

Biobanking

Introduction

Meaning

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

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

Types:

- Tissue bank–(i) Surgical tissues (ii) Transplant tissues
- Cancer/Tumor bank
- Cord blood/Stem cell bank
- Blood bank–Dried Blood Spots
- Body fluids–(i) Synovial (ii) Urine (iii) Sputum (iv) Buccal scrapings (v) Scrapings (vi) Sperm
- DNA/RNA bank
- Cornea bank Functional Division

Divisions:

- Cell and Molecular Biology
- Blood Center Blood Center
- Pathology
- Genetics
- Bioengineering
- Cryobiology
- Bioinformatics
- Ethics

Indications:

- Research work–biomedical experiments for a particular disease in a specific population.
- Routine work–health centers, hospitals, blood transfusion centers and Public/Private pathological laboratories.
- 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.^{1,2}

- Model Consent Form
- Confidentiality

Volume 5 Issue 6 - 2018

Saraswathi KN

Department of mental health nursing, JSS College of Nursing, India

Correspondence: Saraswathi KN, Asst Professor, Department of mental health nursing, JSS College of Nursing, Mysore, India, Email saraswathimvsores803@gmail.com

Received: May 02, 2017 | **Published:** November 23, 2018

- Quality assurance checks necessary for right from planning, implementation, up to documentation and analysis.
- Safety is crucial

Biobank in India

NIMHANS: Brain Biobank
 ACTREC, Mumbai: cancer biobank

Repositories in India:

- Organ Retrieval Banking Organization (ORBO), AIIMS, New Delhi
- National Repository for Cell Lines/Hybridomas, NCCS, Pune
- 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.

Acknowledgments

None.

Conflicts of interest

Author declares that there is none of the conflicts.

References

1. Vaught J, Rogers J, Myers K, et al. An NCI perspective on creating sustainable biospecimen resources. *J Natl Cancer Inst Monogr*. 2011;42:1–7.
2. 2012 Best Practices for repositories: collection, storage, retrieval, and distribution of biological materials for research. *Biopreserv Biobank*. 2012;10(2):79–161.