How do we run an accredited laboratory animal facility for mammals?
What can we learn from each other?

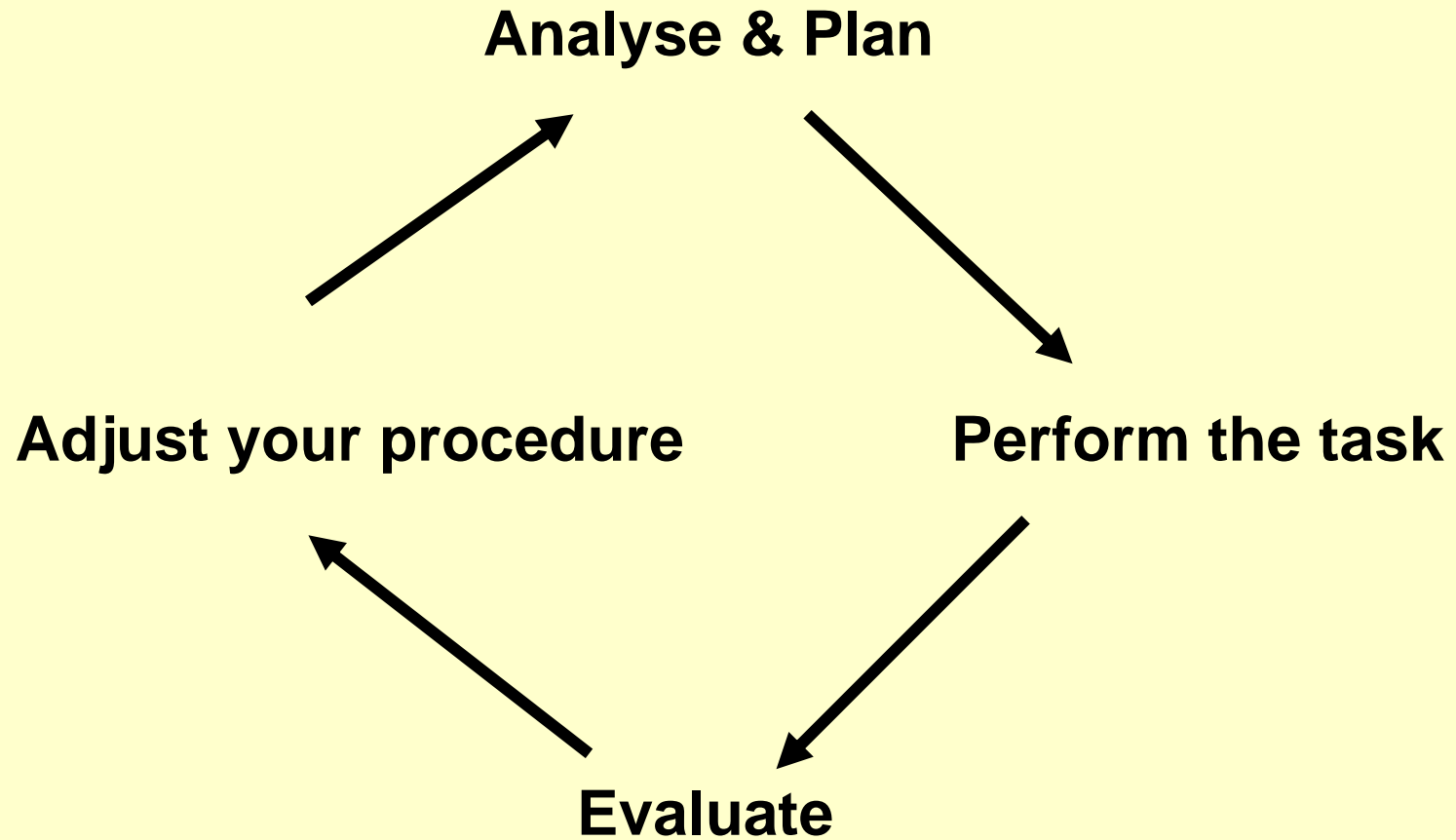**Adrian Smith**

Norwegian School of Veterinary Science, Oslo

AAALAC. Where science and responsible animal care connect.

c. 2001 AAALAC International

Analyse & Plan

Adjust your procedure

Perform the task

Evaluate

Quality control can become a motivating upward spiral

'Our long experience and our modern coffee factory is your guarantee for quality.'

