# **OUR SOLUTIONS**



For a complete support of the research models



# **Passion of breeding** and commitment to research for more than 60 years

### Founded in 1960 by Roger JANVIER, the company became international and remains loyal to the values of its founder.

- Seeking excellence, going ever further for the quality of our rodents, products and services
- X Ensuring customer satisfaction through flexibility, responsiveness and proximity of our teams
- $\chi$  **Innovating** by anticipating the needs of our customers
- **Y** Engaging with researchers to improve tomorrow's health

Up to now, more than 3,000 public and private laboratories trust us in more than 20 countries.



The largest and most advanced rodent breeding site in Europe



#### Innovation & continuous improvement

· Millions of Euros reinvested each year in our production site

 Ongoing development of new advanced technologies



### Continuity of supply

We breed each strain in different production units in order to ensure their availability

## **International player** in biomedical research

With the support of our teams of experts and our unique site in Europe, at the forefront of innovation and entirely dedicated to rodent breeding, we assure you of strict breeding conditions around 4 fundamental elements:



*0*0

One sole



microbiota

Genetic stability

## **Key figures**



unique production site in Europe

of facilities on more than 8 hectares



45,000 km a week travelled by our integrated transport department



3,000.000 rodents a year



international employees



## Find your model

Benefit from a large range of models: mice, rats, hamsters and gerbils.

### Customise your model

Facilitate the creation of your research models with our products and services offer.

### Breed and secure your model

Save time, space and resources: house your models on our unique site in Europe and entrust their management to our experts.

### Prepare your model

Receive your model prepared according to your requirements. Benefit from a large range of services: experimental protocols, surgery services, biological products ...

### Deliver / Repatriate your model

Take advantage of our integrated transport policy in order to ensure animal welfare and limit stress during transport.

# **OUR SOLUTIONS**

## For a complete support of the research models

JANVIER LABS offers solutions adapted to meet specific needs at each stage of the research projects.

A scientific support is available for you at each stage of your research project





# FIND YOUR MODEL

## Mice, rats, hamsters and gerbils

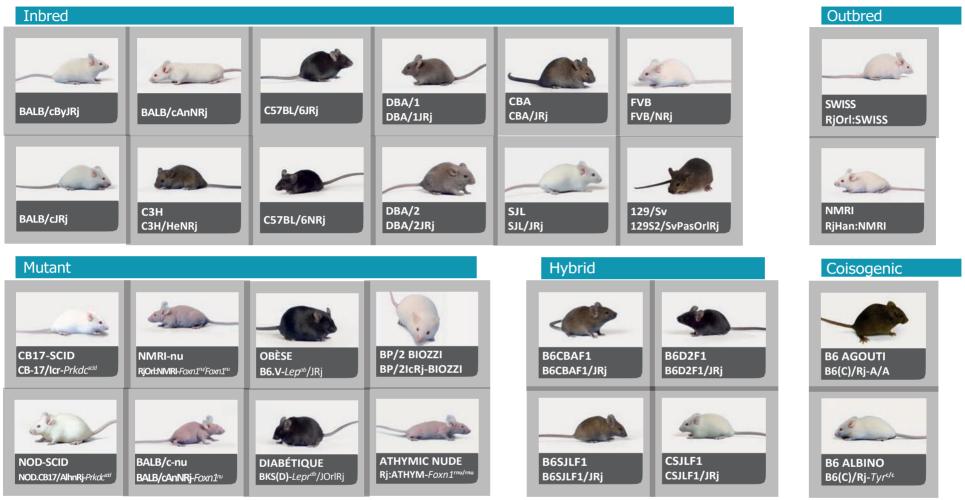
JANVIER LABS offers a large range of rodent models to support your research.

Each of our models benefits from the same standards: health, genetic stability, one sole microbiota, in breeding conditions assuring animal welfare.

Strict breeding conditions to ensure homogeneous research models that guarantee repeatable results for your research over time.



