
NATIONAL INFRASTRUCTURE IN BIOLOGY AND HEALTH

BIOBANQUES

The French Human Biobanks and microorganism BRCs

Key facts :

- BIOBANQUES federates 67 biobanks and mBRCs and involved over 200 research teams
- It covers the whole spectrum of human diseases with more than 600 ongoing biological and clinical research programs
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- 45 follow-up prospective surveys of populations
- 300 000 individuals included in the studies

About BIOBANQUES :

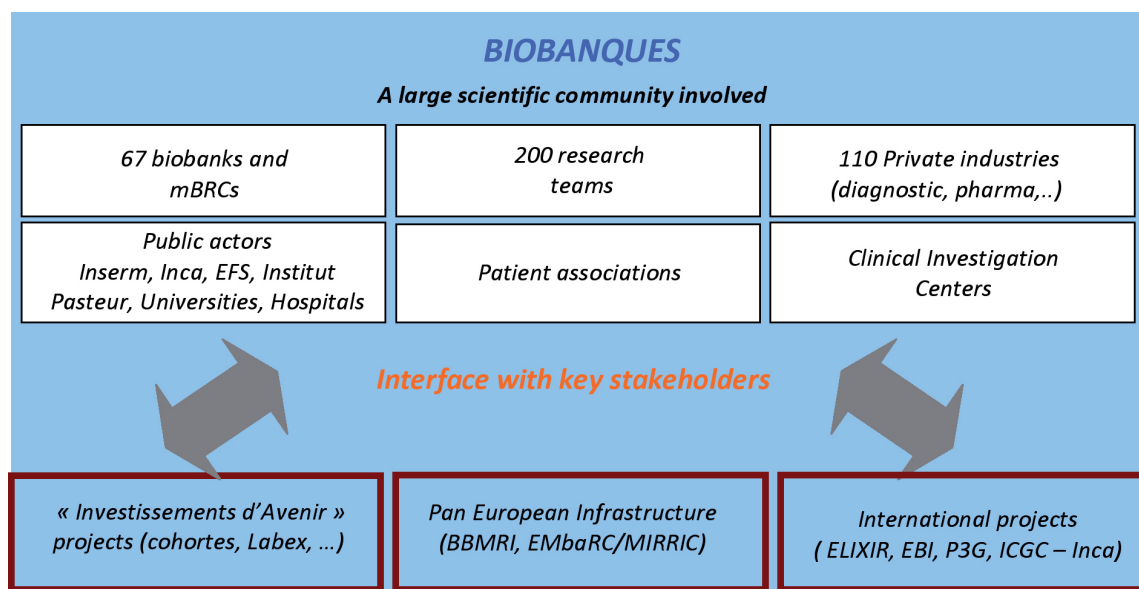
The mission

BIOBANQUES infrastructure will take French collection of biological resources to a new level of coordination, quality and efficiency, by setting up a sustainable infrastructure that will provide new services, better access for users from public and private sector, develop public private partnerships, interface with the pan European infrastructure BBMRI and EMbaRC/MIRRI and support French biobanks and mBRCs in increasing the value and the use of their collections.

BIOBANQUES fulfils the strategic aims of AVIESAN and the pharmaceutical corporate ARIIS. It will integrate existing sample collections, resources, technologies and expertise, to prepare for further extension and complementation with innovative components, properly embedded into European scientific, ethical, legal and societal frameworks.

Strategic aims

- 1.** To increase scientific excellence and efficacy of French research in the life sciences, especially towards the development of the biomarkers field, robust translational medicine studies and thus realizing significant advances in personalised medicine
- 2.** To reach a critical mass and avoid duplication by establishing links with European Infrastructures (BBMRI and EMbaRC/ MIRRI) and by increasing the quality and standardization of bioresources collected, scaling up capacities and implementing interoperability of database
- 3.** To facilitate access to biobanks and mBRCs to academic and industrial researchers in order to foster knowledge, innovation and competitiveness and accelerate public private partnerships.



Common services and platforms

Needs	Platforms, common services and expertise of BIOBANQUES
Scientific projects	

Biomedical, biomolecular and microbial resources
 Related analytical and clinical data
 Many subjects, patient samples and samples
 Samples of various geographical areas
 Appropriate statistical power to decipher the complex genetic mechanisms of complex diseases
 High quality samples and data

“One stop access” to biological resources and associated data
 Common access procedure, “peer reviewed process”
 Online updated catalog of samples and data available
 → **Online catalog**
 → **Common access portal**

Samples and data of France and Europe (interface with BBMRI/EMbaRC/MIRRI)
 Reducing the fragmentation of resources
 Large number of quality samples and data
 → **Quality Department, Biosafety, biosecurity**
 → **Service “Methodology and statistics”**

Transfer of samples and data - Quality, biosafety and biosecurity - Legal and Ethical Issues

Interoperability of biobanks and analytical databases
 Assistance and advice on regulatory and ethical issues
 Building confidence of clinicians, physicians and patients
 Harmonization of procedures for collecting, processing and cession
 Quality control of samples and quality assurance of procedures
 Expertise in biosafety and biosecurity

Appropriate IT tools
 Development of interoperable databases
 → **IT Services and interoperability of databases**

Regulatory, ethical and societal advices interaction with stakeholders and society (patient groups, industry ...)
 → **ELSI Service Platform, Stakeholders forum**

SOPs harmonization & dissemination
 Development and implementation of sample quality tests
 Establishment of Quality Management & Certification NFS 96-900
 → **Quality Department, Biosafety, biosecurity**
 → **European or ISO Standard for biobanks and mCRBs**