Accreditation by AAALAC International

- Private nonprofit organization.

- Governed by 60+ "Member Organizations," (AVMA, ICLAS, AALAS, FELASA, etc.).

- Facilities are assessed by a Council on Accreditation working with approx. 200 *ad hoc* Consultants.

- Offices in Rockville, Maryland (USA) and Brussels, Belgium.

www.aaalac.org

Why did we *choose AAALAC?*

- We didn't need ISO or GLP
- Other systems focus more on documentation/standardisation, less on animal welfare
- AAALAC covers all aspects of LAS
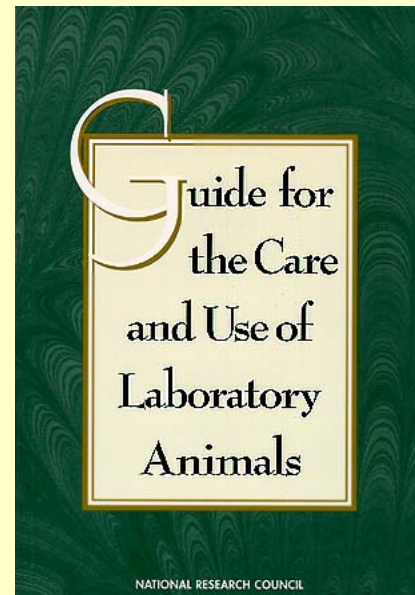- Peer review is a good stimulant!

Emphasis on the three R's

- *Replace*
- *Reduce*
- *Refine*

William Russell & Rex Burch

Standards

- AAALAC standards are based on applicable local and national regulations, plus the *Guide for the Care and Use of Laboratory Animals* (NRC 1996).

Two AAALAC programs

The AAALAC accreditation program

or

Program Status Evaluation

- Helps familiarize institutions with AAALAC standards/processes
- Detailed recommendations
- Often used prior to applying for accreditation

Application for full accreditation

- AAALAC's Council meets in May, September & January
- Two inspectors: one Council member and one *ad hoc* inspector
- At least 2 Council members evaluate the inspectors' report and present it to the Council

How does it work?

Develop a "Program Description" (a document that details your entire animal care and use program).

Program Description

- A complete description of the facility's organisation and functions

- Template from AAALAC

- In our case: 60 pages + enclosures

- In addition we wrote a **Master Plan** and a **Disaster Plan**

The framework

- Animal care and use policies and responsibilities

- Animal environment, housing and management

- Veterinary medical care

- Physical plant

Animal care and use policies and responsibilities

- Who is responsible
- Who provides veterinary care
- Competence of the staff
- Health and safety at work

Animal environment, housing and management

- The physical environment
- Consideration to the animals' needs
- Animal care
- Breeding systems

Veterinary medical care

- Purchase of animals and transport
- Preventative medicine
- Surgery
- Analgesia and anaesthesia
- Humane killing
- Medicines control

Physical plant

- Location and construction
- Management of the plant
- Farm animals and field studies *(contiguous units)*
- Security

In addition we wrote

- **A Master Plan**

- A **Disaster Plan**

Risk assessment

EXPLODING RATS ROCK LABORATORY

By MARK McGIVERN

A UNIVERSITY research lab at a top hospital has been rocked by ... exploding RATS.

The explosion, at Glasgow University's building at Yorkhill Hospital, blew up a fridge.

It smashed four windows and damaged fittings and equipment.

And two women scientists – who normally work in the lab – escaped because they were in the room next door.

Glasgow University has launched an inquiry into how the blast at its "Animal House" took place.

A spokesman said the blast had been caused after 15 rats had been soaked in anaesthetic ether to kill them humanely.

INJURED

But, while they were stored in a special fridge, a thermostat gave off a tiny spark, which ignited the volatile ether. The spokesman admitted that the two researchers – a genetics postgraduate and a researcher – could have been seriously injured.

