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**Occupational Health Services**

**Procedure on the Management of Exposure**

**to Laboratory Animal Allergens**

**Introduction:**

1. For background information and advice it is recommended you read the Guidance included with this document at Appendix 1 (page 6).
2. The University will take all reasonable steps to control hazardous exposure to allergens and to protect the health of Staff, Students and others that may be exposed to allergens in the course of their work.

**Responsibilities:**

1. Effective implementation of this Code of Practice requires co-operative action between Occupational Health Services, Biological Support Facility (BSF), the Scientific Community represented by Heads of Schools, Research Group Leaders and Estates and Services.
2. **The Occupational Health Service is responsible for:**
* Organising and executing an appropriate health surveillance programme for all who may be exposed to animal allergens in the workplace;
* Advising on appropriate health protection measures;
* Advising on the management of persons sensitised to animal allergens; and
* Keeping abreast of developments in this field and advising/ acting appropriately.
1. **Manager, BSF is responsible for:**
* Ensuring that all animal facilities are managed and supervised to minimise exposure to laboratory animal allergens;
* Making available the necessary personal protective equipment (PPE) for use in the animal facility and ensuring adequate instruction in their use. Records will also be maintained of use and maintenance of non-disposable PPE;
* Ensuring all users are aware of the risk of exposure to laboratory animal allergens;
* Provide training in the safe handling of animals and their caging;
* Restricting access to the animal facilities to persons enrolled in the health surveillance programme;
* Notifying companies, who are contracted to provide service to equipment located within animal facilities, of the need to enrol their agents in an appropriate health surveillance programme; and
* Keeping abreast of developments in this field and advising/ acting appropriately.
1. **Heads of Schools are responsible for:**
* Ensuring that research groups comply with the terms of the Code of Practice and subsequent advice received;
* Ensuring that rooms outside BSF, used for work with animals, can comply with the Code of Practice governing such work; and
* Ensuring all Staff and Students who may be exposed to animal allergens participate in the health surveillance programme prior to exposure.
1. **Research Group Leaders are responsible for:**
* Ensuring that Risk Assessments for all work with laboratory animals are completed and that necessary control procedures are in place before work commences;
* Ensuring that all members of the research Group are provided with appropriate information and training on control measures;
* Ensuring that any visitors (e.g. visiting scientists) to the group who will be exposed to animal allergens are provided with appropriate information and training on the control measures;
* Ensuring that the control measures are observed; and
* Complying with advice received.
1. **All persons working with laboratory animals are responsible for:**
* Complying with control procedures;
* Participating in the health surveillance programme and responding in a timely manner to requests for completion of the annual Health Surveillance Questionnaire; and
* Reporting possible symptoms of allergy to University Occupational Health Services.

**Arrangements to Control Exposure**

1. Only using laboratory animals where no practical alternatives exist.

*This is guaranteed by both National Home Office Policy and the Local Ethical Review Process.*

1. **Ensuring, as far as is reasonable practicable, that animal work is undertaken in purpose-built facilities designed to ensure effective containment of aero-allergens.**

*Investigators are expected to work within BSF unless there is a compelling scientific reason for not doing so.*

1. **Ensuring that safe-systems work that minimise exposure to allergens are in place wherever animals are housed or used.**

*The Risk Assessment made at the planning stage of the project will include an assessment of the risk of exposure to laboratory animal allergens.*

*Local rules will be drawn up specifying the control measures necessary to minimise exposure.*

