Hargreaves Test JAX_HRG_001

Purpose

To assess thermal hyperalgesia in the mouse paw.

Experimental Design

Minimum number of mutant animals: 7 males + 7 females

Age at test: either 8 weeks or 17 weeks

Sexual dimorphism:

Procedure

1. Baseline measurement
   1. Transfer mouse to the testing arena and allow to acclimate to the test environment.
   2. Ensure that the intensity and cut-off timer of the radiant heat source are set correctly.
   3. Position the light source below the platform and directed at the correct part of the paw.
   4. Turn the light source on and record the latency to paw withdrawal. The stimulus is terminated once a response is registered, or if the maximum exposure time is reached before the animal responds.
   5. Repeat the test so that each mouse is tested three times with the same paw.
3. Challenge
   1. The challenge is administered after the baseline measurement has been completed.
   2. Anaesthetise the mouse and administer the challenge injection.
5. Test 1
   1. After the specified length of time since the challenge injection, the mouse is re-tested using the same procedure as described for the baseline measurement.
7. Test 2
   1. After the specified length of time since the challenge injection, the mouse is re-tested again using the same procedure as described for the baseline measurement.

Notes

This procedure is a pilot study from the Pain Phenotyping Pilot

Parameters and Metadata

Baseline: latency to withdrawal
Baseline: average latency to withdrawal  JAX_HRG_002_001  | v1.0

Test 1: latency to withdrawal  JAX_HRG_003_001  | v1.0

Test 1: average latency to withdrawal  JAX_HRG_004_001  | v1.0
Test 2: latency to withdrawal JAX_HRG_005_001 | v1.0

seriesParameter

Test 2: average latency to withdrawal JAX_HRG_006_001 | v1.0

simpleParameter

Length of acclimatisation period JAX_HRG_007_001 | v1.0

procedureMetadata
**Unit Measured:** min

**Options:** 30, 30 - 60, 60,

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**Glass base heated during acclimatisation** JAX_HRG_008_001

*procedureMetadata*

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

**Options:** Yes,

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**Maximum exposure time** JAX_HRG_009_001  | v1.0

*procedureMetadata*

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

**Unit Measured:** s

**Options:** 20, 30,

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**Number of repeats per paw** JAX_HRG_010_001  | v1.0

*procedureMetadata*

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

**Options:** Right hind paw tested 3 times,
Minimum time between stimulus presentation  JAX_HRG_011 _001 | v1.0

Unit Measured: min
Options: 2,

Challenge  JAX_HRG_012_001 | v1.0

Options: CFA,

Site of challenge injection  JAX_HRG_013_001 | v1.0

Options: Plantar surface of right hind paw,
Anaesthetic for challenge injection JAX_HRG_014_001 | v1.0

Options: Isoflurane,

Time between baseline measurement and challenge injection JAX_HRG_015_001 | v1.0

Unit Measured: Hours
Options: 0.5-1, 2, 24,

Time between challenge and test 1 JAX_HRG_016_001 | v1.0

Unit Measured: Hours
Options: 24,

Time between challenge and test 2 JAX_HRG_017_001 | v1.0
**Glass base temperature: settings** JAX_HRG_018_001 | v1.0

- **Unit Measured**: C
- **Options**: 30, 32, 34,

**Glass base temperature: measured** JAX_HRG_019_001 | v1.0

- **Unit Measured**: C
- **Options**: 29-32,
Unit Measured: %
Options: 2, 3, 10,

Test intensity JAX_HRG_021_001 | v1.0

Unit Measured: %
Options: 15, 25, 30, 100,

Tetrad manufacturer JAX_HRG_022_001 | v1.0

Options: IITC,

Tetrad material JAX_HRG_023_001 | v1.0

Options: Acrylic,
**Tetrad colour/opacity** JAX_HRG_024_001 | v1.0

**procedureMetadata**

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

**Options:** Clear,

**Inset material** JAX_HRG_025_001 | v1.0

**procedureMetadata**

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

**Options:** Acrylic,

**Inset colour/opacity** JAX_HRG_026_001 | v1.0

**procedureMetadata**

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

**Options:** Clear, White opaque,

**Lid material** JAX_HRG_027_001 | v1.0

**procedureMetadata**

Req. Analysis: false  
Req. Upload: true  
Is Annotated: false
Options: Acrylic,

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**Lid colour/opacity**  JAX_HRG_028_001 | v1.0

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

**Options:** Clear,

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**Testing chamber dimensions**  JAX_HRG_029_001 | v1.0

- **Unit Measured:** cm

**Options:** 12.7 cm H x 10.16 cm W x 10.16 cm L, 12.5 cm H x 10 cm W x 10 cm L,

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**Glass base manufacturer**  JAX_HRG_030_001 | v1.0

- **Options:** IITC,
**Glass base model** JAX_HRG_031_001 | v1.0

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

**Options:** Model 400 Heated Base (Item #400G),

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**Radiant heat light source manufacturer** JAX_HRG_032_001 | v1.0

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

**Options:** IITC,

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**Radiant heat light source model** JAX_HRG_033_001 | v1.0

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

**Options:** 390 Plantar test head (Item #300TH),

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**Experimenter ID** JAX_HRG_034_001 | v1.0

- **Req. Analysis:** false  
- **Req. Upload:** true  
- **Is Annotated:** false
Disinfectant JAX_HRG_035_001 | v1.0

procedureMetadata


Options: 1% Virkon, Clidox and 70% Ethanol, Coverage Plus Working Solution,

Delta2: difference in latency to withdrawal JAX_HRG_036_001 | v1.0

simpleParameter


Unit Measured: s

Derivation:
sub(meanOfIncrements('JAX_HRG_001_001',1), meanOfIncrements ('JAX_HRG_005_001',1))