

List of APCF SOPs relevant to Faculty and information session

Anthony James

Director APCF

(14 & 23 Mar 2018)

APCF InfoSite - Pay it a visit!!!



Animal and Plant Care Facility InfoSite

The Hong Kong University of Science and Technology

[Home](#) [About Us](#) [APCF News](#) [Learning](#) [Scientific & Animal Care News](#) [Forms & Applications](#)
[Standard Operating Procedures](#) [Occupational Health and Safety](#) [Guidelines & Procedures for Research Practices](#)
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Home



Welcome to The Hong Kong University of Science and Technology's Animal & Plant Care Facility

ABOUT US

The Hong Kong University of Science and Technology is an internationally acclaimed university and takes its responsibilities for the humane care and use of animals seriously. The Animal & Plant Care Facility's animal care and use program has been written to standards based on the best practices in either the Hong Kong's Code of Practice for Care and Use of Animals for Experimental Purposes (2004) published by Animal Welfare Advisory Group, of the Agriculture, Fisheries and Conservation Department or the National Institutes of Health (NIH): Guide for the Care and Use of Laboratory Animals, 8th edition (2011).

ABOUT THIS SITE

This web site contains News, New APCF Policies and Procedures, Updates to Existing APCF Policies and Procedures, Upcoming Events and Links to External Resources and References.

SEARCH

Search

LOCATION

Room 5488
Academic Building
Hong Kong University of Science
& Technology, Clearwater Bay,
Kowloon,
Hong Kong

Contact
Email: apcf@ust.hk

APCF General Enquiries:
+852 2358 8201 or +852 3469
2509

APCF 24/7 Emergency Hotline:
+852 5760 6599

HOURS

Monday—Friday: 8:30AM—
5:30PM
Access to APCF outside these
hours can be arranged, with
advanced notice, by contacting
the APCF main office in Room
5488

1. Animal caring

<p><u>C-002 Special Observation Notifications</u></p>	<ol style="list-style-type: none">1. The Guide, Veterinary Care: Clinical Care and Management. PP:113 to 1142. The Code of Practice P.10 (3.1.xv) and P.20 (5.23)
<p><u>C-013 Breeding and Weaning Policy</u></p>	<ol style="list-style-type: none">1. The Guide, Environment, Housing and Management. PP:56-582. The Code of Practice P.31 (6.36-6.37)
<p><u>C-014 Mouse Cage Density</u></p>	<ol style="list-style-type: none">1. The Guide, Environment, Housing and Management PP:56-582. The Code of Practice P.31 (6.36-6.37) &3. The decision in the APCF User Advisory Committee Meeting (19thMarch2015).

Special Observation

Ref#: J00419

Request date:

Requested by:

IACUC #:

PI name:

User:

Strain and Cage #:

Email:

Phone:

Animal Health & Care Issue

Mortality

Body Condition

Rectal/Genital Prolapse

Dermatitis

Wound

Hair loss

Dystocia

Abscess

Eye problem

Weaning issue

Housing issue

Card detail issue

Others:

Special Observation

Request date:

Requested by:

IACUC #:

PI name:

User:

Strain and Cage #:

Email:

Phone:

Animal Health & Care Issue

Mortality

Body

Rect

Derr

Wou

Hair

Dyst

Absc

Eye problem

Weaning issue

Housing issue

Card detail issue

Others:

Cage exceeding 1M1F
with **one** litter
will be charged at
Category III rates.



Euthanasia (安樂死) Request

Ref#: 01201

IACUC #:

Date:

Room:

APCF	HUANG Pingbo	PARK Hyokeun	TSIM Karl	ZHANG Mingjie	
CHAN Wan	IP Nancy	POON Randy	WONG YH		
CHAU Ying	KO Robert	QI Robert	WU Zhen Guo		
CHEUNG Tom	LAM Henry	QU Jianan	XIA Jun		
CHOW King	LIU Kai	TANG Ben zhong	XIE Yong		
CHUNG Kenny	MAK Ho Yi	Tong Penger	XUE Hong		
HERRUP Karl	Miller Andrew	TG	YEUNG King Lun		

Animal Qty:

Strain:

Mice	Rat	Frog	Others

Remarks:

2. Animal health

<p><u>H-001 Rodent Importation and Quarantine</u></p>	<ol style="list-style-type: none">1. The Guide, Preventive Medicine: Animal Biosecurity & Quarantine and Stabilization. PP:109-1112. The Code of Practice P. 27 (6.11).
<p><u>H-002 Health Monitoring and Disease Surveillance Programmes on Rodents</u></p>	<ol style="list-style-type: none">1. The Guide, Surveillance, Diagnosis, Treatment & Control of Disease. PP:112-1132. The Code of Practice P.11 (4.1.iv), P.24 (5.47) & P.27 (6.11)

Special Observation

Ref#: J00419

Request date:	Requested by:
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IACUC #:

PI name:	User:
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Strain and
Cage #:

Email:

Phone:

Animal Health & Care Issue

Mortality		
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Body Condition		
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Rectal/Genital Prolapse		
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Dermatitis		
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Wound		
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Hair loss		
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Dystocia		
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Abscess		
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Eye problem		
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Weaning issue		
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Housing issue		
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Card detail issue		
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Others:		
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Special Observation

Request date:	Requested by:
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IACUC #:

PI name:	User:
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Strain and
Cage #:

Email:

Phone:

Animal Health & Care Issue

Mortality		
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Body		
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Rect		
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Derr		
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Wou		
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Hair		
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Dyst		
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Absc		
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Eye problem		
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Weaning issue		
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Housing issue	<input checked="" type="checkbox"/>	
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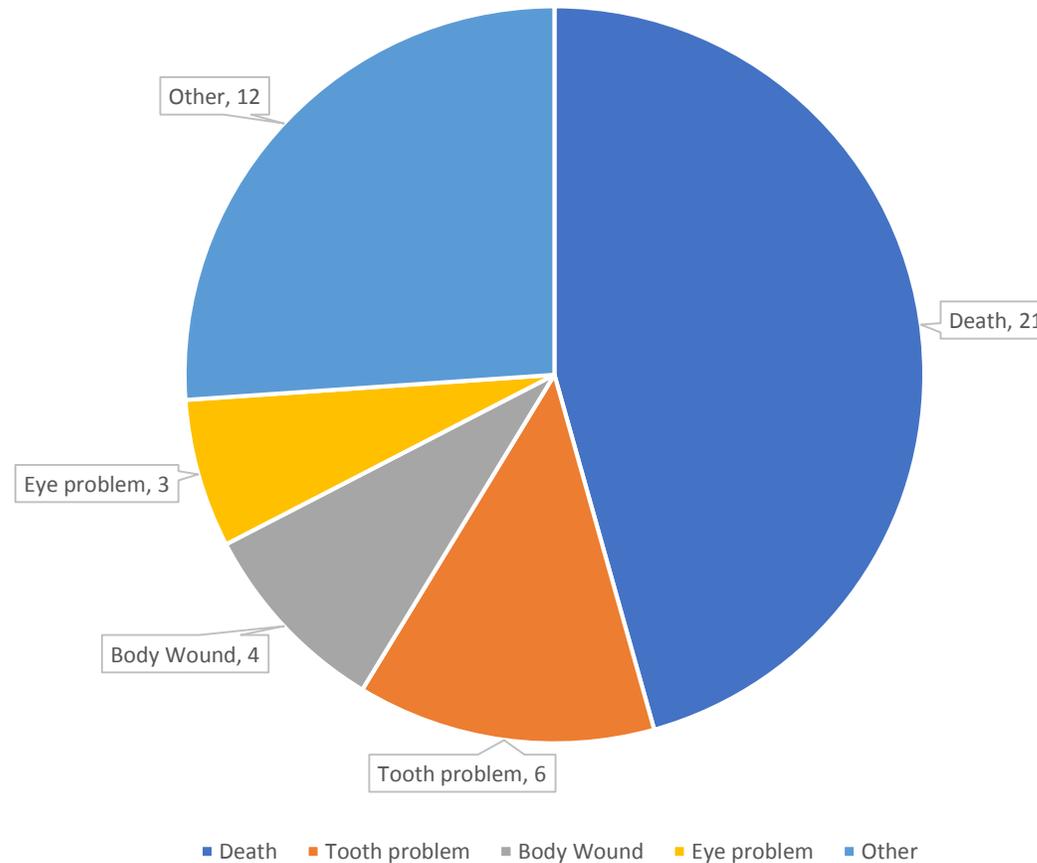
Card detail issue		
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Others:		
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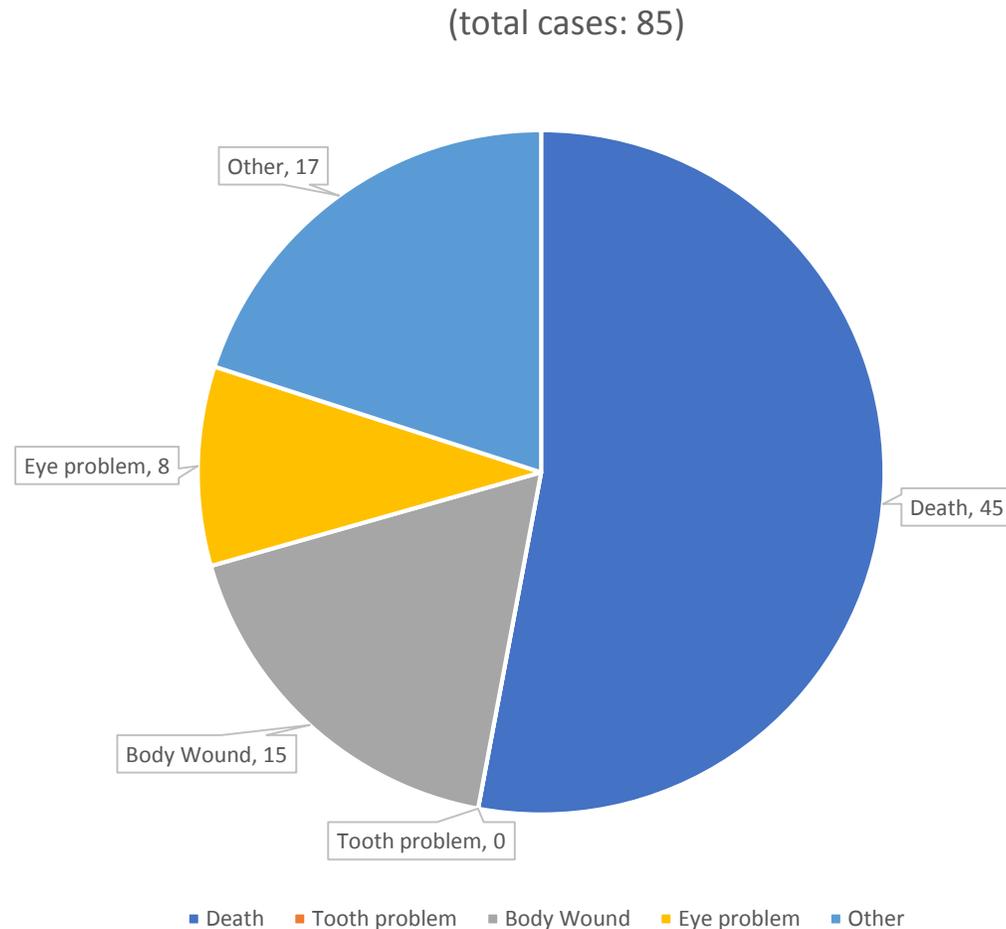
Cage exceeding 1M1F
with **one** litter
will be charged at
Category III rates.

