



INFRAFRONTIER
mouse disease models



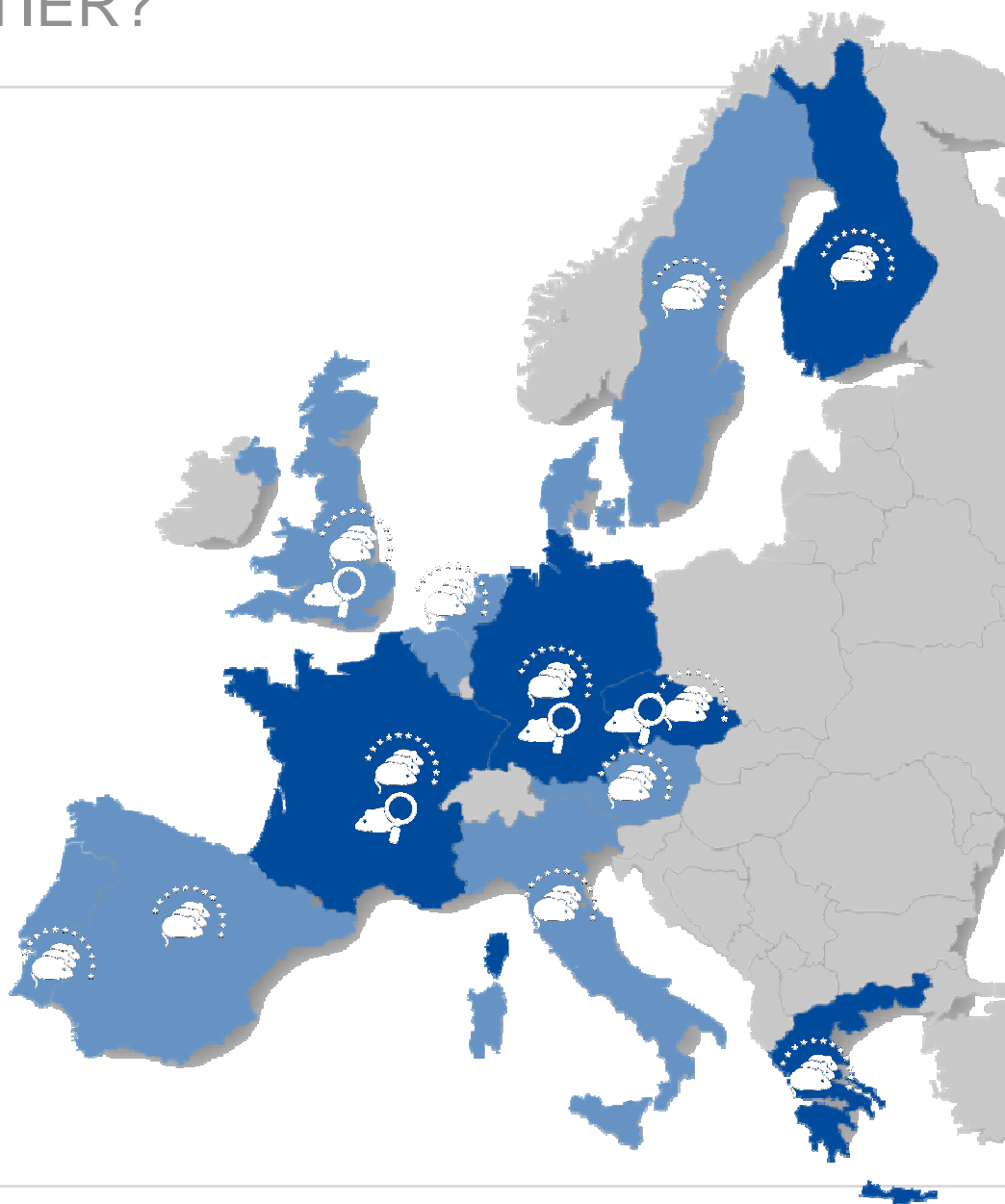
CORBEL/AARC workshop for BMS AAI, Paris 2016

