OVERVIEW

The aim of the EPIC Phenotyping Unit is to provide a standard set of phenotypic tests as a primary screen for altered anatomy and/or physiological functions.

These tests are provided as a service by EPIC staff, using standardized SOP's (IMPRESS).

The EPIC phenotyping license is available for a standard phenotyping screen (see right side).

ADDITIONAL DEVICES

In addition to the standard tests, the EPIC Phenotyping unit also offers a number of devices for research, including:

- Grip Strength Meter - used to measure neuromuscular function as maximal muscle strength .
- 3-Chamber Sociability Test to assess cognition in the form of general sociability and interest in social novelty in rodent models of CNS disorders.
- Elevated Plus Maze for measuring anxiety-like behavior.
- CODA tail-cuff blood pressure system to allow accurate non-invasive blood pressure measurement in mice and rats.

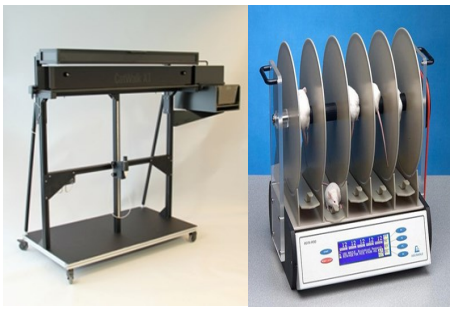
LOCOMOTOR STUDIES

Noldus CatWalk XT

The CatWalk XT is an automated gait analysis system to objectively assess function in rodents including movement deficits, and locomotor problems.

Ugo Basile RotaRod

The rotarod test is used to assess motor coordination and balance in rodents. The rotarod measures motor coordination and motor function. The effects of drugs, disease, ageing, and neural damage on muscle strength may be assessed.



EPIC Phenotyping Unit

SERVICE

Phenotyping of Genetically Modified and Mutant Mouse Strains by Standardized Methods

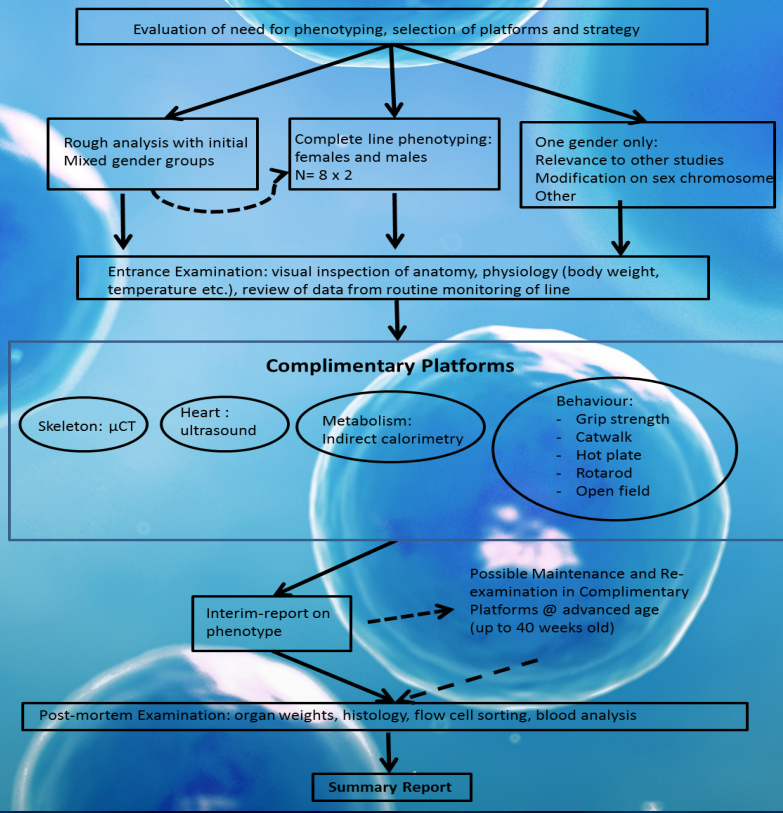
EPIC Phenotyping License Available to run Standard Phenotyping Tests Quickly

