# **AS Core Training Course**

DVM Yu-Huei Chen(陳昱卉)

April 2020 Revised



# **Outline:**

# Organization Structure and Facility Plan Application for Experimental Animals Application for Users



# **Outline:**

# AS core's organization structure and facility plan

Application for Experiment Animals
 Application for Users



# Introduction

#### Purpose:

Providing the husbandry service of SPF laboratory animal for Academia Sinica

#### Location:

Institute of Biomedical Science, New Building 10F

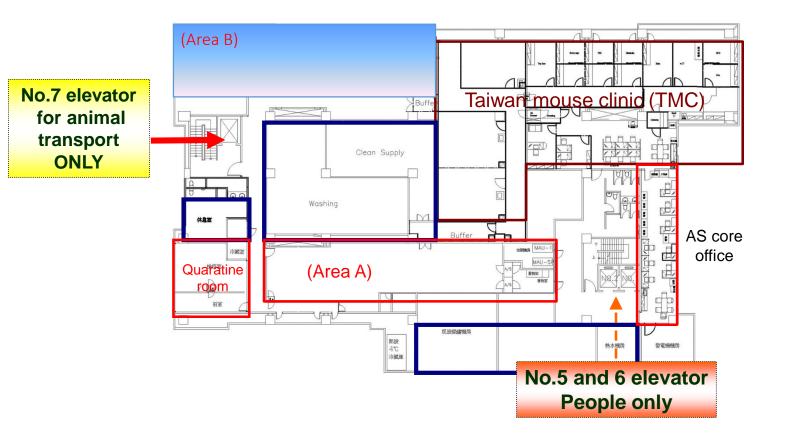
(1) Area A : A total of 1800 cages

(2) Area B : A total of 980 cagesB1: Recovery room : 280 cages + Operation roomB2: Breeding room : 700 cages

(3) Q room Veterinarian : DVM *Yu-Huei, Chen* 



# The plan of AS core





# **Rules for the usage of cages**

(1) Each PI can hold a maximum of 100 cages in Area A and a maximum of 50 cages in Area B.

(2) When the facility usage rate is less than 85%, PI is allowed to temporarily apply for excess cages. If the facility usage rate is reaching or above 85%, AS core will request PI to return the excess cages within 2 months. If the return process is over 2 months, each cage will be charged twice the usual price.



# The usage of cages :

(3) Users will be suspended temporarily if there's no access records in over 3 months. Users will be suspended permanently, if there is no entry records in over 6 months. Users need to re-take the training course to regain the pass.

(4) The usage and the charge of the cages are based on the filling date of application form. Every vacant cages is belonged to AS Core. AS Core has authorization to move or to assign the cages. All applications required 3 working days in advance.

(5) Users can choose either area A or are B. Animals from area A can be transferred to area B.