Philipp Gormanns, INFRAFRONTIER GmbH



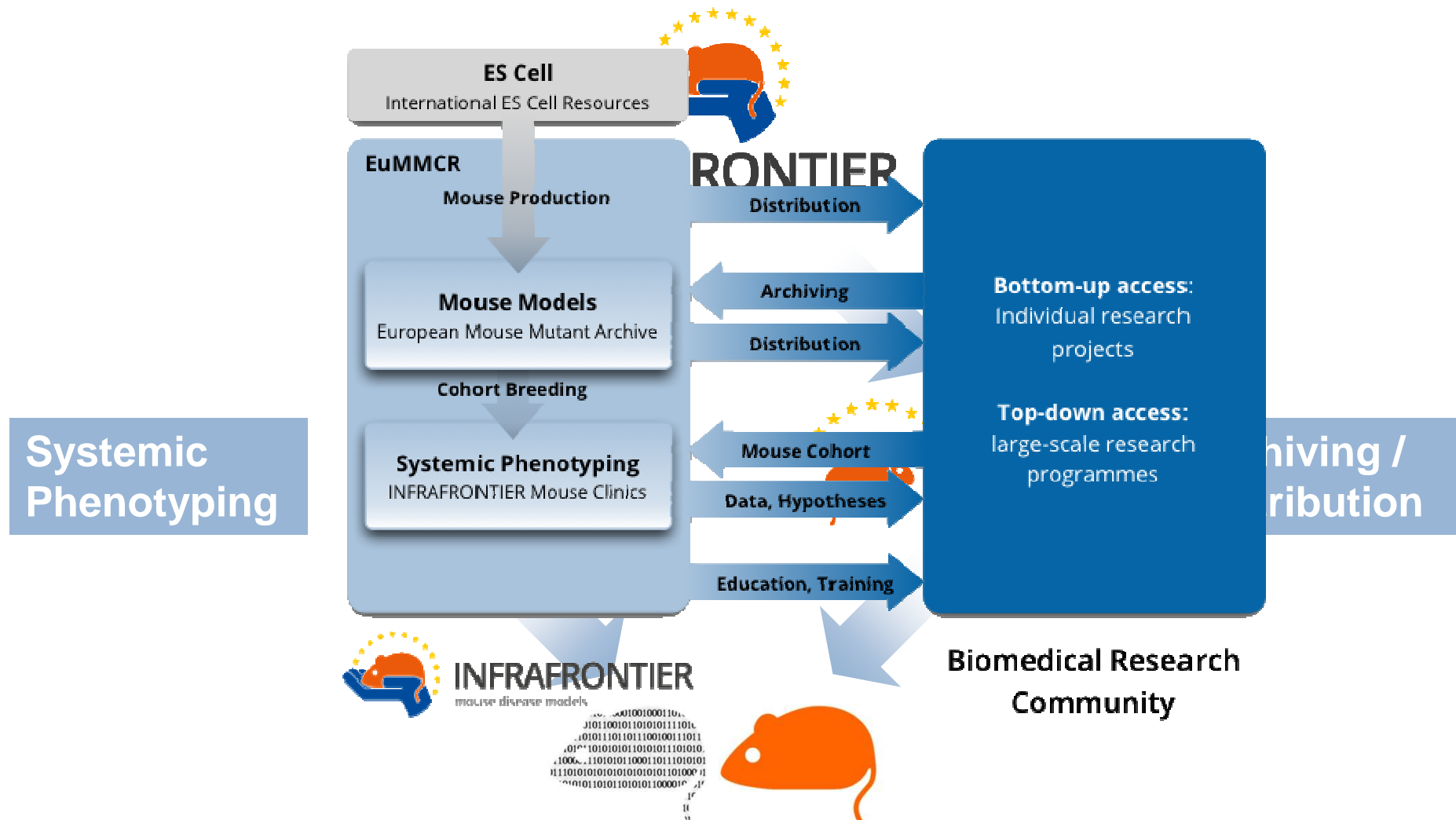
Who is INFRAFRONTIER?

	EMMA nodes 	Mouse clinics 
FI	Yes	
SE	Yes	Plan
UK	Yes	Yes
NL	Yes	
DE	Yes	Yes
FR	Yes	Yes
CZ	Yes	Yes
AT	Yes	
ES	Yes	
PT	Yes	
IT	Yes	Constr.
GR	Yes	



