

Application Form AE / Bio-Safety v3.01**General Information**
Completion of Application**Research Type:****Select the purpose for this Application:** *2. Teaching**General:**

Protocol Number: 001648
 Project Title: Training in experimental manipulations
 Responsible Investigator: [REDACTED]
 Department: *Research Office

Project Funding - Teaching:**1. Please indicate how the project is funded:**

Academic teaching: %
 Commercially funded contract: %
 = % [must equal 100]

? **Other:**

* 2a: Will any Genetically Modified Organisms (animals, cells, bacteria etc.) be used during the manipulations described in this application?

No

Please indicate from which other bodies approvals or permits for this project are required:

- The University of Auckland - Biological Safety Committee
 The University of Auckland - Human Ethics Committee
 Another Animal Ethics Committee
 Department of Conservation
 Other (please specify)

?

Section A: UoA Personnel

Personnel - Review

(Add Personnel - Review

)

Personnel - Review

Name of UoA Personnel [REDACTED]

RI Start Date 21-Aug-2015 End Date _____ Role Co-Inv E-Mail: [REDACTED]

Certification Begin End
- - - Certifications

No response is required for Start Date, End Date and Certifications

*** Qualifications:**

BSc. Hons. Natural Science

?

Please confirm whether you have completed the following training modules:

Yes * Module 1 - Legislation

Yes * Module 2a - Handling, sexing and euthanasia of rodents

Yes * Module 2b - Handling, sexing and euthanasia of rabbits and guinea pigs

*** Experience:**

Over 18 years experience working as an animal technologist with extensive experience in animal manipulations.

?

Categories of procedures to be performed:

Manipulation

Monitoring

Euthanasia

Note: All personnel named in the application are required to sign the 'Details of Personnel' form. This can be downloaded [here](#). Once all the personnel have read and signed this form, the document needs to be uploaded into 'Section G: Attachments'.

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

Personnel - Review

Name of UoA Personnel [REDACTED]

RI Start Date 21-Aug-2015 End Date _____ Role PI E-Mail: [REDACTED]

Certification Begin End
- - - Certifications

No response is required for Start Date, End Date and Certifications

*** Qualifications:**

BVM&S

?

Please confirm whether you have completed the following training modules:

Yes * Module 1 - Legislation

Yes * Module 2a - Handling, sexing and euthanasia of rodents

Yes * Module 2b - Handling, sexing and euthanasia of rabbits and guinea pigs

*** Experience:**

43 years experience as a veterinarian. Over five years as the University of Auckland Animal Welfare Off cer.

?

Categories of procedures to be performed:

Manipulation

Monitoring

Euthanasia

Note: All personnel named in the application are required to sign the 'Details of Personnel' form. This can be downloaded [here](#). Once all the personnel have read and signed this form, the document needs to be uploaded into 'Section G: Attachments'.

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Personnel - Review

Name of UoA Personnel [REDACTED]

RI <input type="checkbox"/>	Start Date 21-Aug-2015	End Date _____	Role Co-Inv	E-Mail: [REDACTED]
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Certification Begin End

- - - Certifications

No response is required for Start Date, End Date and Certifications

*** Qualifications:**

M.I.A.T. ONC Biological Sciences

?

Please confirm whether you have completed the following training modules:

Yes * Module 1 - Legislation

Yes * Module 2a - Handling, sexing and euthanasia of rodents

Yes * Module 2b - Handling, sexing and euthanasia of rabbits and guinea pigs

*** Experience:**

Over 35 years experience working as an animal technologist with extensive experience in animal manipulations and techniques.

?

Categories of procedures to be performed:

Manipulation

Monitoring

Euthanasia

Note: All personnel named in the application are required to sign the 'Details of Personnel' form. This can be downloaded [here](#). Once all the personnel have read and signed this form, the document needs to be uploaded into 'Section G: Attachments'.

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

Personnel - Review

Name of UoA Personnel [REDACTED]

RI <input type="checkbox"/>	Start Date 21-Aug-2015	End Date _____	Role Co-Inv	E-Mail: [REDACTED]
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Certification Begin End

- - - Certifications

No response is required for Start Date, End Date and Certifications

*** Qualifications:**

BSc, MSc, PhD

?

Please confirm whether you have completed the following training modules:

Yes * Module 1 - Legislation

No * Module 2a - Handling, sexing and euthanasia of rodents

No * Module 2b - Handling, sexing and euthanasia of rabbits and guinea pigs

Please refer to the [Animal Ethics](#) website for details of how to register for these Module(s).

*** Experience:**

[REDACTED] has been involved in sheep research for 25 years.

?

Categories of procedures to be performed:

Manipulation

Monitoring

Euthanasia

Note: All personnel named in the application are required to sign the 'Details of Personnel' form. This can be downloaded [here](#). Once all the personnel have read and signed this form, the document needs to be uploaded into 'Section G: Attachments'.

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner

of this application form!

Personnel - Review

Name of UoA Personnel [REDACTED]

RI <input type="checkbox"/>	Start Date 21-Aug-2015	End Date _____	Role Co-Inv	E-Mail: [REDACTED]
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Certification Begin End	
- - -	Certifications

No response is required for Start Date, End Date and Certifications

*** Qualifications:**

BTech Vet

?

Please confirm whether you have completed the following training modules:

Yes * Module 1 - Legislation

Yes * Module 2a - Handling, sexing and euthanasia of rodents

Yes * Module 2b - Handling, sexing and euthanasia of rabbits and guinea pigs

*** Experiences:**

[REDACTED] animal Facility Manager and has over 10 years comprehensive experience with animal welfare and interventions.

?

Categories of procedures to be performed:

Manipulation

Monitoring

Euthanasia

Note: All personnel named in the application are required to sign the 'Details of Personnel' form. This can be downloaded [here](#). Once all the personnel have read and signed this form, the document needs to be uploaded into 'Section G: Attachments'.

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

Section A: non-UoA Personnel

UoA Personnel not found in the HR List or addition of non UoA Personnel:

First & Last Name:	Email:	Role:	Qualifications:	Experience:	#Man	#Mon	#Eut	*Mod 1	*Mod 2a	*Mod 2b
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Section B: Description

B.1: Protocol Number:

001648

* B.2: Department(s) and Course Number and/or Course Title:

Training in experimental manipulations

* B.3: Lay Summary:

The Animal Welfare Act (1999) requires that all personnel using animals for research, testing and teaching be 'suitably qualified' in the manipulations they undertake. In addition, the University of Auckland Institutional Operating Plan for the Direct management of Animals requires medicine users to be competent in the administration of medicines in animals.

Animal users at the University of Auckland include the veterinarian, academic staff, technicians and students. The purpose of this application is to address the need for a systematic method of ensuring that animal users receive the training they require, whilst adhering to the University Code of Ethical Conduct. The benefits of this training for users include: learning the standard internationally accepted methods of restraint, blood sampling, drug administration, aseptic techniques, basic surgical procedures and euthanasia. It also provides new users with the support of experienced animal technicians longer term, beyond the initial training. The benefits for animals (used in the future by these personnel under other AEC approvals) include: careful stress-free handling and restraint, minimal trauma associated with drug administration, less trauma from blood sampling, fewer post-operative infections and minimal stress during euthanasia and other manipulations

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* B.4: Describe why animals are needed for this project:

Personnel will only require training if they are to use animals in their research protocols. Training on non-experimental animals is necessary to ensure refinement of techniques that will be used on experimental animals. This will lead to less variability in how manipulations are performed and less variability in results.

