

## University Court

### Minutes of Welfare and Ethical Use of Animals Committee

A meeting of the Committee was held on 25<sup>th</sup> January 2024.

Present: The Convener, the Director of Biological Services (DBS), the Named Veterinary Surgeon (NVS; online), a NACWO, the NIO, the training coordinator (NTCO), four scientists (three PIL holders, two PPL holders), the student representative, an independent member, three lay members (including Aberdeen AWERB Convener).

Apologies: Four members sent apologies.

#### 1 WELCOME

The committee welcomed the convener of Aberdeen University AWERB to the meeting.

#### 2 MINUTES OF LAST MEETING

The last meeting was held on 11<sup>th</sup> November 2023, and Minutes of the meeting were approved. All action points were addressed and completed.

#### 3 MATTERS ARISING

- **Discussion with a PPL holder on their Retrospective Review and plans for renewal in 2024.** After much discussion, the summary of the meeting requested the PPL holder to:
  - a) Resubmit the RR (retrospective review) to include more detail (and in more lay terms) about progress against the stated scientific objectives in the PPL and should also make a statement regarding animal numbers in terms of numbers generated against the percentage used.
  - b) Any completed studies should have completion reports written up and submitted as per local systems;
  - c) That the extent of back-crossing should be clarified and going forward should be done with input from facility staff with the aim of distinguishing whether harms arise from genetic background drift or treatment.
- **WEC2023\_20.** The background and progress of this application have been documented in previous meeting minutes. The applicant worked with the Convenor/DBS/UVS to re-write the application, which has now been approved by the Home Office.
- **RSPCA Lay Members Report.** The lay members found this article interesting and in response plan to visit the facility soon.
- **Culture of Care.** The importance of wellbeing specifically for animal technicians is being recognised more widely. The committee were informed of plans to survey the facility animal technicians as a starting point on improving the culture of care before discussing more widely within the university.
- **Web page.** A university public facing website detailing the use of animals in Dundee is still in

development.

*[Action for Convenor/DBS/NVS to provide a guidance document on how to complete the retrospective review form  
[Action for DBS: to share the culture of care survey with the committee and reach out to Safety Service for further discussion]*

#### 4 NACWO AND NVS REPORT ON ANIMAL WELFARE

[Standing agenda item]

- **Ongoing losses with a genetically altered (GA) line due to illness.** Analysis of records have identified that the percentage of found dead or culled due to illness, excluding pups pre-weaning, is 11% in CIRRU (colony now closed), 6% in WTBRU (imported adult animals only) giving 9% across both colonies (weighted due to slightly higher numbers to date in CIRRU). To benchmark, the expected percentage of animals requiring culls on a C57B6J background between weaning and 12 months is <1%. There appears to be a sex bias ratio for ill animals with F:M overall 1.86:1, in heterologous mice 2:1 and in homozygous mice 4.3:1, so the animals most likely to be ill are homozygous females.

It is recognised that these animals are potentially hugely important as a tool in drug discovery but it the NVS believes that this issue should be investigated due to the potential welfare impact. We anticipate that the changes made to humanise the drug handling enzymes in the liver have altered the ability of the liver to perform its normal functions for the mouse and that there is an oestrogen -or progesterone-dependent effect. If a biomarker for animals at risk could be determined that would serve the dual purpose of identifying animals who might be at risk from transport and reducing the animals that need to be culled pre- or during a study. If the animals were phenotyped, at least for liver function, this might provide such a biomarker.

This line is no longer being bred at Dundee. Animals are bred at, then imported from, a CRO (within the UK). Ideally, we would provide these data to CRO and/ or analyse theirs to have a larger pool of data.

- **Import from MRC Harwell.** 2 males from animals rederived at Mary Lyon's Centre required culling on arrival as they appeared very unwell. A post-mortem identified fighting wounds and one animal with slight malocclusion (teeth not meeting properly) but neither seemed sufficient to explain the clinical state. Further fighting was noted in the other males of the same line that had been brought in and they were separated. An investigation is underway at Harwell as well as with the courier company to understand if there are any causative factors.
- **Phenotypic animals in a GA line.** Some animals have shown additional clinical signs above those detailed in the licence protocol. An assessment of what clinical signs were phenotype related and which might be related to the C57B6J background strain (eye related issues) has been complicated by a poor breeding strategy where there has been brother x sister matings which may have spread a background defect. Further described in the standard condition 18 report below.

