AUSTRALIAN AND NEW ZEALAND
COLLEGE OF VETERINARY SCIENTISTS

FELLOWSHIP GUIDELINES
Animal Welfare Science, Ethics and Law

ELIGIBILITY
1. The candidate must meet the eligibility prerequisites for Fellowship outlined in the Fellowship Candidate Handbook.
2. Membership of the College must be achieved prior to the Fellowship examinations.
3. Membership may be in any discipline.

OBJECTIVES
To demonstrate that the candidate has sufficient training, experience, knowledge and accomplishment in Animal Welfare Science, Ethics & Law to be recognised as a leading authority in this field by his/her colleagues in the veterinary profession.

LEARNING OUTCOMES
1. The candidate will have a detailed\(^1\) knowledge of the following core learning outcomes:

1.1 The history of animal welfare, including the development, and driving factors behind the social, philosophical and scientific components of Animal Welfare Science, Ethics and Law.

\(^1\) Knowledge levels:
- **Detailed knowledge** — candidates must be able to demonstrate an in-depth knowledge of the topic including differing points of view and published literature. The highest level of knowledge.
- **Sound knowledge** — candidate must know all of the principles of the topic including some of the finer detail, and be able to identify areas where opinions may diverge. A middle level of knowledge.
- **Basic knowledge** — candidate must know the main points of the topic and the core literature.


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• How animal welfare is defined and measured including contemporary approaches in the scientific assessment of animal stress and wellbeing, based on an appropriate selection of scientific disciplines including ethology, physiology and neuroscience.

• Genetic, environmental and evolutionary determinants of pain, stress and fear responses in animals.

• The nature of cognition and motivation in animals.

• Pain and its assessment and alleviation in animals.

• Methods for assessing and enhancing animal environments and husbandry systems.

• The role of stockmanship and human behaviour in animal welfare responses to human-animal interactions.

• The design, conduct and analysis of scientific experiments to examine welfare issues.

• Animal welfare implications and necessary safeguards in relation to scientific procedures and emerging technologies (e.g. cloning, genetic modification).

1.2 How ethical principles influence animal welfare in animal husbandry, companion animal care, vertebrate pest control and scientific research including:

• The cultural foundations of human perception and treatment of animals.

• The philosophical issues and concepts involved in animal ownership and use by humans (e.g. utilitarian, animal rights, duty-based approaches).

• The relationship between scientific truth and moral value.

• Ethical approaches to the balancing of harm and benefits in animal use.

• The approaches to ethical evaluation of emerging issues (e.g. xenotransplantation, animal-animal transplantation, cloning).

• The ethical basis of professional conduct in relation to animal welfare.

• The relationship between morality and sentiment as a basis for concern for animal welfare.

• The ethical approaches to resolving potential conflicts between animal welfare and other interests (e.g. environment, human society, other animals).

1.3 The legal background and principles of animal welfare in Australia and New Zealand
including:

- The process of the development of public policy and legislation in animal welfare and the factors which influence this process.
- The key Acts governing animal welfare in the Candidate’s jurisdiction, and the principles on which they are based.
- Legal responsibilities of various stakeholders with regard to animal welfare.
- The regulation of animal welfare standards in the Candidate’s jurisdiction.
- The legal basis and associated processes regulating the use of animals in experiments in the Candidate’s jurisdiction.

1.4 The ethical and legal responsibilities of the veterinarian in animal welfare including:

- The role of the veterinarian as an expert witness in animal welfare cases and disputes.
- The ethical principles for veterinarians in resolving conflicts between animal welfare, client interests and commercial interests.
- The roles of veterinary professional bodies and associations in animal welfare.

2. The candidate will have a sound knowledge of:

2.1 Animal husbandry and management procedures, including general husbandry, nutrition and management of domestic farm animals, companion animals and laboratory animals.

2.2 Animal physiological and behavioural responses, including normal physiological and behavioural responses of domestic farm animals, companion animals and laboratory animals.

2.3 Animal stress responses including the impact of stress on disease on domestic farm animals, companion animals and laboratory animals:

3. Elective-specific Learning Outcomes

At the time of submission of the training program document the candidate will be required to nominate to the College Office, two (2) of the following seven (7) electives:

Elective 1: Wildlife management and welfare including pest control

Elective 2: Laboratory animal science

Elective 3: Applied ethology
Elective 4: International legal, regulatory and trade aspects of animal welfare
Elective 5: Urban animal management and welfare
Elective 6: Performance animal management and welfare
Elective 7: Production animal management and welfare

The candidate is expected to have a **sound knowledge** of all the elective topics. **For the nominated two (2) electives, the candidate will be expected to have a detailed knowledge of the following learning outcomes:**

### 3.1 Wildlife management and welfare including pest control
- Principles of humane wild and pest animal management.
- Control strategies for wild, feral and pest animal control and associated welfare risks and benefits.
- Assessment protocols for objectively measuring the welfare costs of control strategies.
- Regulatory aspects of animal control.
- Animal welfare management of captive wild animals.

