# Dysmorphology HMGULA_DYS_001

## Purpose

To visually examine mice and record morphological abnormalities. Whole body check up for anatomical abnormalities and malfunctions in different organ systems.

## Experimental Design

- **Minimum number of animals :** 7M +7F
- **Age at test:** Week 56
- **Sex:** We do not expect the results of this test to show sexual dimorphism.

## Procedure

1. It is important that individuals following this procedure are experienced and aware of the animal's welfare and are familiar with the animal being tested. Animals need to be treated with extra care since animals with advanced age are more fragile.
2. Allow the mice to acclimatise to the phenotyping room for a period of some minutes prior to testing.
3. The respective mouse is identified via the ear tag.
4. Take the weight of the animal.
5. While the mouse is sitting on the hand, take note about the overall appearance of the mouse (360° inspection), and the following parameters are recorded: Abnormal growth, Body posture, Activity and behaviour (unexpected behaviours, Aggression, Reduced movement, Hyperactive behaviour).
6. Grab the mouse by the neck and tail so that one can examine the belly of the mouse. Annotate for Abnormal coat, Colour or skin condition, Alopecia degree area (no alopecia, <10%, 10 to 50%, >50%, Hairless Mouse), Eyes abnormalities (Cataracts cornea opacity, Teeth abnormalities.
7. The paws are checked for deformations or other abnormalities. For easier recognition, push the leg slightly upwards, then the foot stretches, and the toes are automatically spread apart.

## Notes

During this test, note any unexpected dysmorphological characteristics or unexpected behaviours.

## Parameters and Metadata

## Tail Presence HMGULA_DYS_001_001 | v1.0

simpleParameter

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

**Options:** Absent, Present,

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# Tail Length HMGULA_DYS_002_001 | v1.0
simpleParameter

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

**Options:** Long, Short, As expected, No data,

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# Tail thickness HMGULA_DYS_003_001 | v1.0
simpleParameter

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

**Options:** Increased, Decreased, As expected, No data,

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# Tail morphology HMGULA_DYS_004_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Coat - color - back HMGULA_DYS_005_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Coat - color - head HMGULA_DYS_006_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Coat - color - abdomen HMGULA_DYS_007_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected, No data,

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## Coat - color pattern - back HMGULA_DYS_008_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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## Coat - color pattern - head HMGULA_DYS_009_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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## Coat - color pattern - abdomen HMGULA_DYS_010_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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## Coat - hair distribution - back HMGULA_DYS_011_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Coat - hair distribution - head HMGULA_DYS_012_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Coat - hair distribution - abdomen HMGULA_DYS_013_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Coat - hair texture / appearance - back HMGULA_DYS_014_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Coat - hair texture / appearance - head HMGULA_DYS_015_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Coat - hair texture / appearance - abdomen HMGULA_DYS_016_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Forelimbs - position HMGULA_DYS_017_001 | v1.0

simpleParameter

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

**Options:** As expected, One forelimb only - not as expected, Both forelimbs - not as expected,

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## Forelimbs - shape HMGULA_DYS_018_001 | v1.0

simpleParameter

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

**Options:** As expected, One forelimb only - not as expected, Both forelimbs - not as expected,

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## Forelimbs - size HMGULA_DYS_019_001 | v1.0

simpleParameter

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

**Options:** As expected, One forelimb only - increased, One forelimb only - decreased,
Both forelimbs - increased, Both forelimbs - decreased,

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## Hindlimbs - position HMGULA_DYS_020_001 | v1.0

simpleParameter

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

**Options:** As expected, One hindlimb only - not as expected,
Both hindlimbs - not as expected,

## Hindlimbs - shape HMGULA_DYS_021_001 | v1.0

simpleParameter

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

**Options:** As expected, One hindlimb only - not as expected,
Both hindlimbs - not as expected,

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## Hindlimbs - size HMGULA_DYS_022_001 | v1.0

simpleParameter

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

**Options:** As expected, One hinlimb only - increased, One hindlimb only - decreased,
Both hindlimbs - increased, Both hindlimbs - decreased,

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## Vibrissae - presence HMGULA_DYS_023_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Vibrissae - appearance HMGULA_DYS_024_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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## Head size HMGULA_DYS_025_001 | v1.0
simpleParameter

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

**Options:** As expected, Increased, Decreased,

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## Head morphology HMGULA_DYS_026_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected,

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## Ears HMGULA_DYS_027_001 | v1.0
simpleParameter

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

**Options:** As expected, Not as expected,

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## Snout Size HMGULA_DYS_028_001 | v1.0

simpleParameter

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

**Options:** As expected, Increased, Decreased,

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## Forepaw size HMGULA_DYS_029_001 | v1.0

simpleParameter

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

**Options:** As expected, One forepaw - increased, One forepaw - decreased,
Both forepaws - increased, Both forepaws - decreased,