While mannequins are available for teaching some procedures, it is considered that training using live animals gives researchers a more realistic learning experience.

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* B.5a: Is this application for continuation of a paper/course that has previously had AEC approval?

Yes

If this is a new paper/course, or a paper/course that has not had previous approval from the University of Auckland AEC, please select 'No'.

* B.5b: How long has this Course been running with a similar laboratory protocol?

T482 was approved on 7/11/2006.

T777 was approved on 9/12/2009.

001065 was approved on 5/12/2012

* B.5c: Has the laboratory format changed since the last application to the AEC or within the last 5 years?

No

* B.5e: Has student opinion about the use of animals in teaching been obtained?

Yes

The AEC expects that student opinion about the use of animals in teaching courses will be sampled using an annual questionnaire. An example student opinion questionnaire is available on the AEC web page or from the Animal Ethics Administrator.

Please attach the results of the [Student Questionnaire](#) to this application (in the Attachment section).

Section C: Animal Use

Species and Strains to be used:

IMPORTANT: Please click on the yellow '+' icon to add a species or strain. Fill out the details for each species and/or strain.

Species:	Strain:	Usage:	Tot. No. req'd for Project	Sex:	Age Range:	Weight Range:
1a - Mice	Any	Manipulat on	400	Either	>3 weeks	Any
1b - Rats	Any	Manipulat on	150	Either	>3 weeks	Any
1c - Guinea pigs	Any	Manipulat on	45	Either	Any	Any
1e - Rabbits	Any	Manipulat on	45	Either	>3 weeks	Any
1q - Pigeons	Any	Manipulat on	45	Either	Any	Any
1r - Other birds	Any	Manipulat on	45	Either	Any	Any
1f - Sheep	Any	Manipulat on	20	Either	>6 months	Any

Please justify species selection:

For each of the species and strains listed, please explain why you need to use this specific species and strain of animal i.e. explain why this animal is appropriate on scientific, technical, humanitarian and/or educational grounds for the procedures proposed.

The application covers the main species of animals used for research and teaching for which researchers may require training.

If your response to this question exceeds 4000 characters (including spaces), please (a) write "Refer to attachment" in the field above and (b) upload a word document of your response in 'Section G: Attachments'.

AFM Approval

*** If the animals are being obtained from, or are being housed in an animal facility, has the facility manager confirmed in writing that the proposal can be accommodated within the resources of the facility?**

Before submitting this application, please obtain confirmation from the facility manager, as this is a requirement of the AEC. The AEC will not approve an application unless written confirmation has been received. Please upload the written confirmation into section G.

Yes

Animal Usage Statistics

Species section(Add Species section)

▼ 1a - Mice

Species section

1a - Mice

Note: Admin use only! Please ignore the fields above.

* **1. Please select the Usage Type for this Species:** Manipulation

2. Source of Animals:

Number:

Breeding Unit 400

Commercial _____

Farm _____

Born during project _____

Captured _____

Imported into NZ _____

Public sources _____

TOTAL: ***400**

3. Status of animals:

Number

Normal/Conventional 400

SPF/germ free _____

Diseased _____

Transgenic/Chimera _____

Protected Species _____

Unborn/prehatched* _____

Other _____

4. Purpose:

Number:

Teaching 400

Species conservation _____

Environmental management _____

Animal husbandry _____

Basic biological research _____

Medical research _____

Veterinary research _____

Testing _____

Production of biological agents _____

Development of alternatives _____

Other _____

5. Re-Use:

Number:

No prior use 400

Previously used _____

6. Grading:

Number:

No impact - A _____

Little impact - B 400

Moderate impact - C _____

High impact - D _____

Very high impact - E _____

7. Alive:

Number:

Retained [by institution] 200

Returned [to owner] _____

Released [to the wild] _____

Disposed [to works or rehomed] _____

Total Alive: ***200**

8. Dead:

Number:

Total Dead ***200**

9. Total manipulated/used: *400

Notes:

* The Animal Welfare Act (1999) describes pre-natal stages as 'any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; the definition includes any marsupial pouch young'. This means that the mothers and young are required to be added as separate groups in Table 3. The young will have the status 'Unborn/prehatched' box, and the mothers whichever status is appropriate with reference from the AWA to the stages which are specifically excluded e.g. larval stages.

IMPORTANT:

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

▼ Manipulations

*

Manipulations

*

400

*

The University of Auckland

Either

▼ 1b - Rats

Species section

1b - Rats

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-

Note: Admin use only! Please ignore the fields above.

*** 1. Please select the Usage Type for this Species:** Manipulation

2. Source of Animals: Number:

Breeding Unit 150

Commercial _____

Farm _____

Born during project _____

Captured _____

Imported into NZ _____

Public sources _____

TOTAL: ***150**

5. Re-Use: Number:

No prior use 150

Previously used _____

6. Grading: Number:

No impact - A _____

Little impact - B 150

Moderate impact - C _____

High impact - D _____

Very high impact - E _____

3. Status of animals: Number

Normal/Conventional 150

SPF/germ free _____

Diseased _____

Transgenic/Chimera _____

Protected Species _____

Unborn/prehatched* _____

Other _____

7. Alive: Number:

Retained [by inst tut on] 100

Returned [to owner] _____

Released [to the wild] _____

Disposed [to works or rehomed] _____

Total Alive: ***100**

4. Purpose: Number:

Teaching 150

Species conservation _____

Environmental management _____

Animal husbandry _____

Basic biological research _____

Medical research _____

Veterinary research _____

Testing _____

Production of biological agents _____

Development of alternatives _____

Other _____

8. Dead: Number:

Total Dead ***50**

9. Total manipulated/used: ***150**

Notes:

* The Animal Welfare Act (1999) describes pre-natal stages as 'any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; the definition includes any marsupial pouch young'. This means that the mothers and young are required to be added as separate groups in Table 3. The young will have the status 'Unborn/prehatched' box, and the mothers whichever status is appropriate with reference from the AWA to the stages which are specifically excluded e.g. larval stages.

IMPORTANT:

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

▼ Manipulations

*	*	*	Either
Manipulations	<u>150</u>	The University of Auckland	

▼ 1c - Guinea pigs

Species section

1c - Guinea pigs

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Note: Admin use only! Please ignore the fields above.

* 1. Please select the Usage Type for this Species: Manipulation

2. Source of Animals:	Number:	5. Re-Use:	Number:
Breeding Unit	45	No prior use	45
Commercial	_____	Previously used	_____
Farm	_____		
Born during project	_____	6. Grading:	Number:
Captured	_____	No impact - A	_____
Imported into NZ	_____	Little impact - B	45
Public sources	_____	Moderate impact - C	_____
TOTAL:	*45	High impact - D	_____
		Very high impact - E	_____
3. Status of animals:	Number	7. Alive:	Number:
Normal/Conventional	45	Retained [by inst tut on]	45
SPF/germ free	_____	Returned [to owner]	_____
Diseased	_____	Released [to the wild]	_____
Transgenic/Chimera	_____	Disposed [to works or rehomed]	_____
Protected Species	_____	Total Alive:	*45
Unborn/prehatched*	_____		
Other	_____		
4. Purpose:	Number:	8. Dead:	Number:
Teaching	45	Total Dead	*0
Species conservation	_____		
Environmental management	_____	9. Total manipulated/used:	*45
Animal husbandry	_____		
Basic biological research	_____		
Medical research	_____		
Veterinary research	_____		
Testing	_____		
Production of biological agents	_____		
Development of alternatives	_____		
Other	_____		

Notes:

* The Animal Welfare Act (1999) describes pre-natal stages as 'any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; the definition includes any marsupial pouch young'. This means that the mothers and young are required to be added as separate groups in Table 3. The young will have the status 'Unborn/prehatched' box, and the mothers whichever status is appropriate with reference from the AWA to the stages which are specifically excluded e.g. larval stages.

