



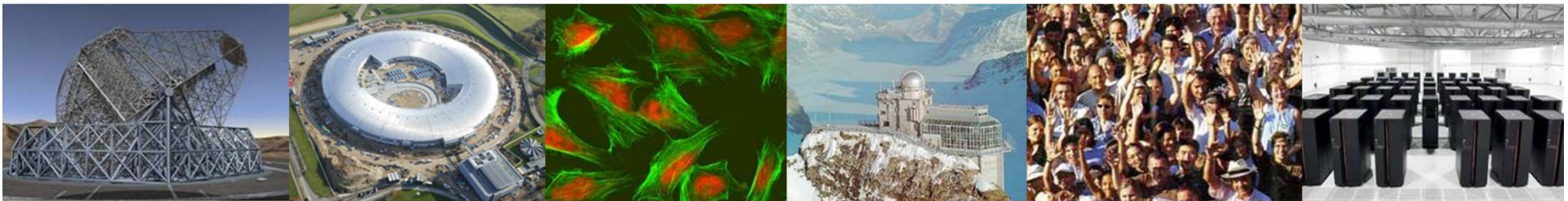
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Research Infrastructures for the Life Sciences

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F	A	R	I	C	R	D	L	S	H	I	G	D	A	V	V	I	L	D	V	E	Q	L	G	I	P	E	Q	E	Y	S	C	V	V	K	M	P	S	G	E	F	A	R	I	C	R	D	L	S	H	I	G	D	A	V	V	I	HsPCNA
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ESFRI - Biological and Medical Sciences

Roadmap 2006

- **BBMRI** - Biobanks
- **EATRIS** - Translational research facilities
- **ECRIN** - Clinical trial platform
- **ELIXIR** – Data repositories
- **Infrafrontier** - Mouse archives and clinics
- **INSTRUCT** - Structural biology facilities

+ Update 2008

- **EMBRC** - Marine biology resources
- **ERINHA** - High-security labs
- **EuroBioImaging** – Imaging facilities
- **EU-Openscreen** - Chemical libraries

+ Update 2010

- **ANAE** - Analysis and experimentation on ecosystems
- **ISBE** – Infrastructure for systems biology
- **MIRRI** – Microbial resources





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National Roadmaps Life Sciences

		National Roadmaps												
		CZ	EE	EL	ES	FI	FR	IE	IT	NL	NO	RO	SE	UK
ESFRI Roadmap 2006	Biobanks and biomolecular resources, BBMRI	█	█	█	█	█	█	█	█	█	█	█	█	█
	Translational research facilities, EATRIS	█	█	█	█	█	█	█	█	█	█	█	█	█
	Clinical research facilities, ECRIN	█	█	█	█	█	█	█	█	█	█	█	█	█
	Life Science data resources, ELIXIR	█	█	█	█	█	█	█	█	█	█	█	█	█
	Mouse repositories and phenotyping centers, Infrafrontier	█	█	█	█	█	█	█	█	█	█	█	█	█
ESFRI Roadmap 2008	Structural biology facilities, INSTRUCT	█	█	█	█	█	█	█	█	█	█	█	█	█
	Marine biology resources, EMBRC	█	█	█	█	█	█	█	█	█	█	█	█	█
	BSL4 laboratories, ERINHA	█	█	█	█	█	█	█	█	█	█	█	█	█
	Chemical libraries, screening platforms, drug development facilities, EU-OpenScreen	█	█	█	█	█	█	█	█	█	█	█	█	█
ESFRI Roadmap 2010	Imaging facilities, EuroBioImaging	█	█	█	█	█	█	█	█	█	█	█	█	█
	Sites and experimental platforms for long-term terrestrial ecosystem research, ANAEE	█	█	█	█	█	█	█	█	█	█	█	█	█
	Systems biology resources, ISBE	█	█	█	█	█	█	█	█	█	█	█	█	█
	Microbial resources, MIRRI	█	█	█	█	█	█	█	█	█	█	█	█	█



FP7 contribution to Life Sciences RIs

Genomics and proteomics research facilities

INSTRUCT

Imaging facilities

Euro-BioImaging

Biological Resource Centres

BBMRI, EMBRC, EU-Openscreen, INFRAFRONTIER

Data resources

ELIXIR, BioMedBridges

Medical research facilities

EATRIS, ECRIN, ERINHA

Food and agriculture
research facilities

***Health and Ageing, Food safety, Environmentally friendly production,
Climate change***

FP7 contribution to Life Sciences RIs

Genomics and proteomics research facilities

INSTRUCT, Bio-NMR, BioStruct-X, East-NMR, Pcube, ESGI, Prime-XS

Imaging facilities

Euro-BioImaging

Biological Resource Centres

BBMRI, EMBRC, EU-Openscreen, INFRAFRONTIER

Assemble, EMMAservices, EMBaRC, EUPRIMnet-II, EVA, Infravec

Data resources

ELIXIR, BioMedBridges, SLING

Medical research facilities

EATRIS, ECRIN, ERINHA

ECRIN-IA, Transvac, ULICE

Food and agriculture

research facilities

NADIR , AQUAEXCEL, EPPN

***Health and Ageing, Food safety, Environmentally friendly production,
Climate change***

FP7 contribution to Life Sciences RIs

(total: ~220 M€ of EU contribution)

