## **Heart Weight ICSLA\_HWT\_001**

## **Purpose**

To evaluate cardiac size using heart weight and body weight.

## **Experimental Design**

• Minimum number of animals: 7M + 7F

Age at test: Week 58

## **Equipment**

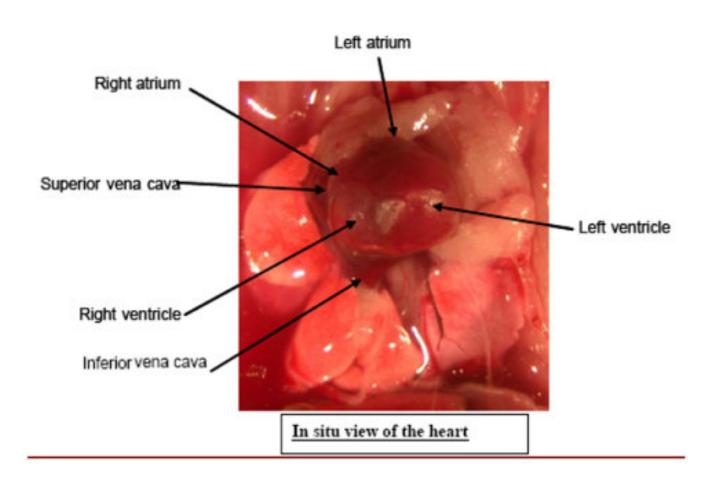
- fine forceps
- surgical scissors
- fine surgical scissor
- kim wipes (tissues) or surgical compress
- laboratory balance
- labelled jar with fixative
- corkplate or wax board
- pins
- jar containing tap water to rinse the tools

### **Procedure**

Methods and procedures used not including center-specific data entry methods.

- 1. Sacrifice the mouse
- 2. Weigh and record total body weight
- 3. Place mouse on its back and pin the mouse onto board with extended extremities (inner side of hands and foot)
- 4. Wipe or wet the mouse with 70% ethanol to control hair and dander
- 5. Option A (for mice that are undergoing complete necropsy):
  - Proceed with a complete necropsy and tissue collection according to Centre-specific technical SOP including removal of the heart by dissecting the aortic root immediately above the aortic valves and the superior vena cava above the atria
  - Remove adjacent mediastinal fat pads from the excised heart carefully with forceps
  - Empty heart blood by tapping the heart on a kim wipe (absorbent pad) or surgical compress. Repeat until the heart is totally dry

- Weigh the heart, record the weight in the Centre-specific database, and place the heart in fixative
- 6. Option B (for mice that are not undergoing complete necropsy):
  - Open the skin in the ventral midline and in the direction of the extremities and extend cut to hands and feet
  - Open the muscular abdominal wall in the midline and along the lower margin of the rib cage with small forceps
  - Open rib cage by removing the sternum and adjacent ribs
  - Remove the heart by dissecting the aortic root immediately above the aortic valves and the superior vena cava above the atria
  - Remove adjacent mediastinal fat pads from the excised heart carefully with forceps
  - Empty heart blood by tapping the heart on a kim wipe (absorbent pad) or surgical compress. Repeat until the heart is totally dry
  - Weigh the heart and record the weight in the Centre-specific database
  - Discard the heart



#### **Notes**

All data are collected at a local workstation in the necropsy room (attached to a digital balance) and uploaded to the Centre-specific pathology data capture system.

#### Data QC

Mouse weight between 5 grams and 150 grams

Weight (in mg)			
Data Analysis, annotation and display (+statistics)			
Statistics: ANOVA/Wilcoxon test using normalized heart weights (for body weight) displayed in boxplot			
Parameters and Metadata			
Date of sacrifice ICSLA_HWT_001_001   v1.0 procedureMetadata			
Req. Analysis: false	Req. Upload: true	Is Annotated: false	
Equipment ID ICSLA_HWT_006_001   v1.0 procedureMetadata			
Req. Analysis: false	Req. Upload: true	Is Annotated: false	
Tibia length ICSLA_HWT_002_001   v1.1 simpleParameter			
Req. Analysis: false	Req. Upload: false	Is Annotated: true	
Unit Measured: mm			

**IMPC Parameters (+ontology annotations)** 

# Heart weight normalised against tibia length ICSLA\_HWT\_013\_0 01 | v1.3

simpleParameter

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

Derivation: div('ICSLA\_HWT\_008\_001', 'ICSLA\_HWT\_002\_001')

## Experimenter ID ICSLA\_HWT\_003\_001 | v1.0

procedureMetadata

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

## Equipment model ICSLA\_HWT\_011\_001 | v1.0

procedureMetadata

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

**Options:** Adventurer AX223/E, Scout Pro SPU123, MS104S, HR-120, PG3001-S, Adventurer Pro, AB104-S, GF-200, TP-114, P-403, AV2101, TE212, AV212C, QUINTIX124-1S, AV213C, 201-10,

.....

## Method of sacrifice ICSLA\_HWT\_005\_001 | v1.1

Req. Analysis: false Req. Upload: true Is Annotated: false Options: Avertin, Ketamine (110mg/kg)/Xylazine (11mg/kg), Isoflurane overdose, Ketamine (110mg/kg)/Xylazine (11mg/kg)/ Antisedan (1mg/kg), Ketamine (100mg/kg)/Xylazine (10mg/kg), Cervical dislocation, Pentobarb (0.1ml), Exsanguination, Carbon dioxide, Ketamine(100mg/kg)/ Xylazine (10mg/kg)/ Antisedan (1mg/kg), Cardiac puncture, None, Anesthetized, Ketamine (137mg/kg)/Xylazine (6.6mg/kg), Body weight ICSLA\_HWT\_007\_001 | v1.3 simpleParameter Reg. Analysis: false Reg. Upload: true **Is Annotated:** false Unit Measured: g Date equipment last calibrated ICSLA\_HWT\_009\_001 | v1.2 procedureMetadata

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

# Heart weight normalised against body weight ICSLA\_HWT\_012

\_001 | v1.0

simpleParameter

Req. Analysis: false	Req. Upload: false	Is Annotated: false	
Derivation: div('ICSLA_HWT	_008_001', 'ICSLA_HWT_007_	_001')	
Heart weight ICSLA_HWT_008_001   v1.2 simpleParameter			
Req. Analysis: false	Req. Upload: true	Is Annotated: true	
Unit Measured: mg			
Equipment manufacturer ICSLA_HWT_010_001   v1.0 procedureMetadata			
Req. Analysis: true	Req. Upload: true	Is Annotated: false	
Options: Sartorius AG Germany, A & D, Mettler Toledo, Denver Instrument, Ohaus, Radwag,			