Gross Morphology Embryo E14.5-E15.5 IMP C_GEO_001

Purpose

To assess visible morphological defects in E14.5-E15.5 embryos from lethal strains

Experimental Design

- Set up timed matings with heterozygous mice
- Day 0 is defined as the midpoint of the prior dark cycle following the identification of a copulation plug.
- **Minimum number of animals**: 1 mutant of any sex
- **Age at test**: E14.5-E15.5
- Capture gross images (optional)
- Collect tissue and genotype embryos.

Procedure

1. **Set up timed mating with heterozygous animals. Dissect at a consistent time and collect >=2 homozygote embryos. Coordination with viability screen is at the centres discretion.**
2. **Score embryos as live or dead if possible.**
3. **Assess embryos according to Gross Morphology parameters.**
4. **Generate gross images of embryos (optional) with scored defects and control embryos.**
5. **Collect tissue for genotyping**
6. **Process embryos for Histopathology, or other imaging (OPTIONAL - depending on center pipeline)**
7. **Scores will be shown per embryo and split by zygosity.**

If capturing images please attempt to capture left, right, front, and back views of the embryo but if this is not possible left, right is sufficient. Feel free to take higher magnification views to show morphologies of interest.

Notes

All genotypes should be collected using validated assays.
Y chromosome assay required for X-linked lethal strains.

Embryos may be processed for Histopathology or 3D Imaging

Parameters and Metadata

**Alive** IMPC_GEO_001_001 | v1.0

simpleParameter

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

**Description:** alive

**Options:** yes, no,

**Scored** IMPC_GEO_002_001 | v1.0

simpleParameter

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

**Description:** scored

**Options:** yes, no,

**Cardiovascular System** IMPC_GEO_003_001 | v1.0

simpleParameter

- **Req. Analysis:** false
- **Req. Upload:** false
- **Is Annotated:** true
Description: cardiovascular_system
Options: normal, abnormal, unobservable,

Cardiovascular Development IMPC_GEO_004_001 | v1.0
simpleParameter


Description: cardiovascular_development
Options: normal, abnormal, unobservable,

Heart Development IMPC_GEO_005_001 | v1.0
simpleParameter


Description: heart_development
Options: normal, abnormal, unobservable,

Outflow tract development IMPC_GEO_006_001 | v1.0
simpleParameter
**Outflow tract development**

Options: normal, abnormal, unobservable.

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**Absent heartbeat**  
IMPC_GEO_007_001 | v1.0

Options: normal, abnormal, unobservable.

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**Heart Morphology**  
IMPC_GEO_008_001 | v1.0

Options: normal, abnormal, unobservable.

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**Hemorrhage**  
IMPC_GEO_009_001 | v1.0

Options: normal, abnormal, unobservable.
Description: hemorrhage
Options: normal, abnormal, unobservable,

Skin Hemorrhage IMPC_GEO_010_001 | v1.0
simpleParameter

Description: skin_hemorrhage
Options: normal, abnormal, unobservable,

Blood Vessel Morphology IMPC_GEO_011_001 | v1.0
simpleParameter

Description: blood_vessel_morphology
Options: normal, abnormal, unobservable,
**Developmental vascular remodelling**

Options: normal, abnormal, unobservable,

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**Craniofacial** IMPC_GEO_013_001 | v1.0

**Description:** craniofacial

**Options:** normal, abnormal, unobservable,

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**Craniofacial Development** IMPC_GEO_014_001 | v1.0

**Description:** craniofacial_development

**Options:** normal, abnormal, unobservable,

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**Head shape** IMPC_GEO_015_001 | v1.0
**head_shape**

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**Head size** IMPC_GEO_016_001 | v1.0

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**facial_cleft**

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**Cleft Palate** IMPC_GEO_018_001 | v1.0

*simpleParameter*

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

**Description:** cleft_palate

**Options:** normal, abnormal, unobservable,

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**Embryo Size** IMPC_GEO_019_001 | v1.0

*simpleParameter*

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

**Description:** embryo_size

**Options:** normal, abnormal, unobservable,

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**Body wall morphology** IMPC_GEO_020_001 | v1.0

*simpleParameter*

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

**Description:** body_wall_morphology

**Options:** normal, abnormal, unobservable,
**Hearing/Vestibular/Ear**  IMPC_GEO_021_001 | v1.0

**simpleParameter**

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**Description:** hearing_vestibular_ear

**Options:** normal, abnormal, unobservable,

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**Ear Morphology**  IMPC_GEO_022_001 | v1.1

**simpleParameter**

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**Description:** abnormal_ear_morphology

**Options:** normal, abnormal, unobservable,

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**Ear Development**  IMPC_GEO_023_001 | v1.0

**simpleParameter**

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**Description:** ear_development

**Options:** normal, abnormal, unobservable,
**Homeostasis/metabolism**  IMPC_GEO_024_001 | v1.0

*simpleParameter*


Description: homeostasis_metabolism

Options: normal, abnormal, unobservable,

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**Hydrops fetalis (fetal adema)**  IMPC_GEO_025_001 | v1.0

