Formalin Test IMPC_FOR_001

Purpose
To assess nocifensive behaviours triggered by the inflammatory response following a formalin injection.

Experimental Design
Minimum number of mutant animals: 5 males + 5 females
Age at test: 16 weeks

Procedure
1. Acclimatise mice in the testing room for at least 30 minutes before testing.
2. Anaesthetize mouse and administer formalin with a subcutaneous injection into the plantar surface of the chosen paw.
3. Place the mouse into the testing arena and start the recording. Run the recording for up to 90 minutes.
4. Remove the mouse from the arena and clean the arena.
5. Score the behaviour of the animals for nocifensive behaviors between 10 and 60 minutes post formalin administration.

Notes
This procedure can be performed as a terminal or non-terminal procedure. If terminal, euthanize the mouse humanely after the recording.

This procedure is a pilot study from the Pain Phenotyping Pilot

Parameters and Metadata

**Total duration of lick/bite behaviour** IMPC_FOR_001_001 | v1.0

simpleParameter


Unit Measured: s

Derivation: sumOfIncrements('IMPC_FOR_020_001', 1)
Total number of lick/bite events IMPC_FOR_002_001 | v1.0

simpleParameter


Total duration of drag/limp behaviour IMPC_FOR_003_001 | v1.0

simpleParameter

Unit Measured: s

Derivation: sumOfIncrements('IMPC_FOR_021_001', 1)

Total number of drag/limp events IMPC_FOR_004_001 | v1.0

simpleParameter


Total duration of flinch behaviour IMPC_FOR_005_001 | v1.0

simpleParameter
Unit Measured: s

Derivation: \text{sumOfIncrements('IMPC\_FOR\_022\_001', 1)}

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**Total number of flinch events** IMPC\_FOR\_006\_001 | v1.0

\text{simpleParameter}

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**Anaesthetic** IMPC\_FOR\_007\_001 | v1.0

\text{procedureMetadata}

\text{Options: Sevoflurane, Isoflurane,}

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**Formalin Concentration** IMPC\_FOR\_008\_001 | v1.0

\text{procedureMetadata}

\text{Options: 5\%, 2.5\%,}
Amount of formalin injected IMPC_FOR_009_001 | v1.0

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

**Unit Measured:** ul

**Options:** 20, 30,

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Syringe Gauge IMPC_FOR_010_001 | v1.0

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

**Options:** 29, 30,

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Site of formalin injection IMPC_FOR_011_001 | v1.0

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

**Options:** Plantar surface of left hind paw, Plantar surface of right hind paw,
**Arena Manufacturer**  IMPC_FOR_012_001 | v1.0

Options: In-house, IITC Life Science,

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**Size of testing arena**  IMPC_FOR_013_001 | v1.0

Options: 13cm (H) x 36cm (W) x 40 cm(L), 12.7 cm (H) x 21.9 cm (W) x 21.59 cm (L), 36cm (L) X 40cm (W) X 13cm (H),

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**Recording Software**  IMPC_FOR_014_001 | v1.0

Options: Home Cage Analyzer, Actual Analytics, Noldus Media Recorder v4,

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**Data scoring method**  IMPC_FOR_015_001 | v1.0
Options: Human scorer, from video, Neural network, from video,
Options: On the side, Below the arena,

Disinfectant  IMPC_FOR_019_001 | v1.0
procedureMetadata


Options: 35% Isopropanol, Virkon 1% & 70% Ethanol, 2% Distel,

Duration of lick/bite behaviour  IMPC_FOR_020_001 | v1.0
seriesParameter


Unit Measured: s
Increments: Minimum 1

Duration of drag/limp behaviour  IMPC_FOR_021_001 | v1.0
seriesParameter


Unit Measured: s
Increments: Minimum 1
Duration of flinch behaviour  IMPC_FOR_022_001 | v1.0
seriesParameter


Unit Measured: s
Increments: Minimum 1

Duration of licking/biting behavior (10-60 minutes)  IMPC_FOR_023_001 | v1.0
simpleParameter


Unit Measured: s
Derivation:
sum(incrementValue('IMPC_FOR_020_001', '10'), incrementValue('IMPC_FOR_020_001', '15'), incrementValue('IMPC_FOR_020_001', '20'), incrementValue('IMPC_FOR_020_001', '25'), incrementValue('IMPC_FOR_020_001', '30'), incrementValue('IMPC_FOR_020_001', '35'), incrementValue('IMPC_FOR_020_001', '40'), incrementValue('IMPC_FOR_020_001', '45'), incrementValue('IMPC_FOR_020_001', '50'), incrementValue('IMPC_FOR_020_001', '55'))

Time per bin/increment  IMPC_FOR_024_001 | v1.0
procedureMetadata

Time bins excluded IMPC_FOR_025_001 | v1.0

procedureMetadata

Experimenter ID IMPC_FOR_026_001 | v1.0