1. Such control measures will include:
* Organising work to minimise the time spent with animals ;
* Where possible procedures should be carried out in rooms with the lowest possible stocking densities;
* Work to be conducted in a procedure room, high-risk activities such as shaving should be carried out under a Class II equivalent hood – or if not possible wearing appropriate respiratory protection;
* Animals and soiled caging must only be transported using a filter bonnet or containment cabinet;
* All personnel must wear dedicated protective clothing when working with animals. The clothing must not be subsequently worn in non-animal areas; and
* Ensuring all users are enrolled in a health surveillance programme.
1. Ensuring that persons working with animals or in areas where exposure to laboratory animal allergens may occur are provided with information, instruction and training on means of controlling exposure:
* *All persons so working will be provided with copies of local rules/ standard operating procedures before starting work;*
* *The symptoms of laboratory animal allergy will be described at the start of the Health Surveillance Programme;*
* *Competency in basic handling techniques will be assessed and appropriate training will be provided to address any need; and*
* *Where respiratory protective equipment is indicated users will be provided with full instruction on the correct use and maintenance of the equipment. A separate SOP is written and made available for each different piece of equipment.*
1. **Ensuring that an effective system for monitoring the health of all persons exposed to laboratory animal allergens is in place:**
* *All persons who are likely to be exposed to laboratory animal allergens will be enrolled in the University’s Health Surveillance Programme. Entry to BSF will be dependent on evidence of such enrolment; and*
* *Group leaders will be expected to ensure compliance with the programme.*
1. **Ensuring that persons developing allergic symptoms are provided with appropriate support to either continue their work without further risk to their health or are re-deployed:**
* *On first becoming aware of symptoms the individual must seek advice from Occupational Health Services. Likewise if a Supervisor suspects an individual in their care may be showing symptoms of laboratory animal allergy they must refer the person to Occupational Health Services;*
* *Continued exposure to laboratory animal allergens may cause progression of allergic disease. Individuals found to be sensitised must follow stringent control procedures to minimise further exposure and must follow the advice given by the Occupational Health Physician; and*
* *If symptomatic disease progresses further exposure should be avoided. This may be achieved by adopting other protective measures (e.g. airstream hoods). It may be helpful for a joint meeting of Occupational Health Services, the individual and their Supervisor to be held to discuss options. Redeployment may also need to be considered.*
1. **Ensuring that appropriate review mechanisms are in place to monitor the compliance and effectiveness of the Code of Practice:**
* *Occupational Health Services will compile annual statistics showing the incidence of laboratory animal allergy compared with the number of persons exposed. Any significant upward shift will be rigorously examined to provide explanation, so if indicated, appropriate remedial action can be taken;*
* *All mechanical control methods will be checked at least annually;*
* *The Health Surveillance Register will be cross-checked annually with the BSF list of licensed workers; and*
* *In the event of a person becoming sensitised the local rules and/ or standard operating procedures will be reviewed.*

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| Document Control Box |  |
| Procedure title: | Procedure: Management of exposure to laboratory animal allergens |
| Date approved: | October 2013 |
| Approving body: | Board of Governors |
| Version: | 1.2 |
| Supersedes: | University Code of Practice and Guidance on Management of Exposure to Laboratory Animal Allergens |
| Previous Review Dates: | September 2007/ July 2005 |
| Next review date: | Upon any significant change |
| Equality impact outcome: | Initial screening will take place during the consultation process. |
| Related documents: | Guidance: Allergy to Laboratory Animals – What you need to know |
| Related Statutes, Ordinances, General Regulations: | Health & Safety at Work Etc., Act 1974 – and relevant statutory provisions.University of Manchester Statute XII(g)University of Manchester Statute XIII, Part III to do with disciplinary procedures for members of StaffGeneral Regulations, Regulation XVII, 3(f) and 5(a) to do with misconduct of Students |
| Related Policies: | Health & Safety Policy |
| Related Procedures: | A-Z of documents on specific Health & Safety topics, at:-[http://www.campus.manchester.ac.uk/healthandsafety/CoPs&Guidance.htm](http://www.campus.manchester.ac.uk/healthandsafety/CoPs%26Guidance.htm) |
| Related Guidance: |
| Related information: | N/A |
| Policy owner: | Director of Occupational Health Service (currently Dr SA Robson) |
| Lead contact: | Director of Occupational Health Service (currently Dr SA Robson) |

**Occupational Health Services**

**Appendix 1**

**Guidance on Allergy to Laboratory Animals**

**What You Need To Know**

1. This Guidance provides information on what you can do to reduce the chance of you developing allergies from this work. Further information is contained in ‘What You Should Know About Laboratory Animal Allergy” found at Appendix 2 (Page 11).