"If people had been in the room there could have been serious consequences," he added.

"We have suspended these kind of experiments until our inquiry is complete."

Risk assessment

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"We have suspended these kind of experiments until our inquiry is complete."

The timescale

- 5th - 6th October 2000: *pre-site visit*

- 13th - 14th September 2001: *site visit*
- January 2002: *AAALAC Council*
- March 2002: *official letter*

- June 2004: *2nd site visit (new inspectors)*

Exit briefing

- *The good news*
- *The bad news*

Identification of critical areas

Some final thoughts…

Refinement of techniques

Identification methods:

    affecting natural behaviour?
    amputations?

Tolerance of mortality

There are now many sources of information on the three R's

The use of Databases, Information Centres and Guidelines when planning research that may involve animals

AJ Smith & T Allen, 2005 (?)

Alternatives to animals on the web

Altweb offers:

- Journals
- Proceedings
- Books
- Fact sheets
- Regulations

- Alternatives news
- Funding information
- A calendar and links…

TextBase

- Information on 1,000 textbooks within LAS
- Hot links to suppliers and bookstores
- Overview of core books and books held in Oslo

NORINA *(A Norwegian Inventory of Alternatives)*

- Information on nearly 4,000 alternatives
- Organised by >20 Types and Categories
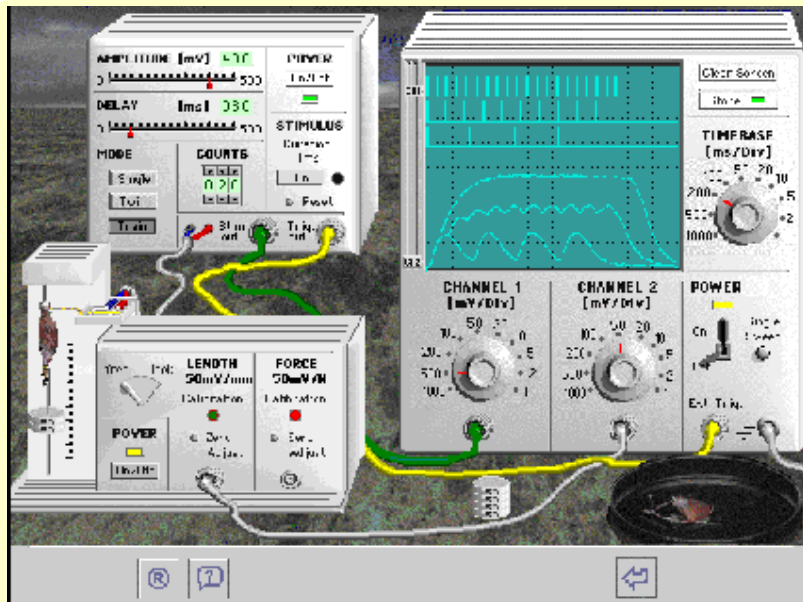- Hot links to suppliers

http://oslovet.veths.no

AJ Smith & K Smith, 2004

Guidelines for humane education: Alternatives to the use of animals in teaching and training

Proceedings of the 4th World Congress on Alternatives and Animal Use in the Life Sciences, New Orleans, August 2002.