Genomics and proteomics research facilities

INSTRUCT, Bio-NMR, BioStruct-X, East-NMR, Pcube, ESGI, Prime-XS, **eNMR**, **WeNMR**

Imaging facilities

Euro-BioImaging, **neuGRID**, **N4U**

Biological Resource Centres

BBMRI, **EMBRC**, **EU-Openscreen**, **INFRAFRONTIER**
Assemble, EMMAservices, EMBaRC, EUPRIMnet-II, EVA, Infravec

Data resources

ELIXIR, **BioMedBridges**, **SLING**, **IMPACT**

Medical research facilities

EATRIS, **ECRIN**, **ERINHA**
ECRIN-IA, Transvac, ULICE

Food and agriculture research facilities

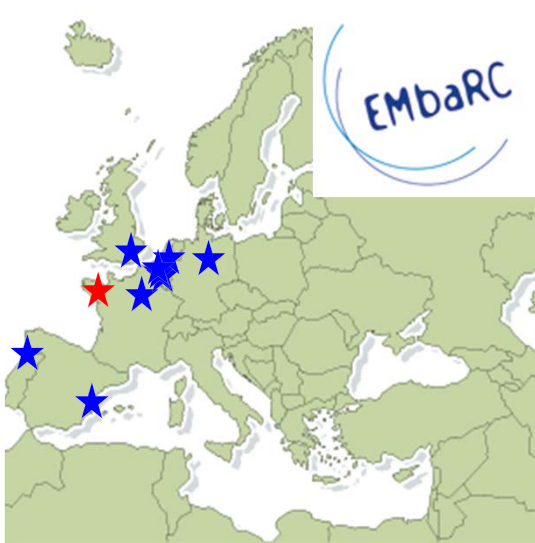
NADIR , **AQUAEXCEL**, **EPPN**, **transPLANT**

*Health and Ageing, Food safety, Environmentally friendly production,
Climate change*

EMBaRC: A Consortium of key Microbial Resource Centres in Europe



EU contribution: ~4.2 M€
2009-2012
www.embarc.eu



Activities:

Networking (~0.9 M€)

- Develop common standards and protocols
- User Access, training and outreach
- Sustainable activity of Microbial Resource Centres

Access (~0.5 M€) to 13 collections and services

Joint Research (~2.4 M€)

- Improve strain and DNA storage methods
- Develop new approaches in species identification

Some impact already achieved:

- Detailed inventory of holdings (Trends in Microbiology, 2010, 18(7) 283-287)
- Compilation of SOPs for handling and storage of microorganisms and associated data
- Inclusion of the MIRRI project in the ESFRI roadmap
- Development of protocols for harmonized sequence and identification by Mass Spectrometry



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A few lessons learnt

- **Consortium**

- Inclusive consortia are successful
- Complementarities between Integrating Activities and ESFRI projects are important

- **Activities**

- Openness of access is essential
- Integration of access modalities is important
- Integrating Activities are an interesting tool for developing Standards, SOPs, common data resources, etc.





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Next call

Life Sciences – Integrating Activities

- **4. Mouse archives and centres for phenotyping mouse models**
 - ➔ Access to mouse lines and data
 - ➔ Targets ESFRI « Infrafrontier », with new European participants
- **5. Facilities for translational research in medicine**
 - ➔ Common technical procedures
 - ➔ Building on ESFRI « EATRIS »
- **6. Biological Resources Centres for micro-organisms**
 - ➔ Virus archives, bacterial and fungi collections
 - ➔ Building on ESFRI « MIRRI »





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Next call

Life Sciences – Integrating Activities

- **7. Experimental facilities for animal disease infectiology**
 - ➔ BSL3 for animal and zoonotic infectious diseases
 - ➔ Plus key collections of samples
 - ➔ « NADIR » Integrating Activity
- **8. Stem cell banks**
 - ➔ Create a European stem cell resource
 - ➔ SOPs and quality control standards
- **9. Large-scale prospective cohort studies**
 - ➔ Prospective cohorts comprising or aiming at hundreds of thousands of subjects
 - ➔ Building on ESFRI « BBMRI »
- **10. Plant Genetic Resources Centres**
 - ➔ Native seed banks, gene/DNA banks





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Next call

Life Sciences – Preparatory Phase

- **MIRRI**

- Microbial Resource Research Infrastructure
- Coordinated by Dagmar Fritze, DSMZ, Germany
- www.mirri.org

- **ISBE**

- Infrastructure for Systems Biology - Europe
- Coordinated by Richard Kitney, Imperial College, United Kingdom

- **ANAEE**

- Infrastructure for Analysis and Experimentation on Ecosystems
- Coordinated by Abad Chabbi, INRA, France
- www.anaee.com