Clinical records in 7H for Faculty member Anon 1 (Sept-Dec2017)

(total cases: 46)



Clinical records in 7H for Faculty member Anon 2 (Sept-Dec2017)



Break down of clinical cases as a feature of age (>1 year old):

- All clinical incidences: 32/85
- Adult deaths: 13/18
- Eye problems: 3/6
- Body wounds: 10/15

You can see the key morbidity for your problems is being older than one year

3. Operation

<u>O-007 New APCF user training</u>	<ol style="list-style-type: none">1. The Guide, Personnel Management: training and Education PP:15-172. The Code of Practice P.23 (5.39) & P.33 (6.45).
<u>O-009 Use and Management of the Mouse Return Room (Room 7221)</u>	<ol style="list-style-type: none">1. The Guide, Separation by Health Status and Species: PP:111-112 The Code of Practice
<u>O-025 Adverse Event Report and Review (Interim)</u>	<ol style="list-style-type: none">1. The Guide, Special Considerations for IACUC Review: PP:27-312. The Guide, Medical Management: PP:1143. The Code of Practice P.17 (5.12) & P.37 (7.15-7.16)
<u>O-026 Respective Responsibility of APCF Staff and Animal Users in APCF Animal Rooms</u>	<ol style="list-style-type: none">1. The Guide, Key Concepts. PP:1-92. The Code of Practice P.6 (2.6) & P.16 (5.2)

4. Health and Safety

[S-002 Guideline on Animal Research involving Hazardous Chemicals](#)

1. The Guide, Animal Care and Use Program: OHS of Personnel PP: 17-19
2. The Code of Practice P.35 (7.7-7.12)

HEALTH HAZARD 健康危害

Chronic or Serious Health Hazard 慢性或嚴重健康危害
Health Hazards Group : see back of card 健康危害組別: 請參閱卡背面資料 Agent name: Route of Admin: see back of card Date of final admin: Date of cage change: PI name: PI contact#: IACUC#: APCF (24/7) emergency : 34692702
Warning: Excreta/bedding/drinking bottle may be contaminated with the administered chemical. Maintain this card on cage for at least 72hrs after administration completed and until animals are transferred to a new cage.

Health Hazards Group 健康危害組別	✓		
May be fatal if swallowed or inhaled 吞嚥或吸入可以致命			
Respiratory or skin sensitization 呼吸道或皮膚致敏			
Germ cell mutagenicity 生殖細胞致突變性			
Carcinogenicity 致癌性			
Reproductive toxicity 生殖毒性			
Specific target organ toxicity : single exposure 特定標的器官系統毒性：單一暴露			
Specific target organ toxicity : repeated exposure 特定標的器官系統毒性：重複暴露			
Aspiration hazard 吸入性危害			
Health hazards not otherwise mentioned 未被分類而引至健康危害物質			
Route of Admin (please circle)			
Oral Dose	Feed	Water	IP
IM	SC	Dermal	ID
Rectal	Implant	Others:	
Waste disposal subject to the conditions of Cap 354C: WASTE DISPOSAL (CHEMICAL WASTE)(GENERAL) REGULATION			

Welfare

[Investigating and Reporting Animal Welfare Concerns](#)

1. The Guide, Animal Care and Use Program:
Investigating & Reporting Animal Welfare Concerns
PP: 23-24
2. The Code of Practice P32-33 (6.39-6.48)



Sample Submission Form

Veterinarian: <u>Peter EGUIA</u>		Owner Name:	
Clinic Name & Address: <u>Animal & Plant Care</u>		Animal Name: <u>2017-5002</u>	Microchip#:
<u>Facility HKUST</u>		Species: <u>Mouse</u>	Breed: <u>APP</u>
Ph: <u>2358-7923</u>	Fax: <u>2358-3978</u>	Gender: <u>M</u> DOB: <u>29 Oct 16</u>	Client ref# at submitting clinic:
Email: <u>bopete@mark@ust.hk</u>	VDL Account #:	Collection Time: <u>16:30</u>	DATE: <u>12/10/2017</u>

HISTORY, SIGNS, LESIONS:
emaciated
BW: 16.06g
euthanized

DIFFERENTIAL DIAGNOSIS: 1. _____ 2. _____ 3. _____

Additional documentations submitted: Clinical medical history In-house blood work Diagnostic image

SAMPLES SUBMITTED (tick ✓)
 Blood, clotted Blood, EDTA Blood, Lith hep Fluid Tissue, unfixed Tissue, fixed Other:
 Blood, citrate Blood, fl/ox Slide Swab Faeces Urine: Cystocent. Catheterized Voided

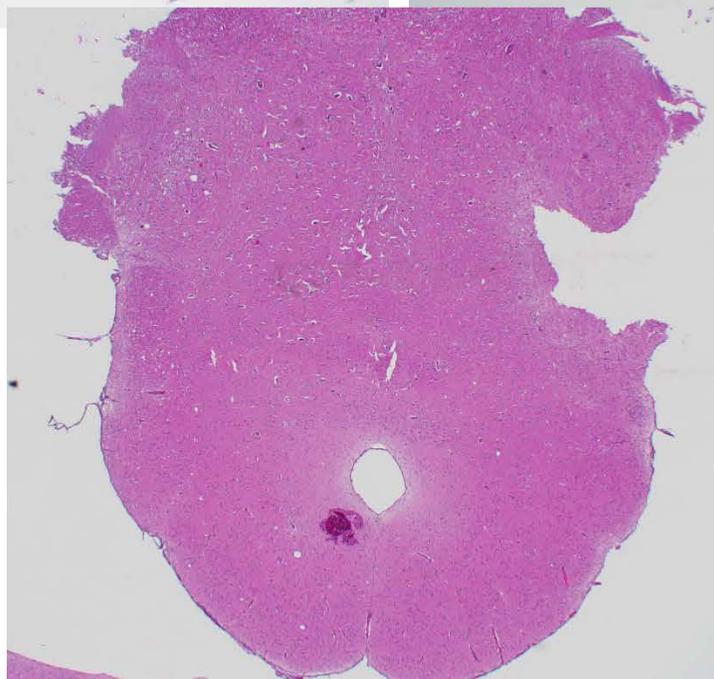
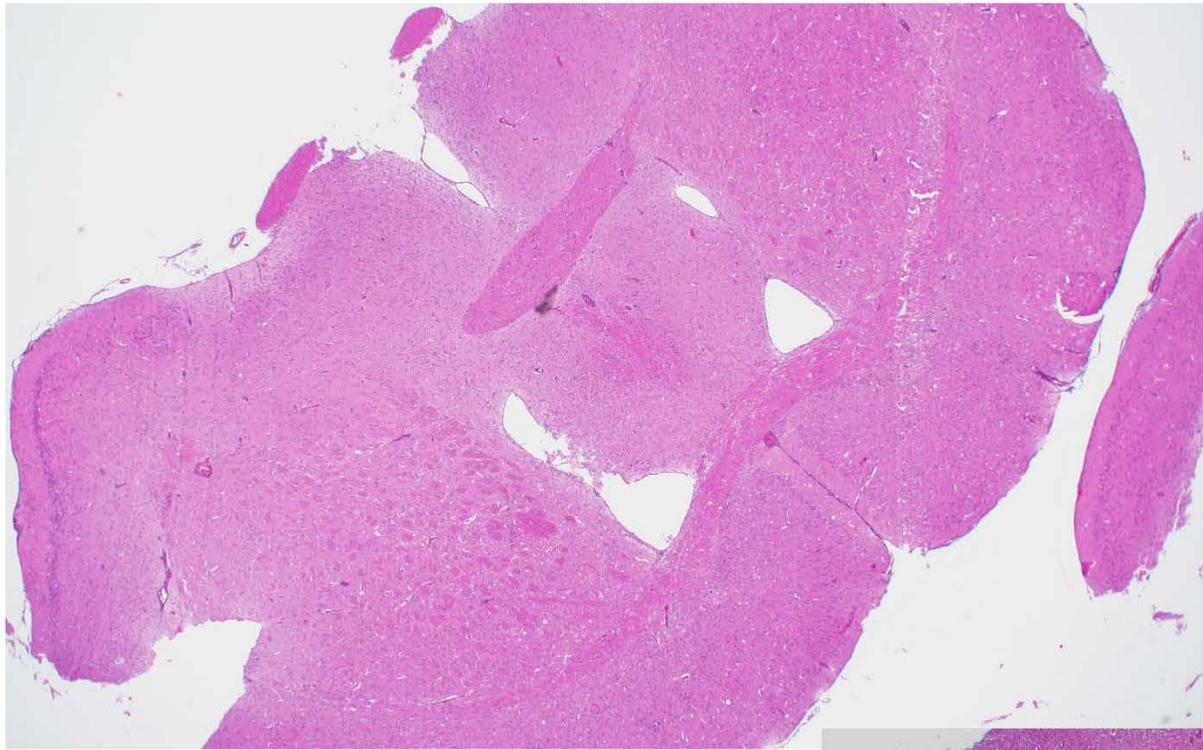
*Results interpretation from a pathologist Yes No

