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## INSTITUT COCHIN ENTITY DMP - MOUSET'IC Core Facility

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# INSTITUT COCHIN ENTITY DMP - MOUSET'IC

*Plan de gestion de données créé à l'aide de DMP OPIDoR, basé sur le modèle "Science Europe: structured template for research entities" fourni par DMP OPIDoR.*

## Plan Details

<b>Plan title</b>	INSTITUT COCHIN ENTITY DMP - MOUSET'IC	
<b>Deliverable</b>		
<b>Version</b>	First version	
<b>Plan purpose/scope</b>	<p>The aim of this DMP is to describe as precisely as possible the various research products produced by the services offered by the core facility. This DMP is part of a wider framework, that of making available all the DMPs of the 9 Institut Cochin core facilities (MOUSET'IC, PROTEOM'IC, PIV, PIME, METABOL'IC, CYBIO, IMAG'IC, GENOM'IC and HISTIM) as well as the DMP of the CID database dedicated to the transfer, storage, consultation and sometimes processing of most of the data produced by the Institut Cochin's core facilities.</p> <p>The purpose of this DMP entity is to provide drafting assistance for researchers wishing to draw up a DMP for their research projects and wishing to call on the expertise of our core facilities.</p>	
<b>Fields of science and technology (from OECD classification)</b>	1.6 Biological sciences	
<b>Language</b>	eng	
<b>Creation date</b>	2024-07-18	
<b>Last modification date</b>	2024-12-11	
<b>Identifier type</b>	DOI	
<b>License</b>	<b>Name</b>	Creative Commons Attribution 4.0 International
	<b>URL</b>	<a href="http://spdx.org/licenses/CC-BY-4.0.json">http://spdx.org/licenses/CC-BY-4.0.json</a>

## Structure Details

<b>Entity's name</b>	Institut Cochin Core Facility - MOUSET'IC
<b>Acronym</b>	MOUSET'IC
<b>Identifier</b>	<a href="https://institutcochin.fr/plateformes/mousetic">https://institutcochin.fr/plateformes/mousetic</a>
<b>Identifier type</b>	URL
<b>Description</b>	<p>The MouseT'IC platform offers expertise and services for :</p> <ul style="list-style-type: none"><li>• Generation of genetically modified mouse models</li><li>• Lineage re-derivation</li><li>• Cryopreservation of cell lines</li></ul>
<b>Creation date</b>	1998-06-18

## Research outputs :

1. Transgenic mouse model establishment (Model)
2. Cryopreservation (Collection)

## Contributors

Name	Affiliation	Roles
Castagnet Emma	Institut Cochin - 051sk4035	<ul style="list-style-type: none"><li>• Data Collector (Cryopreservation, Mouse, Cryopreservation, Mouse)</li></ul>
Do Cruzeiro Marcio	Institut Cochin - 051sk4035	<ul style="list-style-type: none"><li>• Entity's Manager (Mouse, Cryopreservation, Mouse, Mouse, Mouse, Mouse, Mouse, Mouse, Mouse, Mouse, Mouse, Mouse, Cryopreservation)</li><li>• Entity's manager</li></ul>
Guilbert Thomas - 0000-0001-5069-0730	Institut Cochin - 051sk4035	<ul style="list-style-type: none"><li>• DMP Manager</li><li>• DMP manager</li><li>• DMP manager</li></ul>
Pierre Rémi	Institut Cochin - 051sk4035	<ul style="list-style-type: none"><li>• Contact Person (Cryopreservation)</li><li>• Entity's Manager (Mouse, Mouse, Cryopreservation, Cryopreservation, Cryopreservation, Cryopreservation, Cryopreservation, Cryopreservation, Cryopreservation, Cryopreservation, Mouse)</li><li>• Entity's manager</li></ul>
Tournier Emilie	Institut Cochin - 051sk4035	<ul style="list-style-type: none"><li>• Data Collector (Cryopreservation, Mouse, Mouse, Cryopreservation)</li></ul>

# INSTITUT COCHIN ENTITY DMP - MOUSET'IC

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## Data description and collection or re-use of existing data

