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 UCD_HRG_032_001 | v1.0

procedureMetadata


Options: IITC,

Site of challenge injection UCD_HRG_013_001 | v1.0

procedureMetadata


Options: Plantar surface of right hind paw,

Testing chamber dimensions UCD_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,

Disinfectant UCD_HRG_035_001 | v1.0

procedureMetadata
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


Unit Measured: s

Derivation: meanOfIncrements('UCD_HRG_003_001',1)

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

procedureMetadata


Options: Isoflurane,

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

procedureMetadata


Options: Clear,

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

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

Unit Measured: s

Derivation: meanOfIncrements('UCD_HRG_001_001',1)

Length of acclimatisation period  UCD_HRG_007_001  | v1.0

Unit Measured: min

Options: 60, 30, 30 - 60,

Test intensity  UCD_HRG_021_001  | v1.0

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

Glass base manufacturer  UCD_HRG_030_001  | v1.0
procedureMetadata

Options: IITC,

Idle intensity  UCD_HRG_020_001  | v1.0
procedureMetadata

Unit Measured: %
Options: 2, 3, 10,

Tetrad colour/opacity  UCD_HRG_024_001  | v1.0
procedureMetadata

Options: Clear,
Tetrad manufacturer UCD_HRG_022_001 | v1.0

**procedureMetadata**

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

Options: IITC,
**Tetrad material**  
UCD_HRG_023_001 | v1.0  
procedureMetadata

**Options:** Acrylic,

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

**Unit Measured:** s

**Increments:** 1, 2, 3,

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

**Unit Measured:** C

**Options:** 34, 30, 32,

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**Inset colour/opacity**  
UCD_HRG_026_001 | v1.0  
procedureMetadata
**Radiant heat light source model** UCD_HRG_033_001 | v1.0

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

**Challenge** UCD_HRG_012_001 | v1.0
**Test 2: latency to withdrawal**  
*UCD_HRG_005_001 | v1.0*

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

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

**Inset material**  
*UCD_HRG_025_001 | v1.0*

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

*Options:* Acrylic,

**Lid material**  
*UCD_HRG_027_001 | v1.0*

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

*Options:* Acrylic,

**Test 1: latency to withdrawal**  
*UCD_HRG_003_001 | v1.0*
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

procedureMetadata

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

Unit Measured: C

Options: 29-32,