

## **Animal Protection and Animal Housing**

The present state of art in science does not allow us to refrain from animal experiments in biological and medical research. However, it is an obligation to minimise pain, distress and suffering as far as possible.

A prerequisite for obtaining meaningful results from animal experiments is the use of healthy individuals. This involves a regular scientific control and - if necessary - optimisation of the housing conditions, considering also the needs of the animals. The members of the GV-SOLAS have in the past contributed significantly to improvements and to the presently effective conditions in the maintenance of laboratory animals. The high level of hygiene, nutrition, and modern housing techniques enables the use of appropriate animals for experiments. This has led to a significant reduction of the numbers of animals required.

Optimal growth, successful reproduction and long life expectancy of the animals as well as the lack of any physical harm are important criteria for adequate maintenance of laboratory animals. Recent conceptions of research in behaviour have led to an appraisal of housing conditions with ethological methods.

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Areas in which improvements in the housing and maintenance appear to be possible are specified below:

### **1. Freedom of movement**

Freedom of movement of laboratory animals is, as everywhere with domestic animals, limited by the dimensions of the housing unit (e.g. cage, box). Based on present knowledge the adaptive capacity of the laboratory animals used is in general not overstrained by the existing housing standards. In a few areas, however, improvements of the space for activity seem to be possible.

### **2. Social Housing**

The need for community is more or less pronounced depending on the species. Considering this fact, maintaining animals in groups enables social behaviour as an important part of the overall behaviour. It is an important factor of environmental enrichment, but may lead to conflicts the results of which can impede the interpretation of the results of an experiment.

### **3. Structuring of the Environment and Occupational Possibilities**

Introducing a certain structure in the cage layout, allowing for choice and occupation (e.g. bedding and nest material, devices for climbing, and hiding possibilities) appear to be useful in providing the animals with further environmental stimulation.

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The difficulty in implementing ideas for improvements arises by the fact that to date no indisputable scientific criteria exist for the estimation of positive effects of such changes. This is particularly the case for point 3. In addition there is a risk that the results achieved by Laboratory Animal Science may be endangered through hasty changes. Therefore, recommendations for changes of standard housing and maintenance conditions should always be judged by their effects on the animals, experimental results, the running of a service and the costs, before they are implemented.

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