ANNUAL REPORTING REQUIREMENTS

In accordance with the *Australian code for the care and use of animals for scientific purposes 8th ed. (2013)*, investigators must provide the AEC with the following:

* an annual report for each project having active approval, regardless of the duration of AEC approval for the project (Clause 2.4.34 [i])
* a final report on outcomes as soon as practicable after completion or discontinuation of a project (Clause 2.4.34 [iii]).

The continuation of all approved animal ethics projects is contingent upon the submission of annual reports to the AEC. The report will advise the AEC on:

* what progress has been achieved, and whether the project is meeting its aims
* any problems that may have interfered with progress of the project
* how many animals have been used
* whether the well-being of the animals is consistent with that anticipated in the proposal.

The AEC may decide that following review of the annual report for an approved project, the approval for the project is continued, suspended, modified or discontinued (Clause 2.3.9 [ii]). The AEC must allow the continuation of approval for only those projects and activities that are ethically acceptable and conform to the requirements of the Code (Clause 2.3.2 [iii]).

Final reporting on completed or discontinued projects is also accomplished using the annual report, and is an opportunity to detail any scientific achievements associated with the project, as well as any variation from anticipated animal numbers. Researchers must also explain any animal welfare concerns encountered during the project and what lessons may have been learnt.

In accordance with the *Prevention of cruelty to animals Act (1986)*, all animals used in an approved project under a Scientific Procedures Premises Licence must be reported annually to Animal Welfare Victoria. Animal use numbers are reported per calendar year (i.e. 1st January to 31st December).

INVESTIGATOR RESPONSIBILITIES

Investigators must record the number of animals used and provide details about the progress of the work for the project. The number of animals used during the reporting period must be recorded as well as the total cumulative number of animals used since the project commenced. A report is required for all projects with active approval during the reporting period, even if no animals were used during the reporting period.

NOTES FOR COMPLETING THIS FORM

* Animal use is reported in groups by species, source, procedure and impact. If more than one species, source, procedure or impact is involved, you will need to enter each group into a separate row at section 2.2.
* Source: for each group select the applicable option from the drop-down menu.
* Procedure: for each group select the applicable option from the drop-down menu. If none of these procedures have been used, select the ‘other procedure’ option.
* Impact: for each group, select the option that describes the highest impact on the group. For animals that die or are euthanised prior to reaching the experimental endpoint, select the option that represents the highest impact activity that the animal actually experienced. Refer to Appendix A.2 for explanation of each option.
* Number of animals in group: the number of animals issued or used in a group during the reporting period must be recorded. Do not include total number of animals approved in the application, only report numbers actually used.
* Number of deaths in group: record the number of animals that died within each group during the reporting period. This includes animals that were humanely killed or death by other causes.
* An animal must be reported each year in which it is used within a group/project, regardless of any reporting in previous years. Animal allocated to a group that are alive at the end or the reporting period must also be reported in the following year.
* Only animals alive at the time of issue to a project are to be reported. Use of carcasses or tissue from animals acquired after death (for example humanely killed under another approved project) does not require reporting.
* Cumulative total number of animals used in project: sum of all animal numbers that have been issued or used in this and previous reporting periods for the project (i.e. don’t break down into groups).
* Refer to examples in the Appendix for guidance in completing this form.

Annual project reports must be submitted by the 31st January of the following year. Contact the AS-AEC Executive Officer for advice in completing this form. Once complete submit report to aec@synchrotron.org.au.

**Australian Synchrotron AEC Annual Project Report**

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| 1. PROJECT DETAILS |
| **AS-AEC approval #** |  |
| **Project title** |  |
| **Chief Investigator** |  |
| **Project purpose****(Refer to Appendix A.1)** | Maintenance and improvement of human or animal health and welfare |
| **Project benefit** | Diseases-human |
| **Project approval period** | **Start date** |  | **End date** | Select date |
| **Reporting year** |  |
| **Type of report** | [ ]  Progress report [ ]  Completion report |

