



Home Office

PPL Standard Condition 18 Notification Form

Please use this form to notify the Animals in Science Regulation Unit (ASRU) of procedural-related adverse effects that have exceeded or are likely to exceed the severity limitations or controls described in the project licence. ASRU will use this information to determine whether any further action is required.

Do not use to report:

- adverse effects that are due to non-procedural issues;
- potential non-compliance (report by other means);
- issues without adverse welfare consequences.

If you are in doubt whether or not you need to fill in this form, please contact your assigned Inspector.

Please clearly title your document: **'ASRU establishment name_PPL number_PPLh surname_date_sc18'** and send to your Inspector (e.g. using cjsm) with the subject heading 'PPL SC 18 Notification PPL [Number]

Establishment Licence name	University of Cambridge
Establishment Licence number	X81BD37B1
Name of PPL holder	Ole Paulsen
PPL number	PP0499088
Protocol no	10
Protocol title	In vivo behaviour and neural recording (head-restrained)
Severity classification	Moderate
1. Date of incident	11 th of April, 2023
2. Species	Mouse

3. Brief details of study and how the limits or constraints have been breached	At the start of study, surgery is performed to make craniotomies and implant a holder onto the skull bone. Surgery takes 2-3 hours, during which isoflurane anaesthesia is maintained. Post-operative checks are carried out for five days or longer if required before animals are trained for the behavioural experiments. The animal in question was lethargic and cold the first day after surgery with no apparent external injury, and was given a heat pad, additional analgesic and boosted diet to aid recovery. The second day animal was more active but due to slower recovery than others from the same surgery batch, a more thorough post-operative check was completed – the researcher noticed the mouse had a scrunched and possibly bleeding front left paw. Since he was still using it for eating and walking and it was not discoloured, upon consulting an animal technician, a note was made for further observation but no action taken yet. The animal was given analgesic as per standard post-operative care procedure and did not seem to be experiencing pain. The next day the paw was noticed to be necrotic and Schedule 1 was carried out immediately. The animal did not look in pain. The post-operative check sheet is attached to the email.
4. Have you taken advice from the Named Animal Care and Welfare Officer/Named Veterinary Surgeon/others?	Animal technicians at the facility were consulted throughout the process. After noticing the necrotic paw, local NACWO, NVS and the Senior Surgery Technician were contacted, and possible reasons for the incident and ways to prevent it in the future were discussed. A more in-depth technical discussion was held by the researcher and their project supervisor.

5. Cause of Problem, if known	Exact reason is unknown. No other external injury, apart from the necrotic paw, was found during gross post-mortem. A potential reason for necrosis might have been a burn from the heat pad during surgery. The heat pad has been changed recently and in order to maintain the same body temperature, it may have unknowingly heated up more. However, it is a homeothermic system and should not reach such temperatures, given that a rectal probe was used. Animals in the same or previous surgery batches experienced no similar injury. It is also unclear why only one paw, rather the entire body resting on the pad, would be affected. Animal paws are not clamped or otherwise restrained during surgery. Both paws looked healthy during immediate recovery in the incubator and on the first day of post-operative checks. Other reasons could include injury in the home cage and subsequent gnawing on the paw by cage mates, who were seen clustered around this mouse often. Having a harder time recovering from the surgery, he may have not defended itself. Other animals from the same surgery batch have recovered well. The researcher performing surgeries was Urte Beatrice Baublyte (PIL I29829152). Training records are attached in the email.
6. Action that has been or will be taken <i>(For example, formulation of drug changed, supportive treatment given, study design modified). If no action needed, indicate why (for example, none required as study has been terminated and will not be repeated)</i>	The heat pad will be wrapped in paper for next surgeries to prevent direct contact between its surface and the animal. Special care will be taken to notice whether the surface may be getting too hot, as well as additional attention given to paw condition during post-operative checks. The Senior Surgery Technician and researcher's project supervisor have agreed to observe the next round of surgeries to identify potential causes of the incident.
7. Reported by	Ole Paulsen

8. Date	13 th of April, 2023
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*****For official use*****

Inspector's comments and recommendations:

Comments and recommendations	
Inspector name	
Date	

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