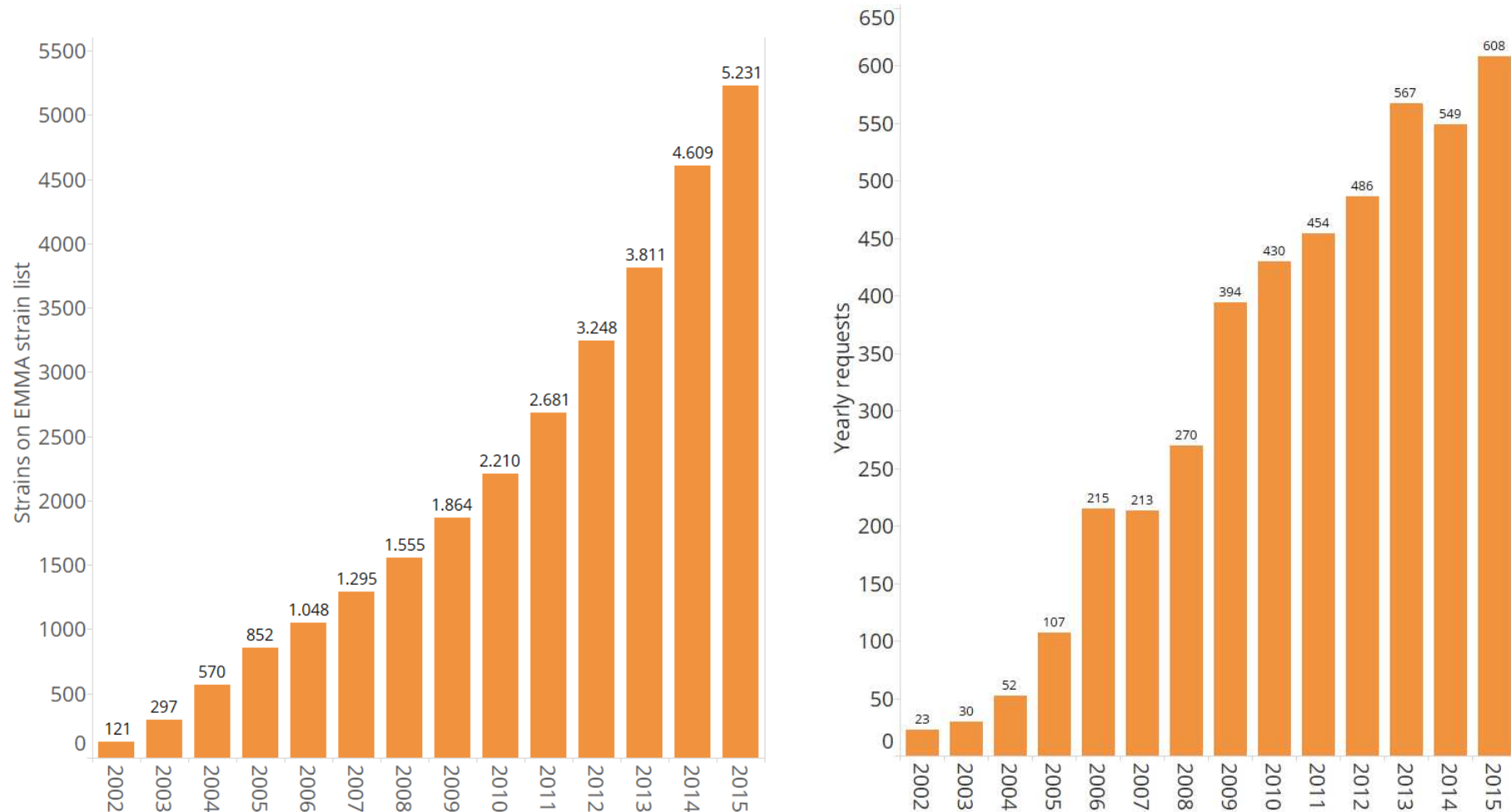


INFRAFRONTIER objectives



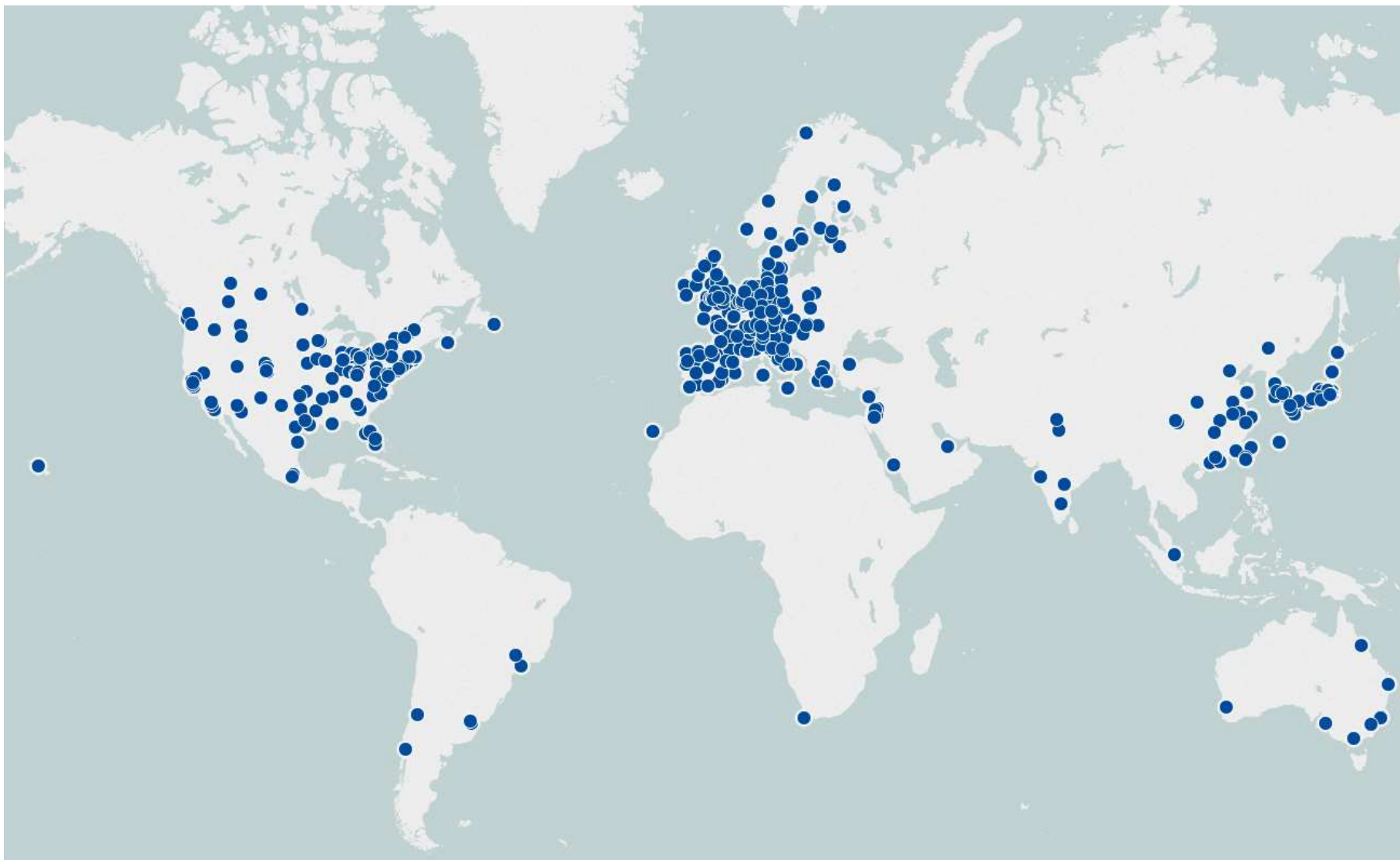


EMMA archiving and distribution





Global user community





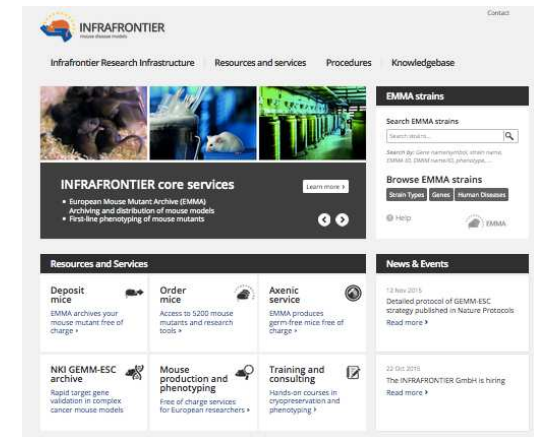
IT: Webpage, software tools and database

Relevance of IT for INFRAFRONTIER

- User access to samples and data
- Essential for operation (logistics support)

INFRAFRONTIER partners involved

- CNR Monterotondo: Data curation
- EBI => HMGU/INFRAFRONTIER GmbH: IT infrastructure and sustainability
 - ✓ Transfer of all IT components from EBI, Hinxton to INFRAFRONTIER GmbH, Munich
 - ✓ Migration completed and system launch in Munich took place on 26th of April 2016






Access to INFRAFRONTIER resources and services

1. Content management system
2. Internal interfaces
3. External submission form
4. Continuously data integration
5. Public search tools



Content management (Users: IT group)

**INFRAFRONTIER**
mouse disease models

Infrafrontier Research Infrastructure | Resources and services | Procedures | Knowledgebase | [Contact](#)

Resources and Services

Deposit mice
EMMA archives your mouse mutant free of charge >

Order mice
Access to 5200 mouse mutants and research tools >

Axenic service
EMMA produces germ-free mice free of charge >

NKI GEMM-ESC archive
Rapid target gene validation in complex cancer mouse models

Mouse production and phenotyping
Free of charge services for European researchers >

Training and consulting
Hands-on courses in cryopreservation and phenotyping >


EMMA strains

Search EMMA strains

Search by: Gene name/symbol, strain name, EMMA ID, OMIM name/ID, phenotype, ...

Browse EMMA strains

Strain Types | Genes | Human Diseases

Help 

News & Events

14 Apr 2016
Obesity, Diabetes and Epigenetic Inheritance Study: 'You are what your parents ate'
[Read more >](#)

17 Mar 2016
