

**ANIMAL WELFARE AND ETHICAL REVIEW BODY**

**Minutes of the meeting held on 20 July 2023**

Present:

[REDACTED]

Apologies:

[REDACTED]

In attendance:

[REDACTED]

**1. Minutes**

*Agreed:* That the minutes of the meeting held on 22 June 2023 were approved subject to correction of some typographical errors.

**2. Applications for New Project Licences**

**2.1. [REDACTED], The regulation of whole-body metabolism across the life course**

*Considered:* A completed AWERB form, PPL application, and minutes from Local Management Committee Meeting.

*Interviewed:* [REDACTED]

*Committee discussion:*

- Statistical sign-off had not been given prior to the application coming to the AWERB meeting.

*Discussed with applicant:*

- The experience of a mouse tethered to the telemetry equipment was discussed and the researchers explained how the mice can rear and groom naturally even when attached.

*Revisions:* It was explained to the applicant that the committee had provided comments to the Secretariat prior to the meeting and while some would be discussed in the meeting, the list below includes all the comments whether they were raised in the meeting or not.

- Please ensure that statistical input and sign-off is given before this application is submitted to the Home Office. The committee noted that this application had missed some deadlines which are in place to ensure that all relevant sign-off is given prior to an application coming to an AWERB meeting. They ask that in future deadlines are adhered to.
- Please check that the numbers on the Cat A form match those in the PPL form.
- There are a number of typographical errors which while they do not change the meaning of the text would benefit from being corrected.
- Page 28 - For intracranial injection you mention AA but do not say 'in cannulated mice' - so surely you cannot do these injections in conscious mice? Same for the other protocols. Please revise.
- Page 55 - Under "What are the humane end points...." the weight loss is 20% or 25% in obese animals. Please clarify why this is so.
- Page 62 - Under "Why is each animal....." The last sentence is incomplete.
- Page 87 - When CCK/GFRALmis mentioned there is no indication of what these refer to. This occurs multiple times thereafter with different types of neurone. The first time each appears it would help if the full name of the neurone is given.
- Page 115 – As above, for AgRP neurones.
- Page 144 - Do you not expect any adverse effects with influenza? Also you say doses of e.g. LPS will be limited but one option is to induce septicaemia so would this not make the animals more ill? How do you define septicaemia?
- Page 166 - It would be useful to know what the designer drug CNO refers.
- Page 176 - Under "what are the humane endpoints...." Starring coat appears twice.
- Page 186 - Under "Describe the procedures ...." It is not clear whether the list given refers to individual doses or whether they refer to multiple injections for each type of procedure. Please clarify.
- Page 232 - There are no answers given to the questions "Why do you intend to re-use the animals?" or "What are the limitations...."
- A number of comments were made regarding your Non-Technical Summary which are listed below. Please update your NTS based on the comments and send it to the following lay members for their review  
[REDACTED]  
[REDACTED]
  - Page 2 - "See action plan" - the NTS needs to stand by itself, since it gets posted on the appropriate website, so it can't refer to other sections of the application, which don't get posted.
  - Page 2 - You may wish to delete 'overarching' (as fewer words adds to clarity). You may wish to delete the sentence "Thus, the

Objectives run in parallel and each feeds into the other (see action plan)." as it adds nothing to answering the question and the NTS should not reference material that cannot be accessed by the lay public.

- Page 3 - might 'metabolism' require a concise explanation for lay reader?
- Page 3 – “Our laboratory is well placed to make a major impact on understanding the brain networks that control whole-body metabolism, including the physiological regulation of energy intake and expenditure, as well as the responses to homeostatic challenge. We have available the necessary models, tools and expertise” has no relevance to the question asked - perhaps remove?
- Page 4 – “Our techniques are minimally invasive and we need far fewer experimental animals than in the past in order to progress knowledge” does not seem relevant to explaining why you are using the types of animals and your choice of life stage - perhaps remove from this answer?
- Page 4 - Explain why... section: "introduction of the human genes" - does this get explained somewhere in the NTS? It may be beneficial to briefly explain what this means.
- Page 4 - I don't think that the animal experience is fully represented in the "Typically what will be done to an animals used in your project?" section. Especially given the extent of the licence. Please add in further key steps, such as food restriction and also infection with flu, administration of DSS, use of optic fibres, tiny camera lenses attached to the mouse's head.
- Page 4 - "The transgenic mice we breed tend to grow and behave in the same ways as normal mice, though occasionally they may be a little fatter or thinner. Normality is very important, because if a mouse is strikingly different or behaves abnormally, it is unlikely to be very helpful in understanding physiology. Thus, we try not to do anything that will make our mice unwell, experience pain or behave unusually, since this would mask the things we are trying to study." - though interesting you may wish to consider either removing this or moving it toward the end of the paragraph. This is because it is explaining what you will NOT be done to the animals when the question asks what WILL be done to the animals. Given the NTS is short and should be concise it might be better to get straight to the answer?
- Page 5 - expected impacts section: this section mentions surgery, which doesn't appear in the "what will be done" section on page 4 - and how often is "often"? Please update the application.
- Page 6 - "It is impossible to study appetite, body-weight regulation, circulating factors or responses to drugs in anything other than a normally behaving mouse." - I see the intention here but the sentence is perhaps untrue - given one could presumably study this in any mammal? Perhaps substitute animal for mouse and explain why mice specifically in one

