



University of Cambridge

Backing up genetically altered animals policy

Working under the Animals (Scientific Procedures) Act 1986 [ASPA] requires the responsible use of animals in accordance with the principles of the 3Rs. The production and maintenance of genetically altered animals requires authorisation under ASPA. The use of genetically altered [GA] animals has contributed significantly to medical and veterinary research.

Valuable genetically altered animals can be lost for a variety of reasons (e.g. disease outbreak in a Biomedical Service Unit [BSU], breaks between project licences) so provision should be made to “back-up” GA lines of animals. In addition it is now known that maintaining GA lines without out crossing and particularly as homozygotes, to keep colony numbers low, introduces the risk of point mutations. The introduction of mutations can impact on scientific data.

As of the 1st January 2018 this policy makes it the responsibility of all University of Cambridge project licence holders to cryopreserve key GA strains held under their project licence that cannot be obtained from a third party (e.g. commercial suppliers or other research groups). Valuable new strains that cannot be obtained from a third party must be cryopreserved within 12 months of the 1st January 2018 or their creation. University Biomedical Services Governance and Strategy [UBSGS] committee has confirmed that the costs associated with this policy must be met by the research group. However given most sponsors support of the 3Rs this should be an eligible cost included in a grant application.

The UBS Transgenic Unit within the Central Biomedical Services [CBS] facility on the Addenbooke's campus (contact Ms Debbie Drage: djd42@cam.ac.uk) can cryopreserve strains and MRC Harwell can provide storage.

MRC Harwell is able to provide a free of charge archiving service for all material accepted by the European Mouse Mutant Archive (EMMA). Researchers will still need to pay the cost of shipping their material to MRC Harwell.

Recent innovations in the handling and shipping of epididymides allow MRC Harwell to accept unfrozen epididymides as an alternative to shipping live mice prior to sperm archiving thus improving animal welfare and drastically reducing the shipping costs. Video and further information is available on the MRC website: <http://www.har.mrc.ac.uk/services/archiving-distribution>.

Worked examples:

Cost of an average embryo freeze including holding of wild type (WT) females c£3,000.*

Cost of resuscitation: c£1,000

*This cost will normally be covered by a sponsor on a grant application as 3Rs good practice and also to protect the line.

Example cost of recreating a lost complicated line.

50 IVC cages for 6 months: £15,600

6 months of 1 PhD/Post Doc unable to progress studies/work c£23,000

Delay to publish/complete work £.....

Dr M Vinnell
Establishment Licence Holder

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