

Biobank

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Biobank
term was first used in 1990s onwards
The term was used in the Scientific journals in 1996
Time magazine quoted biobank as a good new idea in 2009

Biobank is a Bio repository storage unit for bio samples and associated data
Used in Research.

The types of samples stored are

Frozen tissues
Formalin fixed paraffin embedded tissues , cells ,whole blood blood components ,
urine , semen , saliva , buccal cells , Bone Marrow aspirate , hair nails . nucleic acids
DNA / RNA ,cDNA ,mRNA ,Micro RNA

There are legal and ethical considerations and very strict confidentiality.

Can be in the
University
Hospital
Other organisations

Anonymous
Unique no
Donor privacy
Confidentiality

Stored at
-- 190 Degrees C

Can be
Disease specific
Cancers , Alzheimer's Disease
Population based
Genetic DNA ,RNA
Multiple
Virtual

It is for public benefit
For future generations

Can be
Population based studies
Epidemiology
Basic Research
Translational study
Clinical trials
Pathology Archives

International Society for Biological and Environmental Repositories
ISBER
established in 1999

European, Middle East, and African Society
Found in 2010

In india

Recently

A state of art

Phenomenal india

National Biobank

under

CSIR (Council of Scientific and Industrial Research) -

IGIB (Institute of Genomics and Integrative Biology

Delhi

Longitudinal health data base

Can be used for personalised medicine in the future

Cohort studies

10,000 individuals across India

Age , sex ethnicities, socio economic background

India's population is Diverse

India is a living lab for the world

Collaboration between entrepreneurs and Government

AI driven Diagnostics

Tissue bank

Surgical tissue

Transplant tissue

Cancer tumor bank

Cord blood ,Stem cell bank

Dried blood specimens

Body fluids

DNA ,RNA

Cornea

Bone

Cell and Molecular biology

Genetics

Bioengineering

Bio informatics

Cryobiology

Molecular profiling

Isolate the genes

and proteins

Genomic analysis

Proteomic analysis

QC and QA

Biobanks have been developed since 1990s and 2000 in

USA

UK

Sweden

China

Australia

Korea

Singapore

HK

Dr R.G. Wiseman Pinto

Goa India.