2016年第一季交通大學實驗動物中心健康監測結果

一、病毒（抗體）	小鼠	大鼠
1. Hantaan virus	—	0/1
2. Lymphocytic choriomeningitis virus (LCMV)	0/4	0/1
3. Minute virus of mice (MVM)	0/4	—
4. Mouse hepatitis virus (MHV)	0/4	—
5. Mouse parvovirus (MPV)	0/4	—
6. Murine Norovirus (MNV)	3/4[1]	—
7. *Mycoplasma pulmonis* (*M. pul*)	0/4	0/1
8. Pneumonia virus of mice (PVM)	—	0/1
9. Rat Theilovirus (RTV)	—	0/1
10. Sendai virus	0/4	—
11. Theiler's murine encephalomyelitis virus (TMEV, GD VII)	1/4[2]	—
12. Sialodacryoadenitis virus (SDAV)	—	0/1
二、細菌（培養）	小鼠	大鼠
1. *Bordetella bronchiseptica*	0/4	0/1
2. *Pseudomonas aeruginosa*	0/4	0/1
3. *Citrobacter rodentium*	0/4	0/1
4. *Salmonella spp.*	0/4	0/1
5. *Helicobacter spp.*（PCR）	1/4[3]	0/1
三、寄生蟲（鏡檢）	小鼠	大鼠
1. *Syphacia spp.*-玻璃膠帶法	1/4[4]	0/1
2. *Aspicularis tetraptera*	0/4	0/1
3. *Hymenolepis diminuta*	0/4	0/1
4. *Rodentolepis nana*	0/4	0/1

說明：

1. 小鼠 Murine Norovirus (MNV)檢出於舊動物房 A、C 房以及動物中心 2F-4 飼育室。
2. 小鼠 Theiler's murine encephalomyelitis virus (TMEV, GD VII) 檢出於舊動物房 A 房。
3. 小鼠 *Helicobacter spp.*檢出於舊動物房 C 房。
4. 小鼠蟯蟲 *Syphacia spp.* 檢出於舊動物房 A 房。

動物疾病簡介

1.Murine Norovirus(MNV)

MNV is a recently discovered non-enveloped RNA virus, although similar viruses are known in many mammals. In fact, other noroviruses cause most of the non-bacterial food-borne gastroenteritis in humans.

There is no evidence that MNV is a pathogen except in a few strains deficient in innate immunity. Current evidence indicates that in immunocompetent mice, MNV causes persistent infection, with no clinical signs or other evidence of pathogenicity. Even mice deficient in acquired immunity, including athymic nude mice, scid mice and RAG1 -/- mice, also have persistent infection without any clinical disease. However, high mortality was observed in double knockout mice with severe deficiencies in both acquired (RAG1 -/-) and innate immunity (STAT1 -/-, or IFN αβγR -/-).

There is no direct evidence that subclinical MNV infection causes any interference with research. However, the virus replicates in cells of the macrophage line, and host resistance to MNV apparently requires activity of interferon-dependent systems. These observations leave open the possibility that MNV could impact research into macrophage function or interferon-dependent pathways.

2.Theilovirus

Theiloviruses(MEV [TMEV], RTV [GDVII]) are one of RNA virus, nonenveloped Picornaviridae. Affected mice, rats (and experimentally, hamsters and guinea pigs) Common in laboratory colonies, common in wild rats and mice. MEV has the potential to interfere with research on the nervous system, the immune system, and musculoskeletal system. RTV should be considered similarly to MEV until further data is compiled on its effects on rats.

3.*Helicobacter*

Helicobacter (H.) *species* (*spp*.) are Gram-negative, microaerophilic, spiral-to-curve-shaped bacteria with sheathed flagella. The pathogenic potential of the murine *Helicobacter spp.* is unclear. H. muridarum may occasionally colonize the stomach and elicit gastritis. H. hepaticus and H. bilis are associated with chronic, active hepatitis; Koch's postulates have been fulfilled for the association of H. hepaticus with hepatitis. H. hepaticus may also induce liver tumors (both adenomas and carcinomas) in older male A/JCr mice and inflammatory large bowel disease in severe combined immunodeficiency (scid/scid) and nude (Hfh11nu/Hfh11nu) mice. Various mouse strains were reported to differ greatly in susceptibility to H. hepaticus-induced liver disease with A/JCr and scid/scid mice being highly susceptible and C57BL/6NCr mice being resistant. Male mice were more severely affected than females. The earliest histopathologic liver lesions seen, at 2 to 6

months of age, were focal necrosis and focal non-suppurative inflammation. By 6 to 10 months of age, extensive liver involvement included hepatocytomegaly, bile ductular (oval cell) hyperplasia, and cholangitis.

4.Pinworms (*Syphacia obvelata, S. muris, Aspiculuris tetraptera,* etc.)

Since there are rarely clinical signs in most infected animals, even immunodeficient animals, body condition or general health does not generally preclude these animals from use in research. Pinworm infection may have more subtle effects, generally affecting the nature of the immune response, that may render animals unsuitable for use. For example, mice infected with pinworms had a greater incidence of autoimmune disease, nude animals with pinworm infections had an increase in lymphoma prevalence, pinworm infection in one strain of mice was found to affect hemato- and lymphopoesis, and mice with pinworm infections were found to have an increased allergic response to a dietary antigen. Pinworm infection in a colony may also be considered a marker of inadequate biosecurity techniques. （摘自 Charles River technical sheet）

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