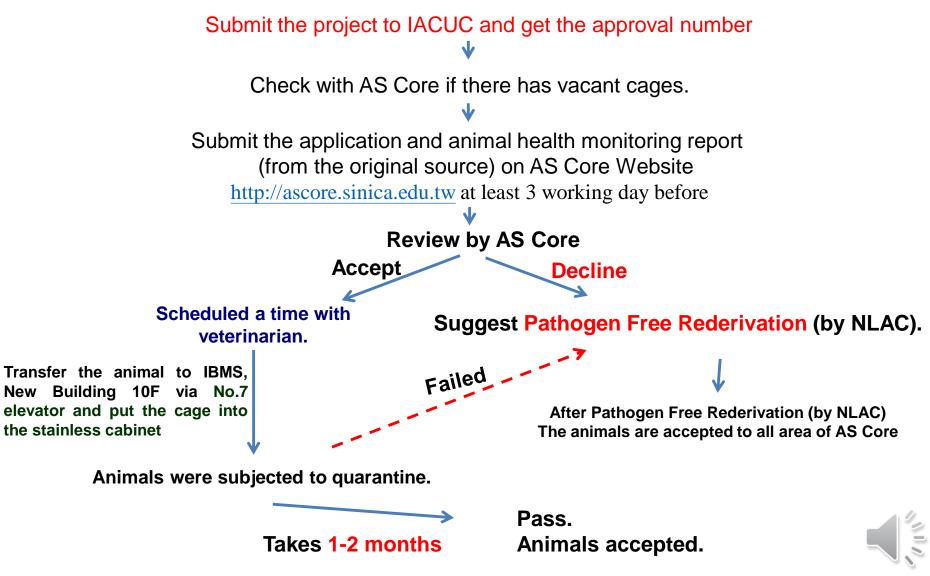


# **Outline:**

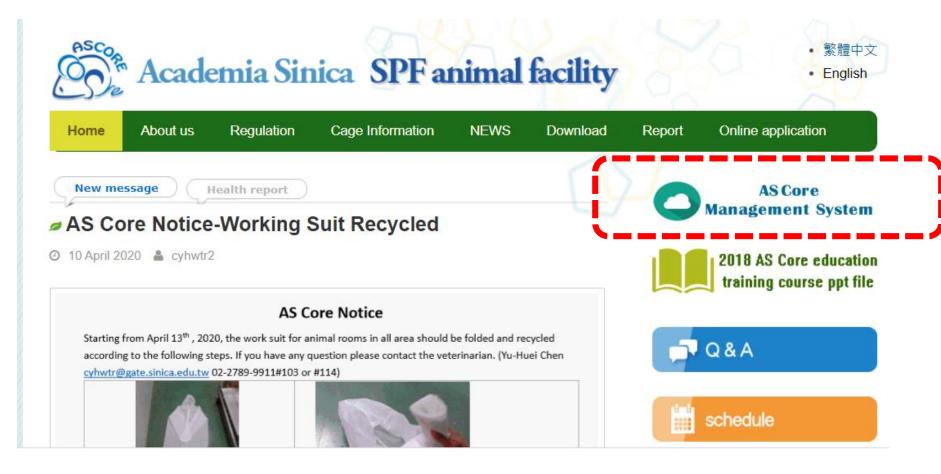
- AS Core's Organization chart and Spatial Planning
- Application for Experiment Animals
- Application for Users