INFRAFRONTIER present at Transgenic Technology Meeting 2016
[Read more >](#)

genOway EUCOMM KO models

- EUCOMM/EUCOMMTOOLS provide access to their growing conditional KO repository with 9,500 models
- genOway provides the necessary IPR to use these models
- The agreement enables short timespans to generate conditional EUCOMM KO models

[Learn more >](#)

Procedures

Information on service fees, legal issues, health monitoring and animal welfare.
[Read more >](#)

Knowledgebase

Validated laboratory protocols and a comprehensive list of relevant publications.
[Read more >](#)


Projects


INFRAFRONTIER runs the EC-funded project INFRAFRONTIER-I3 and is a key partner in the International Mouse Phenotyping Consortium (IMPC).
[Read more >](#)

About INFRAFRONTIER

INFRAFRONTIER is the European Research Infrastructure for phenotyping and archiving of model mammalian genomes. The INFRAFRONTIER Research Infrastructure provides access to first-class tools and data for biomedical research, and thereby contributes to improving the understanding of gene function in human health and disease using the mouse model.


European Partnership

 INFRAFRONTIER is on the ESFRI Roadmap.
[Read more >](#)

**INFRAFRONTIER**
mouse disease models

Infrafrontier Research Infrastructure | Resources and services | Procedures | Knowledgebase | **Internal**

[Home](#) / [Internal](#)



View | Edit | Access control | Devel

Internal

INFRAFRONTIER GmbH
[Read more >](#)

EMMA
[Read more >](#)

I3 project
[Read more >](#)

IPAD-MD project

INFRAFRONTIER collected in this section all the relevant IPAD-MD related documents.

[Read more >](#)

Project archive and general documents

In this section you can find a document archive from the INFRAFRONTIER Preparatory Phase as well as EMMA Service and documents of general interest concerning European research infrastructures.

