



Institutional

Animal Care & Use

Committee

eNewsletter

Issue 1, Nov 06

Contents

Inaugural messages

- ☞ Vice-President, Research/Life Sciences
- ☞ Director, OLS
- ☞ Chairman, IACUC

IACUC Forms

- ☞ Pain relief -Revised IACUC form

Animal Care matters

- ☞ The 4 Rs & 5 Fs
- ☞ Annual inspection

Animal Use matters

- ☞ Audit of animal use protocol
- ☞ Alcohol not enough
- ☞ Tissues available for sharing

Occupational & Environmental Health & Safety

- ☞ It is also our business

Training

- ☞ Something Fishy - New training course

Animal concerns

- ☞ Making it right

Newsworthy articles

- ☞ Are you a *speciesist*?
- ☞ 2nd SALAS Fall Conference

Inaugural messages

Message from the IACUC Chairman

IACUC has just turned 2 in Nov. What better way to celebrate than with the launch of our newsletter !

The newsletter aims to be a useful source of information and to update on IACUC and related matters on a regular basis. We hope it will serve as a channel of communication for researchers, teachers, animal husbandry staff, LAC, OSHE, IRB and IACUC, to facilitate better understanding, and foster closer working ties and co-operation.

Newsletter mainstays include :

1. IACUC Forms
2. Animal Care Matters
3. Animal Use Matters
4. Tissues for Sharing
5. Occupational & Environmental Health & Safety
6. Training
7. Animal Concerns
8. Newsworthy Articles
9. Feedback / Forum

We would greatly appreciate your feedback so that we can continually improve the newsletter to serve our mutual needs further.

LAM Toong Jin
Chairman
IACUC

[Reporting animal concerns](#)

[Feedback](#)

[Archives](#)

Inaugural messages

**Message from
Professor John Eu-Li WONG
Vice President, Research/Life Sciences**

It seems but yesterday that I approached Tom Lam to set up an IACUC to oversee the animal care and use programme of NUS. This Newsletter reminds me that the IACUC has come a long way and it is now established as a part of NUS' life.

I congratulate the IACUC on this achievement in a short span of 2 years.

I note the Newsletter will include regular sections on IACUC Forms, Animal Care matters, Animal Use matters, Tissues for Sharing, Training, Animal Concerns, Occupational & Environmental Health and Safety, Newsworthy articles & Feedback / Forum.

These are all hallmarks of a good practice of animal care and use. They will serve as a conduit for information in these areas to pass to researchers, teachers and animal husbandry staff, and for feedback to reach IACUC. They will also keep the University at large, LAC, OSHE and IRB informed.

In particular, the issue of occupational & environmental health and safety cannot be over-emphasised. I am glad that IACUC is working out with OSHE, IRB and LAC a comprehensive programme to monitor this in animal research and ensure the best practice.

It is commendable that IACUC has put in place a 'whistle blower' mechanism for reporting animal concerns. This will ensure that no animal care and use abuse or malpractice would escape the attention of IACUC.

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That IACUC has also initiated regular on-site audits of animal use in laboratories will further ensure best practice in animal care and use, and enable us to fulfil our ethical responsibilities to AVA and the general public.

We should not aim just to meet the minimum requirements of NAACLAR in the care and use of animals for scientific purposes and the licencing requirements of AVA, but should strive for excellence in animal care and use by international standards. Therefore, we should seek accreditation with the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International. With AAALAC accreditation, NUS will be better placed as one of the top research universities in the world.

Let us all work together to achieve that goal !

Inaugural messages

**Message from
Prof HEW Choy Leong
Director, Office of Life Sciences**

First of all, I would like to congratulate IACUC on this initiative. It marks a significant milestone of IACUC. I know it has not been easy establishing IACUC. That the IACUC is established within 2 years is a commendable achievement.

I am happy to note that the protocol application forms have been revised to make them more user-friendly without compromising on the requirements of NACLAR and AAALAC (Association for Assessment and Accreditation of Laboratory Animal Care) International. I remember this was one of the issues raised in our last OLS Retreat.

I am also happy to note that the newsletter aims to serve as a channel of communication among IACUC, researchers, animal husbandry staff and LAC, and there will be a regular section on feedback. This will certainly promote understanding and co-operation among the various stake-holders in our journey to achieve the best practice in animal care and use, coupled with the best practice in occupational health and safety. We want to do good science based on internationally acceptable ethical standards. Only then can we rightfully join the league of world-class research institutions. Let us continue to work together to achieve that goal!

IACUC Forms

IACUC forms - revised to facilitate completion

IACUC application forms have been revised and uploaded on the IACUC website for use since September.

