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  JAX_HRG_001_001 | v1.0

seriesParameter


Unit Measured: s
Increments: 1, 2, 3,

Baseline: average latency to withdrawal  JAX_HRG_002_001 | v1.0

simpleParameter


Unit Measured: s
Derivation: meanOfIncrements('JAX_HRG_001_001',1)

Test 1: latency to withdrawal  JAX_HRG_003_001 | v1.0

seriesParameter


Unit Measured: s
Increments: 1, 2, 3,
Test 1: average latency to withdrawal JAX_HRG_004_001 | v1.0

simpleParameter


Unit Measured: s

Derivation: meanOfIncrements('JAX_HRG_003_001',1)

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Test 2: latency to withdrawal JAX_HRG_005_001 | v1.0

seriesParameter


Unit Measured: s

Increments: 1, 2, 3,

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

simpleParameter


Unit Measured: s

Derivation: meanOfIncrements('JAX_HRG_005_001',1)
Length of acclimatisation period JAX_HRG_007_001 | v1.0

procedureMetadata


Unit Measured: min

Options: 30, 30 - 60, 60,

Glass base heated during acclimatisation JAX_HRG_008_001 | v1.0

procedureMetadata


Options: Yes,

Maximum exposure time JAX_HRG_009_001 | v1.0

procedureMetadata


Unit Measured: s

Options: 20, 30,
**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,

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**Minimum time between stimulus presentation** JAX_HRG_011_001 | v1.0

*procedureMetadata*

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

**Unit Measured:** min

**Options:** 2,

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**Challenge** JAX_HRG_012_001 | v1.0

*procedureMetadata*

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

**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
**Time between challenge and test 2**  
JAX_HRG_017_001 | v1.0

**Glass base temperature: settings**  
JAX_HRG_018_001 | v1.0
**Glass base temperature: measured**  
JAX_HRG_019_001 | v1.0

*procedureMetadata*

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

**Unit Measured:** C

**Options:** 29-32,

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**Idle intensity**  
JAX_HRG_020_001 | v1.0

*procedureMetadata*

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

**Unit Measured:** %

**Options:** 2, 3, 10,

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**Test intensity**  
JAX_HRG_021_001 | v1.0

*procedureMetadata*

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

**Unit Measured:** %

**Options:** 15, 25, 30, 100,
**Tetrad manufacturer** JAX_HRG_022_001 | v1.0

procedureMetadata


Options: IITC,

**Tetrad material** JAX_HRG_023_001 | v1.0

procedureMetadata


Options: Acrylic,

**Tetrad colour/opacity** JAX_HRG_024_001 | v1.0

procedureMetadata


Options: Clear,

**Inset material** JAX_HRG_025_001 | v1.0

procedureMetadata
Inset colour/opacity  JAX_HRG_026_001 | v1.0

Options: Clear, White opaque,

Lid material  JAX_HRG_027_001 | v1.0

Options: Acrylic,

Lid colour/opacity  JAX_HRG_028_001 | v1.0

Options: Clear,
Testing chamber dimensions  JAX_HRG_029_001 | v1.0

procedureMetadata


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,

Glass base manufacturer  JAX_HRG_030_001 | v1.0

procedureMetadata


Options: IITC,

Glass base model  JAX_HRG_031_001 | v1.0

procedureMetadata


Options: Model 400 Heated Base (Item #400G),
**Radiant heat light source manufacturer** JAX_HRG_032_001 | v1.0

Required Analysis: false  
Required Upload: true  
Is Annotated: false

Options: IITC,

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

Required Analysis: false  
Required Upload: true  
Is Annotated: false

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

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**Experimenter ID** JAX_HRG_034_001 | v1.0

Required Analysis: false  
Required Upload: true  
Is Annotated: false

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**Disinfectant** JAX_HRG_035_001 | v1.0

Required Analysis: false  
Required Upload: true  
Is Annotated: false
Options: 1% Virkon, Clidox and 70% Ethanol, Coverage Plus Working Solution,

Delta2: difference in latency to withdrawal JAX_HRG_036_001 | v1

simpleParameter


Unit Measured: s

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