### Transgenic mouse model establishment

#### Research output description

<b>Name</b>	Transgenic mouse model establishment
<b>Description</b>	<p>The aim is to create a KO / KOc / KI mouse model for a specific, targeted gene. The request is made by email (traceability). An inception meeting is scheduled to determine the targeting strategy.</p> <p>Production of the transgene, genetic modification using the transgene, characterisation of the mice (between 6 and 15 months after the first meeting).</p> <p>Internationally, there are consortia (KOMP, etc.) that enable us to see whether the mice or the pre-targeted biological material are already available (mice, gametes, cells, transgenes). For the CNRS, EMMA provides archived lines (<a href="https://www.taam.cnrs.fr/index.php/collaborations/">https://www.taam.cnrs.fr/index.php/collaborations/</a>).</p>
<b>Type</b>	Model
<b>Workpackage</b>	
<b>Keywords (free-text)</b>	
<b>Language</b>	eng
<b>Issued Date</b>	
<b>Persistent identifier</b>	local standardisation
<b>Identifier type</b>	Identifiant local
<b>May contain personal data?</b>	No
<b>May contain sensible data?</b>	No
<b>May take ethical issues into account?</b>	Yes

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#### Will existing data be reused?

**Justification**                      Depending on the willingness of the collaborators/researchers.

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#### How new data will be collected or produced?

<b>Name of the method</b>	Homologous Recombination / CrispR-Cas9
<b>Description</b>	<p><b><u>Homologous Recombination (HR)</u></b></p> <ul style="list-style-type: none"> <li>• Production of the transgene (15- 25kb)</li> <li>• Modification of murine embryonic stem (ES) cells</li> <li>• Characterisation of murine ES cells</li> <li>• Injection of RH murine ES cells</li> <li>• Obtaining chimeric mice</li> <li>• Transmission of the mutation to the progeny (establishment of the murine line)</li> </ul> <p><b><u>CrispR-Cas9</u></b></p> <ul style="list-style-type: none"> <li>• Transgene design (0.001 - 1 kb)</li> <li>• Synthesis of RNA guides</li> <li>• Electroporation of guide RNA + transgene into zygote stage embryo</li> <li>• Obtaining F0 mosaic mice</li> <li>• Transmission of the mutation to the progeny (establishment of the murine line)</li> </ul>
<b>Data Nature</b>	Model
<b>Equipments, technical platforms used</b>	<ul style="list-style-type: none"> <li>• MOUSET'IC : <a href="https://cat.opidor.fr/index.php/MOUSET'IC">https://cat.opidor.fr/index.php/MOUSET'IC</a></li> </ul>

## Cryopreservation

### Research output description

<b>Name</b>	Cryopreservation
<b>Description</b>	<p>Cryogenic preservation of biological material (gametes).</p> <ul style="list-style-type: none"> <li>• Embryos (200 - 250 per murine line).</li> <li>• Sperms (25 flakes).</li> </ul>
<b>Type</b>	Collection
<b>Workpackage</b>	
<b>Language</b>	eng
<b>Issued Date</b>	
<b>May contain personal data?</b>	No
<b>May contain sensible data?</b>	No
<b>May take ethical issues into account?</b>	Yes

### Will existing data be reused?

**Justification**

The re-use of this data is the very purpose of this research product.

**How new data will be collected or produced?**
**Name of the method**

Cryopreservation

**Description**

Cryopreservation of embryos by slow freezing.  
Cryopreservation of sperm by vitrification.

**Data Nature**

Model

## Documentation and data quality

### Transgenic mouse model establishment

**What metadata and documentation (for example way of organising data) will accompany the data?**
**Description**

Once completed, the mouse model is integrated into the core-facility's database and referenced.  
The core-facility provides the transgene sequence, sequencing of the transgene in the mouse, genotyping PCR and clone analysis (southern-blot).

**Metadata language code**

eng

**What methods will be used to ensure their scientific quality?**
**Description**

At each technical step, a sequence is done to check the quality.  
The core-facility provides the transgene sequence, sequencing of the transgene in the mouse, genotyping PCR and clone analysis (southern-blot).  
The phenotyping of the model was also controlled for the first generation.