Needs	Platforms, common services and expertise of BIOBANQUES
Public-Private Partnerships – Common Technical Services	

Development of national projects and participation to international projects

Development of R & D, innovative technologies, public-private development platforms
 Technical and engineering development
 Development of thematic research networks with academic and private researchers

Development and implementation of sample quality tests
 Compliance with regulations and ethical principles
 Interface with national and international projects
 → **Quality Department, Biosafety, biosecurity**
 → **European or ISO Standard for biobanks and mCRBs**
 → **Planning and project management advice, Unit of "Methodology and Statistics "**
 → **Interfaces with European projects (BBMRI, EMbaRC/MIRRI, ERINHA), "Investissements d'Avenir" projects, international projects...**

Interactions with private companies (pharmaceuticals, diagnostics, biotech)
 → **Development of a platform for biomarker validation (PPP)**
 → **5 technical platforms: "high throughput DNA extraction and conservation"; "dry-phase conservation of cell cultures"; "tissue lyophilisation"; "automated whole blood processing"; "automated sample handling and identification using radiofrequency"**

Transfer of samples and data - Quality, biosafety and biosecurity - Legal and Ethical Issues	
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Continuing education, dissemination
 Improvement of services
 Socio-economic impact of networking

Implication of research institutions, hospitals, competitiveness clusters...
 Strengthen the confidence of clinicians, physicians and patients
 Information and governance
 Public Information and establishment of a relationship of trust

Training, seminars (quality, SOPs, biosecurity, SOP, legal and ethical principles ...)
 Exchanges about good practices and technical
 → **Master "Biobanking" Master in Biosafety and biosecurity**
 → **Quality Department, Biosafety, biosecurity, European or ISO Standard**
 → **Biobanks and mBRCs evaluation**
 → **Socio-economic study of biobanks' activities and their networking**

Quality sample and compliance with regulations and ethical principles
 Development of information and communication to the public and institutions
 → **Governance system**
 → **Involvement of patients associations**

Development of BIOBANQUES and work-packages (2011-2021)

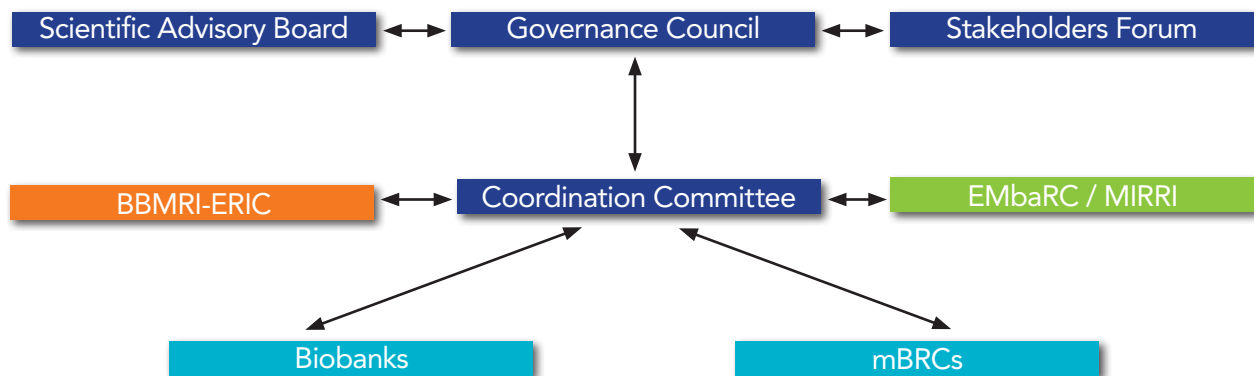
BIOBANQUES infrastructure will develop in two phases: the construction phase (2011-2012) will focus on the requirements (quality assurance, harmonization of operating procedure, regulatory and ethical aspects, public-private partnership) and the operational phase (2013-2021) will provide common services (including portal for access) and technical platforms to the scientific community .

Governance of BIOBANQUES

BIOBANQUES is a distributed infrastructure with biobanks, mBRCs and some networks of biobanks. Governance is realized by central bodies at national level, bodies that interact with EU infrastructures and local bodies governing biobanks and mBRCs. Internal rules would be set up by January 2012 and a "Consortium Agreement" will be signed.

National governance bodies	Local governance bodies of Biobanks and mBRCs
<ul style="list-style-type: none"> • Governance Council • Governance Board • Coordination Committee • Steering committee • Scientific Advisory Board • Stakeholder forum 	<ul style="list-style-type: none"> • Executive Management
	<ul style="list-style-type: none"> • Scientific Review Board
	Interface bodies
	<ul style="list-style-type: none"> • BBMRI French Node hosted by Inserm.
	<ul style="list-style-type: none"> • EMbaRC/MIRRI French representation.

Gouvernance-mai 2011



They support BIOBANQUES

BIOBANQUES infrastructure project received the support of a number of private and public actors:

- **Pharmaceutical and diagnostic industries:** ARIIS, SANOFI-AVENTIS, Institut Mérieux , Pierre Fabre, Syndicat de l'industrie vétérinaire et réactif;
 - **telecom industry:** ORANGE;
 - **Research Institutes:** Institut Pasteur (Paris), Institut Pasteur (Lille);
- and a number of Universities, hospitals and SME; The coordinator of the European infrastructure projects: BBMRI and EMBARC/MERRI.

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