

## **The Digital Ventilated Cage - DVC™ - documents animal activity at the home cage level throughout your study and supports surveillance of your animals**

The DVC™ monitors the animal activity in the home cage. By means of a sensor plate the system's software captures data 24/7 and compares it to different days and similar cages. With the DVC™ you can document the level of activity in any cage on the IVC rack throughout your study. Peaks of high or low activity are detected and indicate which cages you should pay special attention to during the daily inspection. This helps you detect animals that may need special care, ensures that humane endpoints are met early and that you do not lose valuable data.

*"By using continuous home-cage recordings we observed that food and water restriction induced a reversible reduction of overall activity levels that went undetected using the instantaneous scoring method." Goltstein et al. 2018.*

*"DVC is effective in identifying mouse cages with patterns of high activity levels, signaling possible aggression incidences, thus potentially allowing for early intervention and consequently improving animal welfare." (Giles et al. 2018).*

*"The system detected an increase in activity preceding and peaking around lights-on followed by a decrease to a rest pattern. At lights off, activity increased substantially displaying a distinct temporal variation across this period. We also documented impact on mouse activity that standard animal handling procedures have, e.g. cage-changes, and show that such procedures are stressors impacting in-cage activity. These key observations replicated across the three test-sites... These data demonstrate that home cage monitoring is scalable and run in real time, providing complementary information for animal welfare measures, experimental design and phenotype characterization." (Pernold et al. 2018).*

*"The results show that the proposed home-cage monitoring system can provide animal activity metrics that are comparable to the ones derived via a conventional video tracking system, with the advantage of system scalability, limited amount of both data generated, and computational capabilities required to derive metrics." (Iannello F. 2019).*

*"In summary, our results indicate that, for the measures recorded, there was no significant impact on the behaviour and welfare of low frequency EMF exposure experienced continuously over a six-week period as an integrated part of this IVC housing system for BALB/cAnNCrI and C57BL/6NCrI mice." (Burman et al. 2018).*

### **References:**

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### **SCANBUR A/S**