IMPORTANT:

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

▼ Manipulations

* Manipulations	* 45	* The University of Auckland	Either
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▼ 1e - Rabbits

Species section

1e - Rabbits

Note: Admin use only! Please ignore the fields above.

* 1. Please select the Usage Type for this Species: Manipulation

2. Source of Animals:	Number:	5. Re-Use:	Number:
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Breeding Unit	_____	No prior use	45
Commercial	45	Previously used	_____
Farm	_____		
Born during project	_____	6. Grading:	Number:
Captured	_____	No impact - A	_____
Imported into NZ	_____	Little impact - B	45
Public sources	_____	Moderate impact - C	_____
TOTAL:	*45	High impact - D	_____
		Very high impact - E	_____

3. Status of animals:	Number	7. Alive:	Number:
Normal/Conventional	45	Retained [by inst tut on]	45
SPF/germ free	_____	Returned [to owner]	_____
Diseased	_____	Released [to the wild]	_____
Transgenic/Chimera	_____	Disposed [to works or rehomed]	_____
Protected Species	_____	Total Alive:	*45
Unborn/prehatched*	_____		
Other	_____		

4. Purpose:	Number:	8. Dead:	Number:
Teaching	45	Total Dead	*0
Species conservation	_____		
Environmental management	_____	9. Total manipulated/used:	*45
Animal husbandry	_____		
Basic biological research	_____		
Medical research	_____		
Veterinary research	_____		
Testing	_____		
Production of biological agents	_____		
Development of alternatives	_____		
Other	_____		

Notes:
 * The Animal Welfare Act (1999) describes pre-natal stages as 'any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; the definition includes any marsupial pouch young'. This means that the mothers and young are required to be added as separate groups in Table 3. The young will have the status 'Unborn/prehatched' box, and the mothers whichever status is appropriate with reference from the AWA to the stages which are specifically excluded e.g. larval stages.

IMPORTANT:
Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

▼ Manipulations

*	*	*	Either
Manipulations	45	The University of Auckland	

▼ 1q - Pigeons

Species section

1q - Pigeons

Note: Admin use only! Please ignore the fields above.

* 1. Please select the Usage Type for this Species: Manipulation

2. Source of Animals:	Number:	5. Re-Use:	Number:
Breeding Unit	_____	No prior use	0
Commercial	45	Previously used	45
Farm	_____		
Born during project	_____	6. Grading:	Number:

Captured _____
 Imported into NZ _____
 Public sources _____
 TOTAL: *45 _____

No impact - A _____
 Little impact - B 45 _____
 Moderate impact - C _____
 High impact - D _____
 Very high impact - E _____

3. Status of animals: Number
 Normal/Conventional 45 _____
 SPF/germ free _____
 Diseased _____
 Transgenic/Chimera _____
 Protected Species _____
 Unborn/prehatched* _____
 Other _____

7. Alive: Number:
 Retained [by inst tut on] 45 _____
 Returned [to owner] _____
 Released [to the wild] _____
 Disposed [to works or rehomed] _____
 Total Alive: *45 _____

4. Purpose: Number:
 Teaching 45 _____
 Species conservation _____
 Environmental management _____
 Animal husbandry _____
 Basic biological research _____
 Medical research _____
 Veterinary research _____
 Testing _____
 Production of biological agents _____
 Development of alternatives _____
 Other _____

8. Dead: Number:
 Total Dead *0 _____

9. Total manipulated/used: *45 _____

Notes:

* The Animal Welfare Act (1999) describes pre-natal stages as 'any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; the definition includes any marsupial pouch young'. This means that the mothers and young are required to be added as separate groups in Table 3. The young will have the status 'Unborn/prehatched' box, and the mothers whichever status is appropriate with reference from the AWA to the stages which are specifically excluded e.g. larval stages.

IMPORTANT:

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

▼ Manipulations

* Manipulations	* 45	* The University of Auckland	Unknown
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▼ 1r - Other birds

Species section

1r - Other birds

-
-
-

Note: Admin use only! Please ignore the fields above.

* 1. Please select the Usage Type for this Species: Manipulation

2. Source of Animals: Number:
 Breeding Unit _____
 Commercial 45 _____
 Farm _____
 Born during project _____
 Captured _____
 Imported into NZ _____
 Public sources _____
 TOTAL: *45 _____

5. Re-Use: Number:
 No prior use 45 _____
 Previously used _____

6. Grading: Number:
 No impact - A _____
 Little impact - B 45 _____
 Moderate impact - C _____
 High impact - D _____

3. Status of animals: Number

Normal/Conventional 45

SPF/germ free _____

Diseased _____

Transgenic/Chimera _____

Protected Species _____

Unborn/prehatched* _____

Other _____

4. Purpose: Number:

Teaching 45

Species conservation _____

Environmental management _____

Animal husbandry _____

Basic biological research _____

Medical research _____

Veterinary research _____

Testing _____

Production of biological agents _____

Development of alternatives _____

Other _____

Very high impact - E _____

7. Alive: Number:

Retained [by inst tut on] 45

Returned [to owner] _____

Released [to the wild] _____

Disposed [to works or rehomed] _____

Total Alive: ***45**

8. Dead: Number:

Total Dead ***0**

9. Total manipulated/used: ***45**

Notes:

* The Animal Welfare Act (1999) describes pre-natal stages as 'any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; the definition includes any marsupial pouch young'. This means that the mothers and young are required to be added as separate groups in Table 3. The young will have the status 'Unborn/prehatched' box, and the mothers whichever status is appropriate with reference from the AWA to the stages which are specifically excluded e.g. larval stages.

IMPORTANT:

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

▼ Manipulations

*	*	*	Either
Manipulations	<u>45</u>	The University of Auckland	

▼ 1f - Sheep

Species section

1f - Sheep

Note: Admin use only! Please ignore the fields above.

*** 1. Please select the Usage Type for this Species:** Manipulation

2. Source of Animals: Number:

Breeding Unit _____

Commercial 20

Farm _____

Born during project _____

Captured _____

Imported into NZ _____

Public sources _____

TOTAL: ***20**

3. Status of animals: Number

Normal/Conventional 20

SPF/germ free _____

5. Re-Use: Number:

No prior use 20

Previously used _____

6. Grading: Number:

No impact - A _____

Little impact - B 20

Moderate impact - C _____

High impact - D _____

Very high impact - E _____

7. Alive: Number:

Retained [by inst tut on] _____

Diseased _____
 Transgenic/Chimera _____
 Protected Species _____
 Unborn/prehatched* _____
 Other _____

Returned [to owner] _____
 Released [to the wild] _____
 Disposed [to works or rehomed] _____
 Total Alive: *0 _____

4. Purpose: Number:
 Teaching 20
 Species conservation _____
 Environmental management _____
 Animal husbandry _____
 Basic biological research _____
 Medical research _____
 Veterinary research _____
 Testing _____
 Production of biological agents _____
 Development of alternatives _____
 Other _____

8. Dead: Number:
 Total Dead *20 _____

9. Total manipulated/used: *20 _____

Notes:

* The Animal Welfare Act (1999) describes pre-natal stages as 'any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; the definition includes any marsupial pouch young'. This means that the mothers and young are required to be added as separate groups in Table 3. The young will have the status 'Unborn/prehatched' box, and the mothers whichever status is appropriate with reference from the AWA to the stages which are specifically excluded e.g. larval stages.