# **Experimental animals application procedure**



#### http://ascore.sinica.edu.tw/





## Registration

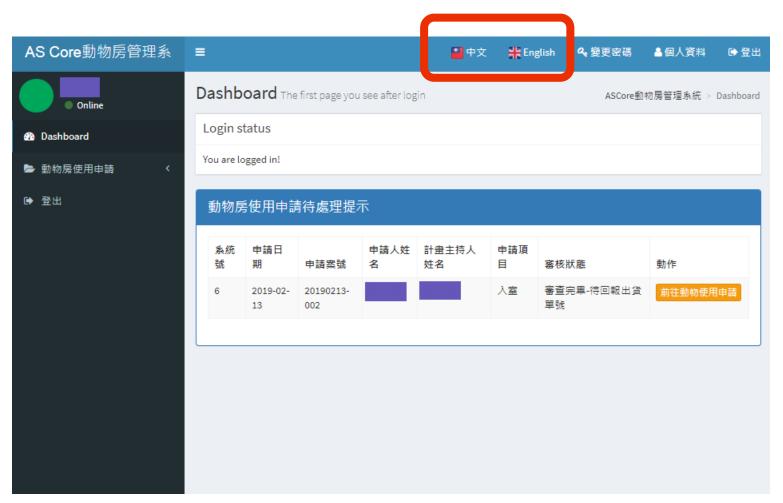
## Register

## Authorized email

## Wait for Authorization

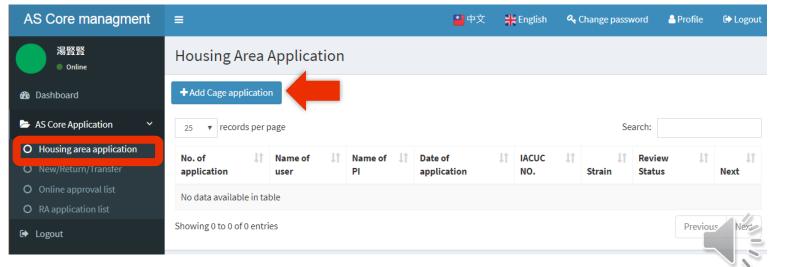


# Change to English version



# Application





# Housing area application

Step1: User/PI i	information				
Qualification					
<ul> <li>pass the lectu</li> <li>Pass either A o</li> <li>Had experience</li> </ul>	<b>be qualified as following:</b> The test for B area practical course ce with animal facility within 6 months not a PI, please select RA for the application	Qualification Instruction			
申請人Applicant			計畫主持人Principle Investigator		
Name * E-mail * Position/Title * Contact number * Emergency number *	湯賢賢 tyx0624@hotmail.com Professor 23456789 23456789		PI*  IACUC NO. Select IACUC protocol and approval number		
			✓ Back Next >		

# Housing area application

#### Currently registered cages status

第二步:填寫申請項目					
主持人於各區登記及使用	總籠數				
A	登記雜數:7	使用中籍數:5			
B1 🖪	登記籬數:14	使用中範數:14			
B2 區	登記雜數:12	使用中龍數:12			
B3 區	登記籬數:10	使用中龍數:0			
Q 🔚	登記雜數:0	使用中華數:0			

申請人:湯賢賢,有實習的區域:A,B
計畫主持人:湯于賢
計畫:iacuc-107003湯于賢的計畫



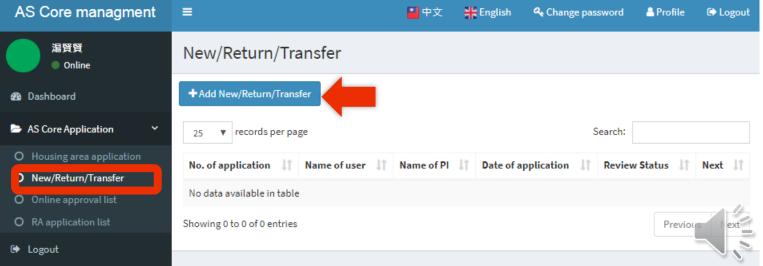
# Housing area application

代養動物資料Animal Informatio	Animal information	
Strain *	full name	
Sex-Number *	male     write down 0 as none     隻     female     write down 0 as none	隻
Date of Birth		<b></b>
Age		
	If animals are different age in one cage, please fill in this column	
Note		
Number of cage *	Fill in the number greater than 0	
Source of animal *	NLAC      LASCO      Re-derived mice      others     Supplementary	
Attachments	+Attach file	
	<b>暹擂檔案</b> 未選擇任何確案	
Date of importation *		<b></b>
Invoice Number		
Acquested area *	💿 A-Breeding area 💿 B2-Husbandry area 💿 B1-Recovery area (room) 💿 B3	
	%Animals from NLAC/Lasco can be transferred to B directly with health report. %housing area must match to the applied area on the original application form.	
New cage number	Fill in the number greater than 0	
Special request		
		1
	⊘ Cancel < Bac	🖪 Submit



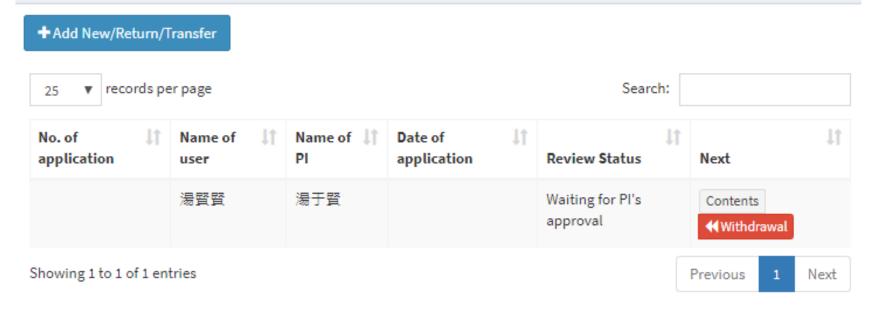
# New/Return/Transfer





# Withdrawal

#### New/Return/Transfer





## PI Approval (notice email)





# Result

### **Housing area application**

- Notice by email
- If the application has been approved, please reply with the shipment number

## **New/Return/Transfer**

- Notice by email
- If the application has been approved, please return the assigned cages.



