

**ANIMAL PROCEDURES COMMITTEE EDUCATION & TRAINING  
SUB-COMMITTEE: REVIEW OF MODULAR TRAINING**

**FEBRUARY 2006**

# ANIMAL PROCEDURES COMMITTEE EDUCATION & TRAINING SUB-COMMITTEE

## REVIEW OF MODULAR TRAINING

### Part 1: Overview of modular training and review of modules 1 to 4 for personal licence applicants

#### Executive Summary

This report presents the first stage of the review by the APC Education and Training Sub-Committee (ETSC) of modular training for applicants for personal and project licences under the Animals (Scientific Procedures) Act 1986 (ASPAs). The report:

- provides an overview of current training requirements for both personal and project licensees;
- defines core competencies and learning outcomes appropriate for personal license applicants;
- proposes revision to the structure of modules 1 to 4; and
- identifies issues requiring further consideration, including a review of module 5 training for project licensees.

In conducting this review, the Sub-Committee consulted widely with those directly involved in the development, delivery and accreditation of modular training courses. In addition, four persons with expertise in training licensees were co-opted to provide specialist advice. A list of members and co-opted members is given in Appendix 1. The ETSC is extremely grateful for the co-operation and enthusiasm of all who participated.

The conclusion of the review is that modular training provides a flexible approach which is highly appropriate to the UK system of regulation. However, existing modules can, with advantage, be restructured to better define expectations of training, for example in anaesthesia and surgery, and to provide a structure which is also suitable for the training needs of persons other than personal licensees.

A key concept re-enforced throughout the review is that the formal training provided in the modules is *only an introduction*, a point which needs to be emphasised in all training courses. The subsequent period of supervision remains central to the development of competence, and the ETSC proposes to develop guidance on this important topic.

At present, the content of the modules is specified as a syllabus, listing topics which should be covered. The review has developed guidance on training objectives, which have been broken-down into the core competencies and learning outcomes we consider to be essential for personal licensees. This report thus provides a contribution to the development of course content and delivery; it also clarifies the requirements for assessment and subsequent supervisory requirements, by

providing an extensive knowledge and skill profile against which candidates can be assessed. This approach has the additional advantage that the learning outcomes provide a useful aide-mémoire which will help licence applicants to understand what is expected of them.

Training is fundamental to legislative compliance, animal welfare and good science and should not simply be viewed as a means of acquiring a licence. However, it is resource intensive, and there is clearly a need for better resources (time, money and expertise) to support trainers and accrediting bodies in their work. The ETSC believes that the importance of training, whether modular or as Continuing Professional Development, is not universally recognised, and that limitations to time or opportunity for training are counter-productive. Certificate holders, ethical review processes, employers and funders of research need to be aware of their responsibilities in this respect.

Lastly, the review has identified a need to reassess and clarify the roles and responsibilities of the various bodies responsible for overseeing and delivering licensee training. The ETSC intends to examine these issues at a later stage of the training review.

The report presented here is intended to support and help develop training for personnel working in the UK under the provisions of ASPA. However, competencies and learning outcomes are also relevant to the training of those in other countries who intend to carry out procedures on living animals, and it should therefore be of wider international interest.

## **Recommendations**

- (i) Modular training should be based on a learning outcomes approach and trainers, course organisers and the accrediting bodies should review current course content and delivery, and the assessment of trainees accordingly.
- (ii) The general principle of a learning outcome approach should be endorsed by the Home Office. The specific learning outcomes, and the seven core competencies for personal licensees with which they are associated (set out in Section 3 of this report), should be endorsed by the Home Office and adopted as the basis for mandatory training for personal licensees.
- (iii) The existing modules 1 to 4 should be replaced with modules A to E as described in Section 3.2 of this report. This arranges the learning outcomes in logical groupings and provides a clearer division between local and general anaesthesia and surgery. It should also provide a module (i.e. module A) that includes local issues, and is thus more appropriate for staff other than personal licensees, such as certificate holders who find such training useful, experienced workers from overseas who need to know about UK legislation and local rules, and those carrying out Schedule 1 euthanasia.
- (iv) The development of the learning outcomes published in this report provides a template against which candidates can be assessed and the three accrediting bodies are encouraged to get together to review their methods of assessment in the light of these.
- (v) The joint IOB/UAG MCQ database will need to be reviewed with respect to a learning outcome approach, and amended to take account of the different

modular structure if accepted. We recommend that the Home Office identify a source of funding for this.

- (vi) The importance of supervision and CPD training in achieving and maintaining competence and in contributing to good science and welfare, needs to be more widely recognised within the research community, both locally within research establishments and by those funding research. Both modular and non-modular training needs to be adequately funded and resourced.
- (vi) The impact of any changes introduced as a result of this report, and of how these work in practice, should be reviewed by the APC ETSC in consultation with the trainers, accrediting bodies and the Home Office, after five years.

# 1. Introduction

## 1.1 Background

Appropriate training of all those working under the Animals Scientific Procedures Act 1986 (ASPA) is critically important in ensuring compliance with legislation, humane use of animals, and good scientific technique. In recognition of this, applicants for personal and project licences are required to complete successfully an accredited training programme as set out by the Home Office in 1991 and published in the Animal Procedures Committee (APC) report for 1992 (see *Appendix 1V of the APC report for 1992*, and *Annex F to the Guidance on the Operation of the ASPA*).

The role of the APC with regard to education and training issues is devolved to the Education and Training Sub-Committee (ETSC) whose remit is: *“To advise [the Home Office] on the requirements for training and education of those who hold responsibilities under the Animals (Scientific Procedures) Act 1986 or who carry out duties under the controls of the Act. In doing so, to liaise with a range of bodies, including the two bodies<sup>1</sup> which accredit licensee training courses.”*

Specific issues that the ETSC has advised the Home Office on in recent years include: the development of accredited training for Named Animal Care and Welfare Officers (NACWOs), training for overseas workers, and the proposal to establish a third training course accreditation body in Scotland. In addition, many of the issues that the APC as a whole considers, have a bearing on education and training.

There have been significant developments in science, technology and animal welfare in the last ten years, and ideas on training needs, methods and resources have also developed. In the light of this, ETSC members agreed in 2003 that a review of current training would be timely. This report presents the first stage of the review. It provides an overview of current modular training requirements for both personal and project licensees; reports on the development of core competencies and learning outcomes for personal licensees; proposes a revised structure for modules 1 to 4; and identifies issues for further work. A review of module 5 training for project licensees will be presented subsequently.