IMPORTANT:

Note: To prevent any loss, please save your work regularly by clicking on the 'save' icon located at the top left corner of this application form!

▼ Manipulations

* Manipulations	* 20	* The University of Auckland	Either
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Section D: Scientific description of the project

*** D.1: The aim of the laboratory:**

The aim of the teaching is to give researchers sufficient skills in methods of restraint, blood sampling, drug administration, aseptic techniques, basic surgical procedures and euthanasia methods, so that they can perform these manipulations with a minimum impact on the welfare of the animals.

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*** D.2: The design of the laboratory:**

N/A

?

*** D.3a: Will the animals be captured in the wild?**

No

*** D.4b: The extent and duration of the manipulation(s):**

Please see attached document "001648 Manipulations".

?

*** D.4c: The extent to which the animals may experience pain or distress during or after any of the manipulations, and which signs may be seen:**

Please see attached document "001648 Manipulations".

?

*** D.4d: Please explain why this extent of pain or distress is unavoidable:**

Please see attached document "001648 Manipulations".

*** D.4e: Describe the pain management plan that has been developed for the alleviation of pain:**

Please see attached document "001648 Manipulations".

?

*** D.4f: Detail the post manipulation care and/or any special housing needs:**

Please see attached document "001648 Manipulations".

*** D.4g: Explain the monitoring procedures and contingencies that will be in place to detect and limit signs of pain or distress:**

Please see attached document "001648 Manipulations".

?

*** D.4h: Describe the humane endpoints that will be applied if applicable i.e. specific clinical signs being shown by an animal that will require its immediate euthanasia.**

Please see attached document "001648 Manipulations".

?

*** D.5a: Will the animals undergo any new manipulations not described in previous applications you have submitted to the Committee?**

Yes

*** D.5b: What are these new manipulations?**

Animals may undergo new procedures. The groups of procedures (e.g. anaesthetic techniques, administration techniques) remain the same as the previous approval (001065), but they are not definitive, as investigators may start new experiments with completely new manipulations that they require training for.

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*** D.5c: How will researchers be trained in these manipulations?**

All of the co-investigators are experienced in all of the manipulations being taught. Researchers will be trained by demonstrations and practice under this approval.

*** D.6a: Will neuromuscular blockade be used?**

No

*** D.7a: Will the animals be killed at any stage during the experiment?**

Yes

D.7b: Please select the technique/s used:

Anaesthetic overdose

Blunt trauma

Captive Bolt

Cervical dislocation

Decapitation

Exsanguination

Injection

Pithing

Poisoning

Sharp trauma

Snap traps

Chilling in ice water

Intracardiac injection of potassium citrate

CO₂

Other

?

Methods of euthanasia should be selected with reference to the [ANZCAART Guidelines](#). A copy of this is also available on the [Animal Ethics](#) web page. If a prescription drug is to be used, please state that "animals will be euthanized as per the IDAO", complete an [IDAO](#) form and attach it to 'Section G: Attachments'.

*** D.8: For the animals that are killed for tissue collection only, have other researchers that may be interested in the other tissues been notified?**

Yes

*** D.9: Describe any other animal welfare or ethical implications of this project:**

There are no other animal welfare or ethical implications.

*** D.10: Describe why the nominated number of animals is needed:**

The number of each species to be used will depend on the demand from researchers for training, so it's difficult to predict. We have requested more than we expect to use to avoid the necessity to apply for an amendment for additional animals. The actual numbers used will be included in the annual AURs and the End of Approval Report.

?

D.11: Detail where the experiments will be conducted:

	Building:	Room Number:
a. before experimentation		
b. during manipulation		
c. after manipulation		
d. disposal		

*** D.12: Estimated period of housing per animal:**

The main animals that survive to be housed are those used in handling and sexing training. They can be reused across training groups and so the exact length of time of the housing cannot be specified.

?

D.13: Describe how this study has taken into account the statutory responsibility to adhere to the principles of Refinement, Reduction and Replacement that govern the use of animals in research, testing and teaching (the 3 R's).

*** a. Refinement:**

The Animal Welfare Act requires all animal users to be suitably qualified in the manipulations they undertake. Training in the use of animals and, in particular, specific manipulations, is the ultimate refinement tool for ensuring that experimental animals are used appropriately. This will lead to less variability in how manipulations are performed and less variability in results.

?

*** b. Reduction:**

Animals used under this approval are usually marked for culling as part of routine colony management. Surgical training on cadavers is undertaken prior to training on live anaesthetised animals, and this reduces the number of animals that experience any impact from the use in training.

?

*** c. Replacement:**

Where possible training will be done on cadavers killed for other reasons prior to progressing to live anaesthetised animals. A range of videos is available on DVD that the AWO uses in training and some of this eliminates the need for animals, for instance video of pain behaviours that occur after abdominal surgery eliminates the need to do recovery abdominal surgery just to show investigators these pain behaviours. While mannequins are available for teaching some procedures, it is considered that training using live animals gives researchers a more realistic learning experience.

?

Section E: Brief Synopsis of current work

Please list all current University of Auckland Animal Ethics Committee approved protocols. Please detail the species and number of animals used/manipulated/observed for each, to date. Then add a one or two sentence summary of scientific progress to date.

AEC Number:001065

Species & No. of animals approved
Mice 400; rats 150; rabbits 45; guinea pigs 45; pigeons 45; other birds 45; sheep 20; ducks 50.

Species & No. of animals used
Mice 286; rats 123; rabbits 8; guinea pigs 41; pigeons 3; other birds 2; sheep 9; ducks 12.

Summary of progress to date

The animal numbers used are well down on those approved. This was not unexpected as the numbers applied for accommodated an estimate of the maximum that may be required for teaching purposes.

AEC Number:

Species & No. of animals approved
Summary of progress to date

Species & No. of animals used

AEC Number:

Species & No. of animals approved
Summary of progress to date

Species & No. of animals used

AEC Number:

Species & No. of animals approved
Summary of progress to date

Species & No. of animals used

AEC Number:

Species & No. of animals used
Summary of progress to date

Species & No. of animals used

Section F: References

List a reasonable number of references (5 - 10), either by the investigators or others that the committee would find helpful in assessing your application:

N/A

Section G: Attachments

Document Name:	Document Version: In reference to Question No.?		
Details of Personnel	v1	A	
001065 Student Questionnaire Summary	v1	B5e	
001065 Student Questionnaires	v1	B5e	
001648 Manipulations (tracked changes)	v2	D4a to D4h	
Memo to the AEC - 001648	v1	D4a to D4h	

[Feedback](#)

Please help us to improve this system by providing feedback on your experience with creating this eForm application: include all your positive and negative experiences as well as what improvements you would like to see in using this application.