## Complete work notice

#### 動物房使用紀錄通知

申請案號: 20190128-003	計畫主持人:
申請人姓名:	申請項目: 轉移/新增籠位(含分籠)/歸還籠位

#### 新增 B3區 籠位 完成日期: 2019-03-19

新增籠號: B3-1-A-1,B3-1-A-2,B3-1-A-3,B3-1-A-4,B3-1-A-5,B3-1-A-6,B3-1-A-7,B3-1-B-1,B3-1-B-2,B3-1-B-3 實際籠數: 10

\*說明:▲ 為使用中的籠位

B3區 B3-1 籠架

R面	1	2	3	4	5	6	7
Α	新增	新増	新增	新增	新增	新增	新增
В	新增	新增	新增				
С							
D							
E							
F							
G							
Н							
1							
J							



# Fee Charging notice (1)

• The system will send an email to the contact person of PI for the confirmation.

您好,							
在此通知您確認費用:	主持人使用費用統計						
確認費用紀錄	計畫主持人:湯于賢	Ē	主持人確認:尚未確認				
<b>帷診費用</b> 起获	聯絡人:湯賢賢						
Regards,	聯絡電話:02-27899911						
ASCore動物房管理系統	使用統計區間:2019-03-01~2019-03-06						
	下載使用統計						
	一、代養費總計: <b>1980</b> 元						
	代養區域	累積籠數	單價	/」∖言十			
	繁殖區A	42	10	420			
	繁殖區B1	84	10	840			
	繁殖區B2	72	10	720			
	二、著袍耗材費總計:0元						
	姓名	使用次數	單價	/」\言十			
	三、檢驗費總計:0元						
	檢疫隻數	<u> </u>	単價	小言十			
	0	2000		0			
	總費用:1980 元			已確認費用內容,該一礎記			

# Fee Charging notice (2)

• After confirmed with PI, the system will send an email notify about the final charge.

0						
主持人使用費用統計						
計畫主持人:湯于賢 主持人確認:尚未確認						
聯絡人:湯賢賢	用	聯絡人確認:已確認				
聯絡電話:02-27899911						
使用統計區間:2019-03-01~	2019-03-06					
下載使用統計						
(小关带你主, 1000 -						
一、代養費總計: <b>1980</b> 元						
代養區域	累積籠數	單價		小計		
繁殖區A	42	10		420		
繁殖區B1	84	10		840		
繁殖區B2	72	10		720		
二、著袍耗材費總計:0元						
姓名	使用次數	單價		小計		
三、檢驗費總計:0元						
檢疫隻數	単	單價		小小青十		
0	20	2000		0		
總費用:1980元 已確認費用內容						





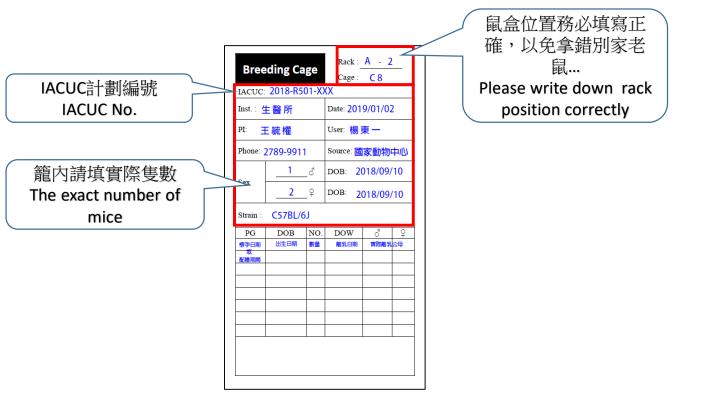
#### 紅框內資訊務必填齊全 Write down the information correctly.

