

## SAFE ANIMAL HANDLING PROCEDURES

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### 1. INTRODUCTION

Animals in the laboratory or research setting can give rise to a number of hazards for animal handlers and researchers. These hazards can range from scratches and bites to the transmission of disease or the development of animal allergies. Other hazards not directly related to animals may also be present, such as manual handling or use of toxic chemicals.

The purpose of these procedures is to inform researchers and supervisors of the University requirements to protect the health and safety of persons working with, or coming into contact with laboratory animals in the course of their work or research. It is expected that such persons will be familiar with the NHMRC's "Code of practice for the care and use of animals for experimental purposes", Worksafe Australia's "Diseases acquired from animals" and any other protocols relevant to animal handling.

### 2. HAZARDS COMMONLY ASSOCIATED WITH ANIMALS

#### **Bites, stings and scratches**

Most animals, birds and insects will bite, scratch or sting during handling although this can be minimised by following correct handling procedures. Bites, scratches and stings may also lead to infection and some individuals may be hypersensitive to stings of some insects.

#### **Infectious diseases**

Animals may have an infection with or without showing any signs of illness and these infections may be transmitted to other animals or to humans. Infections in humans are called zoonotic diseases and may cause either mild, or severe and possibly fatal symptoms. Some animals may also be at risk from acquiring diseases from humans.

#### **Allergens (LAA)**

Persons who come into contact with laboratory animal proteins (usually contained in saliva, urine or shed skin) may develop Laboratory Animal Allergy (LAA). LAA is extremely prevalent amongst persons exposed to allergens and is related to the length of exposure. The symptoms of LAA include rhinitis (the most common symptom), eye symptoms such as red eyes, skin rashes and asthma. The major allergen causing LAA is urinary protein, which can be carried by hair, skin or contaminated materials.

#### **Manual handling**

Manual handling tasks such as lifting and carrying cages and animal feed or moving trolleys and equipment may give rise to muscular sprains and strains unless good design and practices are implemented.

#### **Hazardous substances**

Appropriate precautions need to be taken when using or administering toxic chemicals, drugs, poisons, carcinogens and radioactive substances administered to animals and when collecting or disposing of excretions containing hazardous substances.

### **3. LABORATORY AND HANDLING SAFETY**

#### **Ventilation**

Ventilation in rooms and areas housing animals should be sufficient to control the spread of airborne dusts, fibres and contaminants. The air change rate and pressure relative to other parts of the building should be designed and operated in accordance with relevant standards (recommended 10 to 15 per hour).

All work involving anaesthetic gases must be carried out in a fume cupboard or similar system incorporating local exhaust ventilation.

#### **General Working Procedures**

Local working procedures and tasks should be developed and regularly reviewed. The procedures should detail the health and safety standards to be adopted, such as when protective clothing must be worn, hygiene standards to be maintained and the handling of blood, animal tissues, carcasses or hazardous substances. The use of wet techniques for cleaning should also be adopted wherever possible to minimise dust generation.

The layout and design of the handling area and equipment should minimise the hazards associated with animals. All manual handling tasks which can give rise to an injury must be assessed and controlled, for example by task redesign or by provision of mechanical devices. Cages should be constructed so that they are easily moved or loaded and unloaded into the cage washers or autoclaves and have no sharp edges. Cage sizes and positioning should be planned so as to avoid excessive bending, reaching or stretching.

The use or administration to animals of drugs, poisons, radioactive substances and carcinogens or use of recombinant DNA are subject to University approval. Persons using or administering these substances must ensure that the relevant permits or clearances have been obtained.

#### **Protective Clothing And Equipment**

Protective clothing and equipment plays an important role in preventing injury and infection when working with animals. In particular, the wearing of gloves and laboratory coats will minimise the effects of LAA and assist in preventing its onset. Where significant levels of hazardous liquids (such as corrosive or toxic chemicals) are handled or there is a risk of physical damage, suitable eye protection will be required. Respirable filters should also be worn during all tasks which produce significant levels of dust or airborne particles.

#### **Vaccination**

The University may recommend that persons undergo immunisation prior to working with animals, depending on the animals being handled and the relative risk of acquiring infection. In general, vaccination against tetanus is recommended for persons working with any animal and vaccination against hepatitis B, tuberculosis and Q fever may be required for some animals (particularly primates).

For more information on immunisations, refer to the University's Occupational Health and Safety Policies and Procedures Manual.

#### **Training And Supervision**

It is essential that all persons who work with or come into contact with animals are properly trained and supervised according to their level of competence. Those persons must also be familiar with procedures to be followed in an emergency or incident involving animals.

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#### **4. LABORATORY ANIMAL ALLERGY (LAA)**

##### *Information to prospective applicants*

Whenever positions involving the handling of animals are advertised, the employing school or department shall ensure that prospective applicants are informed of the associated risks. A sample information sheet is given in Appendix A. The successful applicant will be asked prior to appointment to complete a health questionnaire (Appendix B) and if there is a history of asthma, allergies or other risk factors, they will be required to undergo a medical examination.

A decision not to appoint a person because they are found to have acquired LAA will only be made if the person is unable to fulfil the inherent requirements of the position or if their health and safety would be placed at risk by performing those requirements. This is because the University has an obligation under the Occupational Health and Safety Act to provide, as far as is practicable, a workplace that is safe and without risks to health.

If on the opinion of medical advice the appointment can proceed, the school or department is responsible for ensuring that adequate measures are taken to protect the health and safety of the person.

##### **Health Surveillance**

It is essential that health and medical surveillance program be established to identify persons at risk of acquiring LAA and to monitor the condition of persons who have already acquired LAA. All persons who are required to handle animals will be required to complete a health questionnaire on commencement of employment and at one yearly intervals thereafter. If there are any concerns about providing the information required in the questionnaires, persons working with animals can discuss this in confidence with the Head of School.

