

「総説」

疾患モデルウサギの系統維持, WHHLMI ウサギを例に

塩見雅志¹⁾・國吉信恵・菊森明生・山田悟士

神戸大学 大学院医学研究科 附属動物実験施設
〒650-0017 兵庫県神戸市中央区楠町7-5-1

¹⁾ 現在の所属

神戸大学 大学院医学研究科 内科学講座 循環器内科学分野
〒650-0017 兵庫県神戸市中央区楠町7-5-1

佐賀大学 総合分析実験センター 生物資源開発部門
〒849-8501 佐賀県佐賀市鍋島5-1-1

Breeding of a rabbit model for human disease

**Masashi Shiomi¹⁾, Nobue Kuniyoshi, Akio Kikumori,
and Satoshi Yamada**

Summary In Western countries, reduced reproducibility of results of animal tests in clinical trials has been a problem, and one of the causes is considered to be due to species differences in pathophysiological properties between humans and animals used in studies. In order to solve the problem of species differences, it is important that animal models for human disease other than genetically modified mice can also be used for studies, in addition to promoting comparative biological studies.

Institute for Experimental Animals, Kobe University
Graduate School of Medicine
7-5-1, Kusunoki-cho, Chuo-ku, Kobe 650-0017, Japan

¹⁾ The present affiliation

Division of Cardiovascular Medicine, Kobe University
Graduate School of Medicine
7-5-1, Kusunoki-cho, Chuo-ku, Kobe 650-0017, Japan
Division of Biological Resources and Development,
Analytical Research Center for Experimental
Sciences, Saga University
5-1-1 Nabeshima, Saga 849-8501, Japan

Correspondence: Masashi Shiomi, mnaknj@gmail.com

However, the breeding of animal models for human disease other than rodents involve many difficulties, such as inbreeding depression and the necessity of selective breeding for keeping the characteristics of the strain, etc. Using the WHHLMI rabbits that spontaneously develop hypercholesterolemia, severe coronary atherosclerosis, and myocardial infarction as an example, this review describes the development, breeding, keeping the characteristics across generations, and health management of animal models for human disease other than rodent models.

Key words : animal models for human disease other than rodents (げっ歯類以外の疾患モデル動物), breeding (系統維持), development of a strain (系統開発), keeping the characteristics across generations (特性の維持), WHHLMI rabbit (WHHLMI ウサギ)

要旨

欧米では、動物実験の結果の臨床試験での再現性が低下していることが問題になっており、その原因の一つとして実験に使用される動物の種差の問題が指摘されている。種差の問題を解決するためには、比較生物学的な研究の推進とともに、遺伝子改変マウス以外の疾患モデル動物が研究に使用できる体制の整備が重要である。しかし、げっ歯類以外の疾患モデル動物の系統開発と系統維持には、近交退化や選抜交配をはじめ