

ASSET International Project

Digital Tools for the Management and Sharing of Research Animal Samples

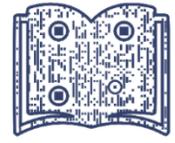
3Rs

FOCUS ON REDUCTION

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Scan to access the catalogue

Introduction

The international ASSET consists on the provision of professional software to enhance management, traceability and sharing of research animals and its samples. Aligned with the 3Rs, this initiative not only promotes an ethical and efficient use of animal resources, but also fosters collaboration among research institutions and groups, ultimately stimulating the development of novel research ideas and maximising the scientific value of existing biological materials.

Objectives

- Promote the **efficient use of experimental research animals** and their tissues, **minimising animal use while maximising scientific output**.
- **Provide digital tools** to research groups for the **traceability and management** of their research samples.
- **Establish a searchable database of animal research samples** available worldwide for consultation and request.
- **Improve transparency, reproducibility and collaboration** between research groups at international level.
- **Ensure compliance** with ethical and biosecurity standards.

Methods

The main challenge was integrating multiple institutional realities into a single, cohesive workflow, which was achieved through the implementation of a comprehensive software platform, composed by:

- **Internal sample management system:** Ensures standardized data collection and full traceability of sample origin, metadata and physical location, tailored for each of the research groups participating in the project.
- **External sample sharing platform:** Portal for publication of selected samples to a network-accessible catalogue to enhance scientific collaboration, with a consensus between project members about the system configuration.

Active partners



Umeå University · Sweden

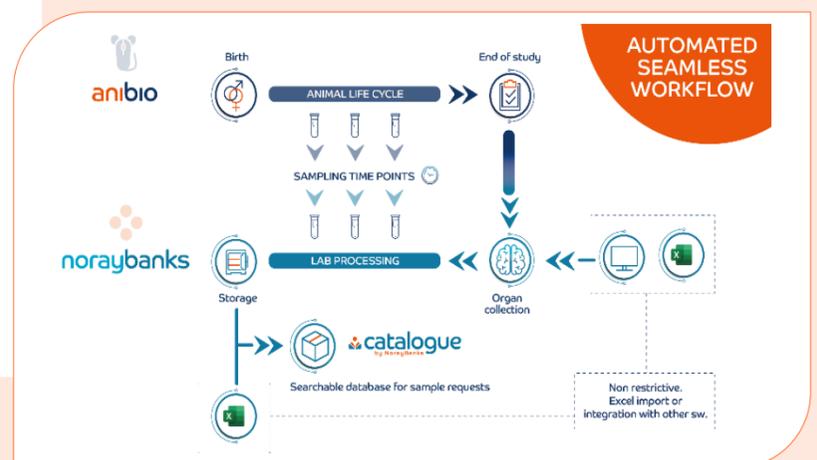
PORT · Poland

CREBA-IRBLleida · Spain

IGTP · Spain

University of Barcelona · Spain

Hospital Clínic de Barcelona · Spain



Group	Collection	NorayBanks sample code	Ani Bio code/mark	NorayBanks case code	Universal code	Sample type	Case status	Donation/Recd date	Donation/Recd date	Sample withdrawn	Samples with incidents	Entry date	Quantity	Sample date	Aliquot	Processed sample	Stored sample	Container	Rack	Sample on request
Group: Sieć Badawcza Łukasiewicz – PORT Polski Ośrodek Rozwoju Technologii (Continued on the next page)	Collection: NIT MW Hodowia 24 (Continued on the next page)	AF2422-241BL1	AF-005066-24/	AF2422-241		18 Blood	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241BL2	AF-005066-24/	AF2422-241		18 Blood	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241BL3	AF-005066-24/	AF2422-241		18 Blood	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241BL1.1	AF-005066-24/	AF2422-241		18 Blood	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241BL1.2	AF-005066-24/	AF2422-241		18 Blood	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241BL1.3	AF-005066-24/	AF2422-241		18 Blood	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241BL1.4	AF-005066-24/	AF2422-241		18 Blood	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241LFT1	AF-005066-24/	AF2422-241		10 Liver Fresh Tissue	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241LGF1	AF-005066-24/	AF2422-241		18 Lungs Fresh Tissue	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241PL2	AF-005066-24/	AF2422-241		18 Plasma	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								
		AF2422-241PL3	AF-005066-24/	AF2422-241		18 Plasma	Available	1-MM-C57BL6	26/02/2025	No	No	26/02/2025								

Results & Conclusions

- **Establishment of an international online searchable public catalogue (ASSET)** with **hundreds of available lab animal samples for consultation and request**, structured into clearly defined collections: fixed tissue samples, frozen tissue samples, complete organs, blood samples, other biological fluids, prenatal samples, and project-specific samples.
- **Inter-institutional sharing of knowledge** (specially from human biobanking to animal facilities) has contributed to the **definition of more efficient workflows, minimizing redundancy and enabling better-informed experimental design**.
- Lay the groundwork for the **development of institutional animal tissue banks** to promote the long-term accessibility and reusability of biological samples.
- **Support of the 3Rs principles in animal research**—particularly **reducing the number of animals used**—by maximising the value derived from each sample and avoiding unnecessary duplication of animal studies.

asset
ANIMAL SAMPLE SHARING & EFFICIENT TRACKING

An asset is a resource with value that an individual, corporation, or country owns or controls with the expectation that it will provide a future benefit

The international ASSET project consists on the provision of professional software to enhance internal management, traceability and sharing of research animals and their samples.

To streamline your search, the ASSET catalogue is organised into the following sample collections:

- Fixed Tissue Samples
- Frozen Tissue Samples
- Complete Organs
- Blood Samples
- Other Biological Fluids
- Prenatal Samples
- Project-Specific Samples

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