[Read more >](#)

Internal

INFRAFRONTIER GmbH +

EMMA +

I3 project +

IPAD-MD +

Project archive and policy documents +

www.infrafrontier.eu



Submission form (User access: External)

EMMA Mutant Mouse Strain Submission Wizard

Dear Submitting Investigator,

Please use this wizard to provide detailed information about the mutant mouse strain that you want to submit to EMMA. This information is used to evaluate your submission request. Please note that if the request is approved the information you provide will be published on the EMMA website.

The online form is a step-through form and you will be able to download a printable version before form submission. Please fill the form as accurately as you can using "unknown", "not applicable" or "none" if you do not possess the information requested. A sample submission is provided [here](#) for your convenience to examine all the information that is required.

Multiple strains must be submitted separately. One strain per submission.

If the information provided through the submission form is clear enough, EMMA will forward it to the external EMMA Evaluation Committee and inform depositors about the outcome of the evaluation by e-mail within 60 days.

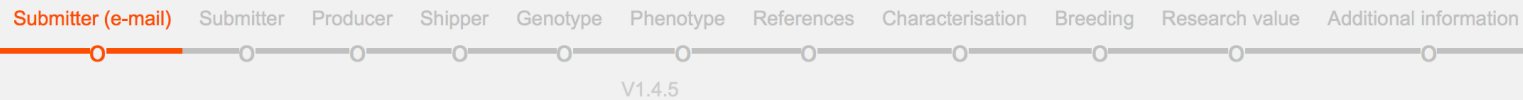
We strongly recommend that you carefully read the [EMMA Procedures](#) on this website. These documents describe the responsibilities EMMA has in maintaining and distributing the submitted strains as well as the responsibilities assumed by the submitter.

Thank you for your interest in the European Mouse Mutant Archive.

☒ I have read the information above and agree to the [EMMA Terms & Conditions](#)

Next

Cancel



Submitter (Step 1 of 11)

Start

Please enter your email address for identification. For your convenience, if you have started or completed a mutant mouse strain submission previously in the last 12 months, you will be prompted to either resume your incomplete submission from where you left off, or, if the submission was completed, you will be asked whether you want to reuse your contact information.

Email *

Previous

Next

Cancel

=> Account system planned.



Internal interfaces (User acces: All EMMA nodes)

[ENTRY POINT](#)[ARCHIVE](#)[STRAINS](#)[REQUESTS](#)[PROJECT OFFICE](#)[CONTACTS](#)[INTERNAL SITE](#)

Curation Interfaces

Strains Search

EMMA ID text search:

International strain name:

Common strain name:

Repository:

Strain status:

Research tools:

Internal Code:

Strain name text search:

Common name text search:

Strain access:

Available to order whilst archiving:

Producer type:

+ Additional Search Filters

Affected gene:

Phenotype description:

Mutation type:

Scientists Country:

Contact surname:

Affected gene text search:

Funding source:
(I3-p1) 1st reporting period of Infrafrontier-I3 WP4
(I3-p2) 2nd reporting period of Infrafrontier-I3 WP4

Mutation subtype:

Scientists surname:

MGI Strain ID:

+ Date Search Filters

Submitted: After:

Evaluated: After:

Mice arrived: After:

Archiving started: After:

Archived: After:

Before:

Before:

Before:

Before:

Before:

Requests Search

EMMA ID text search:

International strain name:

Common strain name:

Repository:

Registration of Interest (ROI):

Contacts surname:

Research tools:

Funding source:
(UNKN) Unknown source
(sTA01) EMMAService 1st period - TA call 1

TA panel decision:

EUCOMM/EMMA Shipment:

Submitted: After:

Date of shipment/cancellation: After:

Request ID:

Strain name text search:

Common strain name:

Request status:

Country:

Scientists surname:

Projects:

Requested material:

Application type:

Before:

Before:



Consuming: IMPC production tracking(User access: All Emma nodes)



[login](#) | [Go to TargRep](#)

[Home](#) [Gene Summary](#) [Mouse Production](#) [Phenotyping](#) [Contacts for Production Centres](#) [Download of all Production](#)

Welcome

Welcome to International Micro-injection Tracking System. IMITS is the designated database for the planning of all IMPC mouse production, as well as the central database to allow IMPC production centres to record the progress of mouse production, cre-excision and to summarise the progress of phenotypes data collection and transfer to the [IMPC DCC](#).

IMITS also stores all the mutation molecular structures made for the IMPC, as well as a catalog of all IMPC products.

All IMPC data (especially phenotyping data) can be found on [the IMPC website](#)

All IMPC-related queries should be addressed to mouse-helpdesk@ebi.ac.uk

Getting data out of IMITS

For web users:
You can directly browse all IMPC mouse production plans and progress, as well as IMPC ES Cell alleles on this website.

For developers:
Access to summary gene - level information and summary allele information can be obtained from our SOLR indices. Instructions for querying that index can be found [here](#).
Bulk access to all IMITS data can be obtained from the IMITS biomarts [here](#).

Bulk access to all IMPC allele data can be obtained from the targrep mart [here](#).