### Cryopreservation

**What metadata and documentation (for example way of organising data) will accompany the data?**

**Description**

Local numbering for semen flakes.  
Lineage name and local numbering for embryos.

**What methods will be used to ensure their scientific quality?****Description**

Embryo cryopreservation:

- Lineage revitalisation test with mice obtained and validation of genotyping during freezing.

Cryopreservation of sperm flakes:

- IVF test after sperm vitrification.

**Legal and ethical requirements, codes of conduct****Transgenic mouse model establishment****How will other legal issues, such as intellectual property rights and ownership, be managed?  
What legislation is applicable?****Description**

Applications for project authorisation (DAP) are submitted by the researchers. The core-facility is responsible for declaring GMO by-products. All the biological material produced belongs to the project researchers.

**What ethical issues and codes of conduct are there, and how will they be taken into account?****Description**

The 3R rule is applied on a daily basis (reduce, replace, refine). All staff are empowered and trained on an ongoing basis.

**Cryopreservation****How will other legal issues, such as intellectual property rights and ownership, be managed?  
What legislation is applicable?****Description**

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### Description

The 3R rule is applied on a daily basis (reduce, replace, refine). All staff are empowered and trained on an ongoing basis.

## Data processing and analysis

### Transgenic mouse model establishment

#### How and with what resources will the data be processed / analyzed?

### Description

Our core-facility sequences the various products used to obtain transgenic mice and analyses all these sequences. These sequences are analysed manually.

### Equipments, technical platforms

- MOUSET'IC : <https://cat.opidor.fr/index.php/MOUSET'IC>

### Cryopreservation

#### How and with what resources will the data be processed / analyzed?

### Description

Our core-facility sequences the various products used to obtain transgenic mice and analyses all these sequences. These sequences are analysed manually.

### Equipments, technical platforms

- MOUSET'IC : <https://cat.opidor.fr/index.php/MOUSET'IC>

## Storage and backup during the research process

### Transgenic mouse model establishment

#### How will data be stored and backed up during the research?



<b>Storage needs</b>	The vectors and stem cells are cryopreserved by the platform. Sequence data can be stored and backed-up with CID.
<b>Equipments, technical platforms</b>	<ul style="list-style-type: none"> <li>• CID : <a href="https://cat.opidor.fr/index.php/CID">https://cat.opidor.fr/index.php/CID</a></li> </ul>
<b>Measures taken for data security</b>	Data security is ensure by the core-facility's staff.

<b>Cryopreservation</b>	
<b>How will data be stored and backed up during the research?</b>	
<b>Storage needs</b>	Cryopreservation is a storage technique in itself. Sequence data can be stored and backed-up with CID.
<b>Equipments, technical platforms</b>	<ul style="list-style-type: none"> <li>• CID : <a href="https://cat.opidor.fr/index.php/CID">https://cat.opidor.fr/index.php/CID</a></li> </ul>
<b>Measures taken for data security</b>	Data security is ensure by the core-facility's staff.

## Data sharing and long-term preservation

<b>Transgenic mouse model establishment</b>	
<b>How will data be shared?</b>	
<b>Modalities of sharing</b>	The sequencing data produced is shared by email.
<b>Reusability</b>	Yes, on demand.
<b>Data repository/catalogs</b>	<ul style="list-style-type: none"> <li>• CID : <a href="https://cat.opidor.fr/index.php/CID">https://cat.opidor.fr/index.php/CID</a> ()</li> </ul>
<b>How will data be long-term preserved? Which data?</b>	
<b>Justification</b>	All sequenced data are saved on local network.
<b>Start date</b>	
<b>End date</b>	
<b>Final dispositions</b>	

## **Cryopreservation**

### **How will data be shared?**

**Modalities of sharing** A special container is used to transport the biological material (dry-shipper) by an approved carrier.

**Reusability** Yes, on demand.

**Data repository/catalogs**

- CID : <https://cat.opidor.fr/index.php/CID> ()

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### **How will data be long-term preserved? Which data?**

**Justification** Long-term preservation is the aim of this research product.

**Start date**

**End date**

**Final dispositions**