<p>TESTS REQUESTED (tick ✓)</p> <p>Panel*</p> <input type="checkbox"/> Canine liver <input type="checkbox"/> Feline liver <input type="checkbox"/> Equine racing profile <input type="checkbox"/> Electrolyte panel <input type="checkbox"/> Thyroid panel <input type="checkbox"/> Coagulation panel <input type="checkbox"/> DIC panel <input type="checkbox"/> FeLV / FIV panel <input type="checkbox"/> Canine diarrhoea <input type="checkbox"/> Feline diarrhoea <input type="checkbox"/> Canine respiratory <input type="checkbox"/> Feline respiratory <input type="checkbox"/> Canine tick fever <input type="checkbox"/> PBF (HA, serology & PCR) <p>Histopathology / Necropsy</p> <input type="checkbox"/> Biopsy <input checked="" type="checkbox"/> Necropsy, routine <input type="checkbox"/> Necropsy, cosmetic <p>Urine *</p> <input type="checkbox"/> Urinalysis <input type="checkbox"/> plus stained cytology <input type="checkbox"/> plus culture & sensitivity <input type="checkbox"/> Urine protein:creatinine	<p>Haematology*</p> <input type="checkbox"/> Complete blood count <input type="checkbox"/> Fibrinogen <input type="checkbox"/> Serum amyloid A <input type="checkbox"/> Reticulocyte count (no CBC) <input type="checkbox"/> Platelet count (only) <input type="checkbox"/> Prothrombin time <input type="checkbox"/> APTT <input type="checkbox"/> Coomb's test <input type="checkbox"/> Cross match <p>Biochemistry*</p> <input type="checkbox"/> Canine biochem panel <input type="checkbox"/> Feline biochem panel <input type="checkbox"/> Equine biochem panel <input type="checkbox"/> Ruminant biochem panel <input type="checkbox"/> Avian biochem panel <input type="checkbox"/> Reptile biochem panel <input type="checkbox"/> Electrolyte analyte: <input type="checkbox"/> Bile acids <input type="checkbox"/> T4 <input type="checkbox"/> Individual tests: <p>Parasitology</p> <input type="checkbox"/> Faecal floatation <input type="checkbox"/> Worm egg count, individual	<p>Microbiology**</p> <input type="checkbox"/> Aerobic culture and sensitivity <input type="checkbox"/> Anaerobic culture and sensitivity <input type="checkbox"/> Blood culture and sensitivity <input type="checkbox"/> Fungal culture <input type="checkbox"/> Faecal culture (specify bacteria): _____ <input type="checkbox"/> Bacterial culture only Therapeutic Monitoring <input type="checkbox"/> Zonisamide <input type="checkbox"/> Levetiracetam <input type="checkbox"/> Phenobarbitone <input type="checkbox"/> Potassium Bromide <p>Cytology</p> <input type="checkbox"/> Fine needle aspirate Fluid analysis: <input type="checkbox"/> Abdominal <input type="checkbox"/> Thoracic <input type="checkbox"/> Joint <input type="checkbox"/> CSF <input type="checkbox"/> Pericardial Cavity Washes: <input type="checkbox"/> BAL <input type="checkbox"/> TTW	<p>Endocrinology*</p> <input type="checkbox"/> Canine ACTH <input type="checkbox"/> Canine insulin <input type="checkbox"/> Fructosamine <input type="checkbox"/> Cortisol <input type="checkbox"/> Urine cortisol:creatinine <input type="checkbox"/> ACTH stim <input type="checkbox"/> LDDT <input type="checkbox"/> HDDT <input type="checkbox"/> Total T4 <input type="checkbox"/> fT4 <input type="checkbox"/> Progesterone <input type="checkbox"/> Testosterone <input type="checkbox"/> Canine TSH <input type="checkbox"/> Parathyroid hormone <p>PCR</p> Site: _____ Specify test: (refer to back of form) <p>Serology</p> Specify test: (refer to back of form)
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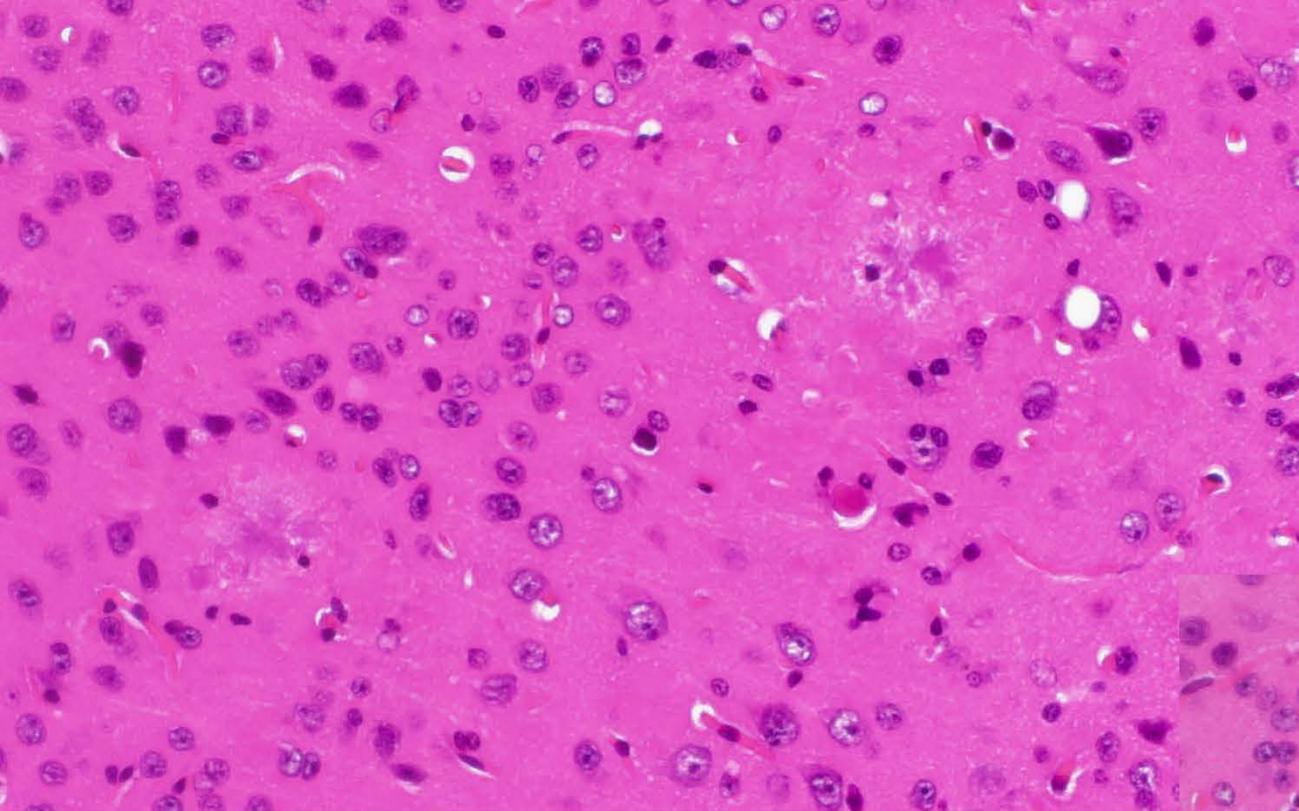
VDL USE ONLY 25-10-2017
 Time & Date: 15:21
 Staff member: KH

