REQUIRED:

APPROPRIATE NATIONAL STANDARD LOGO – SELECT THIS LINK TO ACCESS ALL LOGOS

Austin Health

Office for Research: Bioresources Facility

PROCEDURE

Management of Animal Health

Staff this document applies to:

- Bioresources facility staff
- Researchers who utilise the Bioresources Facility
- Any staff wishing to access the Bioresources Facility

State any related Austin Health policies, procedures or guidelines:

Key Points:

- Maintenance of the health of the research animal population is crucial to ensure regulatory compliance and enable excellence in research.
- This policy describes how the health of Austin Health Bioresources facility animal population is maintained, managed and monitored.

Purpose:

To ensure Austin Health Bioresources Facility (AHBRF) animal health complies with the current Australian Code for the Care and Use of Animal for Scientific Purposes.

To ensure there is clearly defined and adequate maintenance, testing and monitoring of the research animal population within AHBRF.

General:

There are strict pre-entry criteria to be met prior animal transport and entry to the AHBRF. These criteria are defined by a list of excluded diseases (see Appendix 1). Animals not fulfilling these criteria may be excluded from the BRF.

Animals must only be obtained from facilities that the AHBRF management has approved and who have provided the appropriate approved health status material.

Once maintained at the AHBRF, population health is monitored via the use of dirty bed sentinels. Individual unwell animals should be necropsied after death or tested prior death to determine if the health issue is due to an infectious agent.

The AHBRF maintains a quarantine period for staff or researchers utilising other animal facilities. This varies depending on the other facilities health status but generally a three day period between facilities is recommended.

Pre-entry Requirements:

All entry of animals must be organised with the AHBRF staff prior ordering.

Health reports from the originating facility and room housing the animals for the previous 12 months must be approved prior transport of the animals. Once these reports have been approved, then the animals may be ordered. If these reports contain excluded diseases (as per Appendix 1),

the animals may still be accepted, at the discretion of the AHBRF manager and veterinarian. These animals may be required to be placed in isolation until further tested or used.

There may be some instances where animals will not be accepted and those requesting the animals will be required to source them from elsewhere if possible.

Unwell or diseased animals should not be transported, even if not harbouring an excluded infectious agent, as transport exacerbates illness and stress. This could lead to poor welfare outcomes.

Animals sourced internationally must go via an approved import quarantine facility-e.g. Howard Florey or TasQ. These facilities organise the import and testing prior entry into Australia and then the AHBRF.

AHBRF Monitoring:

Sentinel mice, in ivc or open top depending on the room status, require deliberate contamination by placing the sentinel mouse in a dirty box containing contaminated bedding and nesting material, capturing exposure to all mouse colonies within that location, by rotating on a weekly basis.

To ensure all organisms of interest are captured, retired breeders will also be placed into the cage with the sentinel, at least once, to ensure direct contact transmission.

The sentinels should be exposed to the contaminants for at least 45 days to ensure optimal opportunity to develop antibodies. The sentinel mice in the AHBRF are generally maintained for at least 3 months prior testing.

The sentinels should be immunocompetent mice, sourced from a facility with known health status.

Immuno-compromised or young animals (4-8 weeks) are best used to determine any parasitological contaminants.

Rat sentinels are not utilised as extensive breeding is not currently performed with rats at AHBRF. Most rats are sourced from ARC which has a known, stable contaminant list in their rat population.

Testing frequency:

Virology is performed every 6 months via blood sampling only

Full necropsies including virology, bacteriology, endo and ecto parasites are performed every 12 months- live sentinels are sent to the laboratory for this.

If a positive result is returned for an excluded or new disease then the room from which this result is returned should be isolated and strict quarantine regulations be immediately enacted to prevent further spread. A mouse from each colony/genotype represented in the room should then be tested for this new infectious agent. Further action from here will be determined from these results. It may be that animals from within these rooms will need to be treated or culled and rederived.

Animals that die from unknown or non genotype related causes should be autopsied and if appropriate sent for sampling to ensure excluded infectious agents are not contributing to disease processes within the BRF.

Screening of Biological materials:

Mouse biological product should be screened for a range of murine pathogens before

introduction into the experimental mouse areas.

The following products should be screened:

- Cell lines
- Transplantable tumours
- Viral stocks
- Serum

- Ascitic fluid

Materials must be free from:

- Murine Mycoplasma spp
- Parvovirus MMV and MPV
- MHV
- LDV transplantable tumours
- Polyoma virus
- LCMV

Only materials determined to be free of transmissible agents by MAP or PCR testing are to be used in the experimental areas of the animal facility.

BRF Personnel Requirements:

In line with the BRF entry SOP, there should be a minimum of 24 hours between visiting other research animal facilities and entry into the BRF. This may vary if the health status of the other facility is known and approved (e.g. research community and animals moving between LaTrobe and the BRF). If less than 24 hours is required then personnel should have showered and utilise a full change of clothes before accessing the BRF.