New IMPC Mouse Production Attempts

Gene	Consortium	Production centre	Production date
Kcnk1	Phenomim	ICS	25 May 2016
Pt1	MGP	WTSI	25 May 2016
Sirpblc	MGP	WTSI	25 May 2016
Chadl	MGP	WTSI	24 May 2016
Cadps2	RIKEN BRC	RIKEN BRC	24 May 2016
Pdg25	MGP	WTSI	24 May 2016
Spink1	MRC	Harwell	19 May 2016
Bmp1a	MRC	Harwell	19 May 2016
Serpinc9	MGP	WTSI	19 May 2016
Gm2694	MGP	WTSI	19 May 2016

New IMPC Genotype Confirmed Mice

Gene	Consortium	Production centre	Production date	Genotype confirmed date
Rictor	NHL Labs	NHL Labs	15 May 2015	26 May 2016
Mir29a	MRC	MRC	30 Apr 2014	26 May 2016
Per3	CAM-SU GRC	CAM-SU GRC	26 Jan 2016	26 May 2016
1700011E24Rik	RIKEN BRC	RIKEN BRC	05 Jan 2016	25 May 2016
Serf2	BaSH	Harwell	23 Sep 2015	24 May 2016
Klhl2	JAX	JAX	26 Jan 2016	24 May 2016
Lmcd1	JAX	JAX	02 Feb 2016	24 May 2016
Arid1b	MGP	WTSI	13 Mar 2013	23 May 2016
Hmg1	Phenomim	ICS	13 Jul 2015	23 May 2016
Nlrp3	CAM-SU GRC	CAM-SU GRC	14 Apr 2016	22 May 2016



[SEARCH](#) [ABOUT IMPC](#) [NEWS & EVENTS](#) [CONTACT](#) [MY IMPC](#)

[Login](#) [Register](#)

We are building the first truly comprehensive, functional catalogue of a mammalian genome.

Genes

[Find genes](#)

3154 Genes analysed

[Stay Connected](#)

Phenotypes

[Find phenotypes](#)

[Embryonic phenotyping](#)

[Gene Interactions](#)

Human Disease

[Find Human Disease](#)

[Mouse Models](#)

[Rare diseases links](#)

Search IMPC database

Enter your favorite **gene**, **phenotype**, **anatomy** or **protocol** to find IMPC data important to your research.

Or browse

[new gene-phenotype associations](#)

Phenoview

An interactive web application with integrated media viewer for comparative visualisation of genotypes and phenotypes.

[Visit Phenoview](#)

Rare Disease Models

Find mouse models of rare disease by either shared gene or shared phenotype features.

[Visit Disease Models](#)

News and Events

October 29, 2015
[IMPC in G7 report as model example of international research](#)

October 28, 2015
[Training Course: Primary phenotyping of mouse embryos \(France\)](#)

August 14, 2015
[Phenoview: a new tool to compare IMPC data](#)










International Mouse Phenotype Consortium

The goal of the International Mouse Phenotyping Consortium (IMPC) is to discover functional insight for every gene by generating and systematically phenotyping 20,000 knockout mouse strains.



Order Mouse and ES Cells



Product	Allele	Strain of Origin	MGI Allele Name	Description	Product Details	Order / Contact
Mouse	Reporter-tagged deletion allele (post-Cre)	C57BL/6N	Krt83 ^{tm1b(KOMP)Wtsi}	 image  genbank file		 EMMA
Mouse	KO first allele (reporter-tagged insertion with conditional potential)	C57BL/6NTac	Krt83 ^{tm1a(KOMP)Wtsi}	 image  genbank file		 KOMP  EMMA



Feeding IMSR



International Mouse Strain Resource (IMSR)

[Search](#)[Repositories](#)[Participate](#)[Glossary](#)[Contact Us](#)[About Us](#)[Deposit Strains](#)

Welcome to the IMSR

The IMSR is a searchable online database of mouse strains, stocks, and mutant ES cell lines available worldwide, including inbred, mutant, and genetically engineered strains. The goal of the IMSR is community in locating and obtaining mouse resources for research. Note that the data content found in the IMSR is as supplied by strain repository holders.

For each strain or cell line listed in the IMSR, users can obtain information about:

- Where that resource is available (Repository Site)
- What state(s) the resource is available as (e.g. live, cryopreserved embryo or germplasm, ES cells)
- Links to descriptive information about a strain or ES cell line
- Links to mutant alleles carried by a strain or ES cell line
- Links for ordering a strain or ES cell line from a Repository
- Links for contacting the Repository to send a query

Search for:

Strain State:

Any
ES Cell
embryo
live
ovaries

Strain Type:

Any
closed colony
coisogenic strain
congenic strain
consomic or chromosome substitution strain

Repository:

Any
APB (Australian Phenome Bank) Australia
ARC (Animal Resources Centre) Australia
CARD (Center for Animal Resources and Development) Japan
CMMR (Canadian Mouse Mutant Repository) Canada
EMMA (European Mouse Mutant Archive) Germany
EMS (Dr. Elizabeth M. Simpson, Ph.D.) Canada
HAR (MRC Harwell) UK
JAX (JAX Mice and Services) USA

View [Repository Reports](#).