## 1.2 Aim and context of the review

The primary purpose of the review was to assess whether the current system of formal modular training for personal and project licence applicants is achieving what it was hoped it would achieve when it was originally implemented, and whether any improvements are necessary. The review encompassed: the content of existing modules; training objectives and anticipated learning outcomes; assessment of candidates; post training supervision of new licensees; and the accreditation schemes. The appropriateness of the modules as training for other staff such as certificate holders and overseas workers was also considered.

## 1.3 Process of the review

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<sup>1</sup> There are now three accrediting bodies, the Institute of Biology, the Universities Accrediting Board and the Scottish Accrediting Board.

The ETSC co-opted four members with additional expertise in training for the period of the review (see Appendix 1). The process also involved extensive consultation with those involved in the development, delivery and accreditation of modular training courses. Two workshops for trainers and representatives of the accrediting bodies were held in May and October 2004. Meetings and or discussions were also held with representatives from the Universities Accreditation Group (UAG), the Institute of Biology (IOB) and the Scottish Accreditation Board (SAB). Draft documents were developed from these meetings and were circulated to the accreditation bodies and trainers for comment, further discussion and amendment where necessary.

The ETSC is extremely grateful for all the input received and has tried to accommodate all of the comments and concerns within its final report. We recommend that future APC work of this nature adopts a similar consultative approach.

## **2. Overview of current training for personal and project licence applicants**

### **2.1 Modular training**

The education and training required for personal and project licence holders is based on the five modules set out in Table 1 (see Home Office policy statement in Appendix IV of APC report for 1992). From April 1994, applicants for personal licences were required to complete successfully an accredited training programme comprising modules 1 to 3, and, where appropriate to the techniques included in the licence application, module 4. (Note, personal licensees seeking extension of authority from minor surgical procedures to major surgical procedures are expected to complete module 4 of the programme before application for amendment of their licence.) Very limited exemptions from these requirements may be considered by the Home Office [see Appendix F to the Guidance on the Operation of the Animals (Scientific Procedures) Act 1986, (2000)]

Personal licensees seeking amendments to the species authorised on the licence (e.g. extension from rodents to dogs or to farm animals) which involve additional skills, are required to undertake additional training as provided by the relevant parts of modules 2, 3 and/or 4 before application for such amendment.

The training requirements of former personal licensees who are applying for reinstatement of their licences after time away from carrying out procedures will be determined by many factors including previous formal training and length of time away from use of animals in procedures. In general, anyone applying for a licence more than 5 years after relinquishing the previous licence should expect to undergo the full training programme. Where less than 5 years has elapsed, the training requirements should be discussed with the Home Office Inspector.

From April 1995, new applicants for project licences have been required to have completed successfully at least modules 1, 2 and 5, and also modules 3 and 4 when appropriate to the procedures to be carried out in the project. In most cases, project licence applicants will have held, or still hold, a personal licence and therefore will only need to complete module 5 prior to application for a project licence. The Home Office states that there is merit in personal licence holders, who are likely to become

project licence holders or deputies later in their career, completing module 5 at an early stage, perhaps with a refresher course before application.

The Home Office emphasises that the modular and practical nature of the training programme allows considerable flexibility in the planning of courses, and training can be achieved in a variety of ways, via lectures, tutorials and discussions, videos, films and reading. Formal courses may be a convenient way of achieving the necessary objectives, but may not provide the flexibility necessary in some situations. In practice, courses and the syllabuses for these have been developed in a variety of ways by different training providers<sup>2</sup>.

**Table 1: The five modules as set out in 1991**

*Module 1*

Historical background

- Legislation and attitudes to animals and animal welfare in the United Kingdom

**An introduction to ethical aspects of the use of animals in scientific procedures**

The Animals (Scientific Procedures) Act 1986

- The Certificate of Designation
- The Project Licence
- The Personal Licence
- Schedule 1
- Schedule 2
- Home Office Guidance on the Operation of the Animals (Scientific Procedures) Act 1986
- Home Office Code of Practice for the Housing and Care of Animals used in Scientific Procedures
  - Other codes of Practice and Guidelines
  - Other relevant legislation

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<sup>2</sup> For a list of training providers see the directory of training courses 2003/5 compiled by the Laboratory Animal Science Association

## *Module 2*

Recognition of wellbeing, pain, suffering or distress (in the relevant species)

Handling and restraint (of the relevant species)

Humane methods of killing (appropriate to the relevant species)

Local procedures

- Security
- Administration
- Supply of animals
- Disposal of animals

Personal Health and Safety

## *Module 3*

Biology and husbandry (of the relevant species)

Common diseases and recognition (of the relevant species)

Health monitoring and disease prevention or control

- General principles
- Principles of gnotobiology
- Local practices and procedures

Introduction to anaesthesia and analgesia (in the relevant species)

Conduct of minor procedures (in the relevant species)

- Common methods of dosing
- Common methods of sampling
- Minor procedures not requiring sedation, analgesia or general anaesthesia
- Other minor procedures involving sedation, analgesia or brief general anaesthesia

#### *Module 4*

##### Surgical anaesthesia and analgesia

##### Conduct of surgical procedures

- Principles of surgery
- Common surgical procedures
- Post-surgical care and monitoring

#### *Module 5*

##### Ethical aspects of the use of live animals

##### Analysis of the literature

- Critical appraisal
- Literature searches

##### Alternatives

- Refinement
- Reduction
- Replacement

##### Project design

- Plan of work
- Good laboratory practice
- Appropriate laboratory methods
- Selection of appropriate animal models
- Appropriate statistical methods

##### Project licence management

- Responsibilities
- Supervision of personnel and programme of work
- Record keeping requirements
- Annual return of procedures

##### Legal aspects – the European and wider international context

#### A key question - is modular training still the best approach?

The ETSC began its work with a reconsideration of modular training in the UK as a *principle*, and whether this is as satisfactory an approach as the FELASA scheme operating in Europe (see Appendix 2 and FELASA, 2002). It was concluded that the current system of modular training is flexible and highly appropriate to the UK system of regulation. It has the added advantage of being adaptable, so can be used to 'teach people what they need' at an appropriate time, and can accommodate staff who are not intending to become licensees, but who need to know about animal use.

However, it was agreed that the content of courses and the structure of modules 1 to 4 should be reviewed. In particular, concern was expressed by participants regarding the current division between modules 3 and 4, i.e. minor procedures, anaesthesia and surgery, and also about the inclusion of 'local' issues in module 2 rather than module 1 (see section 3.2. for further discussion). A number of other issues stemming from, or associated with, these general points were raised as the review progressed, and these are discussed below.

