Electrocardiogram (ECG) IMPC_ECG_001

Purpose

To find out and evaluate cardiac functional changes reflected in electrocardiogram in a conscious mouse.

Experimental Design

1. **Minimum number of animals :** 5M + 5F
2. **Age at test:** Ideal age = 12 weeks ±3 days.
3. **Sex:** We would expect the results of this test to show sexual dimorphism

Procedure

1. Mouse is hold by hand gently on which the lead platelet surface electrode are set at palms and sole with plastic clips and connected to the the pre-amplifier unit.
2. The plastic clips should be gentle enough not to induce any irritation. The platelet surface electrode need to be covered with conducting cream to ensure close contact on their skin.
3. Then, turn on the combined amplifier and the pre-amplifier, double click the icon ECG acquisition on the acquisition computer, open the ECG set up file, keep mouse sound in hand, press Start.
4. After the desired acquisition time, (-10 minutes) stop the reading.
5. There will be one long reading, save the data. For additional readings create a new session using the same settings as before. When saving sections with good readings, highlight the selected area and then save.

Notes

Data Analysis

ECG data would provide more useful insight and increase potential to identify cardiovascular phenotypes when considered with heart weight and heart histopathlogy.

Data QC

Analysis room should be dim and quiet. Keep the door closed preferably while analysis is taking place.

Parameters

	Version	Type	Increment	Option	Derived	Unit	Data Type

	Version	Type	Increment	Option	Derived	Unit	Data Type
Number of signals IMPC_ECG_001_001	1.2	simpleParameter					FLOAT
HR IMPC_ECG_002_001	1.0	simpleParameter					FLOAT
CV IMPC_ECG_003_001	1.0	simpleParameter				%	FLOAT
RR IMPC_ECG_004_001	1.2	simpleParameter				ms	FLOAT
PQ IMPC_ECG_005_001	1.0	simpleParameter		No		ms	FLOAT
PR IMPC_ECG_006_001	1.1	simpleParameter				ms	FLOAT
QRS IMPC_ECG_007_001	1.2	simpleParameter				ms	FLOAT
ST IMPC_ECG_008_001	1.0	simpleParameter			To JT	ms	FLOAT
QTc IMPC_ECG_009_001	1.0	simpleParameter				ms	FLOAT
HRV IMPC_ECG_010_001	1.0	simpleParameter				bpm	FLOAT
QTc Dispersion IMPC_ECG_011_001	1.0	simpleParameter				ms	FLOAT
Mean SR amplitude IMPC_ECG_012_001	1.0	simpleParameter		No		mV	FLOAT
Mean R amplitude IMPC_ECG_013_001	1.0	simpleParameter		No		mV	FLOAT
rMSSD IMPC_ECG_014_001	1.0	simpleParameter		No		ms	FLOAT
pNN5(6>ms) IMPC_ECG_015_001	1.1	simpleParameter		No		%	FLOAT

Metadata

	Version	Type	Increment	Option	Derived	Unit	Data Type
Equipment ID IMPC_ECG_016_001	1.0	procedureMetadata					TEXT
Equipment Manufacturer IMPC_ECG_017_001	1.0	procedureMetadata		AD Instruments			TEXT
Equipment Model IMPC_ECG_018_001	1.0	procedureMetadata		ML826/FE132			TEXT
Anesthetic IMPC_ECG_019_001	1.0	procedureMetadata		No anesthesia			TEXT
Experimenter ID IMPC_ECG_020_001	1.0	procedureMetadata					TEXT

	Version	Type	Increment	Option	Derived	Unit	Data Type
Noise level IMPC_ECG_021_001	1.0	procedureMetadata					TEXT
Light level IMPC_ECG_022_001	1.0	procedureMetadata					TEXT
Date equipment last calibrated IMPC_ECG_023_001	1.1	procedureMetadata					DATE