If the health questionnaire indicates the person is suffering asthma or symptoms associated with LAA, they will be referred to their medical practitioner or the University Health Service for assessment and advice on management of the condition. Similarly, if any staff or students become aware of symptoms commonly associated with LAA, they should report this to their supervisor who will then arrange for a medical assessment by their medical practitioner.

The Occupational Health and Safety Section will liaise with the Health Service to ensure that suitable workplace arrangements are made. In minor cases controlling the allergen at the source, the provision of respirable filters or the rotation or modification of work tasks will be sufficient. However, if the person is unable to continue to work with animals it may be necessary to find suitable alternate duties either within the school or department in the first instance, or elsewhere in the University. Such measures will be undertaken in consultation with the person concerned and in the case of staff members the University's Rehabilitation procedures will apply.

#### **5. FURTHER INFORMATION**

Further information and advice can be obtained from the Occupational Health and Safety Section, Room W230, David Myers Building, Bundoora Campus (Telephone 9479 2186). The OH&S Section also has copies of various legislation and publications.

*Editorial changes September 2004*

**APPENDIX A - INFORMATION TO EMPLOYEES & STUDENTS**

Laboratory Animal Allergy (LAA) is a human hypersensitivity to laboratory animals, which can develop after a single or repeated exposure to allergens. The symptoms of LAA include sneezing and runny nose, sore or red eyes, skin rashes and in more severe cases asthma. LAA is prevalent amongst persons who come into contact with laboratory animals. The major allergen causing LAA is urinary protein, which is present in saliva, urine or shed skin and which can be carried by hair, skin or contaminated materials.

Although persons suffering most mild forms of LAA can be accommodated by changes to the workplace or task redesign, persons with severe LAA (that is, where there is a significant risk to their health and safety) may be unable to continue working with animals and consequently their employment and career prospects may be adversely affected. Prospective employees and students who may be required to work with animals should be aware of the likelihood of acquiring LAA and the effect this may have on their employment or studies.

In order to minimise the risk of persons developing LAA, The University has a policy of health and medical surveillance of persons working with or coming into contact with laboratory animals. Such persons will be required to complete health questionnaires at regular intervals and if necessary, attend a medical examination. The University may also require persons to wear protective clothing and equipment as a condition of work or study.

If prospective employees or students have any concerns about LAA and the impact it may have on their employment or career prospects, they are encouraged to discuss this with the Head of School or Department or the University's Occupational Health and Safety Section.

**APPENDIX B - INITIAL QUESTIONNAIRE**

The University has established a health and medical surveillance program to identify persons at risk of acquiring Laboratory Animal Allergy (LAA) and to monitor the condition of persons who have already acquired LAA. If the health questionnaire indicates the person is suffering asthma or symptoms associated with LAA, they will be referred to their medical practitioner or the University Health Service for assessment and advice on management of the condition.

The results of the questionnaire and any medical assessments will be kept confidential and will not be used to discriminate against people. If there are any concerns about providing the information required in the questionnaires, persons working with animals can discuss this in confidence with the Head of School or the University Health Service.

<b>NAME and SCHOOL</b> .....	
Have you ever worked with Animals? This includes cleaning and maintenance of animal houses as well as direct handling of animals or their tissues. If so, please state which animals.	YES / NO
Have you ever kept, or do you now keep a pet animal? If so, please state which animal(s) and when they were kept.	YES / NO
Do you come into contact with other animals intermittently? e.g. horse riding. If so, which animals.	YES / NO
Have you ever experienced the following symptoms when exposed to animals or their housing? a. wheezing, tightness of the chest or difficulty breathing b. eczema or allergic skin rashes c. attacks of sneezing or running or blocked nose d. watery or itchy eyes	YES / NO
If you have answered YES to any part above, please state which animals have affected you	YES / NO
Have you had to give up animal work because of allergy to laboratory animals?	YES / NO
Have you ever suffered from? a. hay fever b. asthma c. skin problems d. other allergic diseases e. other chest conditions f. any condition of the heart	YES / NO
<i>I declare that the above statements are true to the best of my knowledge and belief.</i>  <b>Signed:</b> ..... <b>Date:</b> ...../...../.....	

**APPENDIX C - FOLLOW-UP QUESTIONNAIRE**

The University has established a health and medical surveillance program to identify persons at risk of acquiring Laboratory Animal Allergy (LAA) and to monitor the condition of persons who have already acquired LAA. If the health questionnaire indicates the person suffering asthma or symptoms associated with LAA, they will be referred to their medical practitioner or the University Health Service for assessment and advice on management of the condition.

The results of the questionnaire and any medical assessments will be kept confidential and will not be used to discriminate against people. If there are any concerns about providing the information required in the questionnaires, persons working with animals can discuss this in confidence with the Head of School or the University Health Service.

<b>NAME and SCHOOL</b> .....	
State which animals you have been exposed to at work since completing your last questionnaire:	
Describe the pattern or frequency of animal handling at work (e.g. 2-3 times per month for about 1 hour per session).	
Since the last questionnaire, have you experienced any of the following symptoms when exposed to animals, their housing or tissues? a. wheezing, tightness of the chest or difficulty in breathing b. eczema or allergic skin rashes c. attacks of sneezing or running or blocked nose d. watery or itchy eyes	YES / NO
If you have answered YES to any part above, please state which animals have affected you.	
If you no longer work with animals, when did you stop any why?	
Has your health status changed in any other way since the last questionnaire? If so, please give details.	YES / NO
<i>I declare that the above statements are true to the best of my knowledge and belief.</i>  <b>Signed:</b> ..... <b>Date:</b> ...../...../.....	