### **2.1.1 Content of modules**

The topics (see Table 1) to be covered in the modules are those which, at the time the courses were established, the Home Office believed to be "*necessary for the proper instruction of those who will be responsible for using animals in scientific procedures*". The syllabus for each module is not exhaustive, and the Home Office stated in its original policy statement that course organisers should feel able to include any other topics which they consider relevant in the particular circumstances. The importance of practical experience within the training programme was also emphasised, but as this experience precedes the granting of a licence, it must be limited to basic handling, husbandry and non-regulated procedures.

The modular syllabus just provides a short list of topics to be covered. There is little published guidance, either on what modular training is trying to achieve, or on how much can be expected from such training. For example, detailed training objectives and associated learning outcomes have not yet been defined. Learning outcomes are specific action statements, which define what the learner will be able to do, think or feel as a result of the planned learning event. They deal with training outputs, rather than inputs (which is the focus when approaching training as a list of topics to be covered). Attainment of each learning outcome leads towards the overall aim of achieving competence.

It was agreed during the ETSC review, that the development of key training objectives in the form of learning outcomes for each of the modules would be welcomed by trainers, accrediting bodies and the APC.

### **2.1.2 The accreditation of courses**

All training programmes for applicants for personal and project licences must be accredited under a scheme recognised by the Home Office. The accreditation system was set up with the aim of ensuring common and high standards for licensee training. In addition, it was hoped that it would facilitate free movement of licensees within the UK and Europe.

There are currently three accreditation schemes, operated by the Institute of Biology, the Universities Accreditation Group and the Scottish Accreditation Board. These are all authorised by the Home Office, which seeks advice on the suitability of each scheme from the APC. The criteria the APC has used to assess this in the past (APC, 1994) are fairly minimal, and are reproduced in Appendix 2 to this report.

All three accrediting bodies require course providers to supply considerable information, on, for example, the content and type of delivery, pre-course materials and hand-outs, trainers roles and qualifications, and the use of feedback on the

courses. However, they then further audit courses in different ways. The UAG conducts audit visits during which recent candidates (and other relevant staff) are interviewed about their view of the course and acquired knowledge. The IOB and the SAB actually sit in on courses as part of the evaluation of the course provision. The candidates' evaluation of the course is gauged by examining follow up questionnaires they complete at the end of courses.

The IOB publishes its *Guidance for Course Organisers*, which provides notes on the expected content of courses, and also covers issues such as teaching methods, course critique, assessment, accreditation visits and quality assurance. The UAG also provides written guidance, focussing mainly on issues around assessment. Both the IOB and the UAG have six monthly course organiser meetings for those involved in course organisation and management, and host annual 'Training the Trainers' meetings to which course providers, and others involved in training, are invited to help deal with issues that arise and to disseminate best practice. The SAB provides an information pack for Course Organisers, which describes the accreditation process and advises course organisers that representatives of the Board will meet or correspond with them to explain in detail the accreditation process and the expectations of SAB as the accrediting body.

Some trainers and other participants in the ETSC review have expressed concern about real or perceived differences in standards between courses accredited by the same and different accrediting bodies. This may stem from the lack of clarity about training objectives and learning outcomes as mentioned in 2.1.2 above. It may also be due to the fact that different trainers interpret the 'syllabus' in different ways and prioritise the list of topics differently. Again, this relates back to the agreed need to define training objectives and learning outcomes and the fact that key messages may not receive sufficient emphasis because at present there is no commonly defined guidance on what these are.

### **2.1.3 Assessment of applicants**

The Home Office Policy on Education and Training of Personnel under the Animals (Scientific Procedures) Act 1986 (APC, 1992) states that effective assessment at the conclusion of the training modules is required, since it is the acquisition of knowledge and skills which matters and not just attendance at a course. All three accrediting bodies now use multiple choice questions (MCQs) for theoretical assessment and there is a database of MCQs, amalgamated from the UAG and IOB databases, and which has recently been further developed to provide a consistent and comprehensive list of questions (the Licensee Assessment Database or LAD). This work was funded by the Home Office on advice from the APC Research and Alternatives Sub-Committee.

The way the MCQs are used and marked differs, but each accrediting body provides justification in educational terms for its preferred method of assessment. Thus, the IOB uses negative marking, whereas the UAG does not; the SAB allows candidates to refer to the course manual as a reference text, albeit under exam conditions. All three accrediting bodies require assessment of practical animal handling skills (where the Home Office allow animals to be handled as part of training – exceptions being on-human primates and fish) to be carried out using an approved checklist. In circumstances where handling is not allowed, the candidate has to obtain confirmation of handling competence for the species named from their local supervisor or NACWO before their certificate is issued.

The ETSC discussed whether it would be advantageous for all three accrediting bodies to require the same system of assessment. However, it was agreed that it is the outcome of the training that is important, i.e. the quality and knowledge of the licensees, rather than how this is assessed. Thus, the methods of assessment need not be the same, as long as these are robust. Nevertheless, assessment is an issue that stimulates much discussion with regard to what is to be assessed, as well as how best this can be done.

The ETSC believes that the assessment process could be facilitated, if there were to be a consistent set of requirements against which candidates could be assessed. Once again the development of learning outcomes would help to achieve this.

#### **2.1.4 Time available for training**

There is considerable variation in the time currently taken for each module. According to information in the LASA course directory, modules 1-3 can take 2 to 4 days; Module 4, 0.5 to 3.5 days; and module 5, 1 to 2 days. Although it might seem desirable to standardise the time taken for each module, this is not necessarily a good idea. Allowing sufficient time for training is obviously important, but provision of a range of learning opportunities to achieve the required learning outcomes is equally so. Thus, courses need to offer a range of activities to maximise the learning opportunities offered. For some topics, formal lectures may be appropriate, and a lot of subject matter can be covered in a short time. For others, workshops, seminars, or practical demonstrations may be better, and these tend to take more time. Where interactive computer based learning is used, different students will work at different paces so this is an additional consideration.

It was generally felt by contributors to the ETSC review, that more time for training would be helpful, particularly for modules 1 and 4. However, it was also recognised that there is reluctance (from both managers and trainees) for trainees to be away from their jobs for longer than absolutely necessary. This may reflect a lack of understanding of the importance of training although there are cost implications too

The ETSC believes that the importance of training, whether modular or as CPD, is not universally recognised and that limiting time or opportunities for training is a false economy. Training should not be viewed just as a means of getting a licence. It is essential with respect to legislative compliance, animal welfare and good science, and trainers need to get this message across to their trainees. This is also an attitude that needs to be embraced by certificate holders, ERPs and employers and funders of research generally.