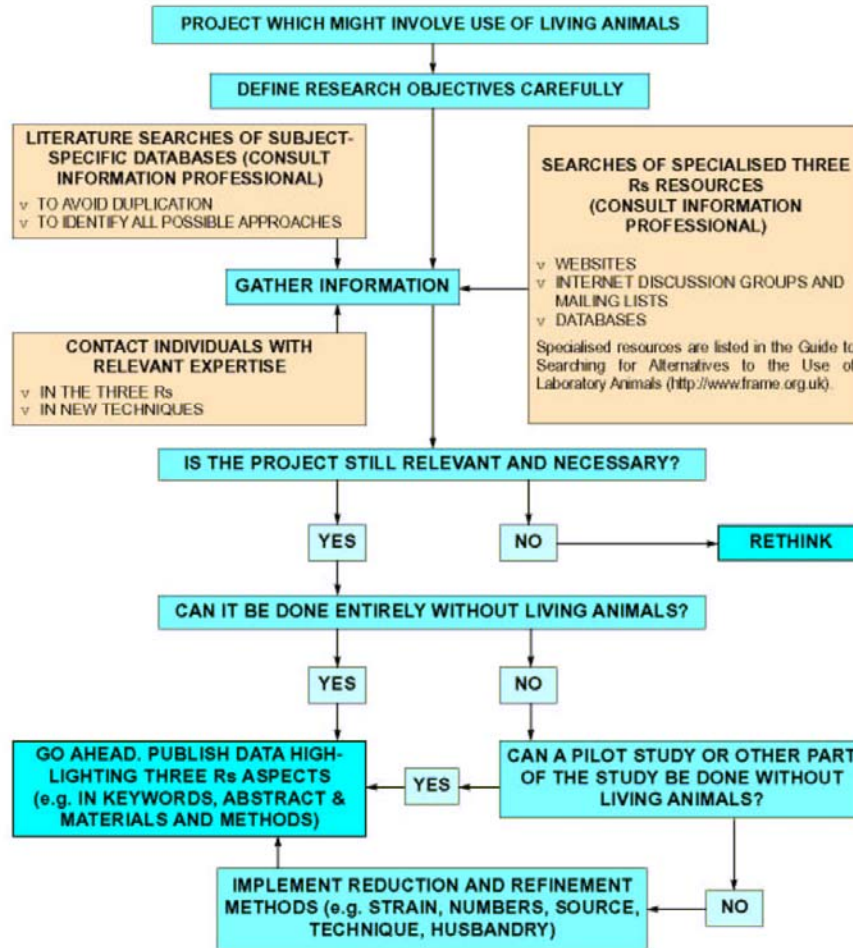*http://www.worldcongress.net/2002/proceedings/ SP4%20Smith.pdf*

Fish…?

'We may need the animals, as it were, on the night; but the machines will do very well at rehearsals'

William Russell & Rex Burch

EARLY PLANNING FOR A PROJECT WHICH MIGHT INVOLVE THE USE OF ANIMALS

Scientists using animals in scientific procedures have an ethical and legal obligation to ensure that the Three Rs, namely **Reduction**, **Refinement** and **Replacement**, are implemented wherever possible. This strategy was designed by the *Focus on Alternatives*[1] group to help scientists meet this obligation. The strategy should be applied at the beginning of a project, and at regular intervals throughout. Advice should be sought from the Ethical Review Process and Home Office Inspectorate.

PROJECT WHICH MIGHT INVOLVE USE OF LIVING ANIMALS

↓

DEFINE RESEARCH OBJECTIVES CAREFULLY

LITERATURE SEARCHES OF SUBJECT-SPECIFIC DATABASES (CONSULT INFORMATION PROFESSIONAL)
v TO AVOID DUPLICATION
v TO IDENTIFY ALL POSSIBLE APPROACHES

SEARCHES OF SPECIALISED THREE Rs RESOURCES (CONSULT INFORMATION PROFESSIONAL)
v WEBSITES
v INTERNET DISCUSSION GROUPS AND MAILING LISTS
v DATABASES

Specialised resources are listed in the Guide to Searching for Alternatives to the Use of Laboratory Animals (http://www.frame.org.uk).

GATHER INFORMATION

CONTACT INDIVIDUALS WITH RELEVANT EXPERTISE
v IN THE THREE Rs
v IN NEW TECHNIQUES

IS THE PROJECT STILL RELEVANT AND NECESSARY?

YES | **NO** → **RETHINK**

CAN IT BE DONE ENTIRELY WITHOUT LIVING ANIMALS?