All regions and repositories are selected by default; to limit your search to a specific region, clic



EMMA distribution service – public strain list

EMMA strains

Search EMMA strains

Search by: Gene name/symbol, strain name, EMMA ID, OMIM name/ID, phenotype, ...

Browse EMMA strains

Strain Types Genes Human Diseases

[? Help](#)

=> Account system planned.

EMMA strain search

EMMA mutant request form

Dear Scientist
Please use the following form to request the mouse strains archived by EMMA.

Please complete all fields. Required information is marked by a * Click **once** on the **Send** button at the end of this form to submit your information to EMMA. You will receive an automatic email notification to acknowledge receipt of your request.

Thank you for your interest in the European Mouse Mutant Archive.

Recipient principal investigator

Scientist's Title

Firstname *

Surname *

E_mail *

Phone *

Fax

Shipping contact (animal facility manager etc.)

Shipping Contact's Title

Firstname *

Surname *

E_mail *

Phone *

Fax

Institution *

Department

Address line 1 *

Info sheet MGI allele Genotyping Health report Availabilities Pricing and Delivery MTA Order



Outlook (Advanced access to systemic phenotyping)

EMMA strain search

[? Help](#)**Status:**

- Line available to order
- Only small colony available
- Under development - register interest

**EMMA**
mouse repository[Browse by Strains](#)[Browse by Genes](#)[Browse by Human Diseases](#)**krt83**

Found 2 entries

Show entriesFilter:

EMMA ID	gene symbol	common strain name(s)	(International) Strain Designation	Status	
EM:08050	Krt83	EPD0715_1_C04	C57BL/6N-A ^{tm1Brd} Krt83 ^{tm1a(KOMP)Wtsi} /WtsiBiat	●	-

General information

Information from provider

Provider	Wellcome Trust Sanger Institute
Strain type	Targeted Mutant Strains
Genetic description	This mouse line originates from KOMP ES clone EPD0715_1_C04. For further details on the construction of this clone see the page at the IKMC portal .
Phenotype description	Potential phenotyping data in the IMPC portal
QC/Screening data	View data

Information from EMMA

[Info sheet](#) [MGI allele](#) [Genotyping](#) [Health report](#) [Availabilities](#) [Pricing and Delivery](#) [MTA](#) [Order](#)