Bree	ding Ca	ige	Rack : Cage :	A - 2 C 8	!	
iacuc: 2018-R501-XXX						
Inst. : 🛓	±醫所		Date: 201	9/01/02	2	
PI:	E毓權		User: 楊	東一		
Phone:	2789-991	1	Source: 🔯	家動物	中心	
	1	ර	DOB: 2	018/09/	/10	
Sex	2	ç	DOB: 2018/09/10			
Strain :	C57BL/6	5J				
PG	DOB	NO.	DOW	ð	Ŷ	
懷孕日期 或	出生日期	數量	離乳日期	實際離乳	公母	
<sup>3</sup> 配種期間						

#### 使用完畢請用 x 註記 Mark "X" after use.







Rack	架號
Cage	位置
IACUC	計劃編號
Inst.	單位
Date	設卡日期
PI	計劃主持 人
User	使用者
Phone	聯絡電話
Source	來源
Sex	性別
Strain	品系

紅字為必要資訊,務必填寫正確 Required information.



# The regulations of AS core quarantine

- Policy: Animals which show negative result on the health report are able to undergo quarantine. Animals will be sent to NLAC for embryo rederiviation if the animal come with risk of infection in the health report
- Object : Subject mice (3 weeks), Sentinel mice (5 weeks)
- Testing Unit : National Laboratory Animal Center
- Sampling : 5% of each strain or each population

Pass : Enter AS Core Failed: Send to NLAC for embryo rederivation or return to users



# **Specific Pathogen Free (SPF) List**

		area A	area B
	Item	A區 / 檢疫室	B區
Serology	Mycoplasma pulmonis Lymphocytic choriomeningitis virus Pneumonia virus of mice Sendai virus Theiler's murine encephalomyelitis virus (TMEV, GD VII) Ectromelia virus Hantaan virus Reovirus 3 Mouse adenovirus Mouse hepatitis virus Mouse parvovirus Minute virus of mice Epizootic diarrhea of infant mice virus Encephalitozoon cuniculi		
	Murine norovirus Polyoma virus	0	Ô ×
Microbiology	Bordetella bronchiseptica         Corynebacterium kutscheri         Klebsiella pneumoniae         Pasteurella pneumotropica         Pseudomonas aeruginosa         Staphylococcus aureus         Streptococcus penumoniae         Klebsiella oxytoca         Streptococcus equi subsp. Zooepidemicus         β-hemolytic Streptococcus         Pseudomonas aeruginosa         Salmonella spp.         Klebsiella oxytoca         Klebsiella pneumoniae         Campylobacter jejuni         Clostridium piliforme         Pneumocystis murina         Helicobacter spp.		
Parasitology	Exoparasite : Flea ` Louse ` Mite Pinworm : Syphaciaspp. Protozoa : Chilomastix spp., Ciliates, Eimeria spp., Entamoeba spp., Giardia spp., Hexamastix spp., Other flagellates, Spironucleus spp.,Trichomonads °	0	0
	Nematoda : Aspiculuris spp., Hymenolepis diminuta, Rodentolepis nana 。	0	0

**Area A:** 45 items. Required quarantine

#### Area B:

35 items. Animals from NLAC and BioLasco are allowed to enter area B without quarantine.



# How to transport animals in and out of AS core?

# Animal entering the room: the staff will handle the mouse entering the room.

# Out of the room: Transport via (1) the transport carton (only for transportation in Academia Sinica area), or (2) the special transport cage (box) and carry it out through the transfer box.

# If the animal is moved to other laboratories, please fill out the Animal Transfer Application Form.

**#The cart, cages, utensils and equipment shall not take out from the unit without permission.** 

(Notice) Once the animal leave the AS breeding room, it is **required to quarantine again** before re-entering the animal room!!!



# How to handle the escaping animal

Definition of escaped animals:

Handling mice should be operated in BSC. Once the animals flee the barrier of BSC, it is regarded as an escaped animal.

Suggestions to escaped animals:

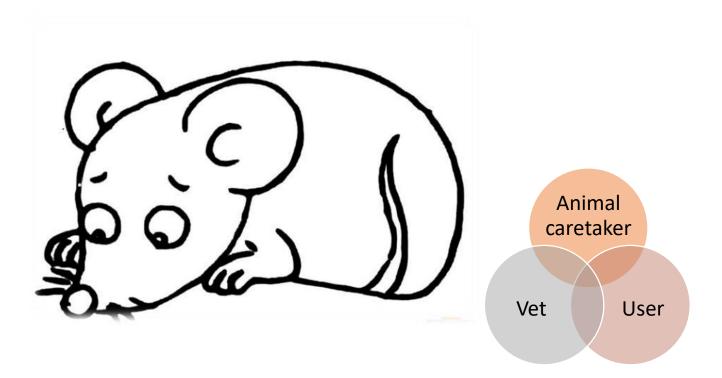
(1) Take the animals back to users' lab by transport carton.