FEATURES

The Standard Phenotyping Tests will include:

- **Behavioral Phenotyping (grip strength, hot plate, rotarod, open field)**
- **Catwalk Test (gait analysis)**
- **Metabolic Analysis**
- **Ultrasound Imaging**

EPIC Phenotyping Platforms



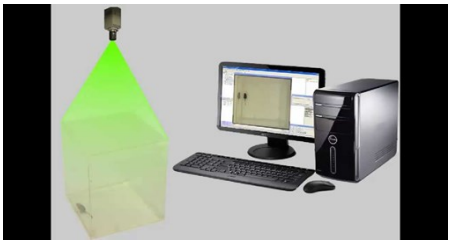
E-mail: phenotyping@epic.ethz.ch
Website: http://www.epic.ethz.ch

ETH Phenomics Center
Swiss Federal Institute of Technology
HPL
Otto-Stern-Weg 7
8093 Zürich

Standardized Phenotyping Service Price List 2016/2017

BEHAVIOURAL STUDIES

Open Field Test (Noldus Ethovision)
Commonly used measure of general locomotor activity, willingness to explore and behaviour in rodents. The test is based on the natural tendency of an animal to explore and to protect itself using avoidance, which translates to a normal animals spending more time in the periphery of the Open Field arena than in the center (the most anxiogenic area).



METABOLIC STUDIES

TSE PhenoMaster Metabolic System
Used for metabolic, calorimetric, physiological & behavioral phenotyping of rodents.
Available with or without climate control (maximum 8 cages with climate control or up to 16 cages without).

IMAGING STUDIES

SCANCO MicroCT
In vivo micro-computed tomography standardized analysis in femur to detect differences in bone mass and structure.

VisualSonics Ultrasound and Photoacoustic System
High resolution echocardiography and photoacoustic system for noninvasive and rapid real-time imaging, and measurement of the magnitude of the emission, providing physiologically specific optical absorption contrast in 2D or 3D images of the targeted areas can then be formed.

EPIC Phenotyping Unit Device	TEST	Cohort size	Staff time (h)	TOTAL Cost / test
General health moni-	Entrance Examination and Body Weight (modified SHIRPA)	8.0	4.0	SFr. 200.00
		16.0	8.0	SFr. 400.00
Motor/ Locomotion	Grip Test	8.0	4.0	SFr. 200.00
		16.0	6.0	SFr. 300.00
	Rotarod	8.0	4.0	SFr. 200.00
		16.0	8.0	SFr. 400.00
	Gait assessment (CatWalk)	8.0	4.0	SFr. 400.00
		16.0	6.0	SFr. 540.00
Sensitivity	Hot Plate test	8.0	3.0	SFr. 150.00
		16.0	6.0	SFr. 300.00
Anxiety	Openfield	8.0	3.0	SFr. 330.00
		16.0	6.0	SFr. 540.00
Home cage monitoring (Phenomaster)	Home cage monitoring - 48h	8.0	4.0	SFr. 400.00
		16.0	6.0	SFr. 580.00
Body weight / food intake (Ad-on for Phenomaster)	Body weight	8.0	1.0	SFr. 170.00
		16.0	2.0	SFr. 220.00
	Food intake	8.0	1.0	SFr. 170.00
		16.0	2.0	SFr. 220.00
Cardio	Ultrasound	8.0	8.0	SFr. 1'080.00
		16.0	16.0	SFr. 2'040.00
Skeletal	MicroCT	8.0	4.0	SFr. 800.00
		16.0	8.0	SFr. 1'480.00
General procedures	Blood collection (tail)	8.0	0.4	SFr. 17.50
		16.0	0.4	SFr. 17.50
	Faeces collection	8.0	0.4	SFr. 17.50
		16.0	0.4	SFr. 17.50
	Injection (IP, IV, gavage, etc.)	8.0	0.4	SFr. 17.50
		16.0	0.4	SFr. 17.50
	Necropsy and organ collection (with optional perfusion)	4.0	4.0	SFr. 320.00
		8.0	8.0	SFr. 520.00

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