## **MICE**





- $\chi$  Immunology / Infectiology X Metabolism :
  - Diabetology
    - Obesity
    - Gerontology
    - Diet
- X Toxicology :
  - Regulatory
  - Experimental

- Oncology :
  - Implantation of tumour
  - Anti-cancer therapy
- $\chi$  Physiology :
  - Cardiology and cardiovascular
  - Gastroenterology
  - Pneumology
  - Neurology
- $\chi$  Other research areas ...

You will find all our strains and all the information on our website

FIND 

## Focus on C57BL/6JRj

## C57BL/6JRj 100 % REFERENCE COMPLIANT



#### Diversity array test carried out with success

Three internationally renowned tests have been successfully conducted. We compared the results with our colony founding breeding pair. Cluster mapping

A qualitative and quantitative study of the relative distance between strains. Homology control (640 000 SNPs)

Comparison of considered genomes by High density SNP mapping technique Variant analyses

Evaluation based on the bibliography and by modelling of possible variants



### **Concept JANVIER LABS Genetic Policy**

The JANVIER LABS Genetic Policy<sup>®</sup>, our specific programme guarantees strict homozygosity in the genome of our inbred strains.

Management is performed at 3 different levels: the nucleus of the colony, the expansion phase and in the production colony of animals sent to the user.

We renew the breeding nucleus every 10 generations by changing all the breeders.



#### Stability of your strain

The JANVIER LABS policy is the basic concept in the management of all our inbred strains and specifically in C57BL/6JRj.

Originated from a formally defined founding breeding pair.

To remain genetically stable in relation to its origins.

To ensure the genetic stability of C57BL/6JRj over time.

## AGED C57BL/6JRj



JANVIER LABS aged C57BL/6JRj mice are male mice selected at weaning and are only destined for ageing.

The mice are kept for ageing in their original production units and are bred until the age of 24 months in a controlled environment and health status

> Available in our permanent stock from the age of 3 weeks to 24 months.

Benefit from attractive prices whilst planning your needs.

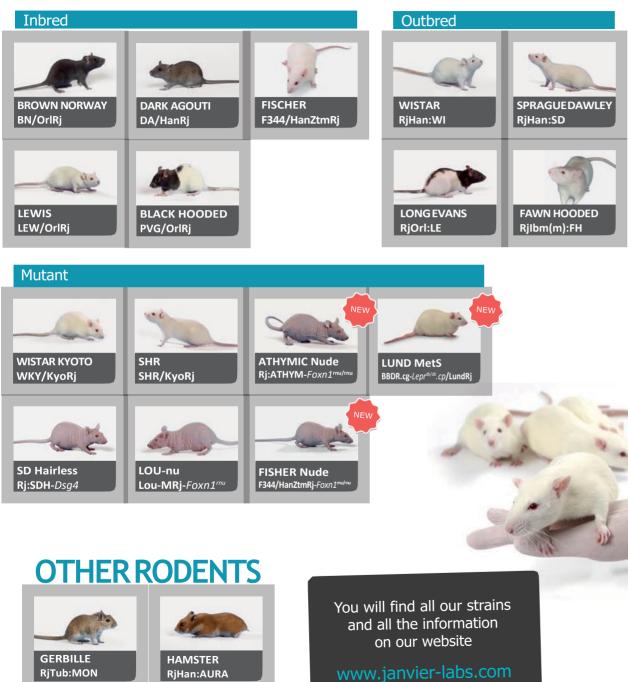
Note:

These animals have never been used as breeders.

All our research mouse models are available for ageing Contact us

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## RATS



## AGED WISTAR



JANVIER LABS aged WISTAR rats are male rats that are selected at weaning and are only destined for ageing.

The rats are kept for ageing in their original production units and are bred until the age of 24 months in a controlled environment and health status.

> Available in our permanent stock from the age of 3 weeks to 24 months.

Benefit from attractive prices whilst planning your needs.

Note:

These animals have never been used as breeders.

