

ANIMAL WELFARE AND ETHICAL REVIEW BODY

Minutes of the meeting held on 14 December 2023

Present:

[REDACTED]

Apologies:

[REDACTED]

1. Minutes

Agreed: That the minutes of the meeting held on 16 November 2023 were approved, subject to correction of a typographical error.

2. Applications for New Project Licences

2.1. [REDACTED], Type 2 inflammation in health and disease

Considered: A completed AWERB form and PPL application

Interviewed: [REDACTED]

Discussed with applicant:

- The applicant explained more about the sudden death of mice and the steps in place to minimise this. It is a feature of the disease in humans and the mouse model. They try to calibrate the dose of infections and time when they take tissues for analysis to try to avoid unexpected loss.

- The description of breathing difficulties in the project licence application does not accurately represent what actually happens. The wording in the licence will be updated to reflect that mild breathing difficulties may occur.

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.

- Title - Is it possible to rethink the title so it can be understood by a lay reader - specifically it is not clear what "type 2" inflammation is. If there was a way to express, in simple non-technical language, what the distinctive characteristic of type 2 inflammation is then rather than just state type 2 that would be a great help in communicating the nature of the project.
- The committee thank you for a very clear presentation. The lay members noted that some of that information could be added into the NTS to make it clearly for a non-scientific audience.
- Please can you check that the number of animals you have requested per protocol add up to that written in the AWERB Cat A form, which is the one that is signed off internally.
- As discussed in the meeting, please update the section in the NTS on page 4 where you discuss breathing difficulties. Based on what you described in the meeting, AWERB suggest the wording "minor laboured breathing" can go on for 24 hours.
- Again, as discussed in the meeting with the statistician, you may want to add a line of text into the question "how do I decide group sizes" about mortality.
- Pages 44, 68, 95, 106, 118 - Can you explain why some of the animals that approach the moderate severity limit will be culled? Do you mean they will be culled at the upper end of the moderate severity limit?
- 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
 - I felt the NTS needed to be a bit more clear that the mice will be given a moderated diet containing substances that may cause adverse effects.
 - Page 2 - Under aim of project, it is not entirely obvious what is distinctive about this 'type 2' form of inflammation. Is it just a type of response specific to helminth worm infection? And is the allergy mentioned specifically allergy to worms? It would be good to clarify this for the lay reader.
 - Page 4 - You don't tell us **how** the mice will be infected, and/or exposed to an allergen, and I'm not clear on page 5 **how** you are looking at the immune response etc. Is what is done to the mice simply blood samples, or does it include other interventions
 - Page 5 - The main paragraph of the "Expected impacts" paragraph reads as though it has been lifted from elsewhere rather than written with non-technical readers in mind. It has

too many technical terms for me to list, and gives too much detail for the NTS, which is intended for the lay reader. Up to this point, the NTS has been very clearly and appropriately written.

- Page 5 – AWERB thank you for the clarification in the meeting regarding the sudden death of animals with no overt warning signs or evidence of suffering. The group were reassured with the explanation that you calibrate the dose of infections and time when you take tissues for analysis to try to avoid unexpected loss. You also explained that this can be a feature of the human disease. Perhaps this can be included briefly in the NTS.
- Page 6 - Under "replacement" it would be helpful to explain: in vitro, in vivo, murine; and on page 7: microbiota, blinding.
- Page 8 - The two central paragraphs under **Refinement** are again full of terms that need explaining, either because the lay reader will not have any sense of what they mean (e.g. hepatosplenic) or because they have a specific meaning in this context (e.g. challenge). And unless I've missed something, this is the first point at which **S.Mansoni** makes an appearance.

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], Development, Optimisation and Validation of Small Animal Imaging.

Considered: A Home Office amendment summary sheet and approved licence containing the amendments.

Interviewed: [REDACTED]

Committee discussion:

- The Chair asked for clarification on why the amendment had been submitted by the Named Persons two days before the meeting. It was explained this was to ensure work on the licence was not delayed while the amendment was being considered.
- The committee recognise the move to this type of work in the research community and the lack of studies looking at the effect of anaesthesia on the blood-oxygen-level-dependent (BOLD) signal, the method used in functional MRI.

Discussed with applicant:

- Given the skull thinning and craniotomy the applicant was asked by this would not be considered as a severe level of suffering rather than moderate. The NVS provided input on the procedure in terms of surgical pain. The applicant explained that the craniotomy is already on the licence and they are wanting to do this while animals are awake.
- The rationale for looking at the differences between awake and anaesthetised animals is that humans are not anaesthetised during

imaging, therefore to make animals studies be more translatable the effects of the anaesthesia need to be investigated.

- Revisions:*
- Information regarding how you will recognise and manage stress during head fixation in the awake animals.
 - Consider the use of a positive reward after head fixation as raised by the NVS, such as condensed milk.
 - Making it clear that the reason for the amendment is to be able to relate animal studies to those in humans where anaesthesia is not used during imaging, should there be no differences between awake and anaesthetised animals. The committee recognise that studies on the effects of anaesthesia on the BOLD signal for instance are needed.

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

4. Report on licences processed from 01/11/2023 to 28/11/2023

The following amendments were approved by the executive committee.

4.1. Amendments to Project Licences

[REDACTED] The Long Term Effects of Developmental Hypoxia on Cardiac Function

[REDACTED] Molecular Basis of Infection-Induced Sickness Behaviour
[REDACTED], Dynamics in Tissue Mechanics, Gene Transcription & Signalling
During Tissue Formation & Regeneration

[REDACTED] Understanding Gene Function in Cardiovascular Disease

4.2. Applications for Category B work

[REDACTED], Molecular Control of Organ Regeneration

4.3. Applications for Category C work

[REDACTED] Ileum Practical: BIOL 20932: Continuation
[REDACTED] Frog Nerve-Muscle Preparation: Physiology Research Skills Module, 2nd Year UG Students

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

- 5.1. The committee were provided with a document showing the status of applications considered previously and those pencilled in for future meetings.
- 5.2. An application that AWERB considered at the July 2023 has now been granted by the Home Office.

6. Any other business

6.1. Workload Allocation Model

The Faculty of Biology, Medicine and Health are going to acknowledge being a member of AWERB in their Workload Allocation Model. The Chair hopes that other Faculties will also take this up in the future.

6.2. AAALAC

The inspection seems to have gone well and it will be considered at a meeting in January where senior investigators present the case.

6.3. RSPCA Lay members forum

The lay member who took part said it was extremely useful. Slides will be circulated once received from the RSPCA.

6.4. Animal research debate

Held on 28 November 2023, the debate took place and was well received. Those who attend said it was very interesting.

6.5. Teams rather than Zoom

A discussion took place on if meetings should be moved back to being face-to-face, but the general feeling was that the regular meetings should remain online and the 'away days' should remain as being held face-to-face.

Meetings in the future will take place on Teams rather than Zoom.

6.6.

Although not present at the meeting, thanks and well wishes were given to [REDACTED] who is leaving the University.

6.7.

[REDACTED] is sadly leaving us and his input and presence will be missed.

The next meeting will be on 25 January 2024 at 10am-12.30pm.

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

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