SHIRPA HMGULA_SHI_001

Purpose

The purpose of the assessments is to examine mice for obvious physical characteristics and behaviors.

Descriptions include abnormal locomotion/appearance/behavior/reflex reactions.

Experimental Design

- **Minimum number of animals:** 7M +7F
- **Age at test:** Week 70
- **Sex:** We would expect the results of this test to show sexual dimorphism

Equipment

- Viewing Jar
- SHIRPA arena
- Grid above arena
- Click Box
- Geotaxis grid
- Tube for contact righting

Procedure

1. Allow the mice to acclimatise to the phenotyping room for a period of 30 minutes prior to testing.
2. Throughout the test note any vocalisation, aggression, salivation or unexpected behaviours.
3. Place the mouse in a clear cylinder over a wire grid and observe for activity and tremors.
4. Transfer the mouse out of the cylinder by removing the metal plate/grid whilst positioning 30cm over an arena and record the transfer arousal.
5. Record the number of $10cm^2$ squares the mouse moves into in the first 30 seconds in the arena (locomotor activity).

6. Allow the mouse to move freely around the arena whilst being observed for gait and tail elevation.

7. Hold the click box approximately 30cm above the arena and press the button, record the response of the mouse.

8. Pick up the mouse by the tail and observe for limp grasping and trunk curl. Trunk curl must only be recorded if the mouse curls forward without twisting its body, bending to one side is not scored as a trunk curl.

9. Place the mouse in a small transparent tube. Turn the tube quickly so the mouse is fully upside down and record if the mouse rights itself.

10. Record any vocalisation and/or aggression which were observed throughout the entire test

Notes

1. If wiping down with ethanol prior to the use of equipment, make sure no ethanol residue remains as the ethanol may affect the behaviour of the animals.

2. The validity of results obtained from behavioural phenotyping is largely dependent on methods of animal husbandry. It is important that individuals following this procedure are experienced and aware of the animal's welfare, and is familiar with the animal being tested, in order to reduce the anxiety levels of the animal prior to testing.

3. The majority of mouse behavioural studies are age/sex/strain dependent. It is important to keep these parameters comparable throughout a single experiment.

4. Environmental factors may contribute to the levels of anxiety within the mouse. The temperature, humidity, ventilation, noise intensity and light intensity must be maintained at levels appropriate for mice. It is essential that the mice be kept in a uniform environment before and after testing to avoid anomalous results being obtained.

5. It is recommended that all phenotyping experimentation is conducted at approximately the same time of day because physiological and biochemical parameters change throughout the day.

6. When a number of mice are tested continuously, residual odours from the equipment used in the preceding test may affect the test results. The floor and walls of the arena, ruler, and metal net should be wiped clean before introducing the next mouse. To prevent infection, the equipment should be washed with water at the completion of the day's tests. Some specific pathogen-free facilities use ultraviolet irradiation when tests are not being performed. Care needs to be taken, however, to ensure that ultraviolet irradiation does not crack any acrylate equipment covered with residual alcohol.

Parameters and Metadata

Activity (body position) HMGULA_SHI_003_001 | v1.0

simpleParameter

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

Options: As expected, Inactive, Increased activity,

Tremor HMGULA_SHI_004_001 | v1.0

simpleParameter

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

Options: Absent, Present,

Body weight HMGULA_SHI_001_001 | v1.3

simpleParameter

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

Unit Measured: g

Locomotor activity HMGULA_SHI_002_001 | v1.2

simpleParameter

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

Unit Measured: Squares crossed

Defecation HMGULA_SHI_005_001 | v1.0

simpleParameter

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

Options: Present, Absent,

Transfer arousal HMGULA_SHI_006_001 | v1.2

simpleParameter

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

Options: As expected, Immediate movement, Extended freeze,

Gait HMGULA_SHI_007_001 | v1.0

simpleParameter

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

Options: Lack of fluidity in movement, Fluid movement,

Tail elevation HMGULA_SHI_008_001 | v1.2

simpleParameter

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

Options: Dragging, No data, Straub / elevated tail, As expected,

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Startle response HMGULA_SHI_009_001 | v1.1

simpleParameter

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

Options: No data, None, Present,

Touch escape HMGULA_SHI_010_001 | v1.2

simpleParameter

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

Options: Response to touch, No response, Flees prior to touch,

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Trunk curl HMGULA_SHI_011_001 | v1.0

simpleParameter

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

Options: No data, Present, Absent,

Limb grasp HMGULA_SHI_012_001 | v1.0

simpleParameter

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

Options: Absent, No data, Present,

Pinna reflex HMGULA_SHI_013_001 | v1.0

simpleParameter

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

Options: Present, Absent,

Urination HMGULA_SHI_014_001 | v1.0

simpleParameter

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

Options: Absent, Present,

Contact righting HMGULA_SHI_015_001 | v1.0

simpleParameter

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

Options: No data, Present, Absent,

Evidence of Biting HMGULA_SHI_016_001 | v1.0

simpleParameter

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

Options: Present, Absent,

Vocalization HMGULA_SHI_017_001 | v1.0

simpleParameter

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

Options: As expected, Not as expected,

SHIRPA comment HMGULA_SHI_018_001 | v1.0

simpleParameter

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

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Gait comment HMGULA_SHI_019_001 | v1.0

simpleParameter

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

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Number of animals in cage HMGULA_SHI_020_001 | v1.2

procedureMetadata

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

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Days since cage cleaning HMGULA_SHI_021_001 | v1.0

procedureMetadata

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

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Date/time of procedure start HMGULA_SHI_022_001 | v1.0

procedureMetadata

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

Experimenter ID HMGULA_SHI_023_001 | v1.0

procedureMetadata

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

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Unexpected behaviors HMGULA_SHI_024_001 | v1.0

simpleParameter

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

Options: Retropulsion, Jumping, Circling, None, Other,

Head bobbing HMGULA_SHI_025_001 | v1.0

simpleParameter

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

Options: Present, Absent,

Location of test HMGULA_SHI_026_001 | v1.1

procedureMetadata

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

Options: LAF cabinet, Open bench,

Size of squares in arena HMGULA_SHI_027_001 | v1.0

procedureMetadata

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

Unit Measured: cm^2