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## Hindpaw size HMGULA_DYS_030_001 | v1.0

simpleParameter

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

**Options:** As expected, One hindpaw - increased, One hindpaw - decreased,
Both hindpaws - increased, Both hindpaws - decreased,

## Forepaw shape HMGULA_DYS_031_001 | v1.0

simpleParameter

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

**Options:** As expected, One forepaw - not as expected, Both forepaws - not as expected,

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## Hindpaw shape HMGULA_DYS_032_001 | v1.0

simpleParameter

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

**Options:** As expected, One hindpaw - not as expected, Both hindpaws - not as expected,

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## Forelimb digit number HMGULA_DYS_033_001 | v1.0

simpleParameter

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

**Options:** As expected, One forelimb - increased number, One forelimb - decreased number, Both forelimbs - increased number, Both forelimbs - decreased number,

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## Hindlimb digit number HMGULA_DYS_034_001 | v1.0

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

**Options:** As expected, One hindlimb - increased number, One hindlimb - decreased number, Both hindlimbs - increased number, Both hindlimbs - decreased number,

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# Forelimb digit size HMGULA_DYS_035_001 | v1.0

simpleParameter

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

**Options:** As expected, One forelimb - increased size, One forelimb - decreased size, Both forelimbs - increased size, Both forelimbs - decreased size, Both forelimbs - fused,

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# Hindlimb digit size HMGULA_DYS_036_001 | v1.0

simpleParameter

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

**Options:** As expected, One hindlimb - increased size, One hindlimb - decreased size, Both hindlimbs - increased size, Both hindlimbs - decreased size, Both hindlimbs - fused,

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# Forelimb digit shape HMGULA_DYS_037_001 | v1.0

simpleParameter

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

**Options:** As expected, One forelimb - not as expected, Both forelimbs - not as expected,

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## Hindlimb digit shape HMGULA_DYS_038_001 | v1.0
simpleParameter

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

**Options:** As expected, One hindlimb - not as expected, Both hindlimbs - not as expected,

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## Forelimb nail number HMGULA_DYS_039_001 | v1.0
simpleParameter

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

**Options:** As expected, One forelimb - increased number, One forelimb - decreased number, Both forelimbs - increased number, Both forelimbs - decreased number, No data,

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## Hindlimb nail number HMGULA_DYS_040_001 | v1.0
simpleParameter

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

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## Forelimb nail length HMGULA_DYS_041_001 | v1.0

simpleParameter

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

**Options:** As expected, One forelimb - increased length, One forelimb - decreased length, Both forelimbs - increased length, Both forelimbs - decreased length, No data,

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## Hindlimb nail length HMGULA_DYS_042_001 | v1.0

simpleParameter

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

**Options:** As expected, One hindlimb - increased length, One hindlimb - decreased length, Both hindlimbs - increased length, Both hindlimbs - decreased length, No data,

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## Forelimb nail shape HMGULA_DYS_043_001 | v1.0

simpleParameter

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

**Options:** As expected, One forelimb - not as expected, Both forelimbs - not as expected, No data,

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# Hindlimb nail shape HMGULA_DYS_044_001 | v1.0

simpleParameter

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

**Options:** As expected, One hindlimb - not as expected, Both hindlimbs - not as expected, No data,

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# Skin color - whole body HMGULA_DYS_045_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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# Skin color - snout HMGULA_DYS_046_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin color - ear HMGULA_DYS_047_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin color - front paws HMGULA_DYS_048_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin color - back paws HMGULA_DYS_049_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin color - tail HMGULA_DYS_050_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin texture - whole body HMGULA_DYS_051_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin texture - snout HMGULA_DYS_052_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin texture - ear HMGULA_DYS_053_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin texture - front paws HMGULA_DYS_054_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Skin texture - back paws HMGULA_DYS_055_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

------------------------------------------------------------------

## Skin texture - tail HMGULA_DYS_056_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Teeth presence HMGULA_DYS_057_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Upper teeth appearance HMGULA_DYS_058_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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## Lower teeth appearance HMGULA_DYS_059_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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## Genitalia presence HMGULA_DYS_060_001 | v1.0

simpleParameter

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

**Options:** As expected, Absent,

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# Genitalia size HMGULA_DYS_061_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Genitalia morphology HMGULA_DYS_062_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected, No data,

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# Mouth morphology HMGULA_DYS_063_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Upper lip morphology HMGULA_DYS_064_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Lower lip morphology HMGULA_DYS_065_001 | v1.0

simpleParameter

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

**Options:** As expected, Not as expected,

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## Experimenter ID HMGULA_DYS_066_001 | v1.0

procedureMetadata

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

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## Body weight HMGULA_DYS_067_001 | v1.0

simpleParameter

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

**Unit Measured:** g

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## Datetime Bodyweight Dysmorphology HMGULA_DYS_068_001 | v1.0
procedureMetadata

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

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## Comment on dysmorphology examination HMGULA_DYS_069_001 | v1.0
simpleParameter

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

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