Comment: fixed tissue X1 pot

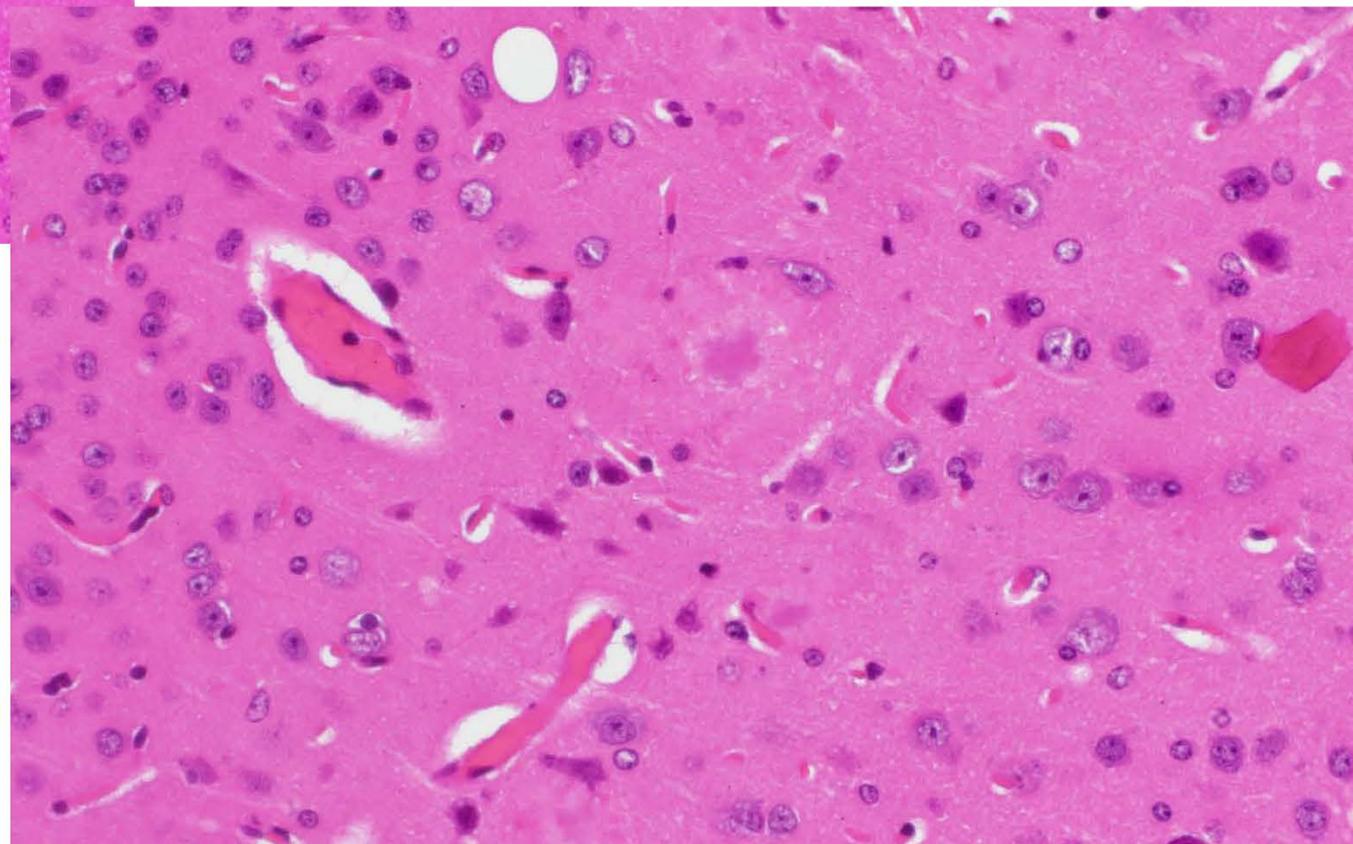
Mouse 1



Mouse 1 : brain



Mouse 2



Mouse 3

Diagnosis: Brain

- Mouse 1 : moderate diffuse **lymphoplasmacytic meningoencephalitis** with **multifocal gliosis** (and amyloid deposits)
 - changes not totally consistent with APP
 - suggests an infectious, possibly viral cause
- Mouse 2,3 : multifocal amyloid deposits, grey matter
 - consistent with APP model

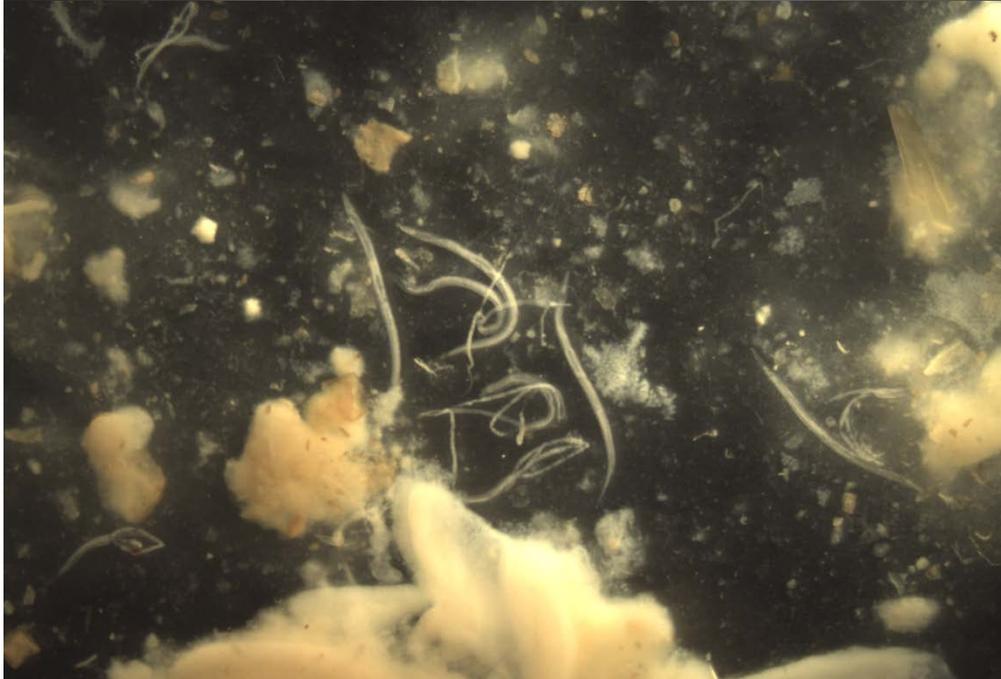
10 mice were found dead after injection with tamoxifen via the intraperitoneal (IP) route.



10 mice were found dead after injection with tamoxifen via the intraperitoneal (IP) route. These mice were of similar age groups, ranging from 2 to 5 months, at the time of drug administration. Necropsy on one mouse revealed foreign debris in the form of white plaques on the GIT, including stomach, intestines, liver, spleen, and mesentery. It also showed some confined bleeding on the abdominal wall and the intestine most likely caused by the injecting needle. Samples were sent to City University of Hong Kong Veterinary Diagnostic Laboratory (CityU-VDL) for histopathologic analysis. Results show that there was an acute inflammation associated with the foreign debris in the peritoneum leading to sepsis and the eventual death of the animal. The representative case was concluded as well with the other deaths and similar action plan will be implemented for this group's future tamoxifen-related procedures.

Lesions circled (in blue) are coagulated fibrin indicative of peritonitis





Non-compliance with APCF guidelines

Mouse cages incorrectly held in satellite lab and held there greater than 48 hours

Caused problems of odour in the laboratory

Exposure of individuals in open-plan laboratory to animal allergens



Mice kept in chemical fume hood



- Sub-optimal sash height achieved?
- Animal kept downstream of toxic organic solvent storage, e.g. xylene and alcohol (for histology)
- In *APCF Animal User Manual* (A mandatory reading material for all new user training)
 - 16.1. Rodents that are taken outside APCF **should not be kept in the users' laboratory overnight**. All procedures, whether the animals survived or sacrificed/euthanized, must be completed very soon.
 - 16.2. Animals taken outside the facility are exposed to a higher risk of infection. These animals must not be returned to its original animal room to avoid any spread of diseases to other animals in the facility. **All animals must be returned to a designated room, i.e. Room 7221 in 7J**, to provide a suitable holding environment (i.e. temperature, humidity, silence, and the proper light-dark cycle) for the animals.
 - 16.4. Animals taken away from APCF should be **kept in a clean, quiet, and dim place**. The period of animal-keeping in the laboratory should be as short as possible. All animals should be kept away from electronic devices. Such devices, e.g. computer and florescent lamp, are very likely to emit ultrasound waves that rodents are sensitive to. (Note: Fume hood is obviously noisy)



Used cages with diet on the floor



- Cage on the Floor - attractive to wild rodents



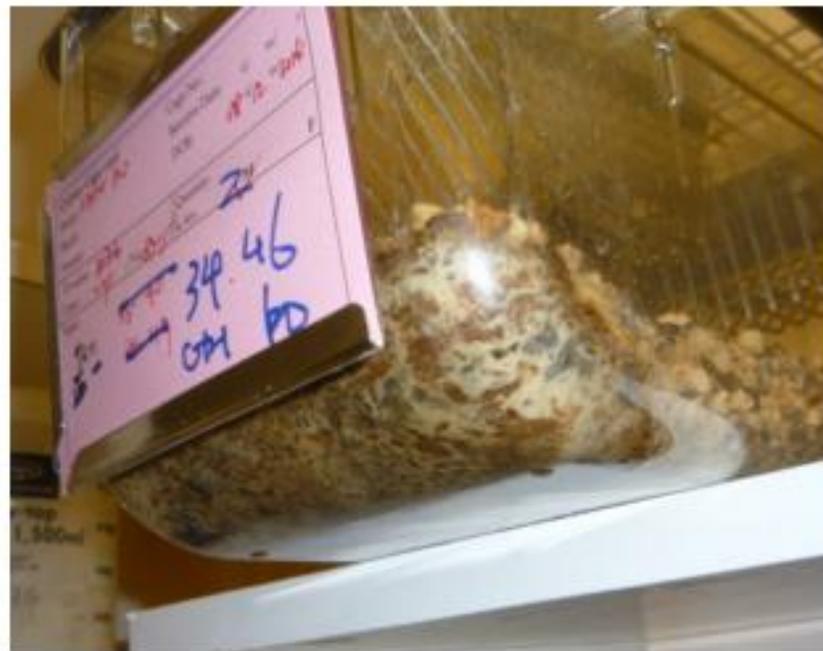
Cages removed illegally from APCF - must use disposable cages















Satellite Facilities

*“If animals must be maintained in a laboratory to satisfy the scientific aims of a protocol, **that space should be appropriate to house and care for the animals and its use limited to the period during which it is required.**”*

Guide pg 134

AAALAC Interpretation:

Satellite areas should be capable of similar standards as the central animal facility – security, HVAC, OHS, light cycle control, feed storage, husbandry and sanitation, etc.