*[Action for DBS/ NVS to generate a report of the GA line data and consult with the affected PPLh and decisions made on how to progress]*

#### 5 UVS COMPLIANCE RELATED REPORT

[Standing agenda item]

Two **standard condition 18** reports since last WEC

- A GA line with expected haematological malignancy phenotype was displaying additional clinical signs not described in the protocol. This was reported to ASRU, with a request to keep two animals currently displaying the additional clinical signs to allow them to get to 8-10 weeks to be used. Authority to keep alive for 14 days pending an amendment was agreed. Animals were culled within the 14-day period, with no other animals currently displaying the phenotype present on the ground. The amendment was approved by WEC verbally.
- An animal was found dead on Tuesday 23<sup>rd</sup> January 2024. This was a male C57Bl6J mouse that was on a study investigating whether long-term recurrent insulin-induced hypoglycaemia causes cardiovascular dysfunction and remodelling in type 1 diabetes. The study involves control and animals made diabetic by streptozotocin (with partial insulin replacement using a small subcutaneous insulin implant), which are then exposed to a recurrent hypoglycaemic regimen (by injection with insulin) or act as saline controls. This mouse was one of the animals in Control Recurrent Saline (non-STZ, non-insulin) group. Animals receive periodic anaesthesia for echocardiogram (for cardiac assessment) and investigation of peripheral vascular function by laser doppler imaging, using iontophoresis where phenylephrine and acetyl choline (Ach) are applied to the skin within an iontophoresis ring. This animal was at week 20 of a 24-week study. Imaging is done under isoflurane anaesthesia, using a rodent specific anaesthetic system (Somnosuite). The animal was showing reduced respiratory rate during iontophoresis on Monday morning, so was recovered early. He took about an hour to come round fully (as opposed to a few minutes) but seemed to have fully recovered in the afternoon but was found dead the next morning. No identifiable abnormalities on postmortem. Suspected cause is a delayed cardiac and/ or respiratory depression due to ACh. The PIL/PPL holder and NVS in discussion about reducing the dose.
- We received a “pre-action” letter from the ASRU **non-compliance** team on 10<sup>th</sup> January relating to the incident reported on the 17<sup>th</sup> October where an animal was found dead and had not had daily checks on the previous two days due to miscommunication between researchers and unit staff.

## 6 REPORT FROM THE TRAINING COORDINATOR

[standing agenda item]

### General

Training is proceeding as normal.

### Update since last meeting

- 25 direct observation of practical skills (DOPS) assessments
- 32 Online Modules
- 3 New PIL ABC
- 4 persons on ScotPIL theory training
- Online 3Rs event on cumulative suffering on 8<sup>th</sup> February
- Necropsy Course planned for January 30/31<sup>st</sup> 2024. Fully subscribed for technicians and research staff
- PPL Holders 2023/2024 Training being developed

## 7 REPORT FROM THE NIO

[standing agenda item]

NIO is new to the role and will attend an accredited training course in February.

Objectives are to:

- Review all aspects of information provision to ensure that information is disseminated appropriately and effectively to our researchers from sources out with the University via email, SharePoint, face to face meetings, or PILh and PPLh training sessions.

- Systematic review of the literature identifying advances, developments, and implementation of 3Rs relevant to research in Dundee. To seek advice on how to approach such methods, an expert in the School of Health Sciences will be consulted.
- Metanalysis of SLS/SMed publications against the ARRIVE guidelines to review if our researchers are adhering to university policy. This will include collaboration with the University of Aberdeen and the University of St Andrews for benchmarking.
- Important analysis of breeding efficiency within backcrossing and non-backcrossing mouse colonies is underway. Understanding such data is a vital resource to share with the research and technical community via publication.

## **8 REPORT FROM THE DBS ON LICENSING MATTERS**

[standing agenda item]

A review of the 11 project licence applications and amendments submitted to WEC between November 2023 and January 2024 were summarised and the status reported.

The committee membership will be reviewed as some members are not able to meet expectations of engagement due to workload demands.

## **8 AOCB**

- The committee congratulated Biological Services on receiving the Dundee Difference Award for Outstanding Team of the Year.
- The committee were informed that there was no steam supply to SLS for a prolonged period in November/December 2023. This affected operations within the facility due to the inability to run autoclaves to sterilise caging. Although local systems were implemented as a best work around, there was a risk to the health status of the facilities. Analysis of the data showed no impact on breeding performance nor an increase in adverse welfare in animals during this period in comparison to a similar period in previous years when steam was available.
- The committee were asked whether standard templates for steps within protocols or indeed protocols themselves should be considered. The committee were in favour to reduce workload but appreciated that flexibility is required for exceptions.
- The convenor intends to attend an Aberdeen AWERB meeting this year.

*[Action for DBS/Convenor/NVS to consult with PIL/PPLh to develop standard wording templates]*

## **9 DATE OF NEXT MEETING**

25<sup>th</sup> April 2024, Dalhousie Building 1G05.