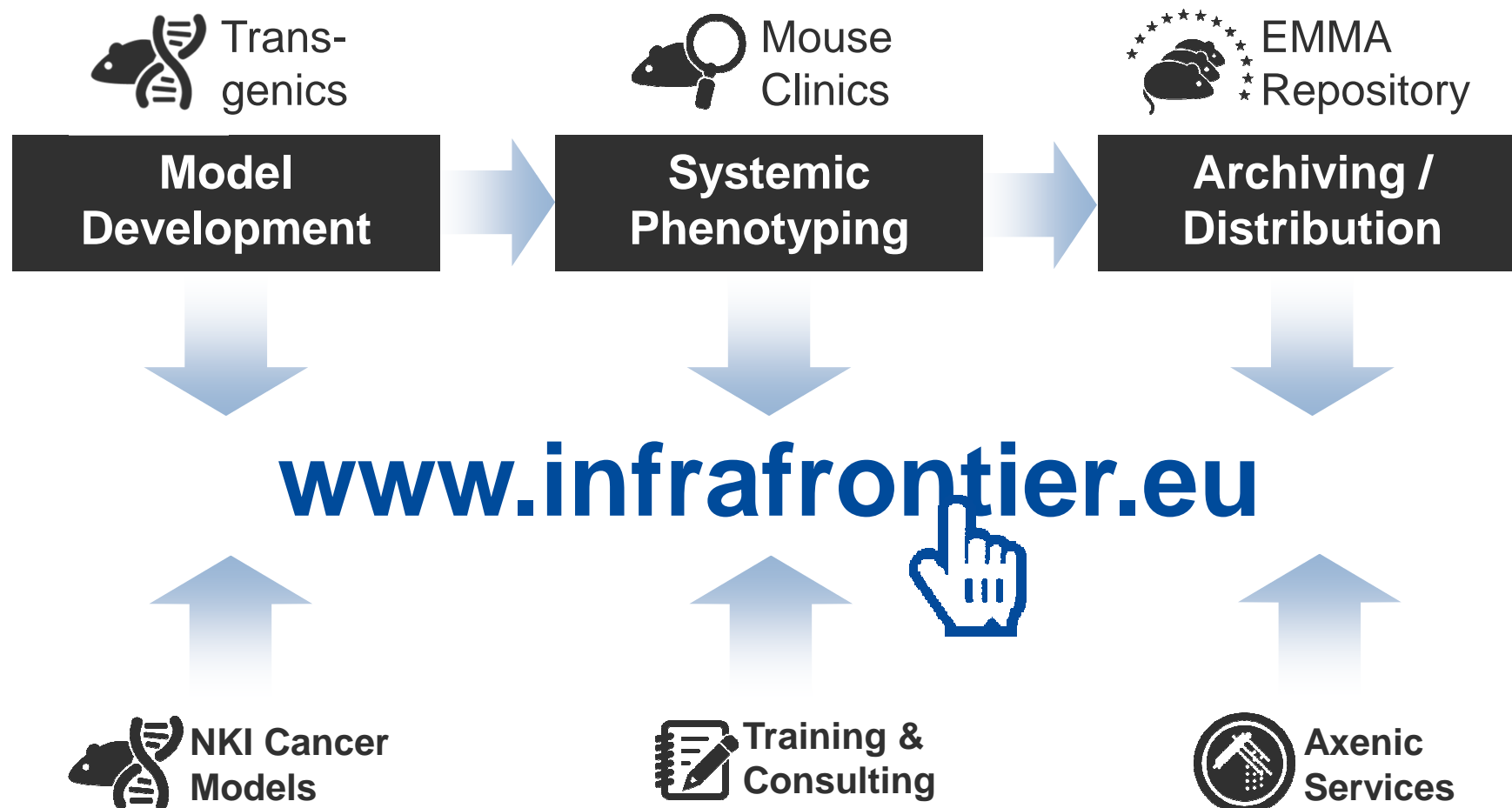
EM:08141	Krt83	EPD0715_1_C04	C57BL/6N-Krt83 ^{tm1b(KOMP)Wtsi} /Wtsi	●	+
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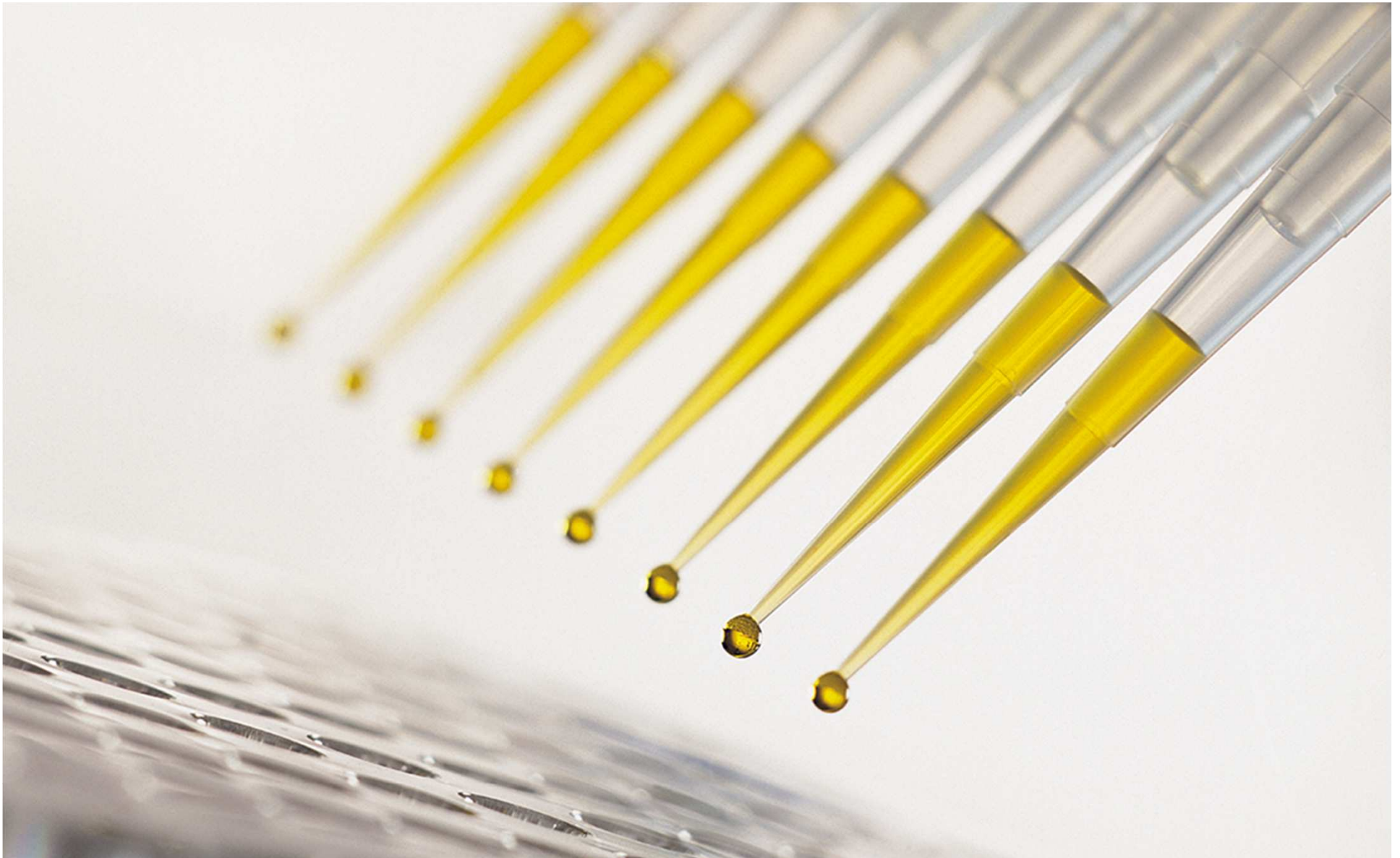
Showing 1 to 2 of 2 entries

[First](#) [Previous](#) [1](#) [Next](#) [Last](#)



Summary: INFRAFRONTIER resources and services





Thank you!