* Is this Application now complete and ready for submission?
Yes

Appendix 1

EForm Name: AE and Bio-Safety Form v3.01

Page:

Section: [Section G: Attachments](#)

Please list all attachments appended in support of this application:

Question:

File Name: 001648 Details of Personnel.pdf

Animal Ethics Application - Details of Personnel

Ref No: 001648

Every person named in the Personnel section of this application (other than the RI and HoD) shall complete and sign the following declaration:

1. I have read the University of Auckland Code of Ethical Conduct available at www.auckland.ac.nz/ae.
2. I have read this application and approve the approach to the study, with particular reference to the ethics of experimentation and the welfare of the animals being used.
3. I agree that I will not deviate from the conditions in the approved application.
4. I have read and agree to abide by the University of Auckland Institutional Operating Plan for the Direct Management of Animals.
5. I have read and I agree to abide by any Institutional Drug Administration Orders (IDAOs) linked to this ethics approval.
6. In accordance with Part 6, Section 80, Paragraph 2 of the Animal Welfare Act 1999, I will ensure that:
 - (i) in relation to animals used in research, testing, and teaching, all reasonable steps are taken to ensure that the physical, health, and behavioural needs of those animals are met in accordance with both good practice and scientific knowledge;
 - (ii) where animals used in research, testing, and teaching are ill or injured, they receive, where practicable, treatment that alleviates any unreasonable or unnecessary pain or distress;
 - (iii) where, because of the nature of the research, testing or teaching, the needs referred to in subparagraph (i) cannot be fully met or the treatment referred to in subparagraph (ii) cannot be provided, any degree of pain or distress is reduced to the minimum possible in the circumstances.

	Personnel	Signature	Date	Contact No.
1.	[Redacted]	[Redacted]	25/8/2015	[Redacted]
2.	[Redacted]	[Redacted]	20/8/15	[Redacted]
3.	[Redacted]	[Redacted]	26/8/15	[Redacted]
4.	[Redacted]	[Redacted]	28/8/15	[Redacted]
5.	[Redacted]	[Redacted]	25/8/2015	[Redacted]

Please nominate two of these named individuals who may be contacted 24 hours 7 days if any animal health or welfare issues arise outside the normal working hours of the facility in which you will carry out the manipulations in this protocol.

If the work proposed in this application will take place in the VJU - FM&HS, only these two investigators (*please provide Access card numbers) will be granted 24/7 access to the VJU facility. The others will receive access from 0800 until 1800, 7 days a week.

Name:	Mobile No:	Work No:	Home No:	*Access Card No:
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]

Appendix 2

EForm Name: AE and Bio-Safety Form v3.01

Page:

Section: [Section G: Attachments](#)

Please list all attachments appended in support of this application:

Question:

File Name: 001065 Student Questionnaire summary.pdf

Summary of results from Student Questionnaires - 001065

Project title: Training in Experimental Manipulations

Total number of students completing training = 117

Number of responses = 12

	Question	Scoring options		Average score [*]
2a	The use of animals is important to this course.	1 = Strongly agree	5 = Strongly disagree	4.3 [1.7]
2b	I learnt a lot from this course.	1 = Strongly agree	5 = Strongly disagree	4 [1.8]
2c	I think the use of animals is ethical in this course.	1 = Strongly agree	5 = Strongly disagree	4 [1.8]
3a	I would learn more without the use of animals but an extra lecture.	1 = Strongly agree	5 = Strongly disagree	1.6 [4.3]
3b	I would learn more if humans were used instead of animals.	1 = Strongly agree	5 = Strongly disagree	1.6 [4.4]
3c	I would learn more from videos of the manipulations.	1 = Strongly agree	5 = Strongly disagree	2.2 [3.8]
3d	I would learn more from computer simulations.	1 = Strongly agree	5 = Strongly disagree	2.5 [3.5]
3e	I would learn more from a lecture and course work (eg essays).	1 = Strongly agree	5 = Strongly disagree	2 [3.9]
4	Overall I was very comfortable with the use of animals during course	1 = Strongly agree	5 = Strongly disagree	4.2 [1.8]

[*Note that the summary data in the Average Score column is incorrect; the correct average scores have been inserted above]

Appendix 3

EForm Name: AE and Bio-Safety Form v3.01

Page:

Section: [Section G: Attachments](#)

Please list all attachments appended in support of this application:

Question:

File Name: 001065 Student questionnaires.pdf

Student Questionnaire on the Use of Animals in Teaching

AEC Approval No: 1065

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated ... Animal Handling (2a) Date 2-3-15

2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

2a The use of animal subjects is important to this course.

Strongly agree 1 2 (3) 4 5 **Strongly disagree**

2b I learnt a lot from this course.

Strongly agree 1 2 (3) 4 5 **Strongly disagree**

2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.

Strongly agree 1 (2) 3 4 5 **Strongly disagree**

3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.

Strongly agree 1 2 3 4 (5) **Strongly disagree**

3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.

Strongly agree 1 2 3 4 (5) **Strongly disagree**

3c I would learn more if there were only video demonstrations of animals in the same experiments.

Strongly agree 1 (2) 3 4 5 **Strongly disagree**

3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.

Strongly agree (1) 2 3 4 5 **Strongly disagree**

3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.

Strongly agree 1 2 3 4 (5) **Strongly disagree**

4. Overall, I was very comfortable with the use of animals in this course.

Strongly agree 1 2 (3) 4 5 **Strongly disagree**

5. Please write here any further comments that you have on the use of animals in this laboratory course:

N/A

Student Questionnaire on the Use of Animals in Teaching

AEC Approval No: 1065

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated 2a Date 7.6.15

2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

2a The use of animal subjects is important to this course.

Strongly agree 1 2 3 4 5 **Strongly disagree**

2b I learnt a lot from this course.

Strongly agree 1 2 3 4 5 **Strongly disagree**

2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.

Strongly agree 1 2 3 4 5 **Strongly disagree**

3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.

Strongly agree 1 2 3 4 5 **Strongly disagree**

3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.

Strongly agree 1 2 3 4 5 **Strongly disagree**

3c I would learn more if there were only video demonstrations of animals in the same experiments.

Strongly agree 1 2 3 4 5 **Strongly disagree**

3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.

Strongly agree 1 2 3 4 5 **Strongly disagree**

3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.

Strongly agree 1 2 3 4 5 **Strongly disagree**

4. Overall, I was very comfortable with the use of animals in this course.

Strongly agree 1 2 3 4 5 **Strongly disagree**

5. Please write here any further comments that you have on the use of animals in this laboratory course:

Student Questionnaire on the Use of Animals in Teaching

AEC Approval No: 1065

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated ... 2a Date... 19.4.15

2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

2a The use of animal subjects is important to this course.

Strongly agree 1 **(2)** 3 4 5 **Strongly disagree**

2b I learnt a lot from this course.

Strongly agree 1 **(2)** 3 4 5 **Strongly disagree**

2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.

Strongly agree 1 **(2)** 3 4 5 **Strongly disagree**

3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.

Strongly agree **(1)** 2 3 4 5 **Strongly disagree**

3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.

Strongly agree 1 2 3 4 **(5)** **Strongly disagree**

3c I would learn more if there were only video demonstrations of animals in the same experiments.

Strongly agree **(1)** 2 3 4 5 **Strongly disagree**

3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.

Strongly agree **(1)** 2 3 4 5 **Strongly disagree**

3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.

Strongly agree **(1)** 2 3 4 5 **Strongly disagree**

4. Overall, I was very comfortable with the use of animals in this course.

Strongly agree 1 2 **(3)** 4 5 **Strongly disagree**

5. Please write here any further comments that you have on the use of animals in this laboratory course:

Student Questionnaire on the Use of Animals in Teaching

AEC Approval No: 1065

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number, not the writing, that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated La Date 19/12/2013

2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

2a The use of animal subjects is important to this course.