### 3.2 Laboratory animal science
- Health, disease, housing and management of animals commonly used in laboratory experiments.
- Assessment of impact of scientific procedures and strategies for applying the Three Rs - reduction, refinement and replacement.
- Pain management in laboratory animals.
- Assessment of competence of animal technicians and researchers.

### 3.3 Applied ethology
- The development of the science of ethology and its application to domestic animals. Ethological principles in the evaluation of animal welfare problems.
- Types of abnormal behaviour in animals and their relationship to welfare.
- The ethological and neurophysiological basis of behavioural pathologies and strategies for their alleviation.

### 3.4 International legal, regulatory and trade aspects of animal welfare
- The status of animals and animal welfare considerations within international legal and regulatory systems.
- The role of key international bodies in animal welfare and trade in animals and their products (e.g. OIE, WTO).
- The variations in the status of animal welfare in international markets for animal
products and the driving factors that contribute to these variations.

3.5 Urban animal management and welfare

- Management of competing interests of companion animals, their owners, other members of the community and wildlife.
- Management of stray companion animals.
- Housing and management of pound animals.
- Management of staff burnout in animal shelters.
- Principles and promotion of responsible pet ownership.
- Population management of companion and stray animals.
- Welfare aspects of dangerous dogs control regulations and processes.

3.6 Performance animal management and welfare

- Management of animals involved in sport, competition, exhibition and entertainment
- Training of performance animals
- Transport of performance animals
- Use of drugs in performance animals
- Welfare of surplus performance animals

3.7 Production animal management and welfare

- Management and husbandry practices of production animals
- Transport and slaughter of production animals
- Welfare assessment in production animals
- The role of the veterinarian in the welfare of production animals
- The development of policy and husbandry strategies that affect welfare of production animals

4. The candidate will be able to demonstrate:

4.1. **detailed² expertise** when assessing the welfare standards of animals on a farm, in a laboratory or elsewhere and writing a report defending their assessment and identifying possible means to improve the animals welfare if necessary

4.2. **detailed expertise** when reviewing the literature relating to an animal welfare issue, producing a document which identifies the problems pertaining to the issue, identifying the necessary research to clarify these and developing the relevant research protocols

4.3. **sound expertise** when developing policies and codes relating to particular

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²Skill levels:

**Detailed expertise** — the candidate must be able to perform the technique with a high degree of skill, and have extensive experience in its application. The highest level of proficiency.

**Sound expertise** — the candidate must be able to perform the technique with a moderate degree of skill, and have moderate experience in its application. A middle level of proficiency.

**Basic expertise** — the candidate must be able to perform the technique competently in uncomplicated circumstances.
husbandry procedures or species management.

EXAMINATIONS

Refer to the Fellowship Candidate Handbook, Section 7.

Written Paper I:

This paper is designed to test the Candidate’s knowledge of the principles of Animal Welfare Science, ethics and law as described in the Learning Outcomes. Answers may cite specific examples where general principles apply, but should primarily address the theoretical basis underlying each example.

Written Paper II:

This paper is designed to (a) test the Candidate’s ability to apply the principles of the Animal Welfare Science, ethics and law to particular cases/problems or tasks, and to (b) test the Candidate’s familiarity with the current practices and current issues that arise from activities within the discipline of Animal Welfare Science, ethics and law in Australia and New Zealand. 25% of this paper will be related to the candidate’s nominated (2) electives, and will assess knowledge of the elective specific learning outcomes.

Oral and Practical Examination:

Refer to Fellowship Candidate Handbook, Section 7.3.1

These two examinations require the candidate to demonstrate expertise in the areas covered by the Learning Outcomes.

In the practical examination, the candidate will be presented with audiovisual material covering animal welfare and management issues and be expected to provide written answers to questions including assessing the standard of welfare of the animals involved and identifying strategies for improving their welfare if necessary.

In each examination, 60% of questions will deal with core components and 40% with the elective components of the subject.
TRAINING PROGRAMMES

Refer to the Fellowship Candidate Handbook, Section 4.3

Supervisors

The candidate must nominate one appropriately qualified principal supervisor to oversee the Training Program. Candidates are encouraged to select a minimum of three adjunct supervisors to address the depth and breadth of the Training Program, particularly with regard to their nominated electives. Adjunct supervisors may be veterinarians or non-veterinarians who are recognised authorities in their field. Examples of non veterinarians are: ethologists; physiologists; animal scientists; philosophers who specialise in ethics and bioethics; and lawyers who specialise in animal welfare legislation. All adjunct supervisors must be approved by the FTCC prior to the commencement of training.

EXTERNSHIPS

Refer to the Fellowship Candidate Handbook, Section 3.4.1

TRAINING IN RELATED DISCIPLINES

Refer to the Fellowship Candidate Handbook, Section 3.4.2.

Suggested disciplines for related discipline training include: veterinary epidemiology, philosophy, bioethics, physiology, veterinary immunology and cognitive science.