Satellite Facilities

- Potential issues....
 - Multiple user labs/ “bystander” exposure
 - HVAC function/ recirculation (engineering controls?)
 - Day-to-day care husbandry/sanitation
 - Animal transportation
 - Conflict of interest
 - Accountability and oversight
 - Scientific data validity
 - Circumventing policies and SOPs
 - Noise, chemical, light cycles, documentation, etc

The reality is that the **FINAL** responsibility for animal care and use rests with the ...

Dear Tony, I would just like to clarify about this email. Of course, we as users are always concern our mice health status and would try our best to check on them, I suppose the observation of food and water requirements for all mice in the facility is actually the responsibility of APCF. It is important for us to know that this is a courtesy reminder to ask users to help and make this a better facility, but these tasks remain the responsibilities of APCF. Thanks,

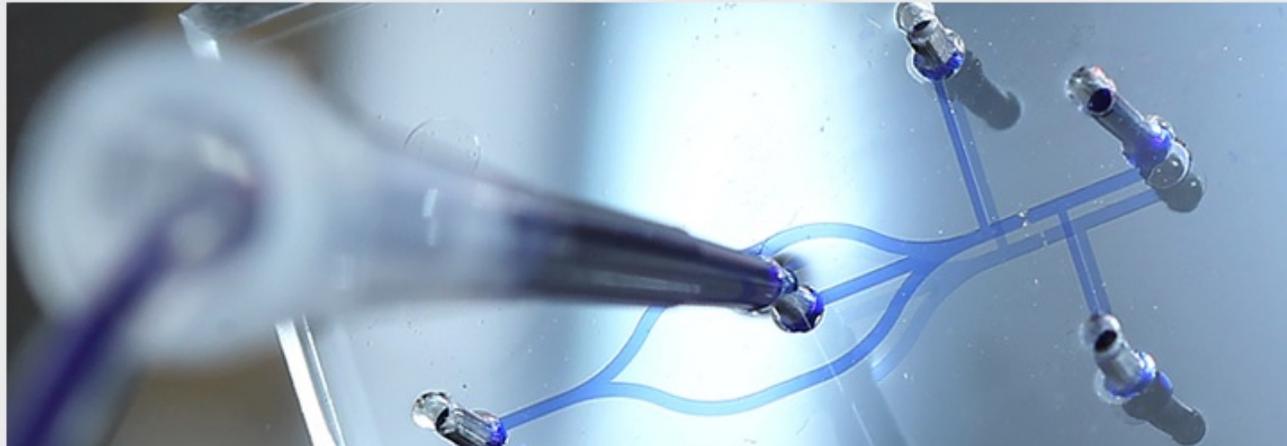
... **USER** as outlined in the Code of practice, The Guide and Harmonized Best Practice, and the NIH Guide!

Why Does This Matter?

1. HKUST's own policy – are we following it?
2. Harmonized international best practice to coincide with our new APCF
 - Ensure humane animal care and ethical use
 - Ensure high quality, specified disease free animals
 - Ensure safe work practices
3. Trying for AAALAC accreditation at some time in the future
4. Are users familiar with BASIC guidelines of animal care and use?
5. There needs to be a culture changes at UST if we are to achieve AAALAC accreditation

1. HKUST's Own Policy:

RESEARCH & GRADUATE STUDIES



Research Policies, Guidelines and Circulars

Policy

[About Us](#)

[About Our Research](#)

[Graduate Studies](#)

[Centers and Institutes](#)

[Central Research Facilities](#)

[Research Impacts](#)

[Mainland Platforms](#)

[Research and Innovation](#)

[Policies and Guidelines](#)

Research Policies, Guidelines and Circulars

Policies

- ❖ [Policy on Research Conduct and Integrity](#)
- ❖ [Intellectual Property Policies](#)
- ❖ [Policy on Faculty Involvement in Commercial Pursuits](#)
- ❖ [Matching Support for Large Scale Group Research Projects](#)
- ❖ [Internal Research Support Schemes](#)
- ❖ [Policy on the Establishment, Management, Reporting and Review of Research Institutes and Centers](#)

Guidelines and Procedures

- ❖ [Guidelines and Procedures for Research Practices at the University](#)

Guidelines and Procedures for Research Practices

The University community has a collective responsibility to ensure that proper research practices are carried out in accordance with both international and University standards and regulations at all times, to be vigilant in guarding against serious lapses, and to report violations if they occur.

Committee on Research Practices

- All research conducted at the University whenever involving animals, human participants and safety should be reviewed for research practices. Under the auspices of the [Committee on Research Practices \(CRP\)](#), there are three Committee/Panels to review such practices:
- [Animal Ethics Committee](#)
- [Human Participants Research Panel](#)
- [Safety Panel](#)

Animal Ethics Committee

Terms of Reference

Monitor the acquisition, transport, production, housing, care use and disposal of animals;

Recommend to the institution any measures needed to ensure that the standards of the [Code of Practice for Care and Use of Animals for Experimental Purposes](#) are maintained;

Examine and approve, subject to modification, or reject written proposals relevant to the use of animals in experimental activities. Also to approve only those projects for which animals are essential and which conform to the requirements of this Code, taking into consideration ethical and welfare aspects as well as scientific value;

Formally withdraw approval for any project or authorize the treatment or euthanasia of any animal;

Examine and comment on all institutional plans and policies which may affect animal welfare;

Maintain a register of approved projects; and

Perform all other duties required by this Code.

Chair

Prof Kenny Chung, LIFS

Members

Mr. Michael Cheng, PURO

Dr. Shiu-Hon Chui (external member)

Prof. Karl Herrup, LIFS

Prof. Pingbo Huang, LIFS

Prof. Hyokeun Park, LIFS

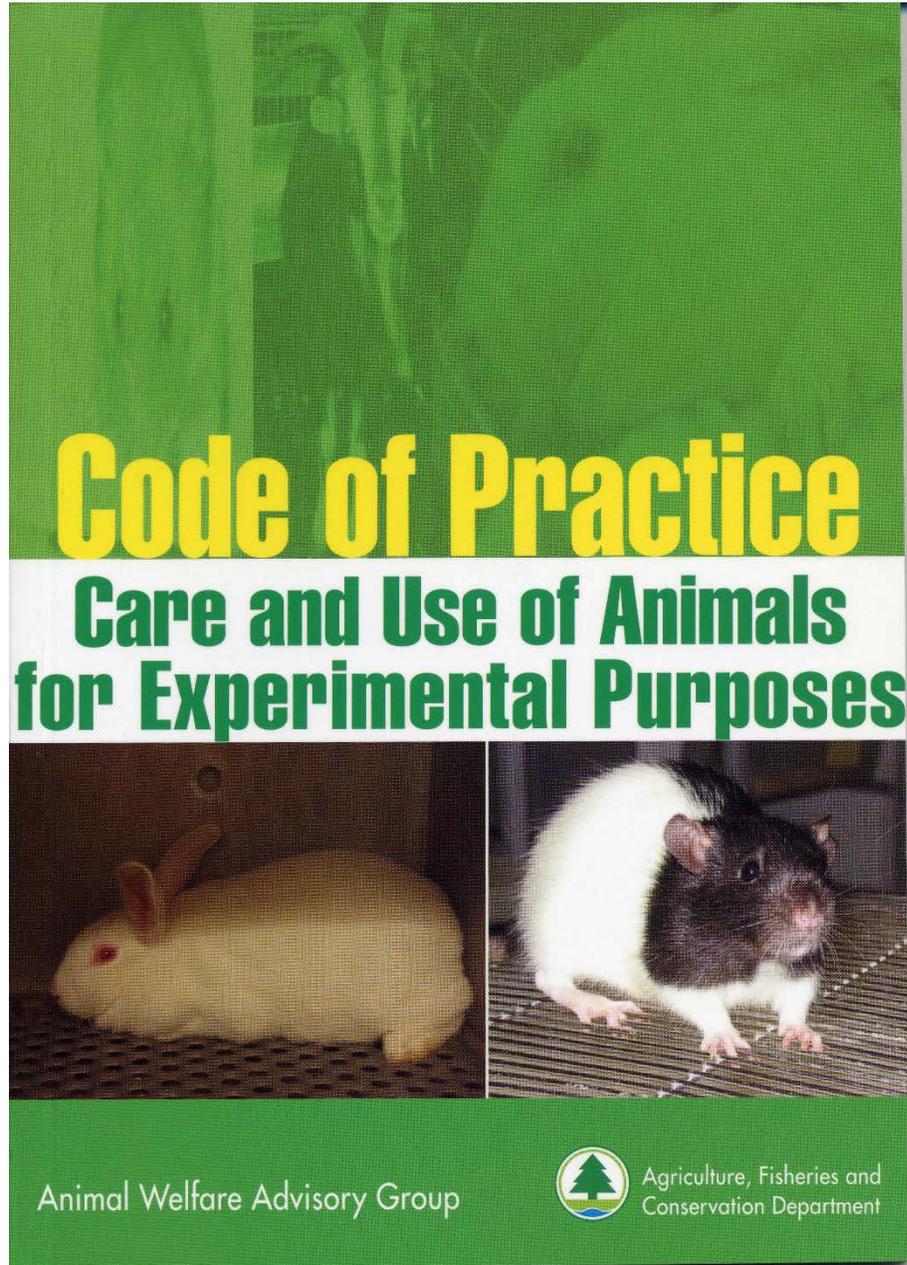
Prof. Zilong Wen, LIFS

Dr. Chi-Kwan Yip (external member)

