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INSTITUT COCHIN ENTITY DMP - PIME Core Facility

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INSTITUT COCHIN ENTITY DMP - PIME

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

Plan title	INSTITUT COCHIN ENTITY DMP - PIME				
Deliverable					
Version	First version				
Plan purpose/scope	<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>				
Fields of science and technology (from OECD classification)	1.6 Biological sciences				
Language	eng				
Creation date	2024-07-18				
Last modification date	2024-12-18				
Identifier	https://doi.org/10.57889/pime_cf				
Identifier type	DOI				
License	<table><tr><td>Name</td><td>Creative Commons Attribution 4.0 International</td></tr><tr><td>URL</td><td>http://spdx.org/licenses/CC-BY-4.0.json</td></tr></table>	Name	Creative Commons Attribution 4.0 International	URL	http://spdx.org/licenses/CC-BY-4.0.json
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Structure Details

Entity's name Institut Cochin Core Facility - PIME
Acronym PIME
Identifier <https://institutcochin.fr/plateformes/pime>
Identifier type URL

Description

La plateforme de microscopie électronique est spécialisée dans l'analyse ultrastructurale des molécules biologiques, des cellules et des tissus, depuis la recherche fondamentale à la recherche appliquée. Nos domaines d'expertise couvrent la description et la caractérisation des tissus normaux et pathologiques, et l'identification et la localisation de protéines. Nos techniques sont complémentaires de la microscopie optique traditionnelle, nous permettant un pouvoir séparateur de l'ordre du nanomètre.

Ce qui est particulièrement important en microscopie électronique, nous réalisons d'office l'aide à l'analyse, à l'interprétation et à la présentation des résultats et des images.

Creation date 2003-02-02

Research outputs :

1. Resin Block (Physical object)
2. EM Images (Image)

Contributors

Name	Affiliation	Roles
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Schmitt Alain - 0000-0002-8011-2277	Institut Cochin - 051sk4035	<ul style="list-style-type: none"> • Contact Person (ResinBlock, Images) • Entity's Manager (ResinBlock, Images, Images, ResinBlock, ResinBlock, ResinBlock, ResinBlock, ResinBlock, Images, Images, ResinBlock, Images, Images, ResinBlock, Images, Images) • Entity's manager

INSTITUT COCHIN ENTITY DMP - PIME

Data description and collection or re-use of existing data

Resin Block

Research output description

Name	Resin Block
Description	Resin block generated from biological sample. Each samble is embedded in electron microscopy designed resins.
Type	Physical object
Workpackage	
Issued Date	2024-07-22
Persistent identifier	"project number"-"sample number"
Identifier type	Identifiant local
May contain personal data?	No
May contain sensible data?	No
May take ethical issues into account?	No

Will existing data be reused?

Justification Yes, for futur research.

How new data will be collected or produced?

Name of the method	Embedding
Description	<p>Embedding Protocol :</p> <p>Secondary fixation was performed with 1% osmium tetroxide in phosphate buffer saline for 1 hr at room temperature, then washed 3 times in H₂O and further dehydrated with increasing concentrations of ethanol (70%, 90%, and 100% twice).</p> <p>After dehydration, samples were infiltrated with sequential 3:1, 1:1, and 1:3 solutions of resin (Embed 812 kit; Electron Microscopy Sciences, Hatfield, PA) and 100% ethanol for 1 h separately at room temperature.</p> <p>Finally, the samples were incubated with propylene oxide for 2mn and and placed in the embedding molds with resin. The embedding resin blocks were polymerize in an oven at 60°C for 24h.</p>
Data Nature	Experimental Data
Equipments, technical platforms used	<ul style="list-style-type: none"> • PIME : https://cat.opidor.fr/index.php/PIME

EM Images

Research output description

Name	EM Images
Description	<p>Acquisition of region of interest.</p> <p>Analysis of the aspects of the samples in light of the problems and research of the researchers.</p> <p>Output consist in information linked to scientific questions</p>
Type	Image
Workpackage	
Keywords (free-text)	
Language	eng
Issued Date	
Persistent identifier	"project number"- "sample number"- "Unique number"
Identifier type	Identifiant local
May contain personal data?	No
May contain sensible data?	No
May take ethical issues into account?	Yes

Will existing data be reused?

