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

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

**Options:** Yes,

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

**procedureMetadata**

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

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

*procedureMetadata*

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

**Options:** Clear,

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**Tetrad manufacturer**  
*UCD_HRG_022_001 | v1.0*

*procedureMetadata*

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

**Options:** IITC,

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

*procedureMetadata*

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

**Unit Measured:** Hours

**Options:** 24,
Minimum time between stimulus presentation  UCD_HRG_011_001 | v1.0

**Procedure Metadata**

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

**Unit Measured**: min  

**Options**: 2, 

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Tetrad material  UCD_HRG_023_001 | v1.0

**Procedure Metadata**

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

**Options**: Acrylic, 

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Baseline: latency to withdrawal  UCD_HRG_001_001 | v1.0

**Series Parameter**

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

**Unit Measured**: s  

**Increments**: 1, 2, 3,
Glass base temperature: settings

**Unit Measured:** C

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

Inset colour/opacity

**Options:** White opaque, Clear,

Radiant heat light source model

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

Time between baseline measurement and challenge injection
**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
Options: 29-32,