*simpleParameter*


Description: hydrops_fetalis_fetal_adema

Options: normal, abnormal, unobservable,

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**Gastroschisis (herniated abdominal wall)**  IMPC_GEO_026_001 | v1.0

*simpleParameter*


Description: gastroschisis_herniated_abdominal_wall

Options: normal, abnormal, unobservable,
Integument IMPC_GEO_027_001 | v1.0

**simpleParameter**


**Description:** integument

**Options:** normal, abnormal, unobservable,

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Vibrissa Morphology IMPC_GEO_028_001 | v1.0

**simpleParameter**


**Description:** vibrissa_morphology

**Options:** normal, abnormal, unobservable,

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Skin Appearance IMPC_GEO_029_001 | v1.0

**simpleParameter**


**Description:** skin_appearance

**Options:** normal, abnormal, unobservable,
Skin Coloration  IMPC_GEO_030_001  | v1.0
simpleParameter

Description: skin_coloration
Options: normal, abnormal, unobservable,

Limb Bud Morphology  IMPC_GEO_031_001  | v1.0
simpleParameter

Description: limb_bud_morphology
Options: normal, abnormal, unobservable,

Limb Plate Morphology  IMPC_GEO_032_001  | v1.0
simpleParameter

Description: limb_plate_morphology
Options: normal, abnormal, unobservable,
**Tail Morphology**  IMPC_GEO_033_001 | v1.0

*simpleParameter*

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

Description: tail_morphology

Options: normal, abnormal, unobservable,

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**Polydactyly**  IMPC_GEO_034_001 | v1.0

*simpleParameter*

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

Description: polydactyly

Options: normal, abnormal, unobservable,

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**Liver/Biliary**  IMPC_GEO_035_001 | v1.0

*simpleParameter*

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

Description: liver_biliary

Options: normal, abnormal, unobservable,
Liver Morphology  IMPC_GEO_036_001 | v1.0

simpleParameter


Description: liver_morphology

Options: normal, abnormal, unobservable,

Liver Size  IMPC_GEO_037_001 | v1.0

simpleParameter


Description: liver_size

Options: normal, abnormal, unobservable,

Pale Liver  IMPC_GEO_038_001 | v1.0

simpleParameter


Description: pale_liver

Options: normal, abnormal, unobservable,
**Nervous System**  IMPC_GEO_039_001 | v1.0  

*simpleParameter*

**Description:** nervous_system

**Options:** normal, abnormal, unobservable,

**Brain Development**  IMPC_GEO_040_001 | v1.0  

*simpleParameter*

**Description:** brain_development

**Options:** normal, abnormal, unobservable,

**Exencephaly**  IMPC_GEO_041_001 | v1.0  

*simpleParameter*

**Description:** exencephaly
Options: normal, abnormal, unobservable,

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**Holoprosencephaly**  IMPC_GEO_042_001 | v1.0

*simpleParameter*


Description: holoprosencephaly

Options: normal, abnormal, unobservable,

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**spina bifida**  IMPC_GEO_043_001 | v1.0

*simpleParameter*


Description: spina_bifida

Options: normal, abnormal, unobservable,

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**Vision/Eye**  IMPC_GEO_044_001 | v1.0

*simpleParameter*


Description: vision_eye
Options: normal, abnormal, unobservable,

Eye Morphology IMPC_GEO_045_001 | v1.0
simpleParameter


Description: eye_morphology

Options: normal, abnormal, unobservable,

Eye Size IMPC_GEO_046_001 | v1.0
simpleParameter


Description: eye_size

Options: normal, abnormal, unobservable,

Microphthalmia IMPC_GEO_047_001 | v1.3
simpleParameter

Description: microphthalmia

Options: normal, abnormal, unobservable,
Description: images

Increments: Minimum 1

Exp[erimente]r ID IMPC_GEO_051_001 | v1.0


Description: experimenter_id

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Equipment ID IMPC_GEO_052_001 | v1.0


Description: equipment_id

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Equipment Manufacturer IMPC_GEO_053_001 | v1.0


Description: equipment_manufacturer
Equipment Model  IMPC_GEO_054_001 | v1.0

Description: equipment_model

Fixative  IMPC_GEO_055_001 | v1.0

Description: fixative

Time of Dissection  IMPC_GEO_056_001 | v1.0

Description: time_of_dissection

Somite Stage  IMPC_GEO_057_001 | v1.1
procedureMetadata

**Description:** somite_stage

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**Time of dark cycle start** IMPC_GEO_058_001 | v1.0

procedureMetadata

**Description:** time_of_dark_cycle_start

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**Time of dark cycle end** IMPC_GEO_059_001 | v1.0

procedureMetadata

**Description:** time_of_dark_cycle_end

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**Date equipment last calibrated** IMPC_GEO_060_001 | v1.1

procedureMetadata

**Description:**
Description: date_equipment_last_calibrated