



To [REDACTED]
[REDACTED]
From [REDACTED] Named Information and Compliance Advice Officer
Date 18th May 2017
Time 2.30pm
Venue [REDACTED]
Subject CAM meeting following two mice found with fight wounds in the [REDACTED] BioBiofacility.
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Our Ref [REDACTED]

Policy-

Compliance Assurance Meetings (CAMs) are a management tool, designed to ensure Governance outside of the Act, to protect individuals, ensure due process and systems are implemented within the division of University Biomedical Services. This process will ensure the University upholds the highest standards of animal welfare and good practice relating to animal care and use.

NOTE: A CAM meeting does not replace the investigation of an incident by the Home Office. Therefore, where the local inspector deems appropriate a Home Office non-compliance investigation may run in parallel or sequentially with a CAM.

Event-

Identification of the animals:

[REDACTED]
Protocol: Protocol 4: Breeding and maintenance
Mice: Male, DOB 22/2/17
Strain: RAG2 (129/B6 background)

History:

On Tuesday 2nd May at approx. 9am, [REDACTED] was asked to look at a cage of 3 male mice in [REDACTED] by [REDACTED] (UBS Licensed Animal Technician). Two out of the three mice in the cage had fight wounds. These wounds were not fresh. Both mice were culled immediately.

These mice arrived at the [REDACTED] Biofacility on Monday 24th April from [REDACTED]. [REDACTED] and in part [REDACTED] unboxed, checked and placed these mice in a new IVC cage in the holding [REDACTED]. These three males were destined for time mating with superovulated female mice which would produce embryos for cryopreservation. The animals had a seven day acclimatisation period which ended on the 1st May. Cages in [REDACTED] were cleaned out on the 26th April but the cage housing these three mice was excluded having been placed in a clean cage on the 24th April.

[REDACTED] Biofacility records do not contain any reference to adverse effects or other health related issues in these animals when they arrived at the unit.

These mice were checked on the morning of Tuesday 25th April by [REDACTED] (UBS Support Service Supervisor - trained in basic animal husbandry). [REDACTED] carried out the morning checks in this room on Wednesday 26th, Thursday 27th, Friday 28th and on Saturday 29th April. [REDACTED] (UBS Licensed Animal Technician) carried out the checks on Sunday 30th April and [REDACTED] (UBS Trainee Animal Technician) on Monday 1st May.



These were genetically altered animals that been genotyped, the sample having been collected as a by-product of the identification process for these animals. They had been weaned at [REDACTED] into a sibling group of 3 males. They had not undergone any regulated procedures. The other box of three siblings were also transferred to [REDACTED] and there are no signs of aggression which have been detected. Aggression has not previously been a feature of this strain.

[REDACTED] asked [REDACTED] (NVS) to look at the cadavers on the afternoon of the 2nd May.

[REDACTED] found two mice had sustained moderate to severe injuries and were culled. The 3rd mouse appeared to have been the aggressor since this mouse had no wounds. The aggressor mouse was not killed.

Mouse 1:

The mouse had sustained injuries to the lower back, legs and tail. Injured areas showed loss of fur and evidence of bite wounds. Both hind feet were swollen (to at least twice the normal size) from the hock, with patchy reddish/dark discolorations from the knee joint to the foot. The tail was amputated with only a ¼ remaining. Caudal vertebrae were exposed and the tail had a blackened, dried and hardened appearance.

Mouse 2:

This mouse had sustained more severe injuries to the lower back, legs, genitalia and tail. The entire lower back was alopecic, swollen and appeared dark/reddened. Bite wounds were evident in this area as well as the other injured areas. The digits of the right foot were missing, so the foot appeared as a stump. It also appeared necrotic (darkened/blackened, hardened, dry). The right knee joint appeared reddened and swollen. The presentation of the tail in this mouse was similar to that of the other mouse. Most of the tail was also amputated with only a ¼ remaining. Caudal vertebrae were exposed and the tail had a blackened, dried and hardened appearance. The prepuce appeared mutilated, swollen and reddened and bite wounds were present around the anal region.

[REDACTED] concluded:

Fight wounds are the most likely cause of the lesions. The location and severity of the lesions rule out other possibilities such as over grooming. A review of the literature revealed an absence of records of spontaneous self-mutilation in this strain. However, self-mutilation and infection as secondary complicating factors could have worsened/influenced the progression of the lesions. The RAG2 strain has immune system deficiencies and it is possible that these also may have worsened/influenced the progression of the lesions.

In [REDACTED] profession judgement and based on the gross appearance of these lesions, the necrotic tissue lesions could have been at least 4/5 days old.

She felt it was noteworthy that:

- a) blood was not reported as having been detected in the cage;
- b) the mice had not been heard to vocalise;
- c) no change in the demeanour of the mice was detected;
- d) the lesions on the lower back in the two mice went undetected until today.

The Home Office inspector who oversees the [REDACTED] Biofacility was notified on the 3rd May by e-mail.



A Compliance Assurance Meeting has been selected as the most appropriate means of action to ensure governance and compliance and, setting processes in place to impress there is no repetition of this event.