### 2.1.5 Training resources

Training can be resource intensive and this is a particularly important consideration, because for many trainers and course assessors, tasks related to training are additional to their main role at work. The need for the development of good training resources (e.g. easily updateable power point presentations, video material, and thought provoking questions to stimulate discussion sessions) was another issue raised during the review.

There is clearly a need for better resources – time, money and staff with the appropriate expertise – to support trainers and accrediting bodies in their work. Participants in the review felt that the cost of training and the development of resources is an issue that funders of research should be prepared to recognise and contribute to.

### 2.1.6 Roles and responsibilities

During the ETSC review it emerged that the various roles, responsibilities, and expectations of trainers, accrediting bodies, the Home Office and the APC with respect to training as a whole are not clear, and a guidance document setting these out would be welcomed by trainers and the accrediting bodies. The ETSC intends to produce such a document at a later stage of the training review.

## 2.2 Supervisory requirements that follow from modular training

The Home Office Policy on Education and Training clearly states that accredited training *"...in no way detracts from the need to maintain good quality training and guidance after [our emphasis] the issue of licences. Rather, it is intended to establish a sound foundation upon which such training can be more effectively built"*. In addition, it states in project licence standard condition 14 that *"the project licence holder shall ensure that the appropriate level of supervision is provided for all personal licensees carrying out regulated procedures under the authority of this licence"*. A standard additional condition is therefore usually added to new personal licences, requiring that the project licence holder, or suitable person nominated by him or her, provides an appropriate level of supervision for such time as is needed to achieve competence.

The holder of the certificate of designation has a responsibility to make sure that licensees receive adequate education and training (PCD standard condition 19 states that *"the certificate holder shall take steps to provide such education and training as is necessary for all licensees..."*). He or she is also responsible for making sure that unauthorised procedures are not performed, and that there is *"regular and effective liaison"* between those entrusted with responsibilities under the Act and with others who have responsibility for the welfare of protected animals (see PCD standard condition 16). Both these points are relevant to the provision of adequate supervision and opportunities for ongoing professional development.

The supervisory period and the quality of supervision provided are critically important to the development of competence. The UAG emphasises this in its accreditation guidance stating that: *"Home Office licensee training courses are intended to prepare candidates for a period of supervision rather than to provide them with definitive technical information on animal biology. Courses are not necessarily expected to develop high levels of competence and learning does not cease with formal assessment or even with the lifting of continuous supervision after*

*the subsequent year. It is during the period of supervision that competence should be developed and we feel that supervisors should be chosen with care and made aware of their responsibilities in this respect. To this end prospective licensees should be encouraged to liaise with their supervisor before attending training, e.g. by requiring prospective licensees to obtain details of the project licence.*

In the case of personal licensees, supervision is a stated necessity and is the responsibility of the relevant project licence holder. Indeed, the topic must be covered in module 5 training for project licence holders. However, concerns were raised during the review as to whether the supervisory process is always adequate. It was therefore agreed that guidance on best practice with regard to supervision is required, and the Laboratory Animal Science Association (LASA) Ethics and Training Group (ETG) has agreed to produce a report on this matter for consideration by the ETSC and the Home Office early in 2006.

All participants in the review agreed that the training provided in the modules is only an introduction and that this should be clearly stated and emphasised in all training courses and also inculcated into the psyche of designated establishments (see also section 2.3. below).

### **2.3 Non-modular training and Continuing Professional Development**

Career development through Continuing Professional Development (CPD) training in areas relating to the humane care and use of animals is as important as CPD within other scientific disciplines. Although legislation itself is unlikely to change quickly, developments in the Three Rs and changes in science and technology can be very rapid. Establishments need to ensure that training is a dynamic process taking account of this. This can be achieved in a number of ways, through CPD programmes or regular formal or informal in-house training sessions appropriate to the staff concerned. The pharmaceutical industry has successfully implemented both approaches. It is important for individual certificate holders to be aware of their responsibility for identifying the need for such training and ensuring it is delivered.

The importance of CPD has also been recognised by FELASA, which has recently established a working group to examine the question of CPD Europe-wide. The ETSC intends to monitor the progress of this working group as part of its ongoing work.

### **3. Development of training objectives and definition of learning outcomes**

The common thread running through all of the discussion in Section 2 of this report is the need to provide common guidance on training objectives through the definition of learning outcomes for modular training. This will provide clearer information on what modular training is intended to achieve, together with a more robust template against which to assess licence applicants, and help to define the supervisory requirements for individual licensees. It will also provide guidance to the accrediting bodies on course standards.

The ETSC therefore set out to:

- define the competencies expected of personal licensees, and explore what training should achieve in the light of these;
- develop learning outcomes to define a common minimum standard for each of the competencies; and

- reconsider the structure of modules 1 to 4 taking account of the concerns highlighted earlier in section 2.1.

The results are summarised in sections 3.1 and 3.2 below.

### **3.1 Core competencies for personal licensees**

The goal of modular training is to help prospective personal licensees understand and fulfil their responsibilities as set out in chapter 6 of the *Guidance on the Operation of the Animals (Scientific Procedures) Act 1986* (the Guidance Notes), and to contribute both to good animal welfare and good science. Contributors to the ETSC review identified seven core competencies that personal licence holders need in order to achieve this goal, and these are listed in Table 3 below. They are broadly similar to the competencies developed by FELASA for category B persons (equivalent to UK personal licensees) (FELASA, 2000), although they are tailored to fit UK requirements.

For each of the core competencies a list of learning outcomes for mandatory training was identified and these are set out in Table 4 in section 3.2. These learning outcomes should be viewed as flexible, and may develop or change depending on developments in science, technology, animal welfare and legislation. They are written in such a way as to enable a judgement to be made of success or otherwise, thereby facilitating assessment.

Expertise in each of the core competencies listed represents *the ideal* that licensees should aspire to and we would re-iterate the statements in the Guidance Notes that: “*The mandatory training is largely theoretical and does not itself ensure technical competence.* (para 2.83), and “*Until technical proficiency and competence are achieved the Secretary of State requires that the personal licensee accepts supervision and training arrangements put in place by the project licence holder or by competent personal licensees nominated by the project licence holder*” (para 2.83). It is, therefore, already accepted that competence cannot be achieved by modular training alone; the learning outcomes are thus just a start and supervision and experience will help deliver high levels of competency.

