# IntelliCage

IntelliCage allows you to assess the home cage behavior and cognitive performance of up to 16 individual mice or rats separately while they are living in a social environment. This unique experimental setup fosters natural social behavior in a biologically relevant, enriched but highly standardized home cage context. In this way, the IntelliCage minimizes the need for handling and human intervention, thereby increasing task validity, data reproducibility and ensuring a high level of animal welfare.

• In-depth screening of individual experimental animals in a social context
• Up to 16 animals per cage, efficient testing, high throughput
• Maximal standardization and reproducibility
• Minimal human intervention, high validity
• Fully automated task performance
• Broad variety of accessible data
• Flexible design of paradigms
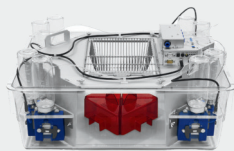
PhenoMaster

PhenoMaster is the world's leading metabolic and phenotyping platform. The system is made to be flexibly adjusted to your specific research field and will be customized to your specific research needs, while still allowing you the flexibility to add additional modules if your research focus changes. To choose the most efficient setup, please contact our experts to discuss your specific needs. Three disciplines combined in the home cage: metabolic, behavioral and physiological data are captured in high resolution and complete synchrony.

• Characterization of experimental animals under controlled conditions in the home cage
• Elimination of human bias
• Standardization of the environment
• Broad spectrum of available parameters
• High throughput phenotyping by running large number of cages in parallel
• Real-time measurement of O_2, CO_2 and energy expenditure with optional $13CO_2$, CH_4, H_2, H_2S, N_2O, NH_3 sensors
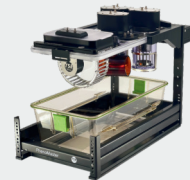
MotoRater

MotoRater is a semi-automated system for rodent kinematic gait analysis with high sensitivity to evaluate 4 different motion modalities – over ground walking, skilled ladder walking, wading in water and swimming. In contrast to conventional methods, MotoRater allows testing animals in water, which offers the exceptional opportunity to evaluate severely impaired rodent models, which would not be able to support their body weight on solid ground.

• Fine kinematic gait analysis in 4 modalities: **walking**, **ladder walking**, **wading**, **swimming**
• Observation and analysis of 3 animal sides
• Data from all relevant body parts – not just paws
• Movement analysis based on trajectories of joint positions and angles with respective properties
• More than 100 parameters
• High sensitivity
• Combines with several other methods (e.g. Electrophysiology, Optogenetics and Telemetry)

Stellar Telemetry

NeuroLux

Inhalation Systems

Stellar Telemetry is the newest generation of implantable telemetry technology, allowing you to collect vital signs while performing phenotypical, physiological, pharmacological, behavioral, metabolic and inhalation studies in and outside of your facility. An unlimited number of animals can be monitored by one receiver, facilitating group housing and social interaction studies while monitoring individual animals without having to place a receiver under each cage.

• Collects data anytime, even when outside the up to 5m normal transmission range
• Data can be recorded in continuous and/or scheduled mode for maximizing battery life
• Catheter-tipped solid-state pressure sensor (eliminates slow frequency response, head pressure, and noise)
• **Remote programming and control of implanted transmitter**
• One receiver for multiple animals
• Economic (transmitter can be re-implanted)
• Dedicated software Biopac Acknowledge or NOTOCORD-hemTM Evolution (GLP compatible)

NeuroLux is a turn-key system for **wireless optogenetic** stimulation or inhibition in freely moving rodents. NeuroLux implants don't require external antennas, batteries, fiber optic cables, or head mount stations. The implants have an ultra-lightweight construction (0.02 g), which allows subjects to move naturally as individuals or as interacting members of social groups.
With NeuroLux user-friendly GUI, researchers can select wavelength and program pulse frequency and duration for optogenetics stimulation/inhibition. Multiple colors for LEDs are also available to study various behaviors. The system is compatible with any TTL input system. With wireless battery-free operation, NeuroLux implants offer unlimited operational lifetimes. For different research applications, we offer unilateral or bilateral implants and unique implants for use with the spinal cord.

TSE-Systems provides complete turn-key inhalation systems for a variety of different in-vivo or in-vitro applications. Various aerosol generators including liquid aerosol and vapor generators, dust generators, and cigarette smoke generators provide homogeneous aerosols. Our customer can choose the appropriate Head Nose Only or Whole Body exposure unit, which can be configured in single or multi-place design. In addition, the exposure of cell culture is also possible. Environmental Sensors and special sensors for CO, NO, and VOCs complete the systems and guarantee highest animal welfare and environmental control. The modular system design and the Daco inhalation software for automated control and regulation of experiments are suitable for long- and short-term inhalation experiments in pharmacology, environmental and occupational safety, and bio-defense studies and are in compliance with the OECD, EPA, and GLP guidelines.

www.TSE-Systems.com

www.animalab.eu