

NeoGAIT®

Gait development

Background

Genetic mouse models of human diseases provide an invaluable tool to shed light on the pathophysiology of psychomotor disorders in children. Paradoxically, although symptoms of neuromuscular disorders currently appear during infancy, most mouse models of these diseases are investigated during adulthood, disregarding the critical period of postnatal development. This major drawback is due to the lack of appropriate tools and methods to investigate psychomotor development in newborn mice. We developed a new device, NeoGAIT®, to evaluate gait development of animals during the first weeks of life until adulthood.

Specifications

- Completely non-invasive
- Specifically developed for newborn and juvenile animals
- Temperature controlled and soundproof evaluation room
- Freely-moving animal: no need for habituation or learning procedures

PhenoPups

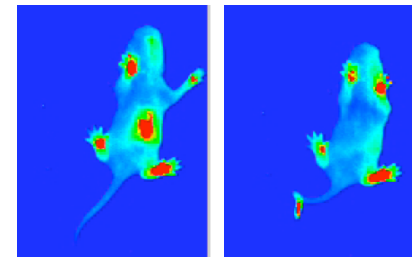
PRECLINICAL PAEDIATRIC SERVICES

Advantages

Unlike other systems available on the market, NeoGAIT® allows to study the ontogenesis of the locomotion in newborn mice and rats.

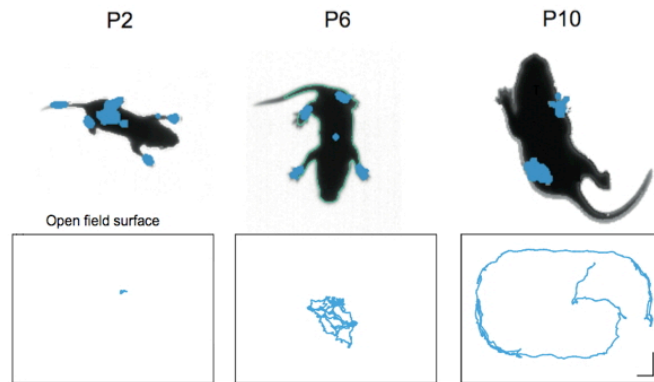
The device allows precise and automatic gait analysis of mice and rats from birth to adulthood. Evolution of gait parameters is observed from birth to adulthood, through development, in the same device.

PhenoPups expertise and NeoGAIT® device is the perfect combination to study gait development in your murine model.



Technology

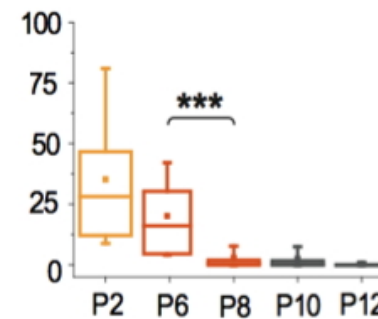
- Bi-optical technology
- Detection of body shape and animal's contact points with the floor



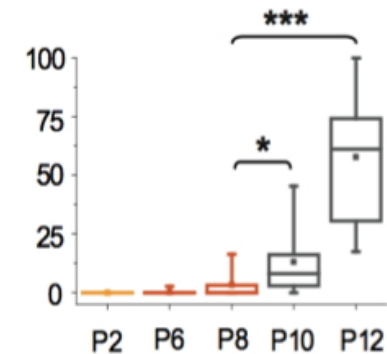
Case study ¹

Gait development in *Swiss* mice from 2 to 12 days.

Abdominal contact duration (% of time)



Total distance travelled along straight line segments (cm)



1: Dehorter N, Michel F, Marissal T, Rotrou Y, Matrot B, Lopez C, Humphries MD, Hammond C. Onset of Pup Locomotion Coincides with Loss of NR2C/D-mediated Cortico-striatal EPSCs and Dampening of Striatal Network Immature Activity. Front Cell Neurosci 2011.