

## Services offered by INFRAFRONTIER

Service/Tool Name	Description	Contact	Mode of access
<b>Model development</b>	Generation of customised mammalian models using a variety of technologies, e.g. gene targeting using ES cell technologies, generation of transgenic mice using DNA microinjection, and gene editing employing the microinjection of Cas9 RNA-guided nuclease and guide RNAs.	<a href="http://www.infrafrontier.eu">www.infrafrontier.eu</a>	Open access, involves user fees
<b>Systemic phenotyping and specialised phenotyping</b>	Access to a comprehensive first-line systemic phenotypic analysis covering a wide range of physiological functions ranging from cardiovascular, neuro-behaviour and metabolism expertise to detailed pathology assessments, carried out in an internationally standardised way. The resulting phenotyping data is deeply annotated and cross-linked to corresponding data sets from other model organisms and from human patients. Specialised phenotyping services in specific disease areas, (e.g. modules for in-depth metabolic phenotyping, behavioural phenotyping or immuno-phenotyping) are also offered.	<a href="http://www.infrafrontier.eu">www.infrafrontier.eu</a>	Open access, involves user fees for specialised phenotyping
<b>Archiving and distribution</b>	<ul style="list-style-type: none"> <li>- The nodes of the European Mouse Mutant Archive (EMMA) comprise over 5200 mutant mouse lines carrying targeted, transgenic, induced and other types of mutations. In addition, EMMA has built up major collections from large-scale projects (e.g. the International Mouse Phenotyping Consortium, IMPC) and provides access to practical research tools such as Cre driver or FLP deleter lines.</li> <li>- EMMA also offers the free-of-charge cryopreservation of mouse mutants under the</li> </ul>	<a href="http://www.infrafrontier.eu">www.infrafrontier.eu</a>	Open access, involves user fees for distribution

	condition that the depositors agree to the distribution of the lines upon requests from the biomedical research community.		
<b>NKI cancer models</b>	The Netherlands Cancer Institute (NKI) has created a unique archive of embryonic stem cells derived from validated genetically engineered mouse models of cancer.	<a href="http://www.infrafrontier.eu">www.infrafrontier.eu</a>	Open access
<b>Axenic services</b>	Generation and maintenance of animals in a germ-free or axenic environment with the possibility to restore specific components of the microflora.	<a href="http://www.infrafrontier.eu">www.infrafrontier.eu</a>	Open access
<b>Training</b>	Regular hands-on training courses on - Cryopreservation methods at different partner sites but also during large conferences and meetings such as the International Society of Transgenic Technology Meetings (ISTT). - Primary phenotyping and - Specialised secondary phenotyping technologies	<a href="http://www.infrafrontier.eu">www.infrafrontier.eu</a>	Open access, user fees may be involved
<b>Consulting</b>	INFRAFRONTIER offers consulting on several levels, e.g. aspects of mouse genetics and breeding strategies, experimental design and statistical analysis, animal husbandry and animal welfare. Comprehensive documentation on INFRAFRONTIER procedures, protocols and best-practices, but also on animal welfare regulations and relevant policy documents are shared through the INFRAFRONTIER website and in publications covering methodology. In addition, INFRAFRONTIER provides expertise for the establishment of new phenotyping and archiving facilities (e.g. consultancy on required technical, engineering and architectural specifications, management of animal husbandry, workflows and data handling and storing, general RI management.	<a href="http://www.infrafrontier.eu">www.infrafrontier.eu</a>	Open access, user fees may be involved