Hargreaves Test UCD_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: 16-17 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
Radiant heat light source manufacturer

Site of challenge injection

Testing chamber dimensions

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

Test 2: average latency to withdrawal UCD_HRG_006_001 | v1.0

Unit Measured: s

Derivation: meanOfIncrements('UCD_HRG_005_001',1)

Time between challenge and test 2 UCD_HRG_017_001 | v1.0

Unit Measured: Hours

Options: 144, 48,

Experimenter ID UCD_HRG_034_001 | v1.0
**Test 1: average latency to withdrawal**  
*UCD_HRG_004_001* | v1.0

*simpleParameter*

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

Unit Measured: s

Derivation: meanOfIncrements('UCD_HRG_003_001',1)

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**Anaesthetic for challenge injection**  
*UCD_HRG_014_001* | v1.0

*procedureMetadata*

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

Options: Isoflurane,

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**Lid colour/opacity**  
*UCD_HRG_028_001* | v1.0

*procedureMetadata*

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

Options: Clear,

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**Glass base heated during acclimatisation**  
*UCD_HRG_008_001* | v1.0

*procedureMetadata*
**Baseline: average latency to withdrawal**  
*UCD_HRG_002_001 | v1.0*

*simpleParameter*

- **Unit Measured:** s
- **Derivation:** `meanOfIncrements('UCD_HRG_001_001',1)`

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**Length of acclimatisation period**  
*UCD_HRG_007_001 | v1.0*

*procedureMetadata*

- **Unit Measured:** min
- **Options:** 60, 30, 30 - 60,

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**Test intensity**  
*UCD_HRG_021_001 | v1.0*

*procedureMetadata*
**Glass base manufacturer**  UCD_HRG_030_001 | v1.0

*procedureMetadata*

**Options:** IITC,

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**Idle intensity**  UCD_HRG_020_001 | v1.0

*procedureMetadata*

**Unit Measured:** %

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

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**Tetrad colour/opacity**  UCD_HRG_024_001 | v1.0

*procedureMetadata*

**Options:** Clear,
**Tetrad manufacturer**  UCD_HRG_022_001  |  v1.0

**procedureMetadata**


Options: IITC,

**Time between challenge and test 1**  UCD_HRG_016_001  |  v1.0

**procedureMetadata**


Unit Measured: Hours

Options: 24,

**Minimum time between stimulus presentation**  UCD_HRG_01  _001  |  v1.0

**procedureMetadata**


Unit Measured: min

Options: 2,
**Tetrad material**  
UCD_HRG_023_001  | v1.0

*p*procedureMetadata*

**Baseline: latency to withdrawal**  
UCD_HRG_001_001  | v1.0

*p*seriesParameter*

**Glass base temperature: settings**  
UCD_HRG_018_001  | v1.0

*p*procedureMetadata*

**Inset colour/opacity**  
UCD_HRG_026_001  | v1.0

*p*procedureMetadata*
Radiant heat light source model UCD_HRG_033_001 | v1.0

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

Time between baseline measurement and challenge injection UCD_HRG_015_001 | v1.0

Unit Measured: Hours

Options: 0.5-1, 2, 24,

Challenge UCD_HRG_012_001 | v1.0

Options: CFA,
Test 2: latency to withdrawal  UCD_HRG_005_001 | v1.0

seriesParameter


Unit Measured: s

Increments: 1, 2, 3,

Inset material  UCD_HRG_025_001 | v1.0

procedureMetadata


Options: Acrylic,

Lid material  UCD_HRG_027_001 | v1.0

procedureMetadata


Options: Acrylic,

Test 1: latency to withdrawal  UCD_HRG_003_001 | v1.0

seriesParameter
Glass base model  
UCD_HRG_031_001 | v1.0

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

Number of repeats per paw  
UCD_HRG_010_001 | v1.0

Options: Right hind paw tested 3 times,

Maximum exposure time  
UCD_HRG_009_001 | v1.0

Unit Measured: s
Glass base temperature: measured  UCD_HRG_019_001 | v1.0

Options: 30, 20,

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

Unit Measured: C

Options: 29-32,

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