AUTHORITY OF THE ATTENDING VETERINARIAN

1. Policy statement

The Animal Care and Use Program (ACUP) is the collaborative responsibility of the Institutional Official (IO), the Attending Veterinarian (AV) and the IACUC. The AV is responsible for the welfare and clinical care of animals used in research, testing, teaching and production.

Each Institution must have an AV to advise on the appropriate care and use of animals, and to provide adequate veterinary care. The AV must be given the authority to provide appropriate veterinary care.

This policy outlines the authority given by the IACUC to the AV to ensure appropriate veterinary care is provided to all animals at all times.

2 Definitions

Animals	All live fish, amphibians, reptiles, birds, non-human mammals and cephalopods.
Attending Veterinarian (AV)	A veterinarian employed or contracted by an institution, on a fulltime or part-time basis, with relevant training or experience in laboratory animal science and medicine to provide adequate veterinary care to the animals in the research facility of the licensee.

3 Scope

This policy applies to all live animals covered under the NUS ACUP.

4 Guidelines

4.1 Principles

4.1.1 The NUS IACUC takes responsibility for supporting ongoing improvements in its ACUP through the development and implementation of procedures and policies that enhance the health and welfare of animals. In this regard, the AV must advise on the appropriate care and use of animals and provide veterinary care at all times. The IACUC gives authority to the AV to provide this veterinary care.

4.1.2 The AV is responsible for the health and wellbeing of all laboratory animals used at NUS. NUS must provide the AV with sufficient authority, including access to all animals and resources to manage the program of veterinary care. The AV should oversee other aspects of animal care and use e.g. husbandry and housing, to ensure that the ACUP complies with the NACLAR Guidelines and the Guide to the Care and Use of Laboratory Animals (Guide). The Guide serves as a basic guide to the establishment of specific standards for AAALAC accreditation.

4.1.3 The AV and all veterinarians with delegated AV responsibilities, employed on a full-time, part-time or contract basis, must be qualified in veterinary science and be licensed by NParks Animal and Veterinary Service (AVS).

4.1.4 When the AV is on leave, or unavailable to provide any general or emergency veterinary care, interim arrangements must be made to ensure that there is always ready access to veterinary care.

4.2 AV Authority

4.2.1 Adequate veterinary medical care is essential to an ACUP. Through the IACUC, NUS has therefore empowered the AV and his/her designate with full authority to provide veterinary medical care and/or euthanasia, at his/her discretion, to all animals in the NUS ACUP.

4.2.2 Institutions must establish and maintain adequate veterinary care, overseen by the AV, including:

a. the availability of appropriate facilities, personnel, equipment, and services to comply with the NACLAR Guidelines;

b. the use of appropriate methods to prevent and control diseases (e.g. vaccination and other prophylaxis, disease monitoring and surveillance, quarantine and isolation), diagnose diseases, and treat various conditions, diseases and injuries. Such methods include having robust biosecurity procedures appropriate for the protocols and animals used;

c. the availability of 24-hour emergency care (including weekends and public holidays);

d. provision of daily observation (or more frequently, as necessary) of all animals to assess their health and well-being. This daily observation of animals may be conducted by someone other than the AV provided that there is a mechanism of direct and frequent communication between the AV and the staff concerned so that timely and accurate information on problems of animal health, behaviour, and well-being is conveyed to the AV;

e. guidance to Principal Investigators (PIs) and other personnel involved in the care and use of animals regarding handling, immobilisation, anaesthesia, analgesia, tranquillisation, and euthanasia; and

f. adequate peri-operative i.e. pre-procedural, surgical, and post-procedural care in accordance with current established veterinary medical and nursing procedures.

4.2.3 While the AV will make every reasonable attempt to consult the PI or responsible member(s) of the research team, the AV is not required to seek approval from the PI or other parties to provide treatment or euthanasia to animals, if such actions are deemed necessary by the AV for the animals' welfare or to ensure the welfare of remaining NUS animal population.