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| 2. ANIMAL USAGE DETAILS |
| **2.1** Total number of animals approved for use (numbers originally approved plus additional numbers approved through amendments). | Click here to enter text. |
| **2.2** Provide details of animal use during the reporting year. *Animals used in scientific procedures are to be reported to the regulator in groups. A separate row is to be used to describe each group within an approved project. Animal use is separated into groups by species, animal source, procedure applied and impact of the procedure. If more than one species, source, procedure or impact is applicable, you must use a separate line for each.* |
| **Species and strain/breed** | **Source** | **Procedure applied to group** | **Impact of procedure on animals in the group (Refer to Appendix A.2)** | **Number of animals in the group during the reporting year** | **Number of deaths in the group during the reporting year** | **Cumulative total number of animals used in the project to date** |
| Click here to enter text. | Victoria - under a Specified Animals Breeding Licence | Ionising radiation exposure | Minor physiological challenge | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Choose an item. | Choose an item. | Choose an item. | Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Choose an item. | Choose an item. | Choose an item. | Click here to enter text. | Click here to enter text. |
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*Add more rows if required*

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| **2.3** Did the number of animals used vary from the number approved?  | Yes [ ]  No [ ]  |
| **2.4** If the answer to 2.3 is YES, provide details |
| Click here to enter text. |

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| 3. UNEXPECTED ANIMAL INCIDENTS OR ADVERSE INCIDENTS |
| **3.1** Were there any unexpected animal incidents or adverse incidents during the reporting period?  | Yes [ ]  No [ ]  |
| **3.2** If the answer to 3.1 is YES, provide details |
| **Date of incident** | **Was the incident reported to the AEC?** | **Summarise the incident and outline what modifications were implemented to avoid reoccurrence** |
|       | Yes [ ]  Date:       No [ ]   |       |
|       | Yes [ ]  Date:       No [ ]   |       |
|       | Yes [ ]  Date:       No [ ]   |       |

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| 4. PROGRESS AND OUTCOMES |
| **4.1** List the aims of the project (in lay terms) |
| In a clinically-relevant mouse model, we aim to identify a robust fractionated MRT irradiation schedule for breast cancer, that would not only treat the primary tumour, but also generate an anti-tumour abscopal effect to eliminate or diminish metastatic lesions in the lung, or prevent metastasis development |
| **4.2** Provide a summary of what progress has been made to date relative to the aims? If the aims have not been achieved, explain why not. |
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| **4.3** Describe any problems that may have interfered with the progress of the project. |
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| **4.4** Was the wellbeing of the animals consistent with that anticipated in the project application? If NO, provide details. |
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| **4.5** Outline any opportunities you have identified that incorporate the 3Rs (Refine, Reduce and Replace) under this project or future projects. |
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| **4.6** Are there any changes to the approved project likely to be needed? Or for completion reports; could procedures in future projects be modified to reduce any impact on animal welfare? |
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| **4.7** Are there any other outcomes to date (e.g. publications, presentations, conference abstracts, theses) that have arisen from work conducted in this project? |
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| **4.8** For completion reports only: Summarise in lay terms, the overall impact this project has had within the field of research in which it was conducted. Include progress towards achieving the original aims, basis for further research, any negative findings. |
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| 5. DECLARATION BY THE CHIEF INVESTIGATOR |
| I hereby declare that:The research conducted under this project was in compliance with the *Australian Code for the Care and Use of Animals for Scientific Purposes*, *8th edition, 2013*, the *Prevention of Cruelty to Animals Act 1986* and the *Prevention of Cruelty to Animals* *Regulations* *2019* and the conditions of AEC approval.All information provided in this report is an accurate record of animal usage for the reporting period.I understand that this report may be audited by an authorised person appointed under the *Prevention of Cruelty to Animals Act.* |
| **Full name** | **Signature** | **Date** |
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| **APPENDIX I: EXPLANATORY NOTES** |
| **A.1 Project purpose (Refers to question 1)****You must select only one option. Select the most appropriate option from those listed below to describe the primary purpose of the project as a whole.** |
| Increasing our understanding of human or animal biology | Projects that aim to increase the basic understanding of the structure, function and behaviour of animals, including humans, and processes involved in physiology, biochemistry and pathology. |
| Maintaining or improving human and/or animal health and welfare | Projects that aim to produce improvements in the health and welfare of animals, including humans.*Examples**Use of a sheep flock to donate blood to produce microbiological media**Production of commercial anti-serum, antivenom.* |
| Improving animal management or production | Projects that aim to produce improvements in domestic or captive animal management or production. |
| Understanding, maintaining or improving of the natural environment | Projects that aim to increase the understanding of the animals’ environment or its role in it, or aim to manage wild or feral populations. These include studies to determine population levels and diversity and may involve techniques such as radio tracking. |
| Achieving educational objectives | The purpose of the project is not to acquire new knowledge, rather to pass on established knowledge or training to others. This includes interactive or demonstration classes in methods of animal husbandry, management, examination and treatment.*Examples**Animals used by veterinary schools to teach examination procedures such as pregnancy diagnosis*Sheep used in shearing demonstration classes for studentsAnimals used to teach animal care to students. |

