

e-MetaBank®

A platform for biobanks

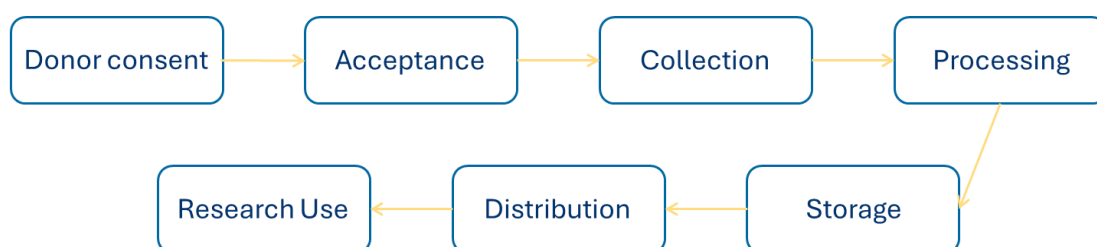
- ✓ Traceable workflows
- ✓ Enhanced quality control
- ✓ Increased biospecimen value



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e-MetaBank® is an advanced platform that **enables high-quality data annotation** from collection to research utilization.

This dedicated, modular platform is designed to record, manage, and preserve every aspect of biospecimen handling across the biobank lifecycle. Starting from donor consent and sample acceptance, the system **tracks each biosample's journey**.



At its core, e-MetaBank® functions as a **comprehensive biobank management hub** that consolidates logistical, pre-analytical, and metadata records within a unified environment. The platform's structured workflows capture acceptance protocols, material transfer agreements, pre-processing conditions, labeling, and donor information with **full traceability**. Sophisticated biospecimen annotation tools build **time-lined data profiles** that enrich each sample with contextual and newly generated information, ensuring that every resource retains its integrity, reliability, and scientific value throughout its lifecycle.

The platform incorporates specialized modules to cover all aspects of repository operations:



Processing & Analyses — Standardized and customizable workflows for aliquoting, sectioning, cryopreservation, and assay-derived data capture.



Acceptance & Collection — Detailed donor and biospecimen information, reception metadata, labeling, and collection protocols.



Biospecimen Annotation — Longitudinal, time-lined annotation integrating both initial and derived research data.



Inventory & Query Management — Advanced multi-criteria search engine, biospecimen tracking, and instant access functions.

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Pre-analytical Factors — Recording of processing delays, ischemia times, storage conditions, and donor-related factors (e.g., fasting, antibiotic exposure).



Shipment & Packaging — Full management of biospecimen distribution and packaging workflows.



Storage & Monitoring — Real-time monitoring of environmental conditions, freezer status, and exact sample positioning.



Digital Dynamic Consent — GDPR/HIPAA-compliant, tiered e-consent tool enabling flexible donor participation and transparent governance.

Through this modular structure, e-MetaBank® ensures that every biosample is handled under validated protocols while capturing critical pre-analytical data that directly influences downstream research reliability. This results in **enhanced quality control, minimized variability, and maximized scientific reproducibility.**

Built for scalability, the platform supports both small institutional repositories and large, multi-site biobank networks. Its interoperability with hospital IT systems, LIMS, and research platforms enables seamless integration into broader biomedical ecosystems, while advanced audit trails and compliance features safeguard data integrity and regulatory alignment.

KPI dashboards and real-time analytics empower institutions to monitor performance, optimize workflows, and continuously improve operational efficiency.

By integrating longitudinal data generated from assays, analyses, and downstream research, **e-MetaBank® transforms biospecimens into well-characterized, high-value resources with maximum reproducibility and scientific impact.**

e-MetaBank® is **one of the 4 platforms** of the e-MetaBio® data network, which functions as a unified interoperable ecosystem for comprehensive data collection, storage, and distribution across the entire biosample lifecycle, from patient/donor to hospital, biobank,

and research entities. Apart from e-MetaBank®, e-MetaBio® comprises of:

e-MetaHep®

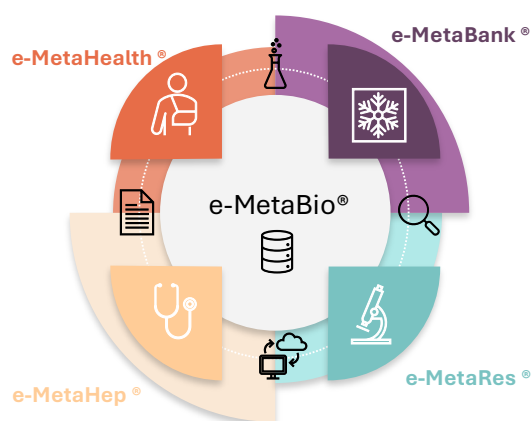
Standards-based EMR for hospitals and healthcare institutions with full interoperability and real-time consent.

e-MetaHealth®

Patient-centered platform for real-world data capture, disease management, and dynamic e-consent.

e-MetaRes®

Platform for accredited research entities, enabling multi-criteria queries, protocol annotation, analytics, and dynamic consent.



e-MetaBank® is not just a system; it is a trusted partner in safeguarding biospecimens, empowering collaboration, and ensuring that every repository evolves into a catalyst for scientific innovation.

Contact us for more details or visit our website:

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