- c) Quality assurance checks necessary for right from planning, implementation, up to documentation and analysis.
- d) Safety is crucial:

Biobank in India

NIMHANS: Brain Biobank

ACTREC, Mumbai: cancer Biobank

### Repositories in India

- a) Organ Retrieval Banking Organization (ORBO), AIIMS, New Delhi
- b) National Repository for Cell Lines / Cell Lines / Hybridomas, NCCS, Pune
- c) Mycobacterial Repository, JALMA, Agra

### Conclusion

India has a population of over a billion and is the world's largest

democracy. India has a very high burden of communicable and non-communicable diseases. India has the means to make a modest start towards establishing a Biobank.

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