The challenge of FELASA accredited courses in laboratory animal science for fish researchers
The European Convention and EU directive demand appropriate teaching and practical training (documented competence)
FELASA: Federation of European Laboratory Animal Associations

www.felasa.org

+ a lot of information on the Laboratory Animals website:

www.lal.org.uk
FELASA’s members are independent European national and regional laboratory animal science associations

- **AFSTAL** - Association Française des Sciences et Techniques de l’Animal de Laboratoire
- **AISAL** - Associazione Italiana per Scienze degli Animali da Laboratorio
- **Balt-LASA** - Baltic Laboratory Animal Science Association
- **BCLAS** - Belgian Council for Laboratory Animal Science
- **CLASA** - Czech Laboratory Animal Science Association
- **GV-SOLAS** - Gesellschaft für Versuchstierkunde - Society for Laboratory Animal Science
- **HSBLAS** - Hellenic Society of Biomedical and Laboratory Animal Science
- **LASA** - Laboratory Animal Science Association
- **NVP** - Nederlandse Vereniging voor Proefdierkunde
- **Scand-LAS** - Scandinavian Society for Laboratory Animal Science
- **SECAL** - Sociedad Española para las Ciencias del Animal de Laboratorio
- **SGV** - Schweizerische Gesellschaft für Versuchstierkunde
FELASA’s (and therefore our) journal
FELASA

- Composed of independent European national and regional laboratory animal science associations, established by them in 1978. It can speak for laboratory animal scientists and technologists in at least twenty European countries. It is managed solely by representatives of its constituent associations in those countries.

- Triennial international scientific meetings. It co-ordinates the development of education and training for those engaged in the provision or use of laboratory animals, animal health monitoring and other topics by meetings, study groups and publications.
**FELASAs categories:**

A1-4: persons taking care of animals (junior and senior animal technicians)

B: persons carrying out experiments (research technicians): 40 hours

C: persons responsible for directing animal experiments (researchers & competent persons): 80 hours

D: lab animal specialists: 2 years’ training (master degree or equivalent)
Progression in category A:

A1: “Off the street, on the job” *
A2: A1 + at least 2 years’ experience/training
A3: A2 + at least 3 years’ experience/training
A4: technicians with specialist training or large responsibilities (can overlap with category D = 2 years’ training)

* approx. 1 year’s practice +/- theoretical courses to be approved
**FELASAs category B:**

- 40 hours of training
- Half theory, half practice
- Limited to procedures that are totally necessary for the person’s work.
FELASAs category C:

- The category that has gained most acceptance
- 80 hours of training
- Very detailed curriculum available
- Problems with documenting practical skills (competence)
**FELASAs guidelines**

www.felasa.org

(B) Lab.Anim. 34: 229-235, 2000  

Written by 3 working groups with different members

Only 1 person sat in all three groups
There are a number of areas where FELASA’s guidelines are unclear:

1. **Does category B competence automatically give competence in A, and if so at what level?**
2. **Do we agree on what competence is?**
3. **What are the best procedures?**
4. **How should the practical training be organised?**

**FELASA has started a system for accrediting courses**
Situation in the U.K.

A module system:

1. Introduction, ethics, legislation
2. Welfare, handling, killing, health and safety
3. Species-specific information (biology, care, diseases, anaesthesia, simple techniques)
4. Species-specific information on surgery & anaesthesia
5. Information for project leaders (paperwork, design, literature, alternatives)
6. Courses for named veterinarians
Situation in the U.k.

Two accreditation bodies:
- They approve suggestions for courses but have no hard rules on how long these courses should be.

Typical courses are:
- Module 1 + 2: 1 day
- Module 3: 1 day
- Module 4: 0.5 - 1 day
- Module 5: 0.5 - 2 days
- Module 6: 2 days
Situation in the U.K.

A: It is expected that technicians take modules 1-4, depending upon their areas of responsibility (i.e. 4-5 days)

B: It is expected that research technicians take modules 1-3 (i.e. approx. 2 days)

NACWOs (Named Animal Care and Welfare Officers):
spesific modules for these are being developed
The situation in the UK

- Personal licences for (very!) specific techniques
- Evaluation of competence is up to the local place of work
- Documentation of competence can therefore vary greatly from place to place
- No live animals are used by participants on training courses (except in microsurgery)
Situation in the Netherlands

Technicians defined as:
- Animal caretakers
- Animal technicians

Animal caretakers:
- 1.5 year course, 13 weeks of lab animal science and 21 weeks on the job training

Animal technicians:
- 3 year course, 26 weeks of lab animal science and 42 weeks on the job training
## Certificate of competence…?

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<th>Rat</th>
<th>Guinea-pig</th>
<th>Rabbit</th>
<th>Salmon</th>
<th>Turbot</th>
<th>Zebra-fish</th>
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X: seen the procedure performed

XX: has performed the procedure (at least once)

Signature: competent to perform the procedure alone

Nils Normann
DYREFORSØK
I NORGE

Denne filmen er laget for å gi informasjon om
mennesker og dyreforsøk i Norge. Det er i begynnelsen
på 1900-tallet, og dyreforsøkene var fortjent.

Regissør: Aage Grimstad
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Spillbok: Del 1. 7 min, 30 sek.
Del 2. 6 min.

Necropsy procedures
for small laboratory animals

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Distance-learning:

- Videoconferences
- Internet-based (www, email)
- Short courses where all meet
Published standards are useful

- “Good Practice”
- “High standards”
- “Best Practice”

These phrases are commonly used, but without any definition of what standards may have been achieved.
Guidelines for reporting the results of experiments on fish

Guidelines for health monitoring
In preparation....!
Challenges as researchers see it:

• The fish themselves
  • Better standardisation
  • Better availability of good models, e.g. zebrafish
  • More use of purpose-bred animals
  • Availability of non-vaccinated, healthy fish

• Standardisation of external factors
  • Transport
  • Water quality
  • Environment
  • Sampling methods

• Three R’s
  • Increased use of statisticians & pilot studies
  • Better limits for environmental factors (e.g. stocking density, water quality, feeding regime)
  • Pain control
  • More research on handling techniques, analgesics & anaesthetics, humane killing
  • Humane endpoints
Many lectures in traditional lab animal science (for caged rodents) appear irrelevant.

More hands-on work is expected by fish researchers.
What is an experimental animal (i.e. that demands trained personnel)?

Eggs
larvae (live feed e.g. microplankton / invertebrates)
fingerlings/juveniles (will eat processed food)

Both carry a yolk sac but are ‘free-living vertebrates’

Natural mortality:
One experiment may involve groups of 500,000 individuals,
3-4 million in one study.
As few as 0.001% of these may survive to maturity…
Resistance to mandatory courses

I am always willing to learn, but I don’t always like being taught…

Winston Churchill