Practical application of the 3Rs: enrichment or standardisation?

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Standardisation aims at enhancing the reproducibility of experimental results. It can thus be one way to apply the 3Rs by reducing the number of animals needed to validate results. Enrichment on the other hand aims at improving animal welfare, but is "tainted" by the suspicion of increasing data variability. Improving reproducibility at the expense of animal welfare represents a conflict. If and how much increase of variability is caused by enrichment and how much improvement of welfare can be achieved are key questions. Different forms of enrichment may differently affect both data variability and welfare.

AAALAC's requirement to have enrichments program approved by the Oversight Body of the animal care and use program helps to avoid inconsistent use of enrichment components. AAALAC recognises enrichment as an important method of improving the well-being of many laboratory animal species, but emphasises that enrichment should be seen as an independent variable to be suitably controlled.

In 2006, the FELASA Working Group on "Standardisation of Enrichment" found that even in the species most extensively investigated, the mouse, results were contradictory: Some studies indicated an increase, others a decrease in data variability of enriched groups. The Working Group concluded that in the foreseeable future there will be no general answer to this issue and proposed cost/benefit analyses on a case-by-case basis. This presentation will follow-up on the presumed conflict between standardisation and enrichment, and summarise evidence published in recent years.