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| **A.2 Impact of activities (Refers to question 2.2)****You must select only one option for each group. Select the most appropriate option from those listed below that reflects the activity with the highest impact on animal welfare.** |
| 1. Observation involving minor interference | Animals are not interacted with or, where there is interaction, it would not be expected to compromise the animal’s welfare any more than normal handling, feeding etc. There is no pain or suffering involved.*Examples:**Laboratory animals in cages**Feeding trial, such as digestible energy determination of feed in a balanced diet**Behavioural or growth study with minor environmental manipulation**Teaching of normal, non-invasive husbandry such as handling, grooming etc.* |
| 2. Animal unconscious without recovery | Animal is rendered unconscious under controlled circumstances with little or no pain or distress. Capture methods are not required. Any pain is minor and brief and does not require analgesia. Procedures are carried out on the unconscious animal which is then killed without regaining consciousness.*Examples:**Laboratory animals killed painlessly for dissection, biochemical analysis, etc.**Teaching surgical techniques on live anaesthetised patients which are not allowed to recover following the procedure.*  |
| 3. Minor conscious intervention | Animals are subjected to minor procedures that would normally not require anaesthesia or analgesia. Any pain is minor and analgesia usually unnecessary, although some distress may occur as a result of trapping or handling.*Examples:**Capture and release (with or without tagging) of animals (including fish) in the wild.**Trapping and humane euthanasia for collection of specimens.**Ear notching for DNA sampling of a new line of GM animals.**Injections, blood sampling in conscious animals.**Minor dietary or environmental deprivation or manipulation, such as feeding nutrient-deficient diets for short periods.**Stomach tubing, shearing.* |
| 4. Minor operative procedure with recovery | Animals are rendered unconscious, with as little pain or distress as possible. A minor procedure such as cannulation or skin biopsy is carried out and the animals are allowed to recover (although the animal may later be humanely killed). Depending on the procedure, pain may be minor or moderate and post-operative analgesia may be appropriate.*Examples:**Biopsies or blood sampling under anaesthesia or sedation.**Cannulations under anaesthesia or sedation.**Sedation/anaesthesia for relocation, examination or injections/blood sampling.**Field capture using chemical restraint methods.* |
| 5. Minor physiological challenge | Animal remains conscious for some or all of the procedure. There is interference with the animals’ physiological or psychological processes. The challenge may cause only a small degree of pain/distress or any pain/distress is quickly and effectively alleviated.*Examples:**Electrofishing**Minor infection, minor or moderate phenotypic modification, early oncogenesis.**Arthritis studies with pain alleviation.**Prolonged deficient diets, induction of metabolic disease.**Polyclonal antibody production**Antiserum production* |
| 6. Surgery with recovery | Animals are rendered unconscious, with as little pain or distress as possible. A major procedure is carried out and the animals are allowed to recover (although the animal may later be humanely killed). Post-operative pain is usually at a level requiring analgesia.*Examples:**Orthopaedic surgery**Abdominal or thoracic surgery**Transplant surgery**Mulesing, surgical castration**Surgery under anaesthesia for implantation of telemetry devices* |
| 7. Moderate to major physiological challenge | Animal remains conscious for some or all of the procedure. There is interference with the animals’ physiological or psychological processes. The challenge causes a moderate or severe impact that is not quickly or effectively alleviated.*Examples:**Major infection**Major phenotypic modification**Oncogenesis without pain alleviation**Arthritis studies with no pain alleviation**Uncontrolled metabolic disease**Isolation or environmental deprivation for extended periods**Monoclonal antibody raising in mice* |
| 8. Death as an endpoint | A deliberate measure in the procedure and where there will be no intervention to kill the animal humanely before death occurs in the course of the procedure or procedures. These procedures must not be conducted unless approved by the Minister for Agriculture and are undertaken in accordance with any conditions determined by the Minister. It does not include death by natural causes, animals which are euthanased as part of the project, animals which are euthanased if something goes wrong, animals euthanased for dissection or for use as museum specimens or accidental deaths.*Examples:**Lethality testing (including LD50, LC50)* |
| **APPENDIX II: EXAMPLES TO COMPLETE QUESTION 2.2** |
| **The following examples illustrate how animal use is to be reported at question 2.2.** |
| Project was assigned rats and mice, with similar procedures on all the animals. As such, the project was broken down into 2 groups, one for the mice and one for the rats. However, 10 rats were assigned to but did not undergo procedures in the reporting year. A third row was used to describe these animals with zero in the number of deaths column. These rats will be carried-over to the next reporting year too for future procedures under the project (Group 3). The sum of all animals in this and other reporting years is recorded in the cumulative total column. |
| **Species and strain/breed** | **Source** | **Procedure applied to group** | **Impact of procedure on animals in the group (Refer to Appendix A.2)** | **Number of animals in the group during the reporting year** | **Number of deaths in the group during the reporting year** | **Cumulative total number of animals used in the project to date** |
| Mice | Interstate institution authorised to distribute animals | Ionising radiation exposure | Animal unconcious without recovery | 20 | 20 | 105 + numbers used in previous reporting years. |
| Rats | Interstate institution authorised to distribute animals | Ionising radiation exposure | Animal unconcious without recovery | 75 | 75 |
| Rats | Interstate institution authorised to distribute animals | Ionising radiation exposure | Observational study involving minor interference | 10 | 0 |