**Table 3: Core competencies for personal licensees**

**(i) Be aware and knowledgeable about national and international regulations**

Licensees should be able to demonstrate a sound knowledge of the principles of the Animals (Scientific Procedures) Act 1986 (ASPA), codes of practice and other relevant legislation. They should understand the personal role and responsibilities of the personal licence holder and other named persons working under the Act, and their required interactions. They should be able to implement the requirements as appropriate.

**(ii) Be aware of and respect societal ethics**

Licensees should have a thorough understanding of the ethical basis for the ASPA, indicating how the cost/benefit assessment is made and indicating how the Three Rs relate. They should understand the ethical issues more generally and how these relate to and shape public opinion. They should be able to recognise that there is a spectrum of views in society on animal experiments and the use of animals more generally (not just polarised extremes), and that attitudes change over time.

**(iii) Understand and respect the 'rules' of the animal facility**

Licensees should understand the need to ensure staff health, safety and security under the Health and Safety at Work Act 1974, and understand local rules and procedures designed to ensure smooth running of the unit, protect animal welfare and safeguard the integrity of scientific studies, including the use of barrier systems and standard operating procedures.

**(iv) Understand and know how to provide for the biology, behaviour and needs of the animals**

Licensees should understand the anatomy, biology, ecology and behaviour of the species and why the animals are motivated to behave in the way that they do. They should recognise, and know how to provide for, physiological and behavioural needs.

**(v) Be competent in animal handling and relevant techniques**

Licensees should be competent in practical aspects such as animal handling, regulated procedures and other techniques used, such that they cause the minimum distress to the animals. They should also be competent in the preparation of dosing solutions, collection, storage and distribution of samples, and analysis of data.

**(vi) Be able to recognise and respond appropriately to pain, distress and discomfort.**

Licensees should be able to assess welfare and recognise pain/discomfort of relevant species. They should be able to identify and respond appropriately to adverse effects and outcomes.

**(vii) Have an appropriate level of understanding of the scientific process and the reasons for the study**

Licensees should understand what they are doing and why they are doing it, in the context of the programme of work authorised by the relevant project licence. They should be able to recognise the purpose of individual procedures and indicate how these relate to the project as a whole. They should have an appropriate level of understanding of the scientific process.

### **3.2 Learning outcomes for personal licence applicants and proposed revision of modules 1 to 4**

The learning outcomes developed for each of the seven core competencies can be delivered within the existing modules. They reflect a different approach to training, rather than a structural change, and therefore could be adopted within the current training system without requiring a change in Home Office policy. They cover all the topics included in the current syllabus with the exception of 'history' in module 1, which review participants felt was unessential. The learning outcomes provide a more definitive guide to what the existing modules should deliver, and describe targets against which personal licence applicants can be assessed. They should also provide a useful aide-mémoire for applicants to help them appreciate what is expected of them, and to supervisors to help identify the level of supervision needed. We hope that this in itself will be a valuable contribution to the improvement of training.

However, when arranging the learning outcomes within the existing modules, we also took the opportunity to address concerns about the separation between modules 3 and 4, which have been identified in section 2.1, by reconsidering the structure of each module. In addition, we have tried to ensure that the content of module 1 is also appropriate for staff other than personal licensees, including certificate holders; experienced workers from overseas who need to know about UK legislation and local rules; and those carrying out Schedule 1 euthanasia. As a result, the modules have been revised and the learning outcomes are listed accordingly.

Compared with the existing modules, the two main points of difference arise from the concerns about the boundaries between modules 3 and 4, and modules 1 and 2, outlined at the end of section 2.1. These are:

- Local anaesthesia is now included with common techniques in module 3. General and regional anaesthesia is addressed as a separate module, as is surgery.
- Local issues particularly relevant to an individual establishment, such as health and safety and the supply and disposal of animals, are moved from module 2 to module 1. This should provide a more appropriate module 1 for certificate holders and overseas workers.

The revised modules are identified by the letters A to E so as to avoid confusion with the existing numbers. For ease of reference, the relationship of each to the existing modules 1 to 4 is noted. Module A is not species-specific; modules B and C are species-specific; most of the learning outcomes in modules D and E apply to all species, but with some species specific aspects. When training for a licence to work with a particular species, the applicant should complete module A, modules B and C for that species, and if relevant, species-specific aspects of anaesthesia (module D) and the module on surgery (E). Subsequently, if changing species there would be no need to repeat the whole of modules B, C and D, just those parts relevant to the species to be added. However, advice should always be sought from the Home Office Inspector. The learning outcomes for each module are arranged under sub-headings, which are broadly similar to the subjects in the original syllabus. Note, the learning outcomes can be addressed in any order.

**Table 4: Revised modules with learning outcomes**

[Abbreviations: COP – Code of Practice; ERP - local ethical review process; HOLO – Home Office Liaison Officer; PCDh - holder of the certificate of designation; PILh - personal licence holder; PPLh - project licence holder; NACWO - Named Animal Care and Welfare Officer; NVS - Named Veterinary Surgeon; SOP - Standard Operating Procedure; GLP - Good Laboratory Practice]

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**Module A: Legislation, ethics and local procedures**

*This combines module 1 with some of module 2.*

Personal licensees are expected to be able to:

**(i) Legislation**

- Relate which legislation, codes of practice and guidance pertain to the conduct of scientific procedures on animals, including Codes of Practice, Council of Europe Convention ETS 123, and EC Directive 86/609/EEC
- Relate the purpose of ASPA as in the first line of the Act
- Define protected animal, including respective stages of development
- Define regulated procedure
- Indicate that programmes of work fall into permissible purposes (as defined by ASPA 5.3)
- Describe the three levels at which control is exercised under the Act as stated in ASPA section 3 (person, project, place)
- Indicate that the controls are exercised through assessment of applications for licences and certificates, inspection of work in progress, and reporting of non-compliance
- Indicate that assessment of applications and monitoring of compliance is done by the Home Office Inspector and know how to contact him/her
- Indicate that the PCDh is responsible for compliance at an establishment and that this responsibility may be exercised through the local ERP
- State that the PILh bears primary responsibility for the animals they have applied regulated procedures to, and that they must make suitable arrangements for periods when they are absent
- Indicate that if permission to delegate non-technical procedures to non-licence holders has been granted, the personal licence holder still bears responsibility
- Outline the scope of PILh responsibilities as defined by the PIL standard conditions, including record keeping and cage labelling, and appreciate how to apply themselves in this respect
- Recognise what a personal licence is and what it looks likeIndicate that regulated procedures may only be carried out if part of a series of regulated procedures authorised by a project licence
- State that it is the responsibility of the personal licence holder to check that appropriate authorities exist in personal and project licences before performing regulated procedures