Strongly agree 1 2 3 4 5 Strongly disagree

2b I learnt a lot from this course.

Strongly agree 1 2 3 4 5 Strongly disagree

2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.

Strongly agree 1 2 3 4 5 Strongly disagree

3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.

Strongly agree 1 2 3 4 5 Strongly disagree

3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.

Strongly agree 1 2 3 4 5 Strongly disagree

3c I would learn more if there were only video demonstrations of animals in the same experiments.

Strongly agree 1 2 3 4 5 Strongly disagree

3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.

Strongly agree 1 2 3 4 5 Strongly disagree

3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.

Strongly agree 1 2 3 4 5 Strongly disagree

4. Overall, I was very comfortable with the use of animals in this course.

Strongly agree 1 2 3 4 5 Strongly disagree

5. Please write here any further comments that you have on the use of animals in this course.

Student Questionnaire on the Use of Animals In Teaching

AEC Approval No: 1065

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number, not the writing, that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated 20A Date 19/12/2013
2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:
- 2a The use of animal subjects is important to this course.
Strongly agree 1 2 3 4 5 Strongly disagree
- 2b I learnt a lot from this course.
Strongly agree 1 2 3 4 5 Strongly disagree
- 2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.
Strongly agree 1 2 3 4 5 Strongly disagree
3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:
- 3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.
Strongly agree 1 2 3 4 5 Strongly disagree
- 3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.
Strongly agree 1 2 3 4 5 Strongly disagree
- 3c I would learn more if there were only video demonstrations of animals in the same experiments.
Strongly agree 1 2 3 4 5 Strongly disagree
- 3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.
Strongly agree 1 2 3 4 5 Strongly disagree
- 3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.
Strongly agree 1 2 3 4 5 Strongly disagree
4. Overall, I was very comfortable with the use of animals in this course.
Strongly agree 1 2 3 4 5 Strongly disagree
5. Please write here any further comments that you have on the use of animals in this course.

Student Questionnaire on the Use of Animals in Teaching

AEC Approval No: 1065

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number, not the writing, that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated

Date 19/12/13

2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

2a The use of animal subjects is important to this course.

Strongly agree 1 2 3 4 5 Strongly disagree

2b I learnt a lot from this course.

Strongly agree 1 2 3 4 5 Strongly disagree

2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.

Strongly agree 1 2 3 4 5 Strongly disagree

3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

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Strongly agree 1 2 3 4 5 Strongly disagree

3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.

Strongly agree 1 2 3 4 5 Strongly disagree

3c I would learn more if there were only video demonstrations of animals in the same experiments.

Strongly agree 1 2 3 4 5 Strongly disagree

3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.

Strongly agree 1 2 3 4 5 Strongly disagree

3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.

Strongly agree 1 2 3 4 5 Strongly disagree

4. Overall, I was very comfortable with the use of animals in this course.

Strongly agree 1 2 3 4 5 Strongly disagree

5. Please write here any further comments that you have on the use of animals in this course.

Student Questionnaire on the Use of Animals In Teaching

AEC Approval No: 1065

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number, not the writing, that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated La Date _____
2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

2a The use of animal subjects is important to this course.
Strongly agree 1 2 3 4 5 Strongly disagree

2b I learnt a lot from this course.
Strongly agree 1 2 3 4 5 Strongly disagree

2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.
Strongly agree 1 2 3 4 5 Strongly disagree

3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.
Strongly agree 1 2 3 4 5 Strongly disagree

3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.
Strongly agree 1 2 3 4 5 Strongly disagree

3c I would learn more if there were only video demonstrations of animals in the same experiments.
Strongly agree 1 2 3 4 5 Strongly disagree

3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.
Strongly agree 1 2 3 4 5 Strongly disagree

3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.
Strongly agree 1 2 3 4 5 Strongly disagree

4. Overall, I was very comfortable with the use of animals in this course.

Strongly agree 1 2 3 4 5 Strongly disagree

5. Please write here any further comments that you have on the use of animals in this course.

Student Questionnaire on the Use of Animals in Teaching

AEC Approval No: 1065

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number, not the writing, that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated 2a Date

2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

2a The use of animal subjects is important to this course.

Strongly agree (1) 2 3 4 ~~5~~ Strongly disagree

2b I learnt a lot from this course.

Strongly agree (1) 2 3 4 ~~5~~ Strongly disagree

2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.

Strongly agree (1) 2 3 4 ~~5~~ Strongly disagree

3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.

Strongly agree ~~1~~ 2 3 4 (5) Strongly disagree

3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.

Strongly agree 1 (2) 3 4 5 Strongly disagree

3c I would learn more if there were only video demonstrations of animals in the same experiments.

Strongly agree 1 (2) 3 4 5 Strongly disagree

3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.

Strongly agree 1 (2) 3 4 5 Strongly disagree

3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.

Strongly agree 1 2 3 4 (5) Strongly disagree

4. Overall, I was very comfortable with the use of animals in this course.

Strongly agree (1) 2 3 4 5 Strongly disagree

5. Please write here any further comments that you have on the use of animals in this course.

Questionnaire on the Use of Animals in Teaching

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated2a..... Date.....22.5.2014.....
2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:
- 2a The use of animal subjects is important to this course.
Strongly agree 1 2 3 4 5 Strongly disagree
 1
- 2b I learnt a lot from this course.
Strongly agree 1 2 3 4 5 Strongly disagree
 1
- 2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.
Strongly agree 1 2 3 4 5 Strongly disagree
 1
3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:
- 3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.
Strongly agree 1 2 3 4 5 Strongly disagree
 5
- 3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.
Strongly agree 1 2 3 4 5 Strongly disagree
 5
- 3c I would learn more if there were only video demonstrations of animals in the same experiments.
Strongly agree 1 2 3 4 5 Strongly disagree
 5
- 3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.
Strongly agree 1 2 3 4 5 Strongly disagree
 5
- 3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.
Strongly agree 1 2 3 4 5 Strongly disagree
 5
4. Overall, I was very comfortable with the use of animals in this course.
Strongly agree 1 2 3 4 5 Strongly disagree
 1

5. Please write here any further comments that you have on the use of animals in this laboratory course:

Questionnaire on the Use of Animals in Teaching

There is considerable debate as to the extent that animals should be used in research and teaching. The use of animals in this laboratory course has been approved by the University of Auckland Animal Ethics Committee. However, the teachers on this course and the Animal Ethics Committee are interested in your views on the use of animals.

Under each statement below, the numbers 1 to 5 represent gradations between "Strongly agree" with the statement and "Strongly disagree" with it. Please circle the number that most closely reflects your opinion.

Please remember that this questionnaire is concerned with this course only. It is not concerned with the use of animals in other courses at the University, or with using animals for experimental or teaching purposes in general.

1. Course being evaluated: Module 2a- animal handling, sexing and euthanasia

Date: 26/5/2015

2. Animals are currently used in the laboratory component of this course, but there are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

2a The use of animal subjects is important to this course.

Strongly agree ① 2 3 4 5 Strongly disagree

2b I learnt a lot from this course.

Strongly agree ① 2 3 4 5 Strongly disagree

2c Bearing in mind the sort of demonstrations attempted in this course, I think the use of animals is ethical.

Strongly agree ① 2 3 4 5 Strongly disagree

3. There are alternatives to the use of animals. Please indicate how strongly you agree or disagree with the following statements:

3a I would learn more if there was no laboratory animal component but there was an extra lecture each week.