YES | **NO**

GO AHEAD. PUBLISH DATA HIGH-LIGHTING THREE Rs ASPECTS (e.g. IN KEYWORDS, ABSTRACT & MATERIALS AND METHODS)

← **YES** — **CAN A PILOT STUDY OR OTHER PART OF THE STUDY BE DONE WITHOUT LIVING ANIMALS?**

NO

IMPLEMENT REDUCTION AND REFINEMENT METHODS (e.g. STRAIN, NUMBERS, SOURCE, TECHNIQUE, HUSBANDRY)

[1]Membership of the *Focus on Alternatives* committee includes the Dr Hadwen Trust, FRAME, The Humane Research Trust, The Lord Dowding Fund, RSPCA, St Andrew Animal Fund and UFAW. Copies of the poster are obtainable from FRAME, 96-98 North Sherwood Street, Nottingham, NG1 4EE. Tel: 0115 958 4740. Fax: 0115 950 3570. E-mail frame@frame.org.uk.

Lateral thinking…

Methods of positioning fish for surgery or other procedures out of water
Lab. Anim., 2000, 34: 430-433.

Overheard on courses:

A lecturer in anaesthesia

'If you want to get rid of large amounts of fish…'

A discussion on "refinement" of bleeding techniques

_____Reduced mortality from 20% to 5%...

Should we give animals the benefit of the doubt?

If so, are we doing this in the case of fish?
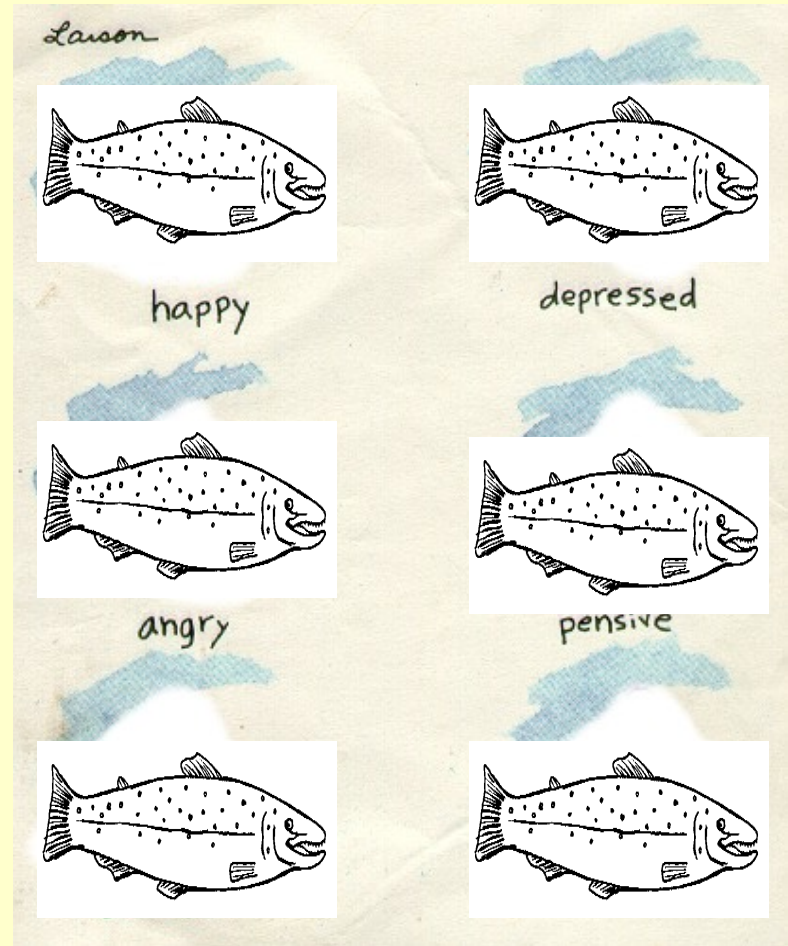
No brain, no pain?

If you **wouldn't** do this to a **dog**, why do it to a **fish**?

PeTA FishingHurts.com

Unfamiliar environments and reactions…

Far less use of mimicry and (audible) sound

Aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mttaer in waht oredr the ltteers in a wrod are, the olny iprmoetnt tihng is taht the frist and lsat ltteer are at the rghit pclae. The rset can be a ttoal mses and you can sitll raed it wouthit porbelms. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe.

Thank you for listening!