(2) Disinfect the escaped animals first and isolate them in a new cage/rack. Animals are OK to return after 3 weeks of health monitoring, if there is no any infection.

(3) Euthanasia by CO2



#### What should I do when mice are sick/death?





## Notice of animal abnormality/death

- 1. Weaning over 28 days
- 2. Notice of Cage returning
- 3. <u>Notice of completion of animal</u> settlement
- 4. <u>New cage application</u>
- 5. Finding abandoned animal in cage
- 6. Using duplex cage for reproduction
- 7. Incompletion of mouse card
- 8. Incorrect location of vacant cage

- 9. Notice of abnormality
- 10. Notice of death
- 11. Notice for teeth trimming
- 12. Notice of euthanasia
- 13. Notice of separation
- 14. Notice of internal examination



## Mice abnormal/Death Report- User's

#### Abnormal:

Can notify to the veterinarian for assistance

#### Death:

Please put the corpse in a paper bag in a BSC, then seal it in zipper bag, write down the researcher's name, rack number, cage position, date and time on the outside of the bag. Can be put it in the -20 °C refrigerator or take it back to user's laboratory.



# **Response to pathogen outbreak**

- 1. AS core will notify to PI, and sacrifice the infected animals within 3 days. The rack and vivarium will be disinfected.
- 2. After the infected animal is removed, the laboratory animal and user will continue to control access/operation and follow-up inspection for at least 6 months (the inspection duration will be adjusted by the veterinarian and manager depending on the type of pathogen and infection) until there is no longer pathogen contamination.
- 3. If the animals in the infected area are important mice, the user must take the initiative to contact the veterinarian. Within a two-week period, all of them should be removed from the AS core and transferred to other animal room that are allowed to be surrogate, or they can be commissioned by the NLAC for deriviation. After the pathogen is confirmed to be cleared, it can be returned to the AS core..
- 4. All users should attend the training course again. Personal pass the course will be authorized again after training course.



# **Outline:**

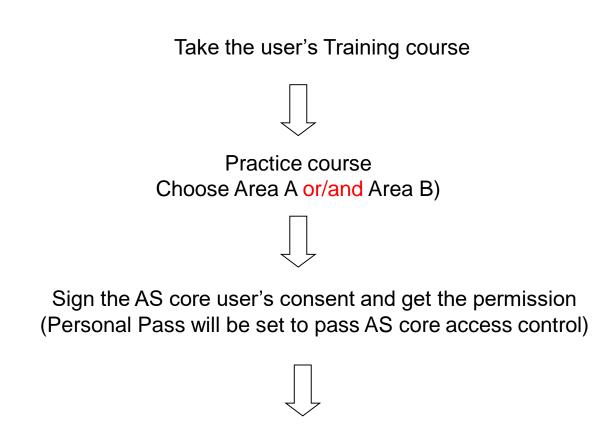
- AS Core's Organization chart and Spatial Planning
   Application for Experiment
  - Animals

# Application for Users

Step 1: Training course Step 2: Practice course (choose A or/and B)



#### Users apply for admission process



Weekend Permission application is required to enter IBMS.



#### Users have to know

The light cycle of animal facility: 07:00~19:00
 User entrance time: 8:00~18:00

User need to pass the entrance test and complete practice training. After passing, you can apply for access to the animal room with the ID card, and you can swipe your card to enter the animal room (the ID card is bound to everyone and can not be borrow/lend others).

Weekend Permission application is required to enter IBMS.