**The Problem**

1. Up to a quarter of people who regularly work with small mammals and insects develop allergic reactions to proteins secreted in their urine, dander, or excreta. Usually this only causes annoying symptoms such as in itchy nose or watering eyes but, not uncommonly, serious diseases like asthma can occur.
2. **All** persons working with laboratory animals are at risk, even if allergy has never been a problem before. The risk is not confined to animal care technicians. Researchers, maintenance staff and anyone involved in the handling of waste materials from animal laboratories can be affected. One person affected had merely been carrying out secretarial work on laboratory notebooks from an animal laboratory.
3. Someone who already has asthma or a history of allergic conditions like hay fever or eczema may be at greater risk in the short term, but no one working with laboratory animals is immune.

**The development of Allergy**

1. Allergenic material becomes airborne whenever animals move around in their cages or are handled. Minute particles of soiled bedding, skin and droplets of urine – aeroallergens – get thrown up and can remain suspended in the air for some time after. These are then breathed in or settle on exposed skin and clothing during work. In addition, many rodent species pass urine continuously. Skin contamination with allergenic material is inevitable unless gloves are worn during handling of animals or bedding.
2. In some people allergen absorbed across the lining of the lung or through breaches in the skin then stimulate the immune system to produce antibodies which will trigger an allergic reaction whenever subsequent exposure to the allergen occurs – even at very low levels.
3. The development of allergic antibodies – sensitisation – appears to be linked more to peak rather than cumulative exposure so even exposures of 1-2 hours per month can be dangerous if it involves high exposure work. Simple handling of animals counts as high exposure.

**Controlling the problem**

1. The ventilation systems in animal houses are designed to contain and remove aero-allergens, but they can only reduce and not eliminate contact with them. Ventilation provides no protection against direct skin contact with allergenic material from handling. Effective control relies on the use of protective clothing and work practices designed to reduce exposure times and amounts.
2. If you follow recommended work practices and comply with recommendations and rules on the use of protective clothing and equipment you will substantially reduce your risk of allergy. If you think you are developing an allergy don’t ignore it: report it, so that it can be checked and additional protection arranged for you.

**Reducing Exposure: Animal Handling**

* Always conduct animal experiments and observations in accordance with the specified operational procedures (SOPs) for the work. SOPs define how procedures should be carried out with the precautions necessary to protect the animal, you and your experiment from harm. You are expected to familiarise yourself with them before starting work.
* Collect animals from the holding rooms only at the time that they are required for experimental work and return living animals to the appropriate room as soon as you have finished with them. Do not spend any more time in animal holding rooms or procedure rooms than is absolutely necessary.
* Avoid carrying animals in open stock cages. Transfer them to a clean, covered cage or box or use enclosed transport trolleys if available in your animal house.
* Learn – and follow – safe handling and experimental techniques. Animal care technicians will usually be keen to teach you. Gentle handling when moving a cage or picking up an animal will reduce the risk that an animal will startle and so lessen the plume of aero-allergen thrown up into your breathing zone.
* Use ventilated cabinets or other special ventilation equipment for your experimental procedures wherever these are provided. Avoid working on an open bench.
* Do not have animals in your own laboratory unless absolutely necessary. Work with live animals is only permitted in ‘Designated Laboratories’ registered with the Home Office for this purpose. Work undertaken in these laboratories must be in accordance with the University Code of Practice governing such work.

