Dark-Light Test CCP_LDT_001

Purpose

To monitor the anxiety-related behaviour of mice in a two-chambered light-dark arena over a defined period of time in order to assess the anxiety phenotype.

Experimental Design

- **Minimum number of animals :** 7M + 7F
- **Age at test:** Week 10
- **Sex:** We would expect the results of this test to show sexual dimorphism

Procedure

1. Acclimatise mice for at least 1 hour before test.

2. Clean the arena with disinfectant and ensure arena is dry.

3. Light intensity levels are set at 200 lux at the centre of light compartment and at 5 lux at the dark one. Light adjustment is performed at the start of each test day.

4. The method of recording is set up with each arena defined. The dark arena constitute approximately 40% of entire chamber.

5. One mouse is placed in the dark compartment and recording is started.

6. The test lasts 5 minutes.

7. At the end of the trial, the mice are removed from the arena and returned to their home cages.

8. Number of transition and time spent in each compartment are calculated automatically by software.

Notes

Local data processing may be implemented to calculate derived measures from this data.

Data QC

Local QC data to assure all data fields have recorded data. In the case all data fields have a value of 0 that particular mouse data will be removed.

1. Verify the total time of each run

Parameters and Metadata

Side changes CCP_LDT_001_001 | v1.0

simpleParameter

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

Unit Measured: count

Description: side_changes

Light side time spent CCP_LDT_002_001 | v1.0

simpleParameter

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

Unit Measured: s

Description: light_side_time_spent

Time mobile light side CCP_LDT_003_001 | v1.0

simpleParameter

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

Unit Measured: s

Description: time_mobile_light_side

Dark side time spent CCP_LDT_004_001 | v1.0

simpleParameter

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

Unit Measured: s

Description: dark_side_time_spent

Time mobile dark side CCP_LDT_005_001 | v1.0

simpleParameter

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

Unit Measured: s

Description: time_mobile_dark_side

Latency to first transition into light CCP_LDT_006_001 | v1.0

simpleParameter

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

Unit Measured: s

Description: latency_to_first_transition_into_light

Percent time in dark CCP_LDT_007_001 | v1.0

simpleParameter

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

Unit Measured: %

Description: percent_time_in_dark

Derivation:
mul(div('CCP_LDT_004_001', add('CCP_LDT_004_001', 'CCP_LDT_002_001')), 100)

Percent time in light CCP_LDT_008_001 | v1.0

simpleParameter

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

Unit Measured: %

Description: percent_time_in_light

Derivation:
mul(div('CCP_LDT_002_001',add('CCP_LDT_004_001', 'CCP_LDT_002_001')), 100)

Transition CCP_LDT_009_001 | v1.1

simpleParameter

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

Description: transition

Options: Yes, No,

Light side distance travelled CCP_LDT_010_001 | v1.0

simpleParameter

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

Unit Measured: cm

Description: light_side_distance_travelled

Dark side distance travelled CCP_LDT_011_001 | v1.0

simpleParameter

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

Unit Measured: cm

Description: dark_side_distance_travelled

Vertical activity (rearing) CCP_LDT_012_001 | v1.0

simpleParameter

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

Unit Measured: count

Description: vertical_activity_rearing

Horizontal activity CCP_LDT_013_001 | v1.0

simpleParameter

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

Unit Measured: count

Description: horizontal_activity

Repetitive beam break ('stereotypy counts') CCP_LDT_014_001 | v1.0

simpleParameter

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

Unit Measured: count

Description: repetitive_beam_break_stereotypy_counts

Total distance travelled CCP_LDT_015_001 | v1.0

simpleParameter

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

Unit Measured: cm

Description: total_distance_travelled

Light level light chamber CCP_LDT_016_001 | v1.0

procedureMetadata

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

Unit Measured: Lux

Description: light_level_light_chamber

Options: 200,

Light level dark chamber CCP_LDT_017_001 | v1.0

procedureMetadata

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

Unit Measured: Lux

Description: light_level_dark_chamber

Options: 5,

Experimenter ID CCP_LDT_018_001 | v1.0

procedureMetadata

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

Description: experimenter_id

Start time CCP_LDT_019_001 | v1.0

procedureMetadata

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

Description: start_time

Arena ID CCP_LDT_020_001 | v1.0

procedureMetadata

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

Description: arena_id

Arena version CCP_LDT_021_001 | v1.0

procedureMetadata

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

Description: arena_version

Options: Custom made,

Equipment ID CCP_LDT_022_001 | v1.0

procedureMetadata

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

Description: equipment_id

Options: Custom made,

Equipment manufacturer CCP_LDT_023_001 | v1.0

procedureMetadata

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

Description: equipment_manufacturer

Options: Biobserve,

Equipment model CCP_LDT_024_001 | v1.0

procedureMetadata

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

Description: equipment_model

Options: Custom made,

Disinfectant CCP_LDT_025_001 | v1.0

procedureMetadata

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

Description: disinfectant

Options: 70% Isopropanol,

Starting position CCP_LDT_026_001 | v1.0

procedureMetadata

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

Description: starting_position

Options: Facing away from entry,

Light-Dark box's walls opaque CCP_LDT_027_001 | v1.0

procedureMetadata

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

Description: light_dark_box_s_walls_opaque

Options: Yes, No,

Light-Dark box set-up CCP_LDT_028_001 | v1.0

procedureMetadata

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

Description: light_dark_box_set_up

Options: Standalone,

Light side arena dimensions (L x W x H, in mm) CCP_LDT_029_001 | v1.0

procedureMetadata

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

Description: light_side_arena_dimensions_l_x_w_x_h_in_mm

Options: 490 x 285 x 190,

Dark side arena dimensions (L x W x H, in mm) CCP_LDT_030_001 | v1.0

procedureMetadata

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

Description: dark_side_arena_dimensions_l_x_w_x_h_in_mm

Options: 490 x 195 x 190,

Entry way dimensions (H x W x L, in mm) CCP_LDT_031_001 | v1.0

procedureMetadata

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

Description: entry_way_dimensions_l_x_w_x_h_in_mm

Options: 6 x 70 x 70,

Test duration CCP_LDT_032_001 | v1.0

procedureMetadata

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

Unit Measured: min

Options: 5,

Software version CCP_LDT_033_001 | v1.0

procedureMetadata

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

Options: Viewer3,
