



CRB-Anim



A national infrastructure project to connect **Biological Resource Centers** for domestic animals

Investing for the future Programme : 2012-2019

11 M€ for construction and operations

Upgrade gene banks to facilitate scientific and socio-economic exploitation of genetic collections

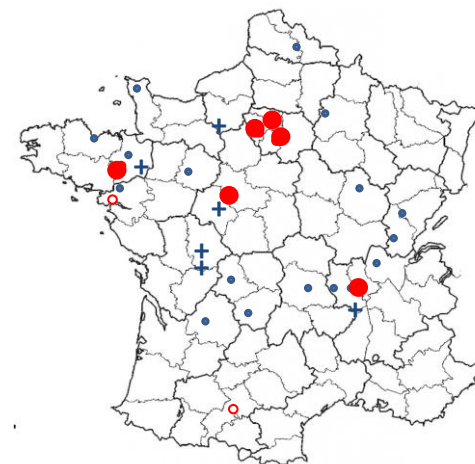
(genomic & reproductive)

6 institutions

8 partners

(3 INRA labs)

11 M€ 2012-2019



LABOGENA





Why a national animal biobank infrastructure ?

Genetic diversity:
a heritage and a resource for the future
to meet societal challenges

Genomics

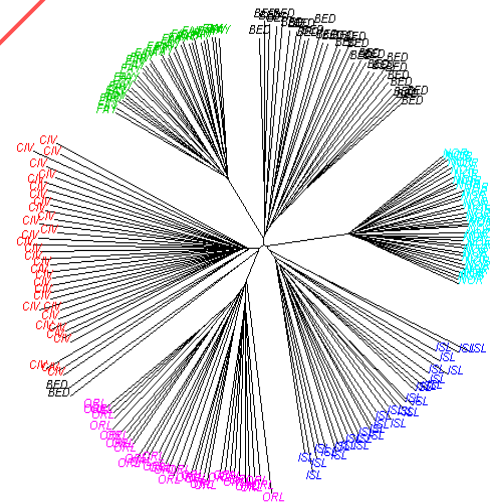
Genome an archive of population history
& the basis of phenotype prediction

Cryobanks (*ex situ/in vitro*)
In situ management

Progress
in reproductive
biotechnologies

Connect reproductive
and genomic biobanks
in a network of
**Biological
Resources
Centers**

Documented biological samples





Species	Number	Organization
22 Species	251 Breeds	
Dogs	40	CERRE/ Vet Schools
Cats	40	CERRE/ Vet Schools
Poultry	36	SYSAAF
Sheep	23	AND (UNCLEA)
Aquaculture species	22	SYSAAF
Rainbow & Brown Trouts	20	INRA
Sea Bass & Red Drum	14	IFREMER
Horses	14	IFCE
Rabbits	10	CERRE
Pigs	8	IFIP
Goats	6	CapriA
Pacific Oyster	3	IFREMER



Fundamental missions of a BRC: Collect/Characterize/Secure/Distribute biological samples

- Improve practices, standards, and develop synergy between BRC members of the network → improved visibility
- Enrich collections for 22 domestic animal species managed populations: farm animals, companion animals → **collect samples and develop new methods for genebanking**
- secure collections, provide traceability
- Facilitate distribution and establish common rules
- Set a web portal for access to samples and related data
- Raise awareness about usefulness of genetic collections
- Strengthen the scientific use and the economic exploitation of collections



Technological developments for biobanking

Objectives: quality, quantity, safety, traceability



• Compare, upgrade sampling and conditioning protocols:

- challenges for a range of tissues and species in **Fr-AgEncode**
- new protocols for tissue dissociation in view of chromatin studies
- tissue preparation for immunohistochemistry, In Situ Hyb.

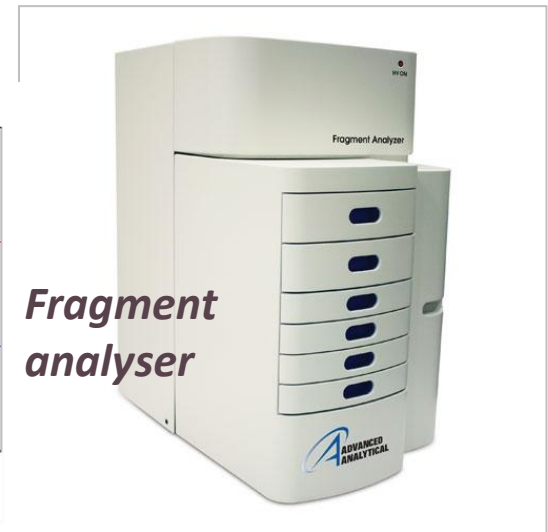
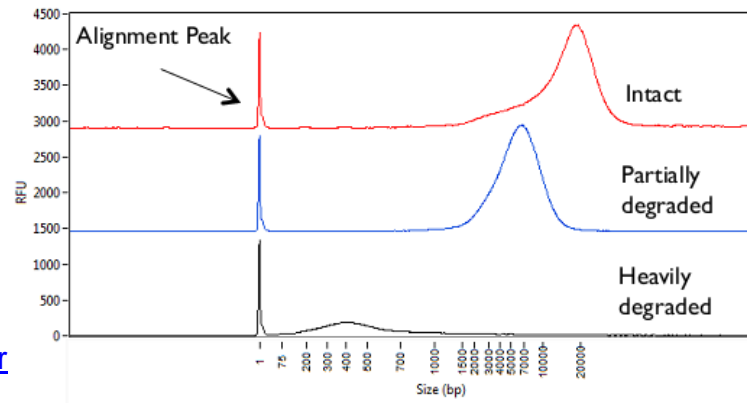
• Nucleic acids

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A new platform for extraction and quality control

Extraction from blood, tissues, sperm, faeces

Storage -40°/-80°C



Fragment analyser

• Gene expression

• Microarrays

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• HT qPCR

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