Feedback on the complexity of the IACUC form was discussed during the last OLS retreat. A Forms Reviewing Committee comprising A/P Madhav Bhatia (Chairman) and Dr Paul MacAry (representing researchers), Dr John Foo (representing IACUC) and Ms Jennie Ong (representing OLS) was formed to review the IACUC forms.

Various revisions were proposed to the IACUC. An IACUC subcommittee reviewed the proposals and accepted those which are within National Advisory Committee for Laboratory Animal Research (NACLAR) Guidelines. The forms have therefore been revised accordingly.

You are reminded to download the forms from the IACUC website only when you need them to ensure the current forms are used. Please do not save a copy of the form for future use as the forms may have been revised at the time of submission.

Animal Care matters

What are the 4Rs and 5Fs of animal care and use?

The 4 Rs

You are probably familiar with the 3Rs Principle of Replacement, Reduction and Refinement.

It is an important topic covered by the RCULA training course and is central to the NACLAR Guidelines.

What is the 4th R then? It is 'Responsibility' !

The 4th R was brought to our attention by Associate Professor Michael Raghunath (Division of Bioengineering). He was invited to submit a full research proposal to IFER (International Foundation for Ethical Research) based on his preliminary proposal on developing an *in vitro* system using human cells and a bio-imaging approach to replace the existing drug screening methods of using chemically or immunologically induced animal models, thereby promoting the reduction of animal use.

IFER's particular interest is for a research programme designed to expose the student to ethical and practical issues regarding animal welfare and the 4 Rs of Replacement, Refinement, Reduction, and Responsibility.

(Editor's Note : Although the grant was not eventually approved, Prof Raghunath feels that NUS researchers should be informed and alerted to such funding opportunities)

The 5 Fs

The 5Fs were raised at a talk by Assoc Prof Arie Bomzon, Israel Institute of Technology, Haifa, Israel. This was organized by SALAS (Singapore Association for Laboratory Animal Science) on 2 Aug 06.

The 5 Fs are the 5 conditions of freedom relating to animal welfare

1. Freedom from hunger and thirst
2. Freedom from pain, injury and distress
3. Freedom from fear and distress
4. Freedom to express or indulge in natural behavior
5. Freedom from environmental stress and physiological discomfort

They represent the second ethical dimension of animal care and use (the first being the 4Rs).

In animal research, data quality generally depends on signal and noise of the data collected. High signal and low noise equates to good data quality which can be achieved by using animals with the 5Fs.

Happy animals make good science !

IACUC annual inspection to animal facilities

The IACUC is required under the Animals and Birds Act to inspect all animal facilities at least once annually to ensure that animals are housed and cared for in accordance to the NACLAR Guidelines.

The inspection this year was carried out in October. A report on the inspection will be sent to the Head of Department/Director and the officer-in-charge of the respective animal facility. To ensure that all deficiencies recorded in the report are addressed, a follow-up inspection will be conducted in December. Animal facilities staff as well as animal users and PIs should ensure that good practices of animal care are adhered to and records are properly kept. This will pave the way for the annual licence renewal of animal facilities in NUS.

The licence is issued by Agri-Food & Veterinary Authority of Singapore (AVA) and has to be renewed annually subject to a satisfactory inspection of the facilities by AVA. The AVA inspection is scheduled sometime in Feb 2007.

Your cooperation in ensuring the licence renewal, and hence uninterrupted animal research activity, will be greatly appreciated.

Animal Use matters

IACUC Audit on Animal Care & Use

Since Feb 06, IACUC has initiated a regular series of Audits on Animal Care & Use.

The IACUC Audit Team comprises the following:

1. Veterinarian / Compliance Officer
2. IACUC member
3. IACUC office staff

The animal care and use audit is not a fault-finding exercise but an IACUC effort to create awareness among researchers of the regulatory compliant issues as well as best practices by international standards on animal care and use.

Announced audits will be replaced with random and surprise audits in 2007.

We appreciate your understanding and support of this IACUC initiative.

Alcohol not enough

The IACUC has come across several protocols involving survival surgery without a proper description of the aseptic techniques used. 70% alcohol is usually cited as the agent for skin preparation (and without shaving of the hair).

Alcohol should not be the sole agent used for skin preparation. It is neither a high level disinfectant nor a sterilant. Alternating disinfectants is more effective and is preferred to using a single agent.

The LAC veterinarians recommend the use of a germicide scrub (iodophors - e.g. betadine or chlorhexidine - e.g. hibiscrub), followed by rinsing with alcohol. This process (referring to alternating between the scrub and alcohol) should be repeated thrice.

The final step for skin preparation is to soak the area with a disinfectant solution (eg. betadine solution). Researchers need to note that a betadine scrub is different from the betadine solution. The latter is for use only during the final step.

Please contact the LAC veterinarians if you need further information.

Tissue sharing information

With animal reduction in mind, tissues from euthanised animals of an approved protocol are now available for sharing (tissue sharing among researchers).

