

International Standards for Assessing the Quality of Laboratory Rodents

Background

Laboratory animals are essential for biomedical research as exemplified by the fact that approximately half of the extramural grants awarded annually by the US National Institutes of Health involve animal experimentation. The significant majority of the animals used for biomedical research are mice and rats. Therefore, the quality and reliability of laboratory rodents have a major influence on research and its benefits for human health. Health care and genetic standards for laboratory rodents have improved greatly during the last quarter century, but face new challenges due to the accelerating development and diversity of genetically engineered animals. Current estimates suggest that use of genetically novel rodents has significantly increased among major US research centers; a trend that is likely to continue as decoding of the human and mouse genomes proceeds. Furthermore, the exchange of rodents and rodent products is expanding as national and global collaborations related to animal experimentation increase. In light of these developments, AALAS encourages and supports the establishment of common standards for the quality of rodents and rodent products, to strengthen and protect the crucial investment in animal-based research.

Issues

- Genetic engineering is creating large numbers of unique rodents worldwide.
- The international exchange of rodents and rodent products is increasing.
- Scrupulous assessment and reporting of the genetic and health status of novel rodents is critical to avoid tainted research results.
- The quality assessment of rodents and rodent products currently use differing definitions, standards and reporting methods.
- The financial and scientific resources to achieve proper quality assessment are inadequate.

Positions

- International definitions and standards for the quality assessment of rodents should be developed and implemented through an international task force.
- The definitions and standards should encompass intrinsic (genetic) and extrinsic (microbiological and environmental) factors that influence rodent quality including, but not limited to:
 - Testing methods and reagents
 - Reporting
 - Training
 - Protection of genetic, microbiological and environmental integrity