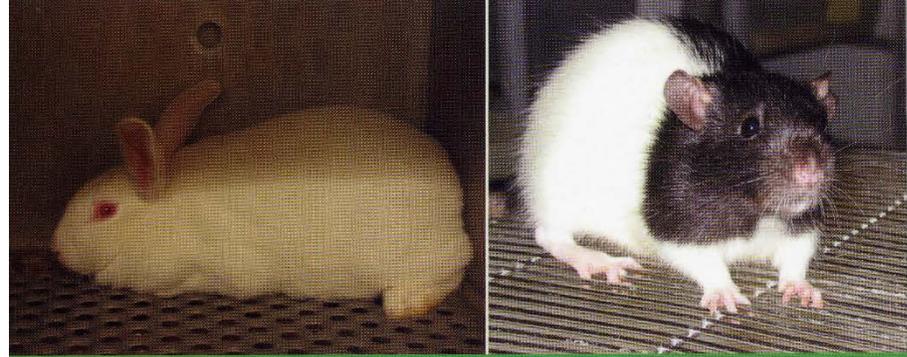
Member/secretary:

Mr. William Chau, APCF

I was chairing editor of this CoP, so I know the background and contents of this document - HKUST is non-Compliant with the CoP!



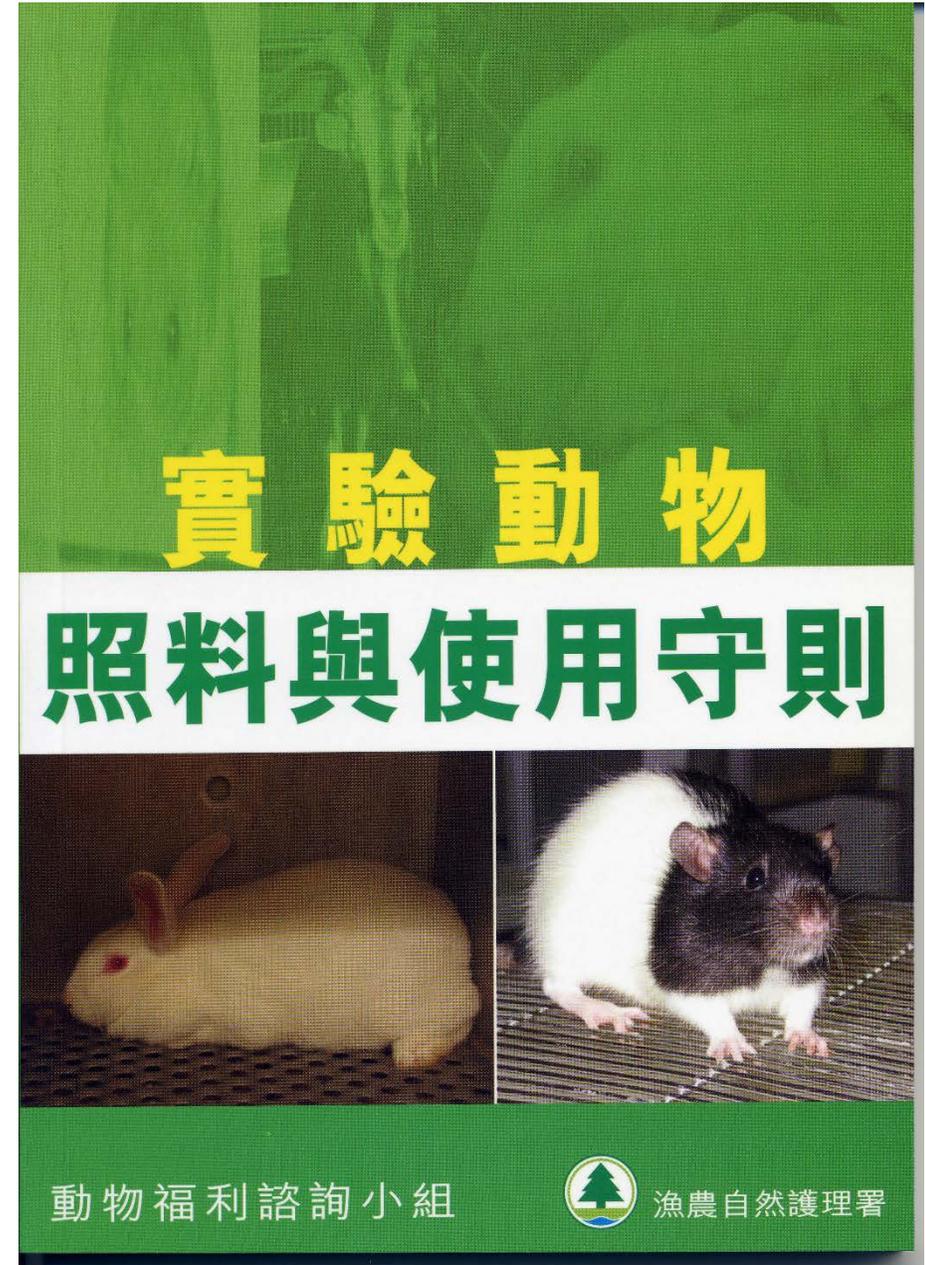
Code of Practice
Care and Use of Animals
for Experimental Purposes



Animal Welfare Advisory Group



Agriculture, Fisheries and Conservation Department



實驗動物
照料與使用守則



動物福利諮詢小組



漁農自然護理署

Harmonized international best practice to coincide with our new APCF

- Council For International Organizations Of Medical Sciences Associate Partner Of UNESCO - In Official Relations With WHO And International Council For Laboratory Animal Science (CIOMS/ICLAS): [INTERNATIONAL GUIDING PRINCIPLES FOR BIOMEDICAL RESEARCH INVOLVING ANIMALS DECEMBER 2012](#)
- The Office of Laboratory Animal Welfare (OLAW) provides guidance and interpretation of the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals, supports educational programs, and monitors compliance with the Policy by Assured institutions and PHS funding components to ensure the humane care and use of animals in PHS-supported research, testing, and training, thereby contributing to the quality of PHS-supported activities.

Challenges and Opportunities for Harmonization

Perspectives from International Organizations International Council for Laboratory Animal Science (ICLAS)

Cecilia Carbone <https://www.ncbi.nlm.nih.gov/books/NBK91511/>

- ICLAS is an international nongovernmental and non-profit scientific organization that exists mainly to provide good principles to achieve good science and to promote high standards in the care of animals used in research, testing, diagnosis, and education.
- ICLAS has a strategic plan according to which it promotes worldwide harmonization in the care and use of laboratory animals.



OLAW Fast Facts

- Assured Institutions ([Domestic](#) | [Foreign](#))

Policies and Laws

- PHS Policy on Humane Care and Use of Laboratory Animals, 2015

[\(PDF - 2.95 MB\)](#)

- Guide for the Care and Use of Laboratory Animals, 8th Edition

[\(PDF - 1.2 MB\)](#)

- AVMA Guidelines for the Euthanasia of Animals: 2013 Edition

[\(PDF - 1.4 MB\)](#)

- International Guiding Principles for Biomedical Research Involving Animals, 2012

[\(PDF - 123 KB \)](#)

Guidance

- [Articles by OLAW Staff and References](#)

Education

- [Education Resources](#)

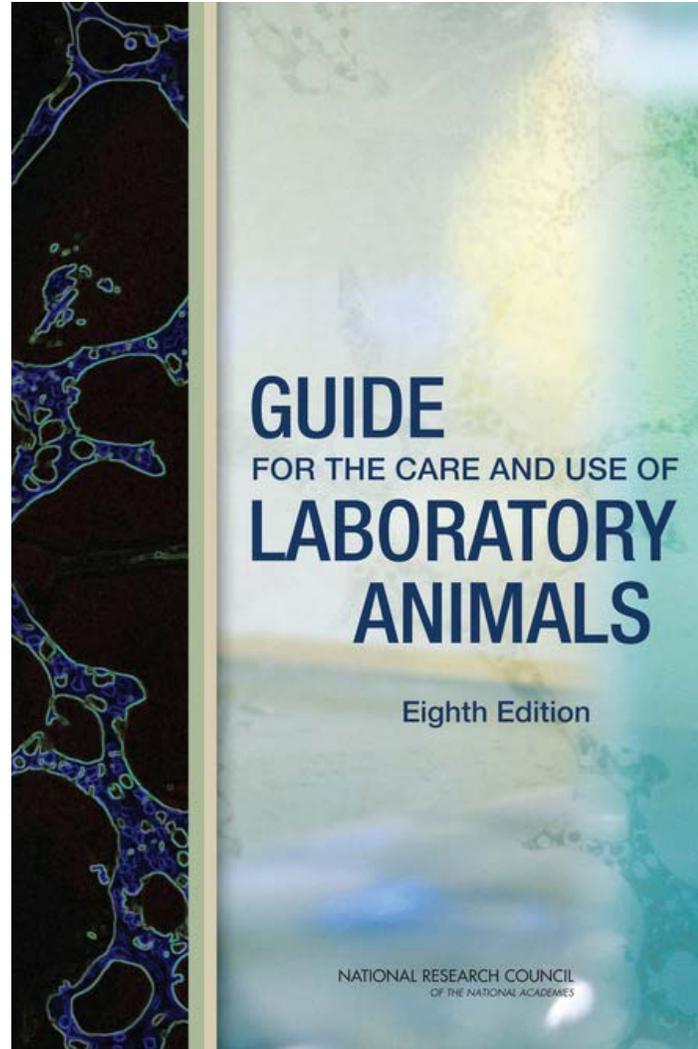
Resources

- [Publications Available From OLAW](#)
- ARENA/OLAW IACUC Guidebook, 2002 ([PDF - 3.2 MB](#)): Addendum ([PDF - 226 KB](#))
- What Investigators Need to Know about the Use of Animals ([PDF - 349 KB](#))
- [Useful Links](#)