sentence? This statement appears again at the bottom of page 7 of 232.

- Page 6 – “organotypic cultures” is slightly technical for a NTS - you might wish to delete the clause "such as cell or organotypic cultures" as it is sufficient to say "There are no suitable alternatives that allow the study of physiology and behaviour."
- Page 7 – “What steps did you take during the experimental design phase to reduce the number of animals being used in this project?” - Please explain briefly what a power analysis is for a lay reader.
- Page 7 – “What measures, apart from good experimental design, will you use to optimise the number of animals you plan to use in your project?” - CLAMS & Phenomaster don't mean anything to the lay NTS reader, (I note that 'Phenomaster' is explained in the "how will you refine" section below), and the second half of this paragraph, beginning "To validate", but it needs clarifying.
- Page 8 – “just as children who suffer with allergic reactions” - perhaps needs an extra word or rewording - similar to children perhaps?
- Page 8 - The section describing refinement, though detailed, is very clear and on my reading both interesting and comprehensible to the lay reader - the detail is worthwhile as it really makes the case for refinement in a way that is easy to understand. For instance - ' To do this we breed mice that have so-called “designer” proteins expressed in just a single cell type. The designer proteins lay dormant and the mice behave as usual. But, by then giving the mice a “designer” drug or by shining a light of precise wavelength through an optic fibre, we can activate or inhibit specific brain cells selectively, while studying changes in the mouse’s behaviour or physiology.'

*Outcome:* The study was given provisional approval based on the applicant making the changes/clarifications listed above to the satisfaction of the Chair/AWERB.

## 2.2. [REDACTED], Understanding the role of systemic inflammation in cardiovascular disease

*Considered:* A completed AWERB form, PPL application, and minutes from Local Management Committee Meeting

*Interviewed:* [REDACTED]

*Discussed with applicant:*

- Minor clarifications were asked of the applicant which were included in the required revisions below.

*Revisions:* It was explained to the applicant that the committee had provided comments to the Secretariat prior to the meeting and while some would be discussed in the meeting, the list below includes all the comments whether they were raised in the meeting or not.

- Page 22 - Only 200 mice used in breeding protocol, 40 per year? Will most of the work be performed on purchased mice?
- Page 23 and 30 – Please seek advice from the Named Persons in the BSF if more detail is needed in the “Which general types or strains will you be using and why?” section.

- Page 30 - Please seek advice from the Named Persons in the BSF if “appropriate device” is adequate or if a more specific description is needed.
- Page 32 - Protocol 2 - Step 2 - glucose and insulin may be administered i.p. or orally for tolerance tests - what's the rationale for each route and the preferred route? Would oral be via gavage? If so what are the adverse effects? Also elsewhere in Step 6 oral route mentioned, and it is unclear if this is gavage.
- Page 35 - Is obesity/weight gain also not expected? What about insulin resistance, blood pressure? Same for protocol 3. Please update the application accordingly.
- Page 36 – please include a reference for the Morton & Griffiths scoring system.
- Page 50 - Do you mean floating vertically, or horizontally?
- A number of comments were made regarding your Non-Technical Summary which are listed below. Please update your NTS based on the comments and send it to the following lay members for their review

[REDACTED]

- Page 4 – please reword PPL as the acronym may not be meaningful to the average lay reader.
- Page 6 - "Blinded" needs some explanation in the "what steps did you take..." section. This section may be more detailed than necessary, anyway, otherwise the NTS was very clear.
- Page 6 - "minimum number of animals whilst ensuring results are statistically significant" – please check the phrasing as this implies you will keep adding animals until  $P < 0.05$ .
- Page 6 - in vivo and ex vivo are often used in the NTS but could be considered technical terms; given the excellent rendering of technical to lay language throughout the NTS you may wish to consider altering these terms to 'animal studies' and 'alternative non-animal experiments' or something similar.
- Page 9 – “What experience do you have of using the types of animals and experimental models stated in this licence application?” – there are some brackets missing in this section.
- From the main part of the PPL you explain that the work will examine sex difference by, though focussing on the male for standardization reasons, also examining female mice. I did not see this mentioned in the NTS and wondered if you might wish to include a line on that if possible somewhere as it may be of interest to the lay public?

