Hargreaves Test TCP_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
Inset material TCP_HRG_025_001 | v1.0

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

**Options:** Acrylic,

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Idle intensity TCP_HRG_020_001 | v1.0

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

**Unit Measured:** %

**Options:** 2, 10, 3, 4, 3-4,

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Glass base temperature: settings TCP_HRG_018_001 | v1.0

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

**Unit Measured:** C

**Options:** 30, 34, 32, 30-32,
Lid colour/opacity  TCP_HRG_028_001 | v1.0

**Options:** Clear,

Length of acclimatisation period  TCP_HRG_007_001 | v1.0

**Unit Measured:** min

**Options:** 30 - 60, 60, 30,

Challenge  TCP_HRG_012_001 | v1.0

**Options:** CFA,

Time between challenge and test 2  TCP_HRG_017_001 | v1.0
Testing chamber dimensions TCP_HRG_029_001 | v1.0

Anaesthetic for challenge injection TCP_HRG_014_001 | v1.0

Test 2: average latency to withdrawal TCP_HRG_006_001 | v1.0
Tetrad colour/opacity  TCP_HRG_024_001 | v1.0

Test 1: average latency to withdrawal  TCP_HRG_004_001 | v1.0

Radiant heat light source model  TCP_HRG_033_001 | v1.0
Options: 390 Plantar test head (Item #300TH),

Glass base temperature: measured TCP_HRG_019_001 | v1.0

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

Unit Measured: C

Options: 29-32,

Minimum time between stimulus presentation TCP_HRG_011_0

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

Unit Measured: min

Options: 2,

Tetrad material TCP_HRG_023_001 | v1.0

- Req. Analysis: false
- Req. Upload: true
- Is Annotated: false
Options: Acrylic,

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**Glass base heated during acclimatisation** TCP_HRG_008_001 | v1.0

procedureMetadata


Options: Yes,

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**Test intensity** TCP_HRG_021_001 | v1.0

procedureMetadata


Unit Measured: %

Options: 15, 25, 100, 30,

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**Time between challenge and test 1** TCP_HRG_016_001 | v1.0

procedureMetadata

Unit Measured: Hours

Options: 24,

Inset colour/opacity  TCP_HRG_026_001 | v1.0

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

Options: White opaque, Clear,

Radiant heat light source manufacturer  TCP_HRG_032_001 | v1.0

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

Options: IITC,

Test 2: latency to withdrawal  TCP_HRG_005_001 | v1.0

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

Unit Measured: s

Increments: 3, 1, 2,
Site of challenge injection TCP_HRG_013_001 | v1.0
procedureMetadata


Options: Plantar surface of right hind paw,

Experimenter ID TCP_HRG_034_001 | v1.0
procedureMetadata


Number of repeats per paw TCP_HRG_010_001 | v1.0
procedureMetadata


Options: Right hind paw tested 3 times,

Test 1: latency to withdrawal TCP_HRG_003_001 | v1.0
seriesParameter
Baseline: latency to withdrawal TCP_HRG_001_001 | v1.0

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

Disinfectant TCP_HRG_035_001 | v1.0

Glass base model TCP_HRG_031_001 | v1.0
Options: Model 400 Heated Base (Item #400G),

Baseline: average latency to withdrawal TCP_HRG_002_001 | v1.0

Unit Measured: s

Derivation: meanOfIncrements('TCP_HRG_001_001',1)

Lid material TCP_HRG_027_001 | v1.0

Options: Acrylic,

Tetrad manufacturer TCP_HRG_022_001 | v1.0
Time between baseline measurement and challenge injection

TCP_HRG_015_001 | v1.0

procedureMetadata


Unit Measured: Hours

Options: 24, 2, 0.5-1,

Glass base manufacturer

TCP_HRG_030_001 | v1.0

procedureMetadata


Options: IITC,

Maximum exposure time

TCP_HRG_009_001 | v1.0

procedureMetadata


Unit Measured: s
Options: 20, 30,

Delta2: difference in latency to withdrawal TCP_HRG_036_001 | v1.0

Unit Measured: s

Derivation:
sub(meanOfIncrements('TCP_HRG_001_001',1), meanOfIncrements('TCP_HRG_005_001', 1))