## Users have to know:

- 1. User cannot rearrange the location of cages by themselves.
- 2. Users cannot take other people who has no authorized ID pass into the animal room.
- 3. It is strictly forbidden to take pictures or photographs of facility equipment.
- 4. Users cannot ask animal caretakers to perform animal experiment, cage transfer and euthanasia.
- 5. Every PI has to designate one person to be a contact person.
- Please come to our office to cancel the authority if not using it for a long time. It is strictly forbidden to pass the ID card to other users.
- 7. Any violation will be reported to PI and AS Core committee

## Users have to know:

- The users are not allowed to enter the AS core within 3 days if
- 1. Users accessed other animal facilities
- 2. Users performed rodent experiment in the labs
- 3. Users contacted other rodents, such as pet.
- Users are not allowed to enter Area B then Area A in the same day. If users need to go area A, they must enter area A on next days.



## **Fees for AS Core**

- General expenses (user committee may adjust the fees according to the actual situation)
- (1) Basic maintenance fee: 10 NT dollars per day.
- (2) Consumables: each entering 100 NT dollars per person
- (3) Quarantine fee: each quarantine animal charges 2000 NT dollars

Fee charging : budget management and PI transfer system
 (1) According to the online application date, the monthly feeding cost is counted

(2) Email to the laboratory contact person and PI, and PI is signed the paper back (paper work and on-line parallel)



# **Other rules:**

Please follow the Animal Protection Act and IACUC according to the 5R principles (Replacement, Reduction, Refinement, Respect, Responsibility) to do the animal experiments and make it better.

The matters that are not covered by this control and the rules must meet the requirements of the announcement of the (IACUC). The AS Core User Committee reserves the right of interpretation and final decision.



## **Reservation of instrument and equipment**

# The user who pass the access of AS core could make reservation for BSCs or other instruments

(http://reservation.iis.sinica.edu.tw/servlet/SignInHandler)

# BSCs are free. IVIS 200, Xtreme II and anesthesia will be charged as below

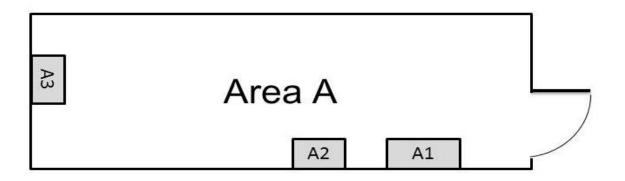
- IVIS : 500 NTD/hour \*
- Xtreme II : 1000 NTD/hr
- Anesthesia unit : 100 NTD/time

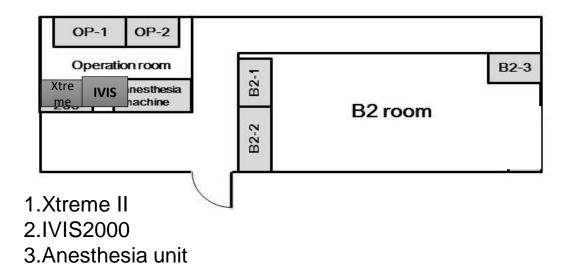
#First application needs wait for the qualification approval.

#Reservation time: One day before use (recommended), the latest booking is one hour before use.



#### The location and code number of BSC and machines in AS core





### The Entrance of Biological Specimen

#### Entrance :

Area A: Any tissue or cells specimen is **not allowed** to be taken into area A Area B: Only the cells (tumor cell) matrix is allowed to enter area B

#### Exit:

Blood, mouse tail and other animal specimen have to be collected in BSC, then sealed in the zipper bag and take out by user or via passing box



How to upload/download the data of experiments or animal records in/from animal room :

#### # Web Mail , Internet Drive (cloud )

The file can be printed in the animal room (please delete the file after finish the work)





## **Violation**

Submit to AS core Committee

- 1) First violation: users will get a "Warning Notice".
- 2) Negligence of warning notice: a "First violation notice" will be sent to the user and his/her P.I.
- 3) Negligence of first violation notice : A "Second violation notice" will be sent to the user and belonging P.I. and report to the member of the committee of the institute and the Chairman.
- 4) Pass Card authority will be cancelled and the users need to write the violation report and take the training lecture again.
- 5) For habitual violator, the users will be forbidden permanently
- 6) Any violation of Animal Protection Act, AS Core will submit to IACUC. It has the right to terminate the experiment if necessary.