Strongly agree 1 2 3 4 ⑤ Strongly disagree

3b I would learn more if there was a laboratory component that uses human participants to demonstrate the same effects.

Strongly agree 1 2 3 4 ⑤ Strongly disagree

3c I would learn more if there were only video demonstrations of animals in the same experiments.

Strongly agree 1 2 3 4 ⑤ Strongly disagree

3d I would learn more if there was a laboratory component in which computer simulations of animals doing the same experiments was presented.

Strongly agree 1 2 3 4 ⑤ Strongly disagree

3e I would learn more if there was no laboratory component but there was one lecture per week and extra in-course work (essays, tests) to make up the credits for this component.

Strongly agree 1 2 3 4 ⑤ Strongly disagree

4. Overall, I was very comfortable with the use of animals in this course.

Strongly agree ① 2 3 4 5 Strongly disagree

5. Please write here any further comments that you have on the use of animals in this laboratory course:

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1. Course being evaluatedModule 2a (Handling and sexing of rodents)..... Date...25/05/2015.....

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Strongly agree 1 2 3 4 5 Strongly disagree

2b I learnt a lot from this course.

Strongly agree 1 2 3 4 5 Strongly disagree

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Strongly agree 1 2 3 4 5 Strongly disagree

5. Please write here any further comments that you have on the use of animals in this laboratory course:

I think use of animals in this laboratory course is indispensable.

Questionnaire on the Use of Animals in Teaching

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1. Course being evaluated Module 2a Date 25/5/15

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2a The use of animal subjects is important to this course.
Strongly agree 1 2 3 4 5 Strongly disagree

2b I learnt a lot from this course.
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Strongly agree 1 2 3 4 5 Strongly disagree

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Strongly agree 1 2 3 4 5 Strongly disagree

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Appendix 4

EForm Name: AE and Bio-Safety Form v3.01

Page:

Section: [Section G: Attachments](#)

Please list all attachments appended in support of this application:

Question:

File Name: 001648 Manipulations (tracked changes).docx

001648 – Manipulations.

(Manipulation 1)

Euthanasia techniques which may include:

- a. Cervical dislocation (mice, rats, birds)
- b. Carbon dioxide asphyxiation (mice, rats)
- c. Intraperitoneal administration of anaesthetic overdose (mice, rats)
- d. Cardiac puncture while terminally unconscious (mice, rats, rabbits)
- e. Intravenous administration of anaesthetic overdose (all species)
- f. Normal dose of anaesthetic followed by physical method of euthanasia (such as exsanguination or cervical dislocation) (all species)

a. Its extent and duration. Include time course, dosage etc.	Carbon dioxide and anaesthetics take a variable time to achieve unconsciousness, up to half a minute. Anaesthetics will be used as per IDAO if not administered by a registered veterinarian. For CO ₂ – animals will be put into an empty (of CO ₂) chamber and it will be filled at an uncontrolled rate until the animals are dead.
b. The extent to which the animals may experience pain or distress during or after any of the manipulations, signs that may be seen and why this is unavoidable	During the induction phase (with CO ₂ or anaesthetics) animals usually experience some form of distress and show escape behaviours. There is also likely to be a stage of anaesthesia where there is frenzied activity even though the animal is already unconscious. All training related to euthanasia will end with death.
c. Detail post manipulation care and/or any special housing needs	n/a
d. Explain monitoring procedures, humane endpoints and contingencies that will be in place to detect and limit signs of pain or distress.	Death will be confirmed by observation of physical parameters such as heart rate (none), breathing (stopped), dilated and unreactive pupil (in the appropriate species).

(Manipulation 2)

Administration of substances, including oral gavage, intraperitoneal, intramuscular, intravenous, inhalation and subcutaneous routes. These are only performed in some species as per Table 1

a. Its extent and duration. Include time course, dosage etc.	Administration procedures are usually of less than one minute duration. Dosage amounts will adhere to the maximum administration volumes from Table 1. Sterile saline will be the only fluid administered.
b. The extent to which the animals may experience pain or distress during or after any	Animals may experience transient distress (e.g. oral gavage) or temporary pain (e.g. at the site

of the manipulations, signs that may be seen and why this is unavoidable	of intravenous or intramuscular injection). Subcutaneous injections are administered at sites with loose skin and don't seem to cause more than the most transient (seconds in duration) pain or distress. Distress may be seen as wriggling and attempts to escape restraint, squeaking may be heard from rats and mice, squealing from guinea pigs. Pain may be demonstrated by favouring a limb or imping (where injected in a limb) or paying increased attention (licking, grooming) to the site of injection.
c. Detail post manipulation care and/or any special housing needs	Normal care and housing
d. Explain monitoring procedures, humane endpoints and contingencies that will be in place to detect and limit signs of pain or distress.	Animals will be monitored for the duration of the procedure and a few minutes afterwards as part of the training session. Once animals have been returned to cages, they will be subject to twice daily monitoring by staff as per normal monitoring procedures. Any animal that is considered to be still showing signs of pain or distress (as specified in Table 2) at the first routine monitoring post procedure will be given analgesic treatment and monitored further in consultation with the Animal Welfare Officer. If the animal fails to respond to treatment within four hours, it will be euthanised by CO ₂ or overdose of anaesthetic.

Table 1. Administration volumes considered good practice (and possible maximal dose volumes)^a Only the species included in this table will be used to teach administration of substances.						
Species	Route and volumes (ml kg⁻¹)					
	Oral	s.c.	i.p.	i.m.	i.v. (bolus)	i.v. (slow inj.)
Mouse	10 (50)	10 (40)	20 (80)	0.05b (0.1) ^b	5	-25
Rat	10 (40)	5 (10)	10 (20)	0.1b (0.2) ^b	5	-20
Rabbit	10 (15)	1 (2)	5 (20)	0.25 (0.5)	2	-10
Sheep	450 (1000)	450 (1000)	N/A	5 (10)	N/A	450 (1000)
Pigeons	5 (20)	2 (4)	N/A	1 (2)	N/A	N/A

^aFor non-aqueous injectates, consideration must be given to time of absorption before re-dosing. No more than two intramuscular sites should be used per day.

Subcutaneous sites should be limited to two or three sites per day. The subcutaneous site does *not* include Freund's adjuvant administration.

^bValues in millilitres per site.

(Diehl et al, "A Good Practice Guide to the Administration of Substances and Removal of Blood, Including Routes and Volumes").

Table 2. Monitoring criteria for animals following administration of substances

Species	Criteria					
Mouse	Activity	Posture	Coat	Respiration	Dehydration	CNS signs
Rat	Activity	Posture	Coat	Respiration	Dehydration	CNS signs
Rabbit	Activity	Respiration	Dehydration	CNS signs	Ear position	
Sheep	Activity	Respiration	Posture	Appetite	Bruxism	
Pigeon	Behaviour	Grooming	Aggression			

(Manipulation 3)

Anaesthesia techniques, including induction by inhalation (mice and rats) or by injection (all species), maintenance of gaseous anaesthesia (mice, rats, sheep), monitoring of reflexes and inhalation and injectable delivery of drugs, reflex monitoring, adjustment of anaesthetic depth.

a. Its extent and duration. Include time course, dosage etc.

