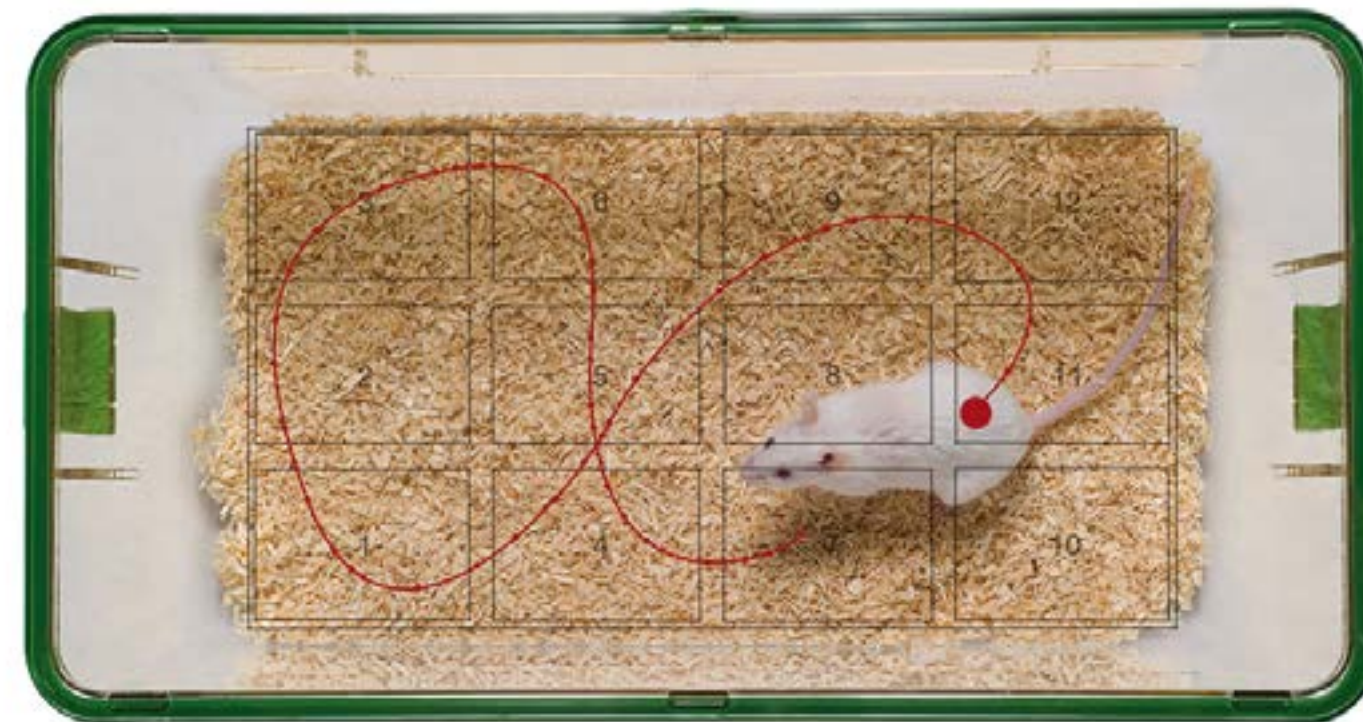


WEBINAR

JOIN US FOR THE... TECNIPLAST UK, DVC WEBINAR 4TH NOVEMBER: START 2PM, DURATION 1.30HRS.

Tecniplast are delighted to host two interactive webinar presentations. Hosted by Tecniplast Global Scientific Director, Stefano Gaburro and Tecniplast UK Product Specialist, Scott Carnell, Dr. Joanna Moore (GSK) and Dr. Judit Espana-Agust (AstraZeneca) will discuss how home cage monitoring can be used to improve animal welfare by reducing stress, optimise methodologies and guide physiology and animal behaviour research. [Click here](#) to register!



Using home cage monitoring during a time mating procedure to determine the impact of swapping a female versus adding a female to an established pair

Dr. Joanna Moore, Investigator, GSK

The use of sterile male mice to induce pseudopregnancy in female mice assigned for the implantation of embryos is a vital component in the production of Genetically Altered Animals (GAA). To achieve this, we use Protamine1 (Pm1) transgenic male Hemizygous mice which are genetically sterile due to this mutation. These males are often kept for up to nine months and are housed with a companion female. During the timed mating period the companion is swapped for a new female.

We hypothesised that the addition of a new female to an established pair would cause less disturbance for the male mouse therefore, activity would return to pre-change levels in a shorter timeframe compared to males that have their females substituted for a new female.

We investigated what the disruption to the cage activity was like, if i) a new female was added to the home cage compared to a group of control cages of trios, and ii) using a normalisation of the data, we can estimate the difference in activity between the trio and a group where the companion female was swapped. We used an established home-cage monitoring (HCM) system to measure cage activity.

We found that there is a wide spread of activity across the groups, however, the activity of the group where the female was added to the established pair was returned to pre-addition levels sooner than the pairs where the female was swapped. This presentation will discuss the results and the type of analysis we performed on the data. Due to the complexity in comparing pairs of mice with trios in HCM, further studies need to be designed to give us a clearer understanding and be confident that adding a female to an established pair could reduce the impact of this intervention. All animal studies were ethically reviewed and carried out in accordance with the Animals (Scientific Procedures) Act 1986 and the GSK Policy on the Care, Welfare and Treatment of Animals.

Towards a better evaluation of in vivo models by monitoring home cage activity

Dr. Judit Espana-Agusti, Senior Scientist, AstraZeneca

Mouse models of human disease are an invaluable tool for scientific research and for the development of new drugs. In vivo oncology murine models (e.g. xenograph, orthotopic, GEMMS) are widely used, however, monitoring the disease progression against humane and scientific points can be challenging and time consuming.

At AstraZeneca we aimed to evaluate whether the automated monitoring of animal activity within the home cage provided by the DVC® rack could be used to assess the progression of disease in mouse models of cancer. By using flank tumour and orthotopic pancreatic mouse models, we have shown that the growth of the tumour correlates inversely with the activity levels registered by the DVC® rack. This suggests that monitoring the activity in the cage has the potential to refine the assessment of the disease's evolution, the effect of new treatments, and the endpoints currently used.

Moreover, we have been able to test whether measuring the animal activity within the home cage could provide further details on the impact of surgery on mice. The data provided by the DVC® rack has allowed us to monitor in detail the changes in activity levels after surgery and the pattern of recovery during subsequent days. Understanding these behavioural patterns can serve us as a tool to enhance the assessment and monitoring of animal welfare after invasive procedures.

To register for these webinars just [click here](#) or contact us on 0345 050 4556 or email scott@tecniplastuk.com

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