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

Options: IITC,

Site of challenge injection UCD_HRG_013_001 | v1.0

Options: Plantar surface of right hind paw,

Testing chamber dimensions UCD_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,

Disinfectant UCD_HRG_035_001 | v1.0
Options: Coverage Plus Working Solution, Clidox and 70% Ethanol, 1% Virkon,

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

simpleParameter

Unit Measured: s

Derivation: meanOfIncrements('UCD_HRG_005_001',1)

Time between challenge and test 2 UCD_HRG_017_001 | v1.0

procedureMetadata

Unit Measured: Hours

Options: 144, 48,

Experimenter ID UCD_HRG_034_001 | v1.0

procedureMetadata
Test 1: average latency to withdrawal  UCD_HRG_004_001 | v1.0

Unit Measured: s

Derivation: meanOfIncrements('UCD_HRG_003_001',1)

Anaesthetic for challenge injection  UCD_HRG_014_001 | v1.0

Options: Isoflurane,

Lid colour/opacity  UCD_HRG_028_001 | v1.0

Options: Clear,
**Glass base heated during acclimatisation**  

UCD_HRG_008_001 | v1.0

**Baseline: average latency to withdrawal**  

UCD_HRG_002_001 | v1.0

**Length of acclimatisation period**  

UCD_HRG_007_001 | v1.0
Test intensity  UCD_HRG_021_001 | v1.0


Unit Measured: %

Options: 100, 25, 30, 15,

Glass base manufacturer  UCD_HRG_030_001 | v1.0


Options: IITC,

Idle intensity  UCD_HRG_020_001 | v1.0


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


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_011_001 | v1.0
procedureMetadata


Unit Measured: min
Options: 2,

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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,
Glass base temperature: settings  UCD_HRG_018_001 | v1.0

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

Inset colour/opacity  UCD_HRG_026_001 | v1.0

- **Options:** White opaque, Clear

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
**Challenge** UCD_HRG_012_001 | v1.0

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

**Inset material** UCD_HRG_025_001 | v1.0
**Lid material**  
**UCD_HRG_027_001 | v1.0**

**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
Options: 30, 20,

Glass base temperature: measured  UCD_HRG_019_001 | v1.0

Unit Measured: C