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

Pipeline ID(s) IMPC_EXD_003_002 | v2.0

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,

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,

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,

Date effective from IMPC_EXD_004_002 | v2.0

procedureMetadata

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

Description: date_effective_from

Date effective until IMPC_EXD_005_002 | v2.0

procedureMetadata

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

Description: date_effective_until

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,

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

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

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,

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,

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,

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,

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,

Maximum number of female controls IMPC_EXD_135_001 | v1.0

simpleParameter

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

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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