**Reducing Exposure: Protective Clothing and Equipment**

* + Special protective clothing is supplied in all the University’s animal houses and must be worn whenever you are in the laboratory areas of the animal house. Requirements may vary between facilities.
	+ Dispose of used protective clothing as directed. Do not wear this clothing outside the facility.
	+ You should always wear gloves (powder-free) when handling animals to prevent skin contact with urine.
	+ Face masks must be worn when directed by animal house staff or if you are advised to do so as an additional personal precaution by an Occupational Health Adviser.
	+ If working in your own laboratory you should wear a face-mask during all animal work unless your work is contained with a safety cabinet or equivalent.
	+ If you are responsible for your own protective clothing, keep one set of laboratory coats specifically for animal work and not for other laboratory activities. Launder these coats regularly to prevent them becoming a store for allergens! Change into a different lab coat for carrying out other laboratory work.
	+ Reducing exposure: housekeeping & hygiene measures.
	+ Keep your work areas clean. Waste materials should be promptly bagged and correctly disposed of.
	+ Bench tops and trays must be cleaned with either a detergent solution or an appropriate biocide as soon as your experiment is over.
	+ Always wash your hands after handling animals even if you have worn gloves. If you’ve been involved in high risk activities e.g. cage cleaning, working in stock rooms, have a shower immediately after you’ve finished your work.
	+ Your attention to hygiene will help protect others using the same facilities and reduce the risk of spreading infections if present in your animals. Good housekeeping helps create good science as well.
	+ Following these recommendations should greatly reduce the risk of you – and other people working alongside you – from developing laboratory animal allergy.
	+ If, despite this, you develop any symptoms that you think may be due to your work then you should contact the University’s Occupational Health Service for advice as soon as possible. Prompt action to reduce exposure can prevent allergic diseases from becoming established.

**Recognising allergy - here’s what to watch out for:**

1. If you experience **any** of these symptoms, report it!

**Eyes**: Itching; watering; redness; swollen eyelids

**Nose**: Itching; runny nose; sneezing bouts

**Skin**: Itching, cracked skin; small blisters; nettle rash; (urticaria); a ‘weal & flare’ reaction (swelling & inflammation), if scratched

**Lungs**: Coughing/wheezing, chest tightness, shortness of breath

**Eye, nasal and most skin symptoms tend to occur during work. Asthma symptoms may not occur until some hours after exposure.**

**Health Surveillance**

1. Whilst you continue to work with laboratory animals your health will be regularly monitored (health surveillance) by the University’s Occupational Health Service, usually by questionnaire, asking about symptoms of allergy.
2. You should report any symptoms that you think might be due to animal allergy to the Occupational Health Service as soon as you become aware of them.
3. If you do report symptoms, we will arrange for you to be assessed and have tests to establish whether or not you have become sensitised. We will then advise on additional precautions to enable you to safely continue with your work.
4. The earlier you report symptoms the easier it is to prevent allergies progressing. If you think you are developing an allergy don’t wait for your next surveillance questionnaire to arrive before reporting it. Contact the University’s Occupational Health Service as soon as possible. (Tel: 0161 27(5) 2858)
5. NOTE: Compliance with Health Surveillance is **compulsory**. If you fail to complete and return a surveillance questionnaire your access to animal house facilities will be suspended. To avoid problems please complete and return your questionnaire direct to the Occupational Health service as soon as possible when you receive it.

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| Policy owner: | Director of Occupational Health Service (currently Dr SA Robson) |
| Lead contact: | Director of Occupational Health Service (currently Dr SA Robson) |

**Appendix 2**

**Allergy to Laboratory Animals**

If you use laboratory animals in your research:

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| **The facts:*** Up to a quarter of people who regularly work with small mammals and insects develop allergic reactions to protein secreted in their urine, dander, or excreta. Usually this only causes annoying symptoms such as an itchy nose or watering eyes but, not uncommonly, serious diseases like asthma can occur.
* Someone who already has asthma or a history of allergic conditions like hay fever or eczema may be at greater risk in the short term, but no-one working with laboratory animals is immune.
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**Development of Allergies:**

* Allergenic material becomes airborne whenever animals move around in their cages or are handled. Minute particles of soiled bedding, skin and droplets of urine – aeroallergens – get thrown up and can remain suspended in the air for some time after. These are then inhaled or settle on exposed skin and clothing during work. In addition, many rodent species pass urine continuously. Skin contamination with allergenic material is inevitable unless gloves are worn during handling of animals or bedding.
* The development of allergic antibodies – sensitisation – appears to be linked more to peak rather than cumulative exposures, so even exposures of 1-2 hours per month can be dangerous if it involves high exposure work. Simple handling of animals counts as high exposure.