Note:

AS core has authority to keep violation records as official record for future usage

If there is any violation of the Animal Conservation Law, the facility will report to the IACUC and the animal experiment may be terminated if necessary.

Violations will be kept in AS Core as official records and also as the basis for future use rights.



# **Common violations**

Access Control	Mouse survival welfare	Animal Room Management	<b>Bio Safety Control</b>
Users are still in the animal room when the access time is exceeded and did not apply in advance	Overcrowding in cages	Remove cage cars, cages, instruments, etc. from AS Core without consent	Failure to comply with the three-day use restrictions across the animal room
Unauthorized borrowing of access control card	Mice forgotten in the feed trough	Overuse unused cage	Handling infectious pathogens
	No feed	Cage not filled or emptied	Unauthorized removal of animals
	The water bottle is not placed or the water bottle is placed in the wrong position	The environment after use has not been cleaned / items are not returned	Other matters affecting animal welfare
	Late weaning	Card / Cage Information Error	
	Animals reached the ending point	No previous application for animal house (new / return / transfer / entry)	
	Other matters affecting animal welfare		47

## Other Policy(Based on 5R)



# Capacity of the cage (housing density)

#### Room A:

Duplex cage -- maximal capacity is 2 mice/chamber. Breeding in duplex cage is not allowed. Full cage -- maximal capacity is 5 mice/cage

#### Room B:

Full cage -- maximal capacity is 5 mice/cage







# Weaning(weaned after 21-28 days Birth)

- Activity Space
- Inbreeding
- Pheromone
- Stress
- Environmental sanitation

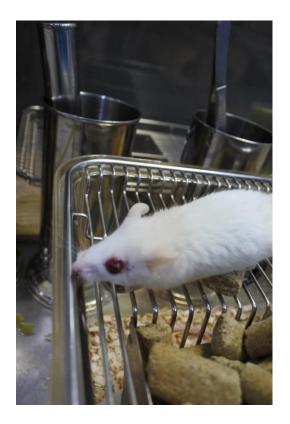


# Feeding Limit

- Living and activity space
- Stress
- Environmental sanitation



# Abnormalities (early end-up point)









# Violation Case I

• All the cart/cages/instrument/equipment is belonged to AS core. It is strictly forbidden to remove outside the facility without authorization.



## **Violation-Case II**

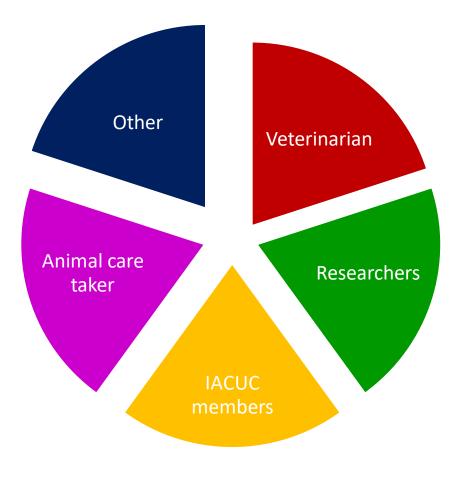




Sharp biomedical waste should not be thrown into the animal carcass bag



# Keep the discussion and communication pipeline





## **AS Core Schedule**

Item	Timeline	
New/Transfer/Divide/Enter application form	3 Days Before	
Quarantine Time	4~8weeks (Depends on NLAC schedule)	
Equipment reservation	1 Day Before	
Inter-Animal room Control	3 days	
Pass card Authorization Suspended	No Records within 2 months	
Pass card Authorization Forbidden	No Records within 6 months	
Weaning Time	Postnatal 21~28 days	



## **Intercom and Phone Extension**







# **Contact us**

#### AS core

Email: ascore@gate.sinica.edu.tw Phone: (02)2789-9911

AS core manager Dr. Yu-Chiuan Wang Email: ycwlrh@gate.sinica.edu.tw Phone: (02)2789-9912

#### DVM

Yu-Huei Chen (02)2789-9911#103 cyhwtr@gate.sinica.edu.tw



Emergency

Office :02-2789-9911 or 02-2789-9912

Security 02-2789-9999

