

# Experimental design IMPC\_EXD\_002

## Purpose

The experimental workflow capture form is an institute overview form to capture how the phenotyping procedures are implemented. The questions have been based on the requirements of the Animal Research: Reporting In Vivo Experiments guidelines (ARRIVE) (Kilkenny PLOS One 2010), and Gold Standard Publication Checklist (GSPC) reporting guidelines (Hooijmans ATLA 2010).

## Notes

Each unique set of conditions within a specified timeframe is submitted by centres. Each centre may have multiple sets of active conditions within the same time-frame if some animals have different experimental conditions depending on e.g. pipeline.

Submission identifier is used to identify a unique submission, and the same identifier is used if a set of conditions have corrected or updated details in a new submission, while new identifiers are used to identify each separate set of conditions.

The questions are based on the Mouse Experimental Design Ontology (MEDO) developed to describe experimental implementation.

This ontology can be examined at <https://bioportal.bioontology.org/ontologies/MEDO>

Some of the experimental conditions need to be specified for each procedure being performed. In these cases the parameters are series parameters where the three letter procedure identifier from the IMPReSS protocol key should be included as the increment name to identify the procedure and one of the defined options should be submitted as the value for each increment. For procedures where different conditions apply during data collection or imaging than during analysis, the stage in question should be specified after the procedure identifier e.g. "ABR collection" vs "ABR analysis".

This applies to the following parameters:

- IMPC\_EXD\_098\_002 (Time effect strategy)
- IMPC\_EXD\_127\_001 (Blinding)
- IMPC\_EXD\_128\_001 (Instrumentation bias management)
- IMPC\_EXD\_129\_001 (Operator effect control strategy)
- IMPC\_EXD\_130\_001 (Order effect control strategy)
- IMPC\_EXD\_131\_001 (Subject selection strategy)

## Parameters and Metadata

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** pipeline\_ids\_applicable\_to\_housing\_conditions

**Options:** BCM\_001 + BCMIP\_001 + BCMLA\_001,  
HMGU\_001 + HMGUIP\_001 + HMGULA\_001 + HMGULA\_002,  
HRWL\_001 + HRWLIP\_001 + HRWLLA\_001, ICS\_001 + ICSIP\_001 + ICSLA\_001,  
JAX\_001 + JAXIP\_001 + JAXLA\_001, TCP\_001 + TCPIP\_001 + TCPLA\_001,  
IMPC\_001 + RBRCIP\_001 + RBRCLA\_001, IMPC\_001 + KMPCIP\_001 + KMPCLA\_001,  
CCP\_001, IMPC\_001,

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## Phenotyping lifestage IMPC\_EXD\_132\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** phenotyping\_lifestage

**Options:** Embryo, In-vivo, FER / VIA, All phenotyping,

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## Submission Identifier IMPC\_EXD\_133\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** BCM\_1, GMC\_1, H\_1, ICS\_1, J\_1, TCP\_1, RBRC\_1, UCD\_1, KMPC\_1,  
CCPCZ\_1, TCP\_NorCOMM2, TCP\_KOMP2\_Phase1, TCP\_KOMP2\_Phase2,

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## Date effective from IMPC\_EXD\_004\_002 | v2.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** date\_effective\_from

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## Date effective until IMPC\_EXD\_005\_002 | v2.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** false

**Is Annotated:** false

**Description:** date\_effective\_until

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## Control design IMPC\_EXD\_006\_001 | v1.0

seriesParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** control\_design

**Increments:** Minimum 1

**Options:** Littermate control, Line mate control, Pooled genetic control,  
Production colony control,

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## Control phenotyping design IMPC\_EXD\_007\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Description: frequency\_of\_controls

Options: Parallel control with knockout, Weekly control, Biweekly control,  
Regular control with phenotyping run (same week), Monthly control,

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## Minimum number of male controls IMPC\_EXD\_008\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Description: number\_male\_controls

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## Minimum number of female controls IMPC\_EXD\_009\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Description: number\_female\_controls

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# Control animal production location IMPC\_EXD\_012\_002 | v1.0

simpleParameter

Req. Analysis: false      Req. Upload: true      Is Annotated: false

Description: control\_animal\_source

Options: Internal, External,

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# Core colony source IMPC\_EXD\_013\_001 | v1.0

simpleParameter

Req. Analysis: false      Req. Upload: true      Is Annotated: false

Description: core\_colony\_source

Options: Internally sourced, Externally sourced,

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# Control stock management IMPC\_EXD\_014\_001 | v1.0

simpleParameter

Req. Analysis: false      Req. Upload: true      Is Annotated: false

Description: core\_stock\_strategy

Options: Control breeding, Externally managed control, Uncontrolled stock management,

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## Time effect strategy IMPC\_EXD\_098\_002 | v2.0

seriesParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** time\_effects

**Increments:** Minimum 1

**Options:** Uncontrolled time effect, Controlled time effect, Randomised time effect,

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## Blinding strategy IMPC\_EXD\_127\_001 | v1.0

seriesParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** blinding\_strategy

**Increments:** Minimum 1

**Options:** Unblinded, Blinded, Genotype free blinding, Allele free blinding,

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## Instrumentation bias management IMPC\_EXD\_128\_001 | v1.0

seriesParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** instrumentation\_bias\_management

**Increments:** Minimum 1

**Options:** Controlled instrumentation strategy, Active randomisation instrumentation strategy, Active randomisation and minimisation instrumentation strategy, Casual randomisation instrumentation strategy, Casual randomisation and minimisation instrumentation strategy, Balanced instrumentation strategy, Balanced and minimisation instrumentation strategy, Minimisation instrumentation strategy,

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## Operator effect control strategy IMPC\_EXD\_129\_001 | v1.0

seriesParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** operator\_effect\_control\_strategy

**Increments:** Minimum 1

**Options:** Single operator, Active operator randomisation, Active operator randomisation with minimisation, Balanced operator, Balanced operator with minimisation, Minimized operator,

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## Order effect control strategy IMPC\_EXD\_130\_001 | v1.0

seriesParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** order\_effect\_control\_strategy

**Increments:** Minimum 1

**Options:** Alternate animal order, Cage active randomisation, Cage casual randomisation, Casual randomisation within a cage,

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## Subject selection strategy IMPC\_EXD\_131\_001 | v1.0

seriesParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** subject\_selection\_strategy

**Options:** First subject availability strategy, Active subject selection strategy, Passive subject selection strategy,

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## Knockout animal production location IMPC\_EXD\_134\_001 | v1.0

simpleParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Description:** knockout\_animal\_production\_location

**Options:** Internal, External,

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## Maximum number of female controls IMPC\_EXD\_135\_001 | v1.0

simpleParameter

**Req. Analysis:** false

**Req. Upload:** false

**Is Annotated:** false



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## Maximum number of male controls IMPC\_EXD\_136\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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## Knockout phenotyping design IMPC\_EXD\_015\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

**Description:** knockout\_phenotyping\_design

**Options:** Single batch, Single batch per sex, Single batch mixed, Multiple batches, Variable batch,

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