4.2.4 In the case of a pressing health problem, if the responsible person e.g. researcher or PI is not available, or if the responsible person and veterinary staff cannot reach consensus on treatment, the AV must have the delegated authority by the institution, and the IACUC, to treat an animal, remove it from an experiment, institute appropriate measures to relieve severe pain or distress or perform euthanasia if necessary.

4.2.5 The AV must be consulted:

a. in the planning of any practice or procedure that can cause pain to animals, including:

   i. use of tranquillisers, analgesics, anaesthetics, and paralytics;

   ii. pre-surgical, surgical and post-surgical care; and

   iii. the withholding of tranquillisers, anaesthesia, analgesia, or euthanasia when scientifically necessary;

b. on the use of appropriate euthanasia methods;

c. on the use of invasive procedures; and

d. d. whenever there are adverse or unexpected outcomes.

4.2.6 Humane endpoints must be described in protocols and approved by the IACUC to determine when animals will be removed from the study, treated, or euthanised. There must be clear directions in

the protocol concerning who can make the decision to euthanise or treat animals in consultation with the AV, including procedures to follow if a situation arises on weekends, holidays, or in the absence of the responsible PI. The AV has the final decision in a disagreement regarding euthanasia or treatment.

4.2.7 Unexpected deaths must be reported to the IACUC and AV, or his/her designee, to be properly investigated to determine the cause and initiate remedial action. If the unexpected deaths are due to a manipulation or a set of manipulations, the particular manipulation or set of manipulations should be refined or mitigated to prevent such occurrences. The AV or his/her designee, should investigate unexpected or unintended morbidity and mortality to determine the cause and initiate remedial action, if appropriate.

4.2.8 Additionally, the AV and his/her designate is authorized to have unrestricted access to all areas where animals are used and/or housed (including but not limited to vivaria, PI laboratories and research study areas, and other non-PI centric research laboratories), and to halt immediately research activities that deviate from the approved protocols and have a negative impact on animal welfare. The IACUC will be accordingly informed for further action.

5. References

1. Guide for the Care and Use of Laboratory Animals. National Research Council, 2011.
2. Guidelines on the Care and Use of Animals for Scientific Purposes. National Advisory Committee for Laboratory Animal Research. 2022
3. Animals and Birds Act (Chapter 7). Animals and Birds (Care and Use of Animals for Scientific Purposes) Rules 2004

No.	Revision	Author	IACUC approval date
1.	Created	Dr Foo Tet Wei, John	14 Aug 13
2.	**P102.01.** Revised to: 1. update the format of the policy 2. specify AV authority to halt research activity that deviate from the approved protocol and have a negative impact on animal welfare.	Dr Chew Li Li	24 Oct 19
3.	**P102.02.** Reviewed to: 1. ensure policies are in compliance with the NACLAR Guidelines 2022 and the updated Animals and Birds (Care and Use of Animals for Scientific Purposes) Rules 2004; and 2. up-to-date with current practices Changes made: 1. under section 1 to add "Each Institution must have an AV to advise on the appropriate care and use of animals and provide adequate veterinary care. The AV must be given the authority to provide appropriate veterinary care."; and 2. add section 4.1.3, 4.1.4, 4.2.2, 4.2.4 – 4.2.7 based on NACLAR 2022; and 3. under section 5, updated to "Guidelines on the Care and Use of Animals for Scientific Purposes. National Advisory Committee for Laboratory Animal Research. 2022"	Dr Chew Li LI IACUC	16 Jan 23
4.	**P102.03.** Changes were made to: 1. reword sections for clarity and correct typographical and grammatical errors. 2. add information from AAALAC position statement to section 1 to make clear the roles of IO, IACUC and the AV. 3. add reference to the Guide in section 4.1.2.	IACUC Designated reviewers Dr Chew Li Li	19 May 25

IACUC Approved