*Outcome:* The study was given provisional approval based on the applicant making the changes/clarifications listed above to the satisfaction of the Chair/AWERB.

### 3. Applications for Amendments to Project Licences requiring full committee review

**3.1. [REDACTED], Early safety assessment, investigatory and efficacy studies**

*Considered:* A Home Office amendment summary sheet and highlighted PPL document.

*Interviewed:* [REDACTED]

*Committee discussion:* • The amendment is for additional availability.

*Discussed with applicant:* • The applicant was asked about the publication process given the work is carried out for sponsors. The applicant explained that they always try to publish where possible, and whilst it can be more difficult due to confidentiality, once the compounds are being used in clinics they will look to publish the data and methods where they can.  
• The type of sponsors working with the applicant was discussed and what would happen if the university or animal facility did not want to be associated with a specific sponsors. The applicant explained that should this issue arise they would discuss it openly with staff at the animal facility.

*Revisions:* None were required.

*Outcome:* The amendment for additional availability was given approval.

**4. Retrospective Assessments of Project Licences requiring full committee review**

**4.1. [REDACTED], New Therapeutic Approaches for Inflammatory Joint Disorders**

*Considered:* A completed Retrospective Assessment form.

*Interviewed:* [REDACTED]

*Revisions:* • Question 9 – please remove the reference to Inflammatory Bowel Disease as this relates to another licence.  
• Question 13 – please update the numbers in the table to reflect those animals requested for use and the number of animals used on each protocol.

*Outcome:* The Retrospective Assessment has support from AWERB for submission to ASRU subject to the revisions being made.

**5. Report on licences processed from 07/06/2023 to 06/07/2023**

The following amendments were approved by the executive committee.

**5.1. Amendments to Project Licences**

[REDACTED], Glucocorticoids & Obesity & Diabetes  
[REDACTED], Immune Cross-Talk Between the Oral & Distant Mucosal Barriers  
[REDACTED], Treatment of Short & Long Term Outcomes of Viral Lung Infection

**5.2. Amendments to Project Licence [REDACTED], Breeding and Maintenance of Genetically Altered Rodents**

[REDACTED] Creation of CaR<sup>R62A/R66A</sup> Mouse Line Using CRISPR

**6. Update on applications outstanding from previous meetings and upcoming Project Licence applications**

6.1. The committee were provided with a document showing the status of applications considered previously and those pencilled in for future meetings.

**7. NVS report**

7.1. The March 2023 report mentioned pheasants and it was queried what type of research the pheasants are used in. The NVS explained that the pheasants are used in respirometry research. The animals are placed on treadmills and their breathing is observed. After the research the birds are returned to the supplier.

**8. Any other business**

**8.1. AAALAC accreditation**

As part of the submission to AAALAC for accreditation, the animal facility will be visited by the end of the year.

**8.2. Lay members leaving**

[REDACTED] is leaving AWERB after being a long-standing member. The Chair thanked [REDACTED] for his service and attention to detail, and expressed that [REDACTED] will be missed. [REDACTED] is also stepping down after the upcoming 'away day'. [REDACTED] will be greatly missed for his engagement with all areas of AWERB including his attendance at RSPCA lay member's forum meetings, which he has attended annually since they were introduced apart from one.

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**The next meeting will be on 21 September 2023 at 10am-12.30pm.**

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**Dates of meetings for the 2023/2024 academic year are:**

21 September 2023  
19 October 2023  
16 November 2023  
14 December 2023  
25 January 2024  
22 February 2024  
21 March 2024  
25 April 2024  
23 May 2024  
20 June 2024  
25 July 2024

August break

**Dates of meetings for the 2024/2025 academic year are:**

19 September 2024

17 October 2024

14 November 2024

12 December 2024

30 January 2025

27 February 2025

27 March 2025

24 April 2025

29 May 2025

26 June 2025

31 July 2025

August break

**Dates of meetings for the 2025/2026 academic year are:**

25 September 2025

23 October 2025

20 November 2025

18 December 2025