Extent and duration of anaesthesia will be dependent on the type of anaesthetic being used. This can vary widely from several minutes through to several hours. Routine teaching will most regularly use an inhalation anaesthetic (isoflurane) of short duration (e.g. 10-20 minutes to show induction, establishment on face mask and then adjustment of anaesthetic levels with demonstration of reflexes after changes) or injectable anaesthetic such as ketamine/domitor which has a much longer duration (up to 1 hour sleep time) and possibly use of a reversal agent.

b. The extent to which the animals may experience pain or distress during or after any of the manipulations, signs that may be seen and why this is unavoidable

Pain is unlikely and is not a large feature of anaesthetics, although minor needle stick pain may be involved at the site of administration of injectable anaesthetics. Brief distress (less than a minute) and confusion is likely on induction of any anaesthesia. Recovery from

	anaesthesia is also likely to produce some confusion, possibly distress, for the duration of 'hang over' (metabolism) from the drugs that were used. For inhalation anaesthetics that are largely breathed out rather than metabolised then recovery to a normal state is much quicker than recovery from injectables which do need to be metabolised through the liver. Animals recovering from injectables may be affected for hours after regaining consciousness and may be quiet, huddle, eat and drink less than normal and be slow to move if a handler puts their hand in the cage.
c. Detail post manipulation care and/or any special housing needs	The previous application had all anaesthetic procedures as terminal, but I believe that recovery from solely an anaesthetic is justified to teach the signs of post-anaesthetic behaviour and care. Any animals which have had surgery under anaesthesia will be terminal at the end of the procedure without regaining consciousness.
d. Explain monitoring procedures, humane endpoints and contingencies that will be in place to detect and limit signs of pain or distress.	Animals will be monitored continuously during the period of pre-anaesthetic assessment, induction and maintenance of anaesthesia and recovery of consciousness. Once animals have recovered consciousness and are able to stand, they will either be monitored intermittently hourly for the remainder of the working day (as per Table 2) or euthanised (depending on the aim of the teaching session). Animals will be euthanised by the end of the working day on which they are anaesthetised.

(Manipulation 4)

Blood collection techniques, which may include tail tip, tail vein, saphenous vein, mandibular vein, jugular vein, cardiac puncture and ear vein as appropriate to the species.

a. Its extent and duration. Include time course, dosage etc.	<p>Rats, mice, guinea pig and rabbit only</p> <p>Blood collection techniques take a variable but short period of time (minutes). All procedures will be taught as per current good practice including only teaching appropriate techniques for each species and taking no more than the safe single bleeding volume if the animal is to remain alive at the end of the procedure.</p> <p>This equates to no more than Mouse, rabbit and guinea pig 7.7 mL/Kg</p>
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	Rat 5.5 mL/Kg Sheep 10 mL
b. The extent to which the animals may experience pain or distress during or after any of the manipulations, signs that may be seen and why this is unavoidable	No animal will be subjected to more than one blood collection procedure, to minimise blood loss and distress. All animals will be restrained during procedures so the main signs seen will be attempts to escape (which is normal for any blood collection procedure) and vocalisation in some species (squeaks, squeals). Cardiac puncture will only be taught as a terminal procedure under anaesthetic or immediately after death due to another means such as CO ₂ asphyxiation.
c. Detail post manipulation care and/or any special housing needs	Post manipulation care will include pressure at the site of blood collection where appropriate and frequent monitoring until sure that there is no further bleeding at the site of collection. Blood clotting at the site of collection usually takes less than 2 minutes but observation will continue uninterrupted until bleeding has stopped.
d. Explain monitoring procedures, humane endpoints and contingencies that will be in place to detect and limit signs of pain or distress.	Periodic checks will occur throughout the rest of the working day for those animals that are to survive. The usual daily monitoring will recommence on the day after the procedure. Animals will not be bled again for at least two weeks.
(Manipulation 5) Handling and sexing of animals.	
a. Its extent and duration. Include time course, dosage etc.	An established training modules exists for teaching handling, sexing and euthanasia of rats, mice, guinea pigs, rabbits, birds and sheep.
b. The extent to which the animals may experience pain or distress during or after any of the manipulations, signs that may be seen and why this is unavoidable	No pain results from these procedures, though the animals may exhibit signs of stress. This is unavoidable during the teaching until the students are competent and confident.
c. Detail post manipulation care and/or any special housing needs	None required.
d. Explain monitoring procedures, humane endpoints and contingencies that will be in place to detect and limit signs of pain or distress.	N/A

(Manipulation 6)

Surgical techniques which may include suture placement, laparotomy (opening the abdomen), subcutaneous implantation, vascular access port placement, implantation of indwelling catheters.

These procedures will be taught on terminally anaesthetised patientsrats, mice and sheep. Students must be proficient in the anaesthetic techniques prior to commencing surgical training on live anaesthetised animals. They must also have practiced on cadavers prior to training on anaesthetised patientsanimals.

a. Its extent and duration. Include time course, dosage etc.	These procedures will take a variable amount of time, but will only occur on terminally anaesthetised animals.
b. The extent to which the animals may experience pain or distress during or after any of the manipulations, signs that may be seen and why this is unavoidable	Pain or distress may be experienced on induction of anaesthesia as per 2.4.3
c. Detail post manipulation care and/or any special housing needs	All animals will be killed at the end of teaching without recovery from a surgical depth of anaesthesia
d. Explain monitoring procedures, humane endpoints and contingencies that will be in place to detect and limit signs of pain or distress.	Routine anaesthetic monitoring such as breathing, heart rate and reflexes will occurbe carried out as appropriate to the species.

Appendix 5

EForm Name: AE and Bio-Safety Form v3.01

Page:

Section: [Section G: Attachments](#)

Please list all attachments appended in support of this application:

Question:

File Name: Memo to the AEC 001648.docx

Memo to the Animal Ethics Committee

Subject: Letter of conditional approval of 001648

From: [REDACTED] Responsible Investigator

I. Given that some of the animals will be handled, injected, sampled from and then returned to their cages, details should be given for some of the answers which are currently N/A, such as D4c-h. Information given in the supplemental document don't include monitoring criteria for animals recovering from anaesthesia, sampling etc, and clear humane endpoints. Reference is made to standard monitoring and intermittent monitoring, but this is insufficient.

I have amended the document "001648 – Manipulations" to include more details of monitoring procedures and end points where appropriate. I've also added a second table – "Table 2. Monitoring criteria for animals following administration of substances".

II. Some manipulation endpoints state that if any pain or distress is observed, the animals will be killed.

Are there no other options to improve outcomes other than death?

I've included the statement "Any animal that is considered to be showing signs of pain or distress (as specified in Table 2) will be given analgesic treatment and monitored further in consultation with the Animal Welfare Officer. If the animal fails to respond to treatment within four hours, it will be euthanised by CO2 or overdose of anaesthetic".

III. In the supplemental information, animals are referred to as patients, e.g. manipulation 6. This word should be replaced with animal.

Sorted.

IV. Is there value in expanding table one to include all the animals being manipulated?

I've extended Table 1 to include sheep and pigeons.

V. It is not clear from the descriptions which manipulations relate to sheep and why some of the manipulations are limited to only some species.

I've indicated, under each manipulation, which items are applicable to which species.

VI. How are researchers notified of available tissues or blood etc?

The facility managers in the [REDACTED] are the personnel doing the training. They are generally well aware of any other researchers that are looking for tissues, and so inform them when they become available. There is nowhere in the application form to add this information.

VII. There are no clear guidelines for monitoring the animals that return to their cages- as we would expect from research staff, and no clear humane endpoints.

I've addressed this in the amended application.