There are some facilities that are known to contain excluded infectious agents and if visited, then the personnel will require a full three day quarantine and full change of clothing including shoes, prior entry into the BRF.

All personnel must also follow the BRF entry and PC2 entry SOP regarding Personal Protective Equipment (PPE). This ensures that contamination of the animals is kept to a minimum.

There is limited access to the BRF Specific Pathogen Free (SPF) breeding area and a greater PPE requirement for this space.

Author/Contributors:

Original Author and Date: Eleanor Hunt 4/1/2018

Current Author : Eleanor Hunt

Contributor(s)

Contributor(s)

Legislation/References/Supporting Documents:

NHMRC Australian code for the care and use of animals for scientific purposes

8th Edition 2013 https://www.nhmrc.gov.au/guidelines-publications/ea28

Prevention of Cruelty to Animals Act 1986 http://agriculture.vic.gov.au/agriculture/animal-health-and-welfare/animal-welfare/animal-welfare-legislation/prevention-of-cruelty-to-animals-legislation

Guidelines for the generation, breeding, care and use of genetically modified and cloned animals for scientific purposes (2007) https://www.nhmrc.gov.au/guidelines-publications/ea17

Guidelines to promote the wellbeing of animals used for scientific purposes: The assessment and alleviation of pain and distress in research animals (2008) https://www.nhmrc.gov.au/guidelines-publications/ea18

Authorised/Endorsed by:

(Head of Unit or Executive Committee, Refer to: Clinical Governance Framework)

Primary Person/Department Responsible for Document:

Eleanor Hunt

Bioresources Facility

Office for Research

Keywords: (Delete this section when uploading to ePPIC)

List keywords used to search for this document in ePPIC

- Animal Health
- Bioresources Facility

Communication Strategy: (Delete this section when uploading to ePPIC)

Email to users to indicate the procedure is now available

Post onto the AEC webpage

Appendix

Excluded Organisms

Mice

Mouse hepatitis virus

Rotavirus

Mouse Parvovirus

Minute virus of mice

Theilers' murine encephalitis virus

Pneumonia virus of mice

Sendai virus

Mouse adenovirus Type 1& 2

Reovirus type 3

Ectromelia virus

Polyoma virus

Murine Cytomegalovirus

Hantaan virus

Mouse thymic virus

K virus

Hantavirus

Lymphocytic choriomeningitis virus

Mycoplama pulmonis

Bacteria

Cilia associated respiratory bacillis

Clostridium piliformis

Encephalitozoon cuniculi

Simian Virus 5

Salmonella

Streptobacillus moniliformis

Corynebacterium kutscheri

Bordetella bronchiseptica

Pseudomonas spp

*Helicobacter spp,

*Pasteurella pneumotropica

*Proteus

*Staphylococcus aureus

Streptococcus pneumonia (alpha haem)

*Streptococcus spp (beta Haem)

Klebsiella oxytoca

Klebsiella pneumoniae

Parasites

Ectoparasites

Endoparasites – Helminths pinworms/tapewormsand pathogenic gut protozoa i.e. Klebsiella & Citrobacter rodentium

**Helicobacter spp, Pasteurella pneumotropica, Proteus, Streptococcus, Staphylococcus and Murine norovirus may be tolerated in the BRF Experimental Facility and must be assessed for approval by the Manager. For all other diseases not represented on the list will be at the Managers and Management Committee's discretion.*

Diagnosis of Helicobacter spp needs to be done by PCR.

Rat

Parvovirus

Rat corona virus/Sialodacryoadenitis

Toolan's virus

Pneumonia virus of mice

Sendai virus

Kilham's rat virus

Cilia associated respiratory bacillis

Clostridium piliformis

Encephalitozoon cuniculi

Simian Virus 5

Theilers' murine encephalitis virus

Lymphocytic choriomeningitis virus

Mycoplama pulmonis

Reovirus Type 3

Sendai virus

Bacteria

Cilia associated respiratory bacillis

Clostridium piliformis

Salmonella

Streptobacillus moniliformis

Corynebacterium kutscheri

Bordetella bronchiseptica

Pseudomonas spp

*Helicobacter spp,

*Pasteurella pneumotropica

*Proteus

*Staphylococcus aureus

Streptococcus pneumonia (alpha haem)

Streptococcus spp (beta Haem)

Klebsiella oxytoca

Klebsiella pneumoniae

Parasites

Ectoparasites

Endoparasites – Helminths pinworms/tapeworms and pathogenic gut protozoa i.e. Klebsiella & Citrobacter rodentium

**Helicobacter spp, Pasteurella pneumotropica, Proteus, Staphylococcus and Murine norovirus may be tolerated in the BRF Experimental Facility and must be assessed for approval by the Manager. For all other diseases not represented on the list will be at the Managers and Management Committee's discretion.*

Diagnosis of Helicobacter spp needs to be done by **PCR**