

# Microbiological Quality Assessment of Laboratory Mice in Korea and Recommendations for Quality Improvement

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### Abstract :

Regular monitoring of commercial laboratory rodents and institutional research animal residents is essential for microbiological quality control programs. The objective of our study was to investigate the recent prevalence of infectious pathogens in laboratory mice from eight experimental animal vendors and 56 institutional animal facilities in Korea. Our investigation was conducted in 2006-2007. Specific Pathogen Free (SPF) mice from four commercial breeders were clean according to serological, bacteriological, parasitological, and histopathological examination results. However, mice from one intermediate vendor that distributed SPF animals from main commercial vendors to local districts had *Syphacia obvelata* and *Mycoplasma musculinus* infections. Additionally, mice from conventional animal breeders were highly contaminated. Among the 56 institutional animal facilities, mouse hepatitis virus (MHV), Sendai virus and *Mycoplasma pulmonis* positive results were obtained in 23.2, 8.9, and 1.8% of animals tested, respectively. These results indicate that quarantine and eradication efforts of infectious pathogens in these facilities are sub-optimal and need to be improved. The use of commercial conventional mice for research should be eliminated and appropriate vendor selection as well as thorough quarantine before releasing animals into a facility are needed. Finally we suggest qualified veterinary experts are needed at each animal facility to ensure an adequate health surveillance program.

### Key Word :

Korea, laboratory mice, MHV, microbiological quality, Sendai virus

Volume 59, Number 1, - 2010, ISSN 1881-7122 (online), ISSN 1341-1357 (print)