Association for Assessment and accreditation for Laboratory Animal Care

- AALAC International is a private, non-profit organization that promotes the humane treatment of animals in science through voluntary accreditation and assessment programs.
- Nearly 1,000 companies, universities, hospitals, government agencies and other research institutions in 46 countries have earned AAALAC accreditation,
- AAALAC endorses the use of animals to advance medicine and science when there are no non-animal alternatives, and when it is done in an ethical and humane way.
- AAALAC's a voluntary accreditation process ensures research animal care and use programs meet the minimum standards required by law, and are *also* going the extra step to achieve excellence in animal care and use.
- **AAALAC International is where science and responsible animal care connect.**

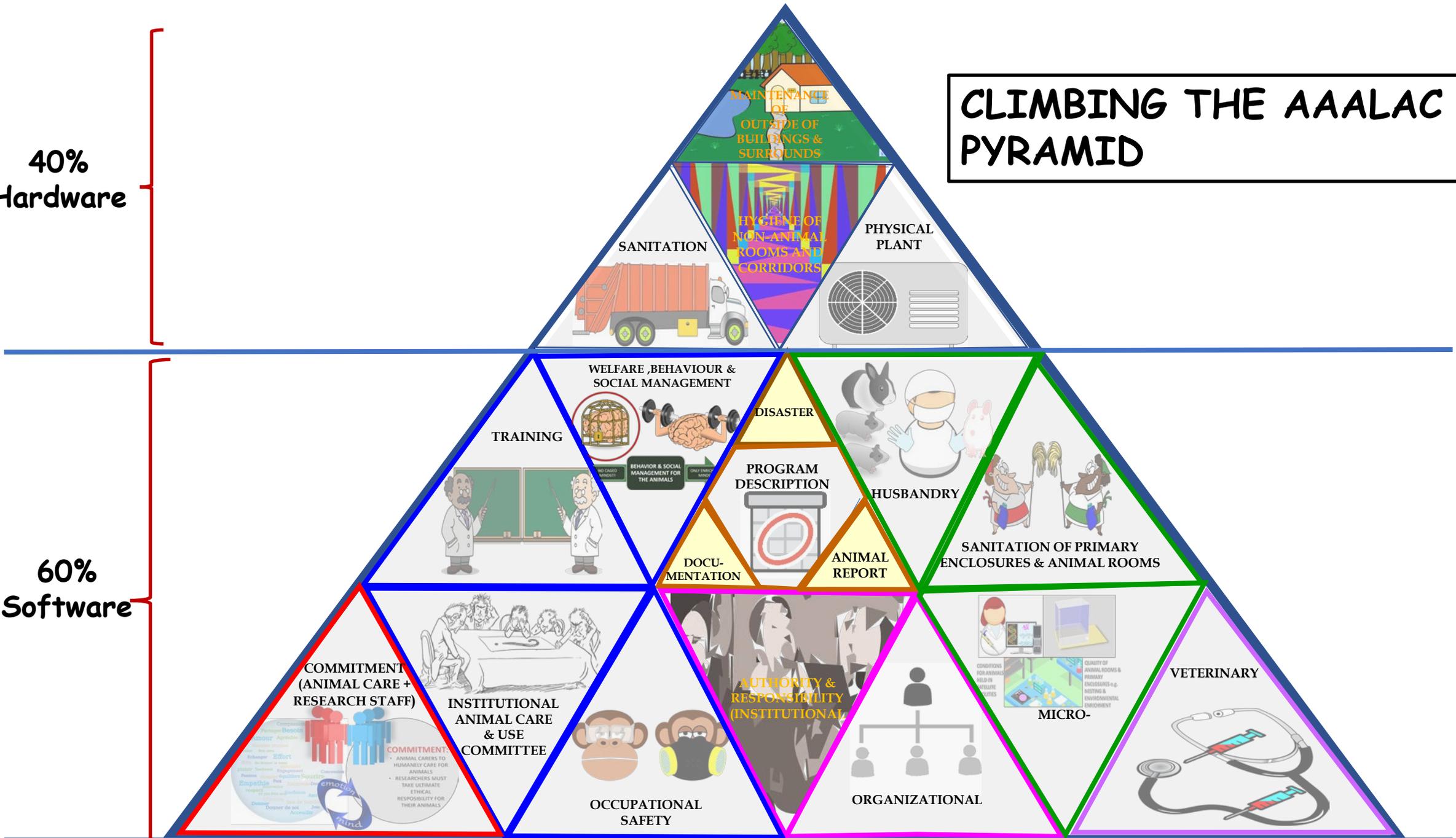
The Guide - the major reference source for a humane care and ethical use program and the compliance is the basis for AAALAC accreditation



CLIMBING THE AAALAC PYRAMID

40%
Hardware

60%
Software



LIST OF ELEMENTS FOR CLIMBING THE AAALAC PYRAMID

HARDWARE (40%)

- 1.1 MAINTENANCE OF MACRO-ENVIRONMENT: OUTSIDE OF BUILDINGS & SURROUNDS
- 2.1 SANITATION OF MACRO-ENVIRONMENT
- 3.1 MACRO-ENVIRONMENT: HYGIENE OF NON-ANIMAL ROOMS AND CORRIDORS
- 4.1 PHYSICAL PLANT

SOFTWARE (60%)

1.1 PROGRAM DESCRIPTION

- 2.1 INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE
- 2.2 WELFARE BEHAVIOR & SOCIAL MANAGEMENT FOR THE ANIMALS
- 2.3 TRAINING OF CARERS, USERS & IACUC MEMBERS
- 2.4 OCCUPATIONAL HEALTH & SAFETY FOR EVERYONE

3.1 HUSBANDRY

- 3.2 SANITATION OF PRIMARY ENCLOSURES & ANIMAL ROOMS
- 3.3 MICRO-ENVIRONMENT: CONDITIONS FOR ANIMALS HELD IN SATELLITE FACILITIES
QUALITY OF ANIMAL ROOMS & PRIMARY ENCLOSURES E.G. NESTING & ENVIRONMENTAL NRICHMENT

- 4.1 THE ROLE OF THE INSTITUTIONAL OFFICIAL: AUTHORITY & RESPONSIBILITY
- 4.2 ORGANIZATIONAL STRUCTURE

5.1 VETERINARY CARE

- 6.1 COMMITMENT: ANIMAL CARERS TO HUMANELY CARE FOR ANIMALS /RESEARCHERS
MUST TAKE ULTIMATE ETHICAL RESPOSIBILITY FOR THEIR ANIMALS

The AAALAC platform - a balanced and stable foundation for a humane care and ethical use program supported by the IO - AV - IACUC



The press is always willing to publish scandalous news - any adverse news about HKUST research animals is going to hurt UST's reputation & ...

FRIDAY
AUG. 13, 1999

South China Morning Post 7

HONG KONG

Big gap between experiments and official figures: legislator

Animal tests 'not checked'

ELLA LEE

A legislator urged stricter regulations yesterday over animal experiments.

Christine Loh Kung-wai of the Citizens Party said she had found a big discrepancy between the figure for the number of animals used in experiments at two local universities and the official figure reported to the Department of Health.

Under the Animals (Control of Experiments) Ordinance, researchers who want to perform experiments on live vertebrate

animals must apply for a permit from the Department of Health.

Figures Ms Loh obtained from sources at the Chinese University and the University of Hong Kong showed that more than 80,000 animals were used in experiments in the 1997-98 academic year. These included rats, mice and rabbits.

But Department of Health figures show that last year 583 permits were issued covering about 26,000 animals.

Ms Loh wrote to Secretary for Health and Welfare Katherine

Fok Lo Shiu-ching yesterday to question the accuracy of the Government's figures.

She said although the two sets of figures were collected over slightly different periods, the discrepancy was large enough to raise concerns.

"The current system assumes that if an experiment is not causing pain then there is no need to monitor it. I believe this approach is outdated and unethical," she said in the letter.

Yesterday, the *South China Morning Post* revealed that

Hong Kong surgeons were to operate on 30 monkeys in Qingdao on the mainland.

The Society for the Prevention of Cruelty to Animals fears the project will open the floodgates for local scientists to circumvent animal testing protocols and regulations in the SAR.

Three monkeys have died during brain operations the scientists hope will reveal the cause of the spine deformity scoliosis.

The society's deputy executive director, Cynthia Smillie, said the Government should

step up monitoring on researchers.

"The regulations here are so loose, the figures show there must be under-reporting of use of animals," she said.

Professor Ricky Man Ying-keung, chairman of the University of Hong Kong's seven-member committee on the use of live animals in teaching and research, said they had been using international standards to consider each application.

He said the chance for local researchers to get around Hong Kong laws would be slim.

