

IGSN - SYMPOSIUM

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FNO – 01 / 117

Novel Approaches for Behavioral Assessment of Rodents

PIA KAHNAU

Experimental Toxicology, German Federal Institute for Risk Assessment, Berlin, Germany

Home-Cage Based Experiments

Traditionally, for an experiment laboratory mice are removed from their home-cage and placed in an initially unfamiliar test environment. The handling method and separation can negatively impact the mice's welfare (1,2). To reduce stress, the mice must be habituated to the test environment (3–4). However, if experiments are carried out in the home-cage, habituation is unnecessary. I will first introduce the IntelliCage (IC) system, which is commercially available. The IC serves as a home-cage and is an RFID-based test system that allows to study learning behaviour of group-housed mice. The second test system that I will present is the Mouse Position Surveillance System (MoPSS (5)). This is also an RFID-based system that has been used to perform home-cage based preference tests (5, 6). Home-cage based test systems present challenges. However, with good planning, they offer the advantage of testing mice in their familiar environment, free from human disturbance.

References

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3. Leussis MP, Bolivar VJ. Habituation in rodents: A review of behavior, neurobiology, and genetics. *Neurosci Biobehav Rev*. 2006;30(7):1045–64.
4. Toval A, Baños R, De La Cruz E, Morales-Delgado N, Pallarés JG, Ayad A, et al. Habituation training improves locomotor performance in a forced running wheel system in rats. *Front Behav Neurosci*. 2017;11(March):1–7.
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Host:

PATRICK REINHARDT

Research Division Experimental and Molecular Psychiatry, LWL University Hospital, Department of Psychiatry, Psychotherapy and Preventive Medicine, Ruhr Universität Bochum