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| Project was assigned mice and fish, forming 2 initial groups. 19 fish were humanely killed and 5 recovered from minor operative procedures. To describe this variability the fish group was further split into 2 groups, and ultimately the project was described in 3 groups (rows). Zero was entered under the number of deaths column for group 2, to indicate that no animals died or were killed in this group by the end of the reporting period. The 5 fish will also be carried over to the next reporting year. |
| **Species and strain/breed** | **Source** | **Procedure applied to group** | **Impact of procedure on animals in the group (Refer to Appendix A.2)** | **Number of animals in the group during the reporting year** | **Number of deaths in the group during the reporting year** | **Cumulative total number of animals used in the project to date** |
| Fish | Commercial supplier | Other procedure | Animal unconcious without recovery | 19 | 19 | 29 + numbers used in previous reporting years. |
| Fish | Commercial supplier | Other procedure | Minor physiological challenge | 5 | 0 |
| Mice | Interstate institution authorised to distribute animals | Other procedure | Animal unconcious without recovery | 5 | 5 |

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| Using the above example, 10 fish from group 1 underwent a different procedure. To account for this, the group was further split into 2 groups as follows |
| **Species and strain/breed** | **Source** | **Procedure applied to group** | **Impact of procedure on animals in the group (Refer to Appendix A.2)** | **Number of animals in the group during the reporting year** | **Number of deaths in the group during the reporting year** | **Cumulative total number of animals used in the project to date** |
| Fish | Commercial supplier | Other procedure | Animal unconcious without recovery | 10 | 10 | 29 + numbers used in previous reporting years. |
| Fish | Commercial supplier | Ionising radiation exposure | Animal unconcious without recovery | 9 | 9 |
| Fish | Commercial supplier | Other procedure | Minor physiological challenge | 5 | 0 |
| Mice | Interstate institution authorised to distribute animals | Other procedure | Animal unconcious without recovery | 5 | 5 |