All our research rat models are available for ageing Contact us



# CUSTOMISE YOUR MODEL

## Choose a complete support of your model, from the creation by our partners to delivery

Janvier Labs has created a department « Customized Models Support » to support the creation of genetically modified research models (overexpression of genes, knock-out, knock-in, RNAI, genetrap, conditional or inducible systems,. ).

We offer a large range of products and services to platforms that perform pro-nuclear micro injections with methods such as: ZFN, TALEN, CRISPR, classical additional transgenesis ... or micro injections of genetically modified ES cells.

We also offer you a complete support of your model, from the creation by our partners, its securing by sperm and/or embryo cryopreservation, its customized breeding, until the delivery of cohorts which have been defined in advance (health status, age, sex, genotype) or the delivery of samples (organs, biological products ...).

# You create genetically modified models?

Benefit from all our products and services in order to save time, space and resources and to benefit from the expertise of JANVIER LABS and of its partners.

- X Embryo kits (Eazygotes, 2Cells, Quickblasto)
- $\chi$  Secure/breed mice and rats with SOPF and SPF status

X Deliver/repatriate

## You want to create your genetically modified mouse or rat model?

Benefit from our partners for the creation of models and a complete support by our departments from the creation until the delivery taking advantage of all our associated services.

All stages of your project are supported by a unique and dedicated project manager in order to assure the strict respect of your needs and your requirements. Our project managers are characterized by their responsiveness, their professionalism, their expertise and their ability to adapt to the customer's goals.



## Our kits

# EMBRYOKITS TO FACILITATE YOUR RESEARCH

**Time saving** 

Reproducible

Safe system

### The kit contains frozen embryo straws at Zygote, 2 cells or morulae stage

After thawing and a short time of culture, you quickly dispose of embryos to create your models or for other applications



EAZYGOTES®

Frozen embryo straws at Zygote stage

2-CELL-KIT

Frozen embryo straws at 2 Cells stage



Frozen embryo straws at morulae stage

CUSTOMISE



# BREED AND SECURE YOUR MODEL

# A customised breeding strategy for all your projects

### Breed your research models

The production of specific and complex research models, such as genetically altered mouse or rat models requires a high skill level in different scientific areas as well as a technological platform.

Rodents in customised breeding are bred according to our quality criteria and whilst respecting our ethics policy, with a guaranteed SOPF or SPF health status.

All stages of your animals' breeding are supported by a unique and dedicated project manager to assure the strict respect of your needs and your requirements.

### Preserve & secure your strains

Benefit from a recognized expertise and from the latest cutting-edge technologies for the cryopreservation and assisted reproduction to ensure the future of your strains.

From the cryopreservation to the assisted reproduction, our reproductive sciences expert teams are trained in the latest techniques in order to offer you very high quality services.



# Our solutions of assisted reproduction

Assisted reproduction means the use of clinical and biological practices allowing "In Vitro Fertilization (IVF)", embryo transfer and artificial insemination, as well as any other technique with an equivalent effect allowing the procreation outside the natural process.

- X Embryo revitalisation
- X Sperm revitalisation
- $\chi$  Rapid colony expansion
- $\times$  Strain decontamination

# Our solutions of customised breeding

If you encounter problems of space, time management or simply of resources, entrusting the management of your models to our breeding experts is the solution!

X Colony management

X Genotyping service

 $\chi$  Speed Congenics (Backcross)

# Our solutions of rederivation & cryopreservation

Have you ever thought about cryopreserving your strain? Cryopreservation is the ideal solution to constitute a security stock of a strain in case of a problem in your breeding or to preserve a strain which is not used anymore or seldom used.

- X Mouse sperm cryopreservation: JAX® Sperm Cryo Kit
- $\chi$  Mouse and rat embryo cryopreservation
- $\chi$  Quality control of frozen sperm and embryos
- $\chi$  Our kits of frozen embryos (p.9)



Exclusively marketed in Europe<sup>(1)</sup> by JANVIER LABS

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# PREPARE YOUR MODEL

## Benefit from a large range of services to accelerate your research

Benefit from a large range of services to accelerate your research: experimental protocols, surgery services, biological products ...