**Controlling the problem:**

* If you follow recommended work practices and comply with recommendations and rules on the use of protective clothing and equipment you will substantially reduce your risk of allergy. If you feel you are developing an allergy don’t ignore it - report it, so that it can be checked and additional protection arranged for you.

**Reducing Exposure**

**Animal Handling**

* Always conduct animal experiments and observations in accordance with the standard operating procedures (SOPs) for the work. SOPs define how procedures should be carried out with the precautions necessary to protect the animal, you and your experiment from harm. You are expected to familiarise yourself with them before starting work.

**Equipment & Protective Clothing**:

* Use ventilation equipment for your experimental procedures where these are provided to control exposure to animal allergies.
* Special protective clothing is supplied in all the University’s animal houses and must be worn whenever you are in the laboratory areas of the animal house. Requirements may vary between facilities.
* Dispose of used protective clothing as directed. Do not wear this clothing outside the facility.
* You should always wear gloves (powder-free) when handling animals to prevent skin contact with urine.
* Face masks must be worn when directed by animal house staff or if you are advised to do so as an additional personal precaution by an occupational health adviser.
* If working in your own laboratory you should wear a face mask during all animal work where specified in your SOP or Risk Assessment.
* If you are responsible for your own protective clothing, keep one set of lab coats specifically for animal work. Launder these coats regularly to prevent them becoming a stop for allergens! Change into a different lab coat for carrying out other laboratory work.

**Housekeeping and Hygiene Measures:**

* Keep your work areas clean. Waste materials should be promptly bagged and disposed of correctly.
* Bench tops and trays must be cleaned with either a detergent solution or an appropriate biocide as soon as your experiment is over.
* Always wash your hands after handling animals even if you have worn gloves. If you have been involved in high risk activities e.g. cage cleaning, working in stock rooms, have a shower immediately after you have finished your work.
* Your attention to hygiene will help protect others using the same facilities and reduce the risk of spreading infections if present in your animals. Good housekeeping helps create good science as well.

Following these recommendations should greatly reduce the risk to you - and other people working alongside you – from developing laboratory animal allergy.

If, despite following this advice, you develop any symptoms which you think may be due to your work then you should contact Occupational Health Services for advice, as soon as possible.

Prompt action to reduce exposure can prevent allergic diseases from becoming established.

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| **Recognising allergy**Early warning signs:Eyes: Itching, watering, redness, swollen eyelidsNose: Itching, runny nose, sneezing boutsSkin: Itching, cracked skin, small blisters, nettle rash (urticaria), a “weal and flare” reaction (swelling and inflammation) if scratched.Lungs: Coughing/wheezing, chest tightness, shortness of breath.Eye, nasal and most skin symptoms tend to occur during work. Asthma symptoms may not occur until some hours after exposure. If you experience any of these symptoms, report it!! Failure to obtain advice may result in the symptoms becoming worse and in extreme cases this may lead to anaphylaxis. |

**Health surveillance:**

Whilst you continue to work with laboratory animals your health will be regularly monitored (Health Surveillance) by Occupational Health Services.

You should report any symptoms which you think might be due to animal allergy to Occupational Health Services as soon as you become aware of them to prevent allergies progressing. DON’T WAIT for your next surveillance appointment before reporting it.

**NOTE**: Compliance with Health Surveillance is compulsory. If you fail to attend for surveillance your access to animal house facilities will be suspended.

**Occupational Health Services**

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