Justification Data can be analyse again at the light of new scientific questions.

How new data will be collected or produced?

Name of the method	EM acquisition
Description	Acquisition software (digital micrograph) on the electron microscope.
Data Nature	Experimental data
Equipments, technical platforms used	<ul style="list-style-type: none">• PIME : https://cat.opidor.fr/index.php/PIME

Documentation and data quality

Resin Block

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

Description	Resine Block are referenced in the ElabOne-Pime.
Metadata language code	fra
Documentation software	ElabFTW

What methods will be used to ensure their scientific quality?

Description	Visual inspection.
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EM Images

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

Description	Coding in the laboratory notebook.
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What methods will be used to ensure their scientific quality?

Description

Visual control. Usefulness for the researcher.

Legal and ethical requirements, codes of conduct

Resin Block

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

Description

Researchers depositing the samples assure that all legal issues are managed by accepting the rules.
For private company, following established contract (destruction or redonner les blocs), following NDA.

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

Description

following INSERM, CNRS and UPCité rules
following AHP rules for human samples (anonymization, legal consent, etc)

EM Images

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Data processing and analysis

Resin Block

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

Description

Production of sample section used for the next ME experiment. Ultrathin sections (90 nm) were cut from the block surface using an ultramicrotome (Reichert Ultracut S ultramicrotome, Leica Microsystems) then stained with uranyl acetate and lead citrate (LFG, France) and observed by TEM (JEOL 1011, JEOL, Japan)) at 80 kV of acceleration voltage. Acquisitions were performed by an Orius 1000 CCD Camera (GATAN, USA) using Digital Micrograph software (GATAN, USA).

Related references

- Ultramicrotomy of biological objects: From the beginning to the present : [https://doi.org/10.1016/1047-8477\(90\)90074-M](https://doi.org/10.1016/1047-8477(90)90074-M)

Equipments, technical platforms

- PIME : <https://cat.opidor.fr/index.php/PIME>

EM Images

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

Description

Data are visually analysed upon acquisition. In Electron microscopy, images provide information on size, shape, morphology and ultrastructure of all the elements of the biological sample, at a nanometric scale. Analysis is mostly qualitative, albeit some quantitative analysis could be performed with a sufficient sample size. In this case, the commonly used image analysis software equipped with an electron microscopy module can be used.

Equipments, technical platforms

- PIME : <https://cat.opidor.fr/index.php/PIME>

Storage and backup during the research process

Resin Block

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

Storage needs	Dedicated container in the lab.
Measures taken for data security	Securised software (ELAB-FTW) referencing the block (Anonymous coding).

EM Images	
How will data be stored and backed up during the research?	
Storage needs	Hard drives connected to the acquisition system or CID.
Estimated volume of data	80
Unit	MB
Equipments, technical platforms	<ul style="list-style-type: none"> • CID : https://cat.opidor.fr/index.php/CID
Measures taken for data security	Securised software (ELAB-FTW) referencing the block (Anonymous coding).

Data sharing and long-term preservation

Resin Block	
How will data be shared?	
Modalities of sharing	Physical objects, so physical sharing.
Reusability	until the block is physically exhausted.
Data repository/catalogs	<ul style="list-style-type: none"> • CID : https://cat.opidor.fr/index.php/CID ()
How will data be long-term preserved? Which data?	
Justification	Could always be useful for futur resarch. On demand or until the project is terminated.
Start date	
End date	
Final dispositions	

EM Images

How will data be shared?

Modalities of sharing	By file transferring or CID.
Reusability	Future research. We recommend the use of open science sharing for future data sharing.
Data repository/catalogs	<ul style="list-style-type: none">• CID : https://cat.opidor.fr/index.php/CID ()

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

Justification	On demand or until the project is terminated.
Estimated volume of data	80
Unit	MB
Start date	
End date	
Final dispositions	