All our services are performed in our laboratories to meet requirements of experimentation and ensure SPF and SOPF status of our models.

All procedures followed by our laboratory, developed by the JANVIER LABS scientific department, are validated by our ethics committee. The peri-operative care is adapted to each type of surgery and the operated animals are subject to optimal transport conditions thanks to our integrated transport department.



## **Pre-conditioned models**

### **SURGERY**

#### **Excision surgery**

Ovariectomy Ovario-hvsterectomv Splenectomy Vasectomy - Castration 70% hepatectomy Bilateral diaphragmatic vagotomy Nephrectomy (unilateral or 5/6) Adrenalectomy Thyroido-parathyroidectomy

#### Ligation surgery

**Tubal ligation - Ureter ligation** Other types of ligation

### CATHETERIZATION

#### Non-vascular catheters

Bile duct Stomach (injection) Duodenum (injection) Jejunum (injection) Ileum (injection) Colon (injection) Intra-peritoneal (injection) Bladder

#### Vascular catheters

Jugular vein-Femoral vein Carotid artery- Femoral artery

### PATHOLOGICAL MODELS

JANVIER LABS's pathological models allow you to recreate hypothetical and described mechanisms in human and animal disease.

They were developed based on current scientific knowledge and they are subject to regular monitoring allowing them to respond to ever-changing research findings.

### DIET-INDUCED PROTOCOLS (DIC

The customised protocol meets 2 goals:

1. a sub-contracted experiment for the researcher with forwarding of the results or samples as defined during the development of the protocol 2. a pre-protocol for preparation of animals to be integrated in a particular protocol of the researcher.

The customised protocol can combine several areas of JANVIER LABS's expertise, such as surgerv, diet, reproduction and breeding...

> Non-exhaustive lists Contact us for any request or any specific need



## **Biological products**

### **BLOOD PRODUCTS**

Whole blood Blood sampling with anticoagulant

#### Plasma

Blood sampling with anticoagulant

Centrifugation

Supernatant liquid sampling = plasma

#### Serum

Blood sampling without any anticoagulant Latent period for obtaining coagulation Centrifugation Supernatantliquid sampling=serum

#### Freezing

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Spinal cord Thyroid

> Immune system Thymus, Spleen

**Digestive system** Tongue, salivary glands

Stomach

Intestine (duodenum, jejunum, ileum) Caecum, Colon

### ORGANS

**Nervous system** Brain with or without the cerebellum **Endocrine system** Adrenal glands

Liver, pancreas

## Adipose tissue

Mesenteric adipose tissue Peri-gonadal adipose tissue

Perirenal adipose tissue

Brown adipose tissue

**Urogenital system** 

Kidneys, Bladder, Prostate Testes

Seminal vesicle

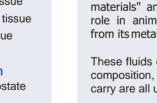
**Ovaries** Uterus

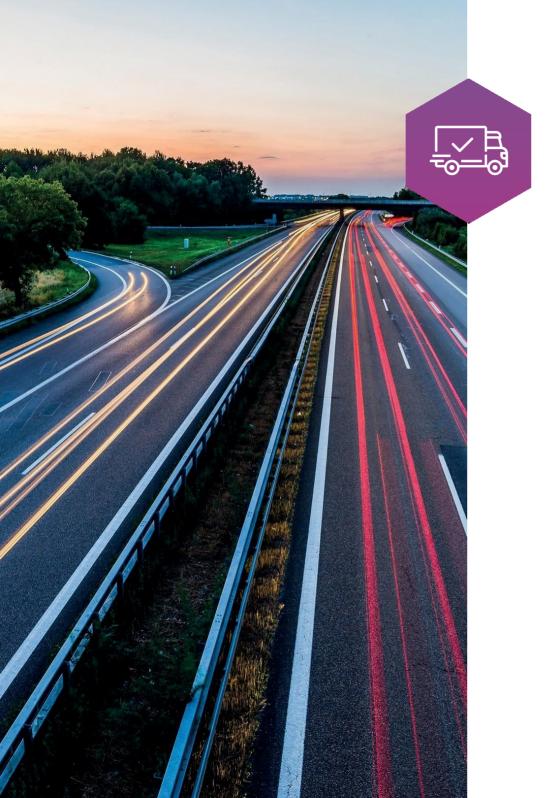
Cardiopulmonary system Lungs, Heart, Aorta Other: skin, bones, muscle, eyes **OTHER BIOLOGICAL PRODUCTS** 