- Indicate which sections of a project licence describe the regulated procedures authorised and be able to relate these to the programme of work

**Continued....**

- Appreciate that key personnel (NVS, NACWO, PCDh, PPLh) have statutory duties and other responsibilities under ASPA
- Define death as in ASPA
- Indicate the circumstances in which protected animals should be killed
- Relate that restrictions on the re-use of animals exist and state that re-use is strictly controlled
- Relate that schedule 1 exists for humane killing, that it is precise and that a CoP exists
- Indicate that Schedule 2 exists, and identify implications for supply of animals
- Indicate that Schedule 2A exists and outline its provisions
- Indicate what an infringement is and that there are penalties attached
- Indicate that other legislation may be relevant, and where to find further information

**(ii) Ethics**

- Appreciate that the ethical framework which underpins ASPA requires that programmes of work are justified by weighing likely adverse effects on the animals against the likely benefits
- Appreciate that there are limits on what it is considered permissible to do within a research establishment and that there are cultural, national, temporal and institutional differences in this respect
- Be able to identify ethical and animal welfare issues in their own work
- State that when considering welfare issues, pain suffering distress and lasting harm should be interpreted in their widest sense and include the whole life experience of the animal
- Define the Three Rs, indicate what they are for, and how these relate to the ethical principles
- Appreciate the need for, and be prepared to contribute to, a culture of care and appreciate the importance of having an appropriate attitude
- Be responsible and willing and able to reflect on the consequences of their actions
- Indicate the purpose of the local ERP
- Identify relevant sources of information relating to ethics and the Three Rs

**(iii) Local procedures**

**General**

- Identify the project licence(s) they will be working under and the holder(s)
- Identify their supervisor if applicable, and state that responsibility for supervision lies with the project licence holder
- Indicate whom to contact in the event of unexpected events
- Indicate who their local HOLO (if applicable) is
- Be able to identify named persons and appreciate that they are sources of information and advice
- Be aware of the importance of excluding non-authorised persons from areas where protected animals are held and used, and describe the action to be taken if such entry occurs

### **Health, safety and security**

- Indicate that health and safety at work is controlled by legislation
- Indicate different hazards associated with the use of laboratory animals (allergy, injury, infection)
- Describe signs commonly associated with allergy to laboratory animals, and steps to be taken to avoid this developing and required in the event of such signs developing
- Define what is meant by zoonosis
- Indicate procedures to be followed in the event of accidents
  
- Indicate steps to be taken to ensure personal safety and security and the safety of colleagues
- Explain action to be taken if accosted by animal rights protesters, or if followed when leaving the workplace

### **Local issues of supply and disposal of animals**

- Describe in general terms local procedures for the acquisition and disposal of animals, and disposal of waste
- Indicate that acclimatisation and habituation are important and that they may affect the outcome of experiments
- Indicate action to be taken in the event of unexpected adverse outcomes
- Indicate that working in animal facilities requires compliance with relevant SOPs/GLP if appropriate
- Indicate relevant contact persons (e.g. unit manager)

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## **Module B: Biology, behaviour and needs**

*This contains material from module 2 and 3.*

Personal licensees are expected to be able to:

### **(i) Biology and behaviour**

- Identify life events that have the potential to cause suffering including sourcing, transport, housing, husbandry, handling and procedures
- Indicate main husbandry, nutritional and behavioural requirements for the species
- Indicate in general terms the environmental requirements for the species, including environmental enrichment
- Indicate where to find further information about basic biological data
- Indicate that failure to attend to biological and behavioural needs may affect the outcome of experiments. Indicate that good welfare equals good science
- Be aware that for some species there are different strains, and that these can have different characteristics which can affect both welfare and science
- Be aware that alterations to the genome in genetically altered and mutant animals, can affect the phenotype in unexpected and subtle ways, and recognise

the importance of monitoring such animals very carefully.

**(ii) Common diseases and recognition**

- Describe how to recognise signs of physical or behavioural abnormality in relevant species
- Indicate that animals can be classified according to microbiological status, requiring different methods of management to maintain barrier status
- Appreciate that microbiological status of animals may affect the outcome of experiments
- Indicate whom to contact if an animal appears unwell

**(iii) Recognition of pain suffering distress and lasting harm**

- Recognise normal or typical behaviour and appearance of the individual animals in the context of their environment and the strain (e.g. GM animals)
- Recognise abnormal behaviour and signs of discomfort, pain, suffering, or distress
- Indicate that a number of methods are available for assessing the welfare of animals, including score sheets
- Describe factors to be considered when assessing an animal's well being
- Indicate how changes in well being, housing conditions and scientific method can impact on variability and therefore on the outcome of experiments
- Indicate action to be taken if an animal's appearance gives cause for concern

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**Module C: Handling and techniques**

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*This contains material from module 2 and 3 including local anaesthesia.*

Personal licensees are expected to be able to:

**i) Handling and restraint**

- Relate principles to be followed when handling animals
- Indicate that animals may be restrained using physical, manual or chemical means
- Describe alternatives to physical/manual/chemical restraint, such as behavioural training
- Indicate that habituation, training and socialisation are refinements which can contribute to the reduction of animal stress and the need for physical restraint
- Pick up, restrain, age and sex animals at different ages (not applicable to all species)

**ii) Techniques**

- Indicate where to find information in the project licence regarding authority for the procedure and the likely adverse effects

- Indicate that refinement is an ongoing process and where to find information

#### **Humane methods of killing**

- Identify at least one method of humane killing listed in Schedule 1 appropriate for the species and indicate how it may be carried out
- List at least one method used for confirmation of death listed in Schedule 1

#### **Minor techniques**

- List commonly used routes of administration of substances and why they are used
- Demonstrate correct techniques for administration of substances (on cadavers or models)
- Define local anaesthesia and analgesia and indicate the limitations of these techniques
- Demonstrate techniques for inducing local anaesthesia and analgesia.
- Indicate methods of alleviating pain suffering distress and lasting harm including provision of appropriate animal care and use of analgesic drugs
- Relate ways of collecting common samples (blood, urine, faeces) with the minimum of stress to the animal

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### **Module D: General and regional anaesthesia**

*This is module 4 but without the surgery.*

Personal licensees are expected to be able to:

#### **i) General and regional anaesthesia: basic**

- Define general and local anaesthesia, and analgesia
- Relate why anaesthesia might be used
- Indicate that balanced anaesthesia involves giving drugs in combinations to achieve physiological stability and minimise side effects
- List the factors to be considered in pre-anaesthetic evaluation of animals
- List the objectives of premedication
- Indicate the importance of minimising stress prior to anaesthesia in reducing the likelihood of complications during anaesthesia
- List the factors to be considered when monitoring anaesthesia both for anaesthetic depth and physiological stability, and indicate how to determine that an animal is sufficiently deeply anaesthetised to enable painful procedures to be undertaken.
- Indicate types of agents used for the induction of general anaesthesia and when each might be used

- Relate one or more ways to induce anaesthesia

ii) **General and regional anaesthesia: advanced**

- Have a sufficiently detailed understanding of anaesthesia to be able to administer anaesthetics safely for a variety of purposes, using a variety of different techniques.
- Indicate that there is a range of drugs commonly used for premedication and the induction and maintenance of anaesthesia in relevant laboratory species and know where to get advice on their use
- Relate the need for acclimatisation and clinical examination prior to anaesthesia.
- Indicate the routes of administration used for different anaesthetic agents
- Indicate some of the problems associated with pain recognition and pain management in animals
- Relate the need for analgesic use after surgical procedures
- List commonly used analgesic agents
- Integrate a program of pain management into an overall scheme of perioperative care.
- Relate factors to be monitored during anaesthesia
- Monitor anaesthetic depth and the animals' vital signs, using both clinical signs, and electronic apparatus
- Indicate the problems that may occur during anaesthesia, and understand how to avoid these, or manage them if they occur
- Indicate the factors to be monitored during recovery from anaesthesia and surgical procedures
- Be aware of the problems that can arise in the post-operative period, and indicate how to avoid these, or manage them if they occur

## **Module E: Conduct of surgical procedures**

*This is surgery separated out from module 4.*

Personal licensees are expected to be able to:

### **Surgical procedures**

- Understand the relevance and need for pre-operative assessment and, where appropriate, conditioning
- Identify sources of reference for good surgical practice
- Discuss the importance of aseptic technique
- Describe in general terms how personnel, animals, instruments and equipment should be prepared for aseptic surgery
- List the principles of successful surgery (e.g. Halstead's principles) and indicate how to achieve these
- Describe the characteristics of different, commonly-used instruments, suture materials and needles
- Relate the importance of good technique in accessing surgical sites, handling tissues and repairing incisions
- Indicate the characteristics of different suture patterns and their applicability to different situations
- Demonstrate how to place a suture correctly
- Describe common post-surgical complications and their causes
- Relate the principles of post-surgical care and monitoring

### **3.2.2 Implementation of a learning outcomes approach**

The development and documentation of learning outcomes agreed by participants from a wide disciplinary background, should, in itself, make a significant contribution to the further development and improvement of training. The learning outcomes provide a training *resource* and do not in themselves reflect a change in *policy*. They can therefore be used immediately to evaluate, develop and support training within the existing modules, as discussed in the introduction to 3.2. above.

Trainers and accrediting bodies are invited to critically evaluate their training provision against the learning outcomes, reflecting on how courses are organised and delivered, and whether all the learning points are addressed with appropriate emphasis.

Those responsible for delivering and monitoring the effectiveness of training are also encouraged to review what trainees actually are 'taking away' from the course in terms of the learning outcomes identified and whether those outcomes are based on theory only, or have been related to practice. A critical evaluation of the assessment process would follow from this, exploring whether and how far current assessment strategies evaluate knowledge and understanding against the specific learning

outcomes. Such a review, may indicate the most appropriate process to ensure that assessment is always as relevant, comprehensive and robust as possible. This in turn would assist in identifying subsequent supervision needs. In the light of these points, the ETSC recommends that the three accrediting bodies should collaborate in evaluating their methods of assessment.

### **3.2.3 Timeframe**

Should the proposed changes in the actual structure of the modules be accepted by the Home Office, it will be necessary to allow sufficient time for course providers and accrediting bodies to implement the changes into their processes and materials. The ETSC has discussed this with the accrediting bodies and it was proposed that a deadline of no later than January 2009 would seem to be appropriate. There are also references in various Home Office documents to mandatory training requirements for different categories of staff, and the ETSC recognises that these need to be revised if the proposals are accepted.

Most of the current questions incorporated into the MCQ database used for the assessment of personal licence applicants remain appropriate for assessing learning outcomes. However, the database will need to be amended to take account of the revised module structure. Time and funding will be required for this, but any revision undertaken should be informed by the comments on assessment in section 3.2.2 above. It is recommended that the Home Office should identify a source of funding for this.

Training is a dynamic issue and it is recommended that the impact of any changes introduced, and how this works in practice, be reviewed by the APC ETSC in consultation with the trainers, accrediting bodies and the Home Office, after five years.

## **4. Future work**

Core competencies and associated learning outcomes for project licensees will be scrutinised and reported as the next stage of the ETSC review. The LASA Ethics and Training group has already produced a draft document on module 5 that will be used as a starting point, and we are grateful for this contribution.

The ETSC also believes that the role of supervision would benefit from further consideration, leading to the production of a guidance document. The LASA Ethics and Training Group is working on this issue and intends to produce a report setting out good practice; the ETSC will review this in due course.

The ETSC has a specific role in advising the Home Office on the accreditation system and several issues arose in discussion with the accrediting bodies, which we would like to pursue. In particular, we intend exploring the possibility of producing guidance on roles and responsibilities of the various bodies involved in training and accreditation, including clarification of outputs, which the accreditation system might be expected to deliver.

## **5. Conclusion and recommendations**

This report is intended to support and help develop training for personnel working under the UK ASPA. However, the competencies and learning outcomes described should be applicable internationally to training for all staff carrying out procedures on animals.

