

The home cage as starting point for innovative concepts in behavioural phenotyping Symposium

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Minimal human intervention, handling and transport; undisturbed and continuous behavioural recordings; measurements of long-term and circadian processes. These advantages have made the home cage increasingly popular and acknowledged as testing environment for behavioural phenotyping purposes. Flanked by an upsurge in the number of automated home cage recording systems available on the market, the home cage is more often becoming implemented in behavioural assays and test batteries. Measuring activity under baseline conditions in the home cage facilitates the interpretation of outcomes from other, novel environment tests. However, the home cage can be equipped to serve as a testing environment for an extended number of behavioural domains, such as anxiety and cognition. This symposium presents the most recent innovations and applications in the field of home cage studies. The program is aimed at addressing different types of automated home cage systems that each have their specific methodology suitable for answering the specific questions of their users. Moreover, the symposium will focus on a variety of behavioural domains, such as locomotor activity, emotional learning, operant conditioning and anxiety. The assessment of home cage behaviour presented here is implemented in neurobiological studies combined with genetic strategies and specific disease-related research.

Symposium contents

Fully Automated 24/7 Behavioral Screening for Mutations in Targeted Cognitive Mechanisms in the Mouse

C.R. Gallistel, A.P. King, A.M. Daniel, E.B. Papachristos and F. Balci

Learning (in) the PhenoTyper: an integrative approach to conducting cognitive behavioural challenges in a home cage environment

R.C. de Heer, M.Schenke, W.W. Kuurman and B.M. Spruijt

Differential involvement of the central amygdala in appetitive versus aversive learning in mice trained in the IntelliCage system

E. Knapska, F. Neuhäusser-Wespy, H.P. Lipp, L. Kaczmarek and T. Werka

Genetic dissection of motor activity and anxiety-related behaviors in mice using an automated home cage task

Martien J.H. Kas, Berend Olivier, and Annetrude J.G. de Mooij-van Malsen

Home cage testing of impulsivity

S. Koot, W. Adriani, R. van den Bos, and G. Laviola

Role of home cage studies in epilepsy research

Paolo Fabene

The PhenoTyper automated home cage environment as a high throughput tool to detect behavioral abnormalities of mutant mice

M. Loos