Cams Meeting-

The history which has been gathered was agreed by all, staff were reminded that whistle blowing processes can and should be used if staff require or are having difficulties, they must feel able to inform UBS. The animal technician team has pulled together to support each other under the pressure of this incident, this was commended. Staff in the Biofacility carry out procedures during the weekend but these are neither technically complex nor time consuming procedures and were not considered to create a significant weekend burden.

██████████ had performed morning checks of the room during the dates of the incident and were remorseful that mouse fighting had been overlooked during their shifts. ██████████ explained to the group that she was in pain due to a back and arm injury which has incapacitated her somewhat and she may not have been able to check the cages as well as she should. However, ██████████ said she had not heard any sounds or seen any signs of fighting. She appreciated that her health concerns should have been raised with ██████████ (Biofacility NACWO) at an earlier stage. ██████████ felt he had let himself down by not fully checking the room, it was the last room on his rota and he said he may have been on auto-pilot and that this was the first time this had happened and he apologised. ██████████ was off sick over the period of time the incident happened but was usually the person responsible for the room in question. It was ██████████ who found the mice on Tuesday 2nd May and alerted ██████████

The daily routine is generally to swap over room checking across the Biofacility but this small mouse room and the one rat room are not currently part of this routine. The Biofacility is not considered complicated or currently overly busy. However two senior staff have recently left who according to the staff being interviewed were considered key because they had the qualifications to oversee staff and animal care. ██████████ informed the CAM that these staff would be replaced as soon as possible.

It is recognised by the University that all new staff, irrespective of the Biofacility they join, and who are entering trainee animal technician roles will not find animal handling and husbandry routines intuitive. For this reason they are provided with a significant amount of training and supervision. In this Biofacility at the current time ██████████ is devoting more of her time to being in the Biofacility to ensure oversight and assistance where required. The four staff attending the CAM said they appreciated her support.

██████████ explained that 3 mice in a cage was an optimal number to avoid fighting when male mice are co-housed. She explained that she felt the contribution of transport stress and checking not performed properly allowed a bully male to take dominance. This mouse appears to have continued to fight the other two males over multiple days, inflicting progressively worse injuries. ██████████ confirmed that the mice had been transferred into a new cage on arrival at the Biofacility along with their transport bedding which usually calms the animals down after moving. ██████████ explained that literature details nesting material, not the bedding, should be transferred.



Outcome-

The explanation of events was considered and staff concerned have showed varying degrees of remorse. It was recognised that systems in the Biofacility are robust, adequate training is in place and the risk is low. It was agreed in the light of this incident some changes could be implemented.

UBS continually review staff resources in every Biofacility. The staff in this Biofacility have received appropriate training and are considered to have attained the appropriate level of experience. All staff are taught that animal checking needs to be completed properly and efficiently. Each individual has been made aware of their own responsibilities during their training. However further support and re-training will be considered following this incident. Part of the training that is in place covers how to health check animals during morning checks but for this incident to have happened means that this was not being completed with due diligence and as a result animal welfare, which is dependent on morning checking being undertaken with due care, was severely compromised.

The Home Office Inspector, [REDACTED] met with the NACWO earlier in the day and during conversation explored stocking and staffing levels and based upon those conversations it was concluded that staffing levels were adequate and not a factor in events that occurred. It was indicated to the Inspector that although some posts in the unit were not currently filled (deputy unit manager, senior surgery technician) the staff available for the tasks in hand were adequate for need despite not being fully staffed. Specifically for the time period in question it was noted by the NACWO that each room was fully staffed throughout although the staff members may have been different/rotated over that period. There was no indication from the NACWO that the unit was under pressure from understaffing.

[REDACTED] complimented training procedures and suggested that all rooms should undergo cross over checks and that minimum time to undertake processes should be established and these should inform the weekend duties timetable.

Actions-

Checking of rooms and animals can become monotonous, therefore management of room checking, varying staff resourced into areas will help motivation, alternating staff in rotation of checking rooms will be implemented in all rooms in the Biofacility.

Weekend rotas will be reassessed and time management of duties taken into account to ensure animals are checked with the appropriate minimum time per cage.

NACWO - [REDACTED] to address a weekend rota/timetable and time management.

Prompt recruitment to replace missing senior technician presence in the Biofacility to strengthen the oversight of animal checks and other husbandry procedures. As with all UBS Biofacilities staffing will be kept under review but, the absence of senior staff should not affect the efficiency and effectiveness of trained and experienced staff to check animals appropriately with correct attention to detail.

Deputy Director/NTCO - [REDACTED] will review resource considerations with senior UBS management.

Re-training of key animal care staff will be undertaken to ensure that appropriate and thorough morning checks are completed. This will assure management that full animal checks are performed which entail all cages on every rack are removed, checked properly and replaced every day. The care



Compliance Assurance Meeting

and attention provided to newly moved animals should be a priority in re-training and an amendment to the Animal Transport SOP will be undertaken.

NACWO - [REDACTED] to re-train staff involved highlighting newly moved animals.

NICSO - [REDACTED] will oversee amendment to the SOP.

CC: [REDACTED] Home Office Inspector