

動物病原實驗操作注意事項

地點：F518、F519 室及生物安全櫃操作台

2022.09.28 修訂

1. 若需與其他實驗人員共用飼育室，請至少在實驗前一周預約，將使用時間填在門口旁的日曆上，以協調使用時段。
2. 病毒液應以不易破的雙層容器盛裝(內層容器開啟方式以旋蓋式為主)。
3. 進入飼育室前，請先穿上實驗衣、防護衣、紙帽及內層(第一層)手套。
4. 進入後，依生物安全櫃(以下簡稱 BSC)之說明步驟開機。
5. 開始病毒注射程序之前，請先在 BSC 內戴上外層(第二層)手套。
6. 若需使用立體定位儀及其他器械進行病毒注射，使用過後務必以消毒劑擦拭乾淨，15 分鐘後才可移出 BSC。
7. 操作過程中若手套沾染病毒液，請先以消毒劑擦拭手套外部，再丟棄至 BSC 內的廢棄物容器中。摘脫手套步驟如下：
 - A. 抓住一支手套的手腕處
 - B. 將這支手套脫下，手套內層要翻出來
 - C. 將剛剛脫下的手套握在另一手裡
 - D. 將手指沿著手腕處伸進手套中
 - E. 手指向身體外側用力，將第二支手套內層翻出來，將第一隻手套包在裡面
 - F. 安全的摘脫手套後直接丟棄，之後穿上新的。
8. 移出小鼠前確認已蓋好籠蓋，並以消毒劑擦拭鼠籠外部，脫去外層手套再移出 BSC。
9. 實驗當中或擦拭檯面等，均會頻繁地更換外層手套。此外，操作者欲離開 BSC 或移出鼠籠，請務必確認已經摘脫外層手套。
10. 操作過程若發生病毒液噴濺或滲漏
 - A. 噴濺滲漏量 $\leq 1\text{ml}$ ：以浸濕消毒劑之擦手紙擦拭，待 15 分鐘後再以浸濕 RO 水的擦手紙清潔乾淨。
 - B. 噴濺滲漏量 $> 1\text{ml}$ ：先以擦手紙覆蓋病毒液噴濺處，再以螺旋狀由外而內淋上消毒劑至完全浸潤擦手紙，之後通知動物中心同仁處理。
11. 實驗過程中的廢棄物
 - A. 如在 BSC 內使用，請丟棄在櫃內的專用容器(包括針頭針筒)。
 - B. 如在 BSC 外使用，請丟棄在生物安全廢棄物垃圾桶中(不包括針頭針筒)。
12. 已注射病毒之小鼠，請務必在鼠籠籠卡上標示病原及注射日期。

13. 小鼠注射病毒一周內，操作動物或更換籠具只能在 BSC 中進行。一周後，即可在 BSC 外進行其他實驗(如行為實驗)。
14. 安樂死方法：
 - A. 若小鼠注射病毒一周內需犧牲，僅能在 BSC 內以過量 CO₂ 法或頸椎脫臼法進行安樂死，活小鼠不可帶離生物安全室。
 - B. 若小鼠注射病毒一周後需犧牲，可移至屍解房安樂死。
15. 當次操作結束後，請以消毒劑確實擦拭 BSC 檯面，並依說明步驟關機，開啟 UV 燈殺菌。
16. 離開飼育室前，請將該次所穿的防護衣丟棄至生物安全室垃圾桶中，並清洗雙手(洗至手肘)後才可離開。
17. 其他注意事項
 - A. 若不慎發生針扎或動物抓咬，務必通知動物中心同仁，並請至醫院就醫，同時告知醫師受傷細節。
 - B. 如有其它 ABSL-2 飼育室使用上的疑問，請立即向本中心同仁詢問，以免發生安全危害。

Precautions for infectious biological material (Lentiviral Vectors) in Animal Experiments

- 1 For coordinating use date, please book your experimental date on the Appointment Form first.
- 2 The infectious biological material must be in double-layer container when you bring to LAC.
- 3 Please wear the PPE (Lab coat, protective clothing and surgical cap) and the inner gloves before entry the ABSL-2 animal room.
- 4 After entering the animal room, please turn on the BSC by the procedure.
- 5 Before viral-injection, please put on the out-layer gloves in the BSC.
- 6 If you want to use the instrument or stereoscopic position meter to assist your injection procedure, you must disinfect with disinfectant for 15mins then move out the BSC.
- 7 If the gloves have been polluted with infectious biological material, please clean the outside of the gloves with disinfectant and peel away then throw in the BSC's trash can. The steps of peeling the gloves away is following:
 - A. Grasp the outside of one glove at the wrist.
 - B. Peel the glove away, pulling it inside out.
 - C. Hold the glove you just removed in your gloved hand.
 - D. Peel off the second glove by putting your fingers inside the glove at the top of your wrist.

- E. Turn the second glove inside out while pulling it away from your body and leave the first glove inside the second.
- F. Dispose of the gloves safely then put the new gloves.
- 8 Before moving out animal cage from BSC, please cover the cage properly, clean the surfaces of cage and take off the out-layer gloves.
- 9 Please pay attention! When you are in the procedure of experiment or clean the BSC, it is necessary to replace the out-layer gloves frequently. In addition, you must confirm that the out-layer gloves have been peeled away before leaving the BSC or moving out the animal cages.
- 10 If the infectious biological material flows out, please follow these steps to sanitize:
- A. Volume \leq 1mL: You must cover the paper towel, which drizzle with disinfectant on the contaminated area for 15mins, and clean out by the water-soaked paper towel.
- B. Volume $>$ 1mL: You must cover the paper towel gently and drizzled with disinfectant from the inside out then notify the staff of LAC.
- 11 Waste during experimentation
- A. Inside the BSC: Please put the infectious waste into the trash can (syringes must be thrown in the needle collection bucket) inside the BSC.
- B. Outside the BSC: Please put the infectious waste into the trash can of animal room.
- 12 You must label the information of the infectious biological material and used date on the cage card after injecting.
- 13 One week after viral-injection, other experiments can be performed outside the BSC.
- 14 The methods of mouse euthanasia
- A. Less than a week: You can use the excess CO₂ or cervical dislocation in the BSC only. (DO not take the live mouse out of the animal room.)
- B. After a week: Animals can be brought to the Room F511 (Necropsy room) for euthanasia if necessary.
- 15 After each experiment, please clean the BSC, turn off it and then turn the UV light on.
- 16 Before leaving the animal room, you must take off the PPE and gloves to the trash can then wash your hands to elbows.
- 17 Other matters need to pay attention:
- A. If acupuncture, mice biting or scratching is occurred, please tell the doctor about you process of injury.
- B. For other matters, please consult with LAC staff.