ACTIVITY LOG AND ACTIVITY LOG SUMMARY

Refer to the Fellowship Candidate Handbook, Section 3.8

The Activity Log (AL) should be recorded using the format in Appendix 1. The candidate will be expected to log their activity in their particular aspect of animal welfare. For example, those involved in research would log their research projects; in government, their policy/code development; and in consultancy, their clinical work. An example of an Activity Log Entry is included in Appendix 1. Expected Activity Thresholds for Fellowship candidates are 20 in the three separate areas of research projects, government policy/code development and clinical consultancies. It is recommended that candidates achieve an Activity Threshold of 20 in their area of daily occupation (e.g. government policy/code development) and a total of 20 across
the other two areas, comprising some activities in each area. The candidate should have the primary role in 30 of the 40 activities and a significant role in the remainder.

The Activity Log Summary (ALS) should be kept in the format of Appendix 2. An example of an Activity Log Summary for Animal Welfare Science, Ethics and Law is included in Appendix 2.

PUBLICATIONS

Refer to the Fellowship Candidate Handbook, Section 3.11.

As part of the Publication requirements stipulated by the Fellowship Candidate Handbook, at least one (1) of the three (3) publications in Category A must be a review article about an issue in Animal Welfare Science, ethics or law.

RECOMMENDED READING LIST

List of Suggested Information Sources

The candidate is expected to read widely within the discipline, paying particular attention to areas not part of their normal work experiences. This list of books and journals is intended to guide the candidate to some core references, including comparative texts, and other source material. Candidates also should be guided by their supervisor. The list is not comprehensive and is not intended as an indicator of the content of the examination.

Recommended Texts


Fraser D Understanding animal welfare: The science in its cultural context (UFAW Animal Welfare)


Sandøe P and Christiansen SB (2008) Ethics of animal use John Wiley and Son


**Useful texts**


Armstrong SJ. and RG. Botzler. The Animal Ethics Reader


Rogers LJ (1997) Minds of their own- thinking and awareness in animals. Allen & Unwin


Young, RJ. (2003) Environmental Enrichment for Captive Animals. UFAW


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Legislation

*Australian State and Territory Animal Welfare Legislation and Codes of Practice*

It is recommended that the candidate refer to the legislation and codes for their own particular state or territory.


*New Zealand Animal Welfare Legislation*


Useful Journals

Animal Welfare
Anthrozoos
Applied Animal Behaviour Science
Australian Veterinary Journal
Australian Veterinary Practitioner
Canadian Veterinary Journal
Compendium for Continuing Education
Journal of Applied Animal Welfare Science
Journal of the American Veterinary Medical Association
Journal of Veterinary Behavior: Clinical Applications and Research
Journal of Veterinary Research
Laboratory Animals
New Zealand Veterinary Journal
Veterinary Clinics of North America

Information Resource Centres

Animal Welfare Science Centre (http://www.animalwelfare.net.au) [Accessed October 28, 2013]


Anthrozoology.org (http://www.anthrozoology.org) [Accessed October 28, 2013]


RNZSPCA (http://www.nzspca.org.nz)


FURTHER INFORMATION
For further information contact the College Office

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### Activity Log for Animal Welfare Science, Ethics and Law

**Name:** Mr C Candidate

<table>
<thead>
<tr>
<th><strong>Date:</strong></th>
<th><strong>Activity:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2007-8</td>
<td>Report on the animal welfare implications of body condition scores in dairy cows for DairyInsight NZ</td>
</tr>
</tbody>
</table>

**Category:** (either: research; policy development; legal representation; report on issue; consultation on welfare standard)

- Report on an issue

**Animal Welfare Issue Identified:**
High genetic merit for milk production combined with a dependence on a pasture-based grazing system result in a majority of cows losing significant body weight and condition score in early lactation under New Zealand conditions. If animals do not calve in a sufficiently high condition score, then they may become excessively thin and in poor condition after calving. This weakens the animal, and also makes it more susceptible to hypothermia, metabolic disease, lameness and infertility.

**Analysis of Animal Welfare Issue:**
Proper management of body condition score (BCS) is important for milk production, cow fertility, animal welfare and dairy farm profitability. Body condition score loss and gain are natural events in the lactation/pregnancy cycle of all mammals. Irrespective of what a cow is fed, her physiology dictates that she will mobilise body condition rapidly in the first 6 to 8 weeks postcalving. An ideal BCS at calving is 5 for mature cows and 5.5 for 1st and 2nd lactation cows. Fatter cows at calving lose more BCS, but are still in better condition at mating.

**Outcome:**
Report completed and Report attached

**Role**
(describe your role in this activity)

**Learning outcomes addressed:** (list numbers)
1.1, 2.1

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Signature of supervisor__________________________________________
Appendix 2.

Name: Mr. C. A nidate

Activity log summary for Animal Welfare Science, Ethics and Law

Example.

<table>
<thead>
<tr>
<th>Category</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Research</td>
<td></td>
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<tr>
<td>Policy development</td>
<td></td>
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<tr>
<td>Legal presentation</td>
<td></td>
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<tr>
<td>Report on issue</td>
<td></td>
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<tr>
<td>Consultation on welfare standard</td>
<td></td>
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</tbody>
</table>