The key conclusions are:

- The process of the ETSC review – co-opting members with additional expertise and involving trainers, accrediting bodies and others directly involved in licensee training – was invaluable in the production of this report. The ETSC is grateful for the co-operation and enthusiasm of all who participated.
- The current system of modular training is flexible and highly appropriate to the UK system of regulation (section 2.1). However, it was agreed by all participants in the review that the formal mandatory training provided in the modules *is only an introduction* and that this needs to be clearly stated and emphasised in all training courses, and the concept inculcated into the psyche of designated establishments.
- Modules 1 to 4 should be re-organised to take account of concerns regarding the current division between modules 3 and 4, i.e. minor procedures, anaesthesia and surgery; and to try to provide more appropriate modules for the training needs of staff other than personal licensees.
- It was generally felt by contributors to the ETSC review, that it would be appropriate to increase the time for training, particularly for modules 1 and 4. The ETSC believes that the importance of training, whether modular or as CPD, is not universally recognised and that limiting opportunities for training is a false economy. Training is of fundamental importance with respect to legislative compliance, animal welfare and good science and should not be viewed just as a means of getting a licence. Trainers need to get this message across to their trainees and the message also needs to be embraced by certificate holders, ERPs and employers and funders of research generally.
- Guidance on training objectives, as opposed to a list of training topics to be covered, would be welcomed by trainers, accrediting bodies and the APC and is provided in this report. This would contribute to the further development of courses (both content and delivery), help with assessment by providing a consistent set of requirements against which candidates could be assessed, and also help define supervisory requirements. Defining learning outcomes also provides a useful aide-mémoire for licence applicants to help them understand what is expected of them
- Training objectives are best expressed in terms of learning outcomes. In order to develop these, the ETSC defined the ideal competencies that personal licensees require in order to fulfil their responsibilities under ASPA (see section 3.1.), and then set out learning outcomes for each of the competencies to provide a common minimum standard for each (see section 3.2.). This defines the training objectives for modular training for personal licensees.
- The supervision period is crucially important to the development of competence and to achieving the seven ideal competencies. Guidance on roles,

responsibilities and practical aspects of supervision would be helpful. Both LASA and the ETSC are considering this issue.

- There is clearly a need for better resources – time, money and expertise – to support trainers and accrediting bodies in their work. Participants in the review felt that the cost of training and the development of resources is an issue that funders of research should consider.
- A guidance document setting out the roles and responsibilities of the various bodies with an interest in licensee training would be welcomed by trainers and the accrediting bodies. The ETSC intends to produce such a document at a later stage of the training review

## **Recommendations**

- (i) Modular training should be based on a learning outcomes approach and trainers, course organisers and the accrediting bodies should review current course content and delivery, and the assessment of trainees accordingly.
- (ii) The general principle of a learning outcome approach should be endorsed by the Home Office. The specific learning outcomes, and the seven core competencies for personal licensees with which they are associated (set out in Section 3 of this report), should be endorsed by the Home Office and adopted as the basis for mandatory training for personal licensees.
- (iii) The existing modules 1 to 4 should be replaced with modules A to E as described in Section 3.2 of this report. This arranges the learning outcomes in logical groupings and provides a clearer division between local and general anaesthesia and surgery. It should also provide a module (i.e. module A) that includes local issues, and is thus more appropriate for staff other than personal licensees, such as certificate holders who find such training useful, experienced workers from overseas who need to know about UK legislation and local rules, and those carrying out Schedule 1 euthanasia.
- (iv) The development of the learning outcomes published in this report provides a template against which candidates can be assessed and the three accrediting bodies are encouraged to get together to review their methods of assessment in the light of these.
- (v) The joint IOB/UAG MCQ database will need to be reviewed with respect to a learning outcome approach, and amended to take account of the different modular structure if accepted. We recommend that the Home Office identify a source of funding for this.
- (vi) The importance of supervision and CPD training in achieving and maintaining competence and in contributing to good science and welfare, needs to be more widely recognised within the research community, both locally within research establishments and by those funding research. Both modular and non-modular training needs to be adequately funded and resourced.
- (vi) The impact of any changes introduced as a result of this report, and of how these work in practice, should be reviewed by the APC ETSC in consultation with the trainers, accrediting bodies and the Home Office, after five years.

## 6. References

FELASA (2000). FELASA recommendations for the education and training of persons carrying out animal experiments (Category B). Report of the Federation of European Laboratory Animal Science Associations Working Group on Education of Persons Carrying out Animal Experiments (Category B) accepted by the FELASA Board of Management. *Laboratory Animals* 34:229-235. 2000),

Home Office (2000). *Guidance on the Operation of the Animals (Scientific Procedures) Act 1986*. London: HMSO

Home Office (1993). *Report of the Animal Procedures Committee for 1992*. London: HMSO

Home Office (1994). *Report of the Animal Procedures Committee for 1993*. London: HMSO

## **Appendix 1: Membership of the APC ETSC and co-opted members**

### **ETSC members:**

Maggy Jennings (chair)  
Michael Festing  
John Gregory (until 2004)  
Bob Kemp (from 2004)  
Graham Moore

### **Observer from the Home Office Inspectorate**

Maggie Lloyd

### **Co-opted members**

Manuel Berdoy  
Bryan Howard  
Jane Smith  
Janet Watson

## **Appendix 2: FELASA competencies for category B staff**

1. Be aware of European and national regulations.
2. Be aware of and respect societal ethics.
3. Understand and respect rules of the animal facility.
4. Understand the theoretical basis of the study and thereby safeguard animal welfare and scientific integrity.
5. Be knowledgeable about the scientific use of animals and able to minimise interfering factors.
6. Be competent in handling and other techniques used.
7. Be able to recognise pain/discomfort and assess welfare of relevant species.
8. Appreciate and respond appropriately to adverse outcomes

## **Appendix 3: Criteria for assessment of accreditation bodies reproduced from the APC annual report for 1993**

### **Chapter 6 Education and Training**

6.5 The Group<sup>3</sup> considered and agreed the criteria to be used for determining the acceptability or otherwise of an accreditation scheme. These are:-

- (i) accreditation of training programmes should be carried out by independent bodies which are not directly associated with the body providing the training;
- (ii) the proposed scheme should have a syllabus, which at least meets the requirement set by the Home Office in its policy statement of February 1993;
- (iii) the means of assessment of trainees should be such as to ensure that participants have adequate understanding of their responsibilities and sufficient knowledge of animal husbandry that good welfare practices will be assured;
- (iv) the scheme should be able to cater for a wide variety of users and species unless it is restricted to specific user groups; and
- (v) the scheme should set out clearly how it will be administered, how courses will be supervised and monitored, how long accreditation will last and how trainees will be notified of their performance in the course.

6.6 The Working Group considered two applications and on their recommendation the Animal Procedures Committee advised the Home Secretary to approve applications from the Institute of Biology and the Universities Group for the Accreditation of Training as approved bodies.

6.7 The Animal Procedures Committee has approved the proposals of the Working Group for continuing oversight of accreditation schemes and training courses. Members of the Working Group or other members of the Committee will attend meetings of the supervisory bodies operating the schemes as observers to satisfy themselves that appropriate arrangements are in place for monitoring accredited training programmes. They will also attend training courses on occasions to satisfy themselves that acceptable standards are being obtained and that assessment procedures are adequate.

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<sup>3</sup> APC working group