In addition to blood and organs, we mean by "other biological materials" any fluid or organic compound having an active role in animal physiology and pathophysiology or derived from its metabolism.

These fluids can be used in various fields. The analysis of its composition, physico-chemical characteristics, the items they carry are all usable information for the researcher

- Urine
- Milk
- Feces
- Amniotic fluid
- Cerebrospinal fluid





# DELIVER / REPATRIATE YOUR MODEL

### 100% in-house transport

At JANVIER LABS, we have decided to provide this service in-house in order to reassure ourselves that it is carried out in a manner which meets our expectations. We manage the whole logistics chain from our site to the door of your animal facility.

×				
The largest transport network in Europe	45,000 kms each week with strict health ønditions	Weekly deliveries throughout Europe	A team of more than 20 drivers	A fleet of about 20 lorries

#### Our transport policy outside Europe

So that the distance is not an obstacle in order for you to be supplied with quality animals, JANVIER LABS has selected specialized partners for the transport of laboratory animals for the most remote or specific destinations.

Each of our partners has been audited and validated by our quality team and our vets.

# Take advantage of our existing customized transport service

#### Administration management

Our international and dedicated department manages the entire administration of: health certificates, customs management ... and we take care of the transport from our site to the departure airport.

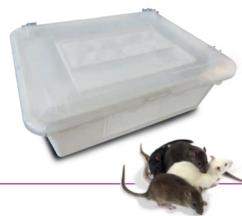
#### Dedicated transport solutions

We can supply you with a dedicated transport service with specific times, express delivery ... in order to adapt to your research projects' needs or to your customers' constraints.

#### A repatriation service wherever you are

Some of our vehicles are also equipped with hermetic boxes for the repatriation of non-SPF animals or biological materials (sperm or embryo).

### JANVIER LABS' INNOVATION



« As the SPF and SOPF status of your research models must be guaranteed under any condition »



An innovative up to date transport packaging entirely recyclable has been designed and created by JANVIER LABS for a 100% secured transport.



Autoclavable



The transport stage can mean stress for the animals. That is why at JANVIER LABS, we have established an exclusive and strict transport policy to limit stress and protect the animals' welfare during travel.

## MORE INFORMATION ABOUT JANVIER LABS TRANSPORT Our teams are specialised, our delivery drivers are outsourced and our vehicles are specially equipped. All our delivery drivers are trained in biosecurity and animal welfare. We have our own fleet of more than 20 air-conditioned and ventilated lorries, specially equipped for the carriage of laboratory rodents and approved by the veterinary authorities. This very recent fleet enables JANVIER LABS to have very reliable equipment with the latest exhaust emission standards. ..... Our vehicles systematically use motorways to reduce jolting and journey times for the animals. ..... We assure a traceability of transport conditions thanks to a temperature recorder. Our teams of drivers are based in different areas in Europe in order to ensure that our rodents' journeys take place in one go without stopping throughout Europe. This policy enables us to respect our teams' working hours while reducing the animals' transport time.



We are a family, independent and international company

We are experts in rodent research models

We constantly innovate to ensure quality, modernity and performance

We share strong human values and a common goal: to support research in order to improve tomorrow's health

WE ARE JANVIER LABS



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