Office of Christine
Loh, Legco Member

Fax

To: Tony James From: Allan Man (Legislative Assistant to
Christine Loh)
Fax: 2503-5723 Pages: (including this page) 4
Phone: Date: 05/22/00
Re: CC:
 Urgent For Review Please Comment Please Reply Please Recycle

Animal Experiment Question

LEGCO QUESTION NO.19

(Written Reply)

Asked by : Hon Christine LOH Date of meeting : 17 May 2000
Replied by : Secretary for
Health and Welfare

Question :

Will the Government inform this Council:

- (a) of the number and percentage of licensed researchers who filed returns under section 12 of the Animals (Control of Experiments) Ordinance (Cap. 340) last year;
- (b) of the measures it has taken to ensure compliance with sections 11 and 12 of the Ordinance;
- (c) whether it has assessed if the provisions of the Ordinance:
 - (i) are still in line with the "best practices" for carrying out experiments on animals in other jurisdictions; and
 - (ii) are impediments to the recognition by the international scientific community of the results of researches conducted in Hong Kong; and
- (d) given that the Ordinance was enacted nearly 40 years ago and with the rapid advances in scientific research methods in the past decades, whether it will consider enacting a new piece of legislation for regulating experiments on animals; if not, of the reasons for that?

10'0' 10.01

QM

Reply :

Madam President,

- (a) In 1999, there were 733 researchers licensed under the Animals (Control of Experiments) Ordinance to conduct experiments on living vertebrate animals. All of them have submitted their returns, except one researcher who has left his employment and another who has left Hong Kong.
- (b) At the time of issue of the licences, licensees are reminded in writing of their duty to keep records and submit returns in accordance with the relevant provisions of the Animals (Control of Experiments) Ordinance. The Department of Health has in place a system to chase up timely submission of annual returns. Reminders are sent to those who fail to submit returns by the stipulated date. Enforcement action may be taken for non-complying licensees.
- (c) (i) The Agriculture, Fisheries and Conservation Department, advised by its Animal Welfare Advisory Group and the Department of Health, is conducting a review of the local and overseas regulatory systems for control of using living animals for experiments.
(ii) The Department of Health, from its contact with licensees, is not aware that the current provisions in the Animals (Control of Experiments) Ordinance has posed an impediment to the recognition by the international scientific community of the results of the relevant researches conducted in Hong Kong.
- (d) The Administration reviews the Ordinance regularly in light of technological advances, international practices and changing community aspirations to ensure that the Ordinance achieves its objectives effectively. Subject to the findings of

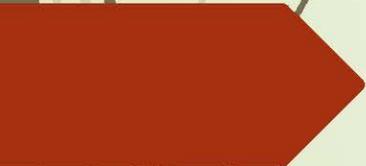
the review mentioned in part (c), we would consider introducing appropriate changes where necessary.

Q19



... DoH does not like to be embarrassed!

Details of the HKUST Health Monitoring, Disease Surveillance and Adverse Event Investigations



Anthony James

BVSc (Hons) MSci MANZCVS MRCVS

Director of APCF HKUST



Why Define Health Status of Research Animals?

FELASA Guidelines for the Accreditation of Health Monitoring Programmes and Testing Laboratories involved in Health Monitoring
[Lab Anim \(NY\)](#). 2010 Feb;39(2):43-8. doi: 10.1038/labnan0210-43. [Nicklas W¹](#), [Deeny A](#), [Diercks P](#), [Gobbi A](#), [Illgen-Wilcke B](#), [Seidelin M](#).

- *Preamble: Defining the health status of animals used in research is key to the reliable interpretation of results obtained from experiments involving the use of animals, and in obtaining reproducible experimental results. Microbiological standardisation has reduced the numbers of animals used by reducing the variation within and between test groups. It has also improved the overall health of laboratory animals, thus improving their welfare, and has reduced human health risks due to zoonotic disease.*



1 Preamble

Monitoring of laboratory animal breeding and experimental colonies, with the intention of harmonizing procedures primarily among countries associated with FELASA, but also worldwide.

The use of the recommendations will be facilitated by a basic knowledge of microbiological standardization and diseases of laboratory animals

2 General considerations

- ▶ These recommendations constitute a common approach for health monitoring of laboratory animals and the reporting of results. **Actual practice may differ from these recommendations in various ways depending on local circumstances, such as research objectives and local prevalence of specific agents,**
- ▶ **Health monitoring schemes must be tailored to individual and local needs.** However, quality aims must be clearly defined and an appropriate system of preventive hygienic measures (e.g. barrier systems) developed to meet those aims.
- ▶ Finally, a **health monitoring programme should be established in every facility** to demonstrate whether the quality aims have been met by monitoring the effectiveness of the preventive measures



3 Risk of introducing unwanted microorganisms

The risk of inadvertently introducing microorganisms (viruses, bacteria, fungi and parasites) into breeding units is generally lower than for experimental units. Introduction of unwanted microorganisms is mainly due to one or more of the following factors:

- **animals,**
- **biological materials,**
- **equipment and**
- **staff**



4 Frequency of monitoring and sample size

- Colonies should be monitored at least quarterly.
- Depending on **local circumstances and needs, more frequent monitoring may be carried out for a selection of some frequently occurring agents that have a serious impact on research.**
- Sick and dead animals should be submitted for necropsy. These animals should be examined...
- ...in addition to those already scheduled for routine monitoring.
- The out-come of the necropsy may prompt an increase in the sample size and frequency of monitoring.

Table 1 Calculation of the number of animals to be monitored

Diseases with an infection rate of 50% or more (Sendai, MHV) require far fewer animals to detect their presence than diseases with low infection rates.

Assumptions

1. Both sexes are infected at the same rate
2. Population size > 100 animals
3. Random sampling
4. Random distribution of infection

The sample size is calculated from the following formula:

$$\frac{\log 0.05}{\log N} = \text{Sample size}$$

N = percentage of non-infected animals

0.05 = 95% confidence level

Relation of sample size to prevalence rate

Suspected prevalence rate (%)	Sample sizes at different confidence levels		
	95%	99%	99.9%
10	29	44	66
20	14	21	31
30	10	13	20
40	6	10	14
50	5	7	10

Example: 10 animals should be monitored to detect at least one positive animal if the suspected prevalence rate of an infection is 30% (confidence level: 95%)



Herd Health Management

- ▶ defined as 'a method to optimise health, welfare and production in a population of ... [animals] ... through the systematic analysis of relevant data and through regular objective observations of the ... [animals] ... and their environment, such that informed, timely decisions are made to adjust and improve ... [colony] ... management over time'.
 - ▶ <https://www.nottingham.ac.uk/research/groups/dairy-herd-health-group/herd-health.aspx>



Conceptual foundations for infectious disease surveillance

- ▶ The purpose of this report is to offer concepts for consideration in developing infectious disease surveillance systems, defined here as active, formal, and systematic processes intentionally directed to rapidly seek out and identify infectious disease agents or disease.
- ▶ Mark C. Thurmond J Vet Diagn Invest 15:501–514 (2003)
 - ▶ <http://journals.sagepub.com/doi/pdf/10.1177/104063870301500601>



Adverse events at research facilities

- ▶ Identifying the various events that can endanger animal and human lives and lead to loss and damage of property is essential in planning efficient measures for prevention and mitigation. Categorizing the possible events into groups based on their effects can help in coordinating and managing efforts to prevent and/or reduce the impact of such events.

- ▶ **Swapna Mohan, Lori L Hampton & Susan Brust Silk**

- https://grants.nih.gov/grants/olaw/references/lab46_06_0617.pdf



HKUST – The Questions

It is not just the organisms but the objectives of the programme.

- What are you trying to exclude and why?
- What will you do if you get a positive?
- What are our resources and how best to employ them.
- What are our risks - imports and/or closed colonies?
- What are your colony units - IVC cages or open cage rooms?
- Are we going using sentinels or EA dust?
- Are we going to use sentinels or live sampling?



Risk-Analysis Programme

- ▶ How are our room(s) HVACs configured:
 - ▶ Pressure differentials?
- ▶ Wild rodents
- ▶ User compliance
- ▶ Institutional support



The key is...

...These things determine our frequency of sampling and how I sample?

NO COOK-BOOK RECIPES



HKUST Circumstances

- ▶ we import animals almost monthly from a range of the sources and so the approved supplier concept is flawed.
 - ▶ (Should I treat the 4 main commercial suppliers the same way as universities and other sources?)
- ▶ We determine a colony as low risk or high risk.
 - ▶ Based on our assessment of the health report and the quality of the laboratory

We do sampling of all imports

- ▶ If over a 100 animals we sample on an assumption of 30% prevalence for the 6 most prevalent organisms,
 - ▶ on the assumption of common things commonly.
- ▶ We do live testing:
 - ▶ 5 animals per swab of the fur and 5 faecal pellets 4 days after arrival.
- ▶ Once the results are back (usually 10 to 14 days) the animals that are low risk go to the PI.
- ▶ For those sources we consider high risk, we keep the animals isolated for a further 4 weeks
 - ▶ repeat testing using a comprehensive panel of serology looking for seroconversion using the blood spot model (2 animals per filter paper)



Finally the programme is meaningless unless...

- ▶ You monitor your facilities' sanitation programme,
- ▶ You monitor your facilities' autoclave,
- ▶ Your users' compliance with SOPs
- ▶ Your users' use of biologicals
- ▶ You have disease surveillance of colonies
- ▶ You have Adverse Event Reporting (and PAM)
 - ▶ We have a gross pathology programme with City U's vet school's path labs

Weaknesses at HKUST:

- Biologicals
 - No users are having their cell lines tested
- Environmental monitoring
 - Just getting started
- User compliance and cooperation
 - Efforts to accept results from sources and laboratories of uncertain/unreported quality standards
- Bacteriology – really nothing meaningful to date
 - Cost of bacteriology to test for the FELASA list of organisms
 - Problematic shipping of bacto samples overseas
 - I don't know what is important because researchers don't involve APCF in research design

Conclusion: HKUST has no excuse for not being compliant with its own policy. Its humane care and ethical use is far from stable and balanced. As a consequence it does not sit well with international best practices as outlined in the major reference documents discussed today



Questions

