ECO-HAB FULLY AUTOMATED AND ECOLOGICALLY RELEVANT SYSTEM FOR MEASURING MICE SOCIAL BEHAVIOUR

PROBLEM DESCRIPTION

To better understand neural mechanisms underlying disorders of social interactions, such as autism or so-cial phobia, researchers routinely assess sociability in laboratory mice. However, tests of social behavior available off the shelf involve high impact of experimenter factor and thus are highly irreproducible, thus the possibility of meaningful discoveries and inventing novel therapeutic strategies is significantly hindered.

STAGE OF DEVELOPMENT

DISCOVERY   PROTOTYPE   MINIMAL VIABLE PRODUCT   READY FOR SALE

INNOVATION OF THE SOLUTION

Eco-HAB is a radio-frequency identification-based (RFID) system for reliable automated testing of spontaneous social interactions in group-housed mice. The core of the system is the physical architecture of the cages as well as the concept behind parametrization of the behavior, data collection and analysis.

THE MOST IMPORTANT ADVANTAGES

Automation – no contact between an experimenter and tested animals.
Reproducibility – discrete, reproducible behavioural parameters are analysed.
Robustness – analysis of both individual animals and group behaviour.

nencki institute
of experimental biology

PROJECT CORE TEAM

Ewelina Knapska   Alicja Puścian   Paweł Boguszewski   Grzegorz Kasprowicz

KEY PUBLICATION

Puścian A, et al. Eco-HAB as a fully automated and ecologically relevant assessment of social impairments in mouse models of autism. Elife. 2016;5:e19532. Published 2016 Oct 12. doi:10.7554/eLife.19532

KEY WORDS

DEVICE   RESEARCH TOOL   BEHAVIOUR   ANIMAL MODEL

INTELLECTUAL PROPERTY STATUS

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CONTACT DETAILS

DOROTA GIEREJ-CZERKIES
phone +48 22 589 22 63 |e-mail: d.gierej-czerkies@nencki.edu.pl
www.nencki.gov.pl

DIALOG

nencki institute
of experimental biology

Ministry of Science
and Higher Education
Republic of Poland