IACUC office maintains a database on information which includes protocol number, name of the PI, contact person & number, species name, and tissues available. Those interested can email [Dr Bala](#).

PIs agreeing to share animal tissues from their IACUC approved protocols are requested to complete the [Tissue Sharing Form](#) which is now part of the IACUC application forms (Application To Use Animals for research, Application to Use Animals for Classroom Teaching, and Application to Use Animals for Undergraduate /School Project).

Occupational & Environmental Health & Safety

It is also our business

In animal research, some may wonder why occupational & environmental health and safety should be the concern of IACUC since we have the OSHE to take care of this.

When a hazardous material or infectious agent is used on animals, the health and safety of personnel handling the material, the animals and the animal husbandry, wastes and disposal is an IACUC concern.

The personnel involved should include not only the PI and his/her team members but also the husbandry staff, whether in the departmental facilities or LAC. The concern covers not only the hazardous material and the contaminated animals but also their wastes, including faeces, urine, body secretion (hence the bedding, and in the case of fish, the ambient water) and expired air, as well as tools, equipment and cages/aquaria that may get contaminated with the hazardous material. The disposal of contaminated animals, wastes and materials, including the contaminated ambient water of aquatic animals, will give rise to environmental health and safety concerns, which will be compounded should transgenic animals/organisms or infectious agents escape into the environment.

OSHE, LAC and IACUC are actively working to come out with guidelines to assist PIs and research & husbandry staff in addressing such issues. The involvement of IACUC in OHS issues is in line with the NACLAR Guidelines, extracts of which are reproduced below :

(1) ". . . the IACUC should participate in the OHS programme of the institution by conducting a health and

safety review of research activities that present hazards to personnel. The procedure should be incorporated into the IACUC protocol review process . . . " and;

(2) ". . . the IACUC also has a role in ensuring that personnel comply with health and safety requirements (e.g. ensuring personnel have received appropriate training, evaluating compliance with standard operating procedures or institutional policy . . . "

Training

Course on Responsible Care and Use of Fish for Scientific Purposes

DBS, LAC and IACUC jointly organized a one-day course on Responsible Care and Use of Fish for Scientific Purposes (RCUF) on 12th July 2006. This was in response to a growing demand from researchers who use fish and will be held twice yearly.

The inaugural course saw a total of 29 participants from the Yong Loo Lin School of Medicine, the Faculties of Science and Engineering and the Temasek Life Sciences Laboratory.

Prof Hew Choy Leong, Director of Office of Life Sciences, delivered the welcome address.

Speakers included Emeritus Prof Lam Toong Jin (Chairman, NUS-IACUC), Prof Alex Ip Yuen Kwong (DBS), and Dr Frederic Chua (Veterinarian).

Certificates of Attendance were awarded to participants.

The second RCUF is confirmed to be held on 15 Dec 06.

Further details can be obtained from the IACUC [website](#).

Animal concerns

Making it right

IACUC has an avenue through which animal care and use concerns may be aired. To avail of this avenue, please click on "Reporting animal concerns" in the coloured box on the left of this newsletter. The form can also be downloaded from the IACUC website.

This avenue will help ensure best practices in animal care and use.

For example, a report was received on the improper handling of mice. IACUC initiated the inquiry process with an investigation, the outcome of which was reported by the attending veterinarian.

A training session on the appropriate methods on animal handling was recommended. This has since been conducted for the staff and students working on this project.

News-worthy articles

Are you a speciesist?

Animal-rights activists in the US and UK are increasingly resorting to intimidation and violence.

Earlier this year, a US federal jury convicted an animal rights group and six of its members of inciting violence and terror against Huntingdon Life Sciences, a contract research organization in the US and UK that conducts animal testing for biotechnology and pharmaceutical companies. Read more on the case and the terror tactics by these activists in the article '[Animal rights activists found guilty](#)' and the related links from The Scientist.

Some activists are trying to use the courts to confer animals with a "nonhumans deserving of additional rights" legal status by equating racism, sexism, and **speciesism**, explained a speaker at a session of the [American Association for Laboratory Animal Science \(AALAS\)](#) nation conference held last month. This is one of the half-dozen sessions focusing on responses to threats from animal-rights terrorists. Details of the article "[Biting back at animal activists](#)" are available from The Scientist.

If the activists have their way, all researchers will be branded *speciesist* !

SALAS Conference

The Singapore Association for Laboratory Animal Science (SALAS) organises conferences on an annual basis.

This year's is held over 2 days on 30 Nov and 1 Dec 06. A [programme outline](#) is attached for your information and future participation. For more information on SALAS, please email the [secretary Ms Punam Dahiya](#).

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[IACUC Application forms](#)



[Submission deadlines](#)



[IACUC meeting schedule](#)



[LAC training schedule](#)