

**ANIMAL WELFARE AND ETHICAL REVIEW BODY**

**Minutes of the meeting held on 21 September 2023**

Present:

[REDACTED]

Apologies:

[REDACTED]

In attendance:

[REDACTED]

**1. Tom Whipple from the Times**

Tom Whipple from The Times observed the meeting as part of the Podcast he is planning. Applicants and members present agreed to be recorded with a view to audio snippets being used as part of the Podcast.

**2. Minutes**

*Agreed:* That the minutes of the meeting held on 20 July 2023 were approved.

**3. Applications for New Project Licences**

**3.1. [REDACTED], Brain Network Changes in the scPCP Model of Schizophrenia**

*Considered:* A completed AWERB form and PPL application.

*Interviewed:*

[REDACTED]

*Discussed with  
applicant:*

- The dose of psychedelics used in the animals. This is high enough to induce head twitching which the researchers know means that it is having a full effect on the receptors of interest.
- Translatability to Schizophrenia in humans. The researcher explained that they are looking at symptoms not a direct translation of the disease, and they can model memory loss in a way that matches really well onto humans.
- The researcher will contact the NACWOs if he wants to learn more about the play pens.

*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: "the scPCP model" is technical - could this be rendered into simpler language as per NTS guidance? Such as "models of".
- 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 approval

[REDACTED]

- The NTS is written in an accessible language for the lay reader (thank you!), it would be improved by being much more concise generally and some explanation of some points as listed below.
- The first paragraph in "what will be done to an animal" could be lost in my view.
- Page 3 - I think the line "explore how drug treatments can effectively normalise brain function and behaviour" probably needs to be rephrased as if we know they normalise brain function and behaviour, why the need to study them?
- Page 3 - Under why is it important to do this work, something from your later paragraph on P19 would be good in the NTS: Schizophrenia affects approximately 24 million people (0.32%) worldwide (0.45% of adults). It is frequently associated with significant distress and impairment in personal, family, social, educational, occupational and other important areas of life. People with schizophrenia are 2 to 3 times more likely to die early than the general population (by c.10 years) due to suicide and/or physical illnesses, such as cardiovascular, metabolic, and infectious disease. And from P20: there are no effective treatments for the cognitive symptoms of schizophrenia.
- Page 3 - The phrase "preclinical markers" would benefit from being explained briefly for the lay audience, as with "functional readouts" on page 4.
- Page 4 - I think you need to explain what you mean by "Our rodent model of human brain disease is established in adult animals".

- Page 5 - Is "in rat" correct or do you mean "in rats" or "in rat models"? Mice is plural yet rat is used in singular though not consistently?
- Page 5 - It might be helpful to the lay reader to explain in the NTS that PCP and psychedelics are all Class A drugs controlled under the Misuse of Drugs Act, but that appropriate permissions have been obtained.
- Page 5 - Will the animals when given repeated doses of PCP (or any of the psychedelics) display any signs of addiction?
- Page 6 - in 'psychedelic drugs', this is quite dense, and reads as if it may have been lifted from a presentation intended for a more technical readership, particularly in the latter part of the paragraph.
- Page 7 – thank you for setting out the expected impacts so clearly.
- Page 7 - The animals will have their food restricted every day for 7 to 10 days and that will result in a 15% weight loss which will then resolve when free-feeding recommences? How long will it take to resolve?
- Page 8 - Under replacement in the NTS, you might add that in vitro approaches may inform the in vivo work and even screen for potential pharmacological interventions prior to their testing in animals. (from P25).
- Page 9 - 9. in experimental design, "experiments with several factors" – this is very clear but probably more detailed than it needs to be.
- I couldn't find a reference to any differential use of male and female animals in the study. Can you clarify?
- It seems that these animals will be having quite a lot of injections. Will they be restrained or can the injections be delivered in a less stressful way?

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

**3.2.** [REDACTED], Can We Modify Severity of Inherited Cardiac Conditions? A Study on Novel Treatments & Environmental Factors That Modify The Severity of Inherited Cardiac Conditions

*Considered:* A completed AWERB form and PPL application.

*Interviewed:* [REDACTED]

*Discussed with applicant:*

- The applicant was asked about how dangerous the arrhythmias are as the first paragraph implies they are the leading cause of death in young adults, but the mice tolerate them well. Or, is it the cardiomyopathies that represent the main burden of fatality?
- For diet, what is the link between fish oil and improved dilated cardiomyopathies? The researcher explained they have some preliminary data that they want to explore more in this project licence.

*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 38 - Can you explain to me as a lay person why heparin is given in every protocol?
  - Page 76 - This sentence needs a number adding to it throughout the license: "For animals that require more than "X" administration a day we will utilize mini osmotic pumps inserted subcutaneously if animals have IP telemetry devices or intraperitoneally if animals do not have IP telemetry devices."
  - Page 93 - "Only one root will be utilised in each animal" appears throughout the license. Should be "only one **route**".
  - P122 and 137, A few answers missing - "No answer provided". Please update these to include answers.
  - What are the maximum number of times a mouse can undergo general anaesthetic?
  - Page 213 - How can you be sure one of the methods by which you expose the animals to pollutants - injection - sufficiently mimics what happens in the real world to justify it? Please can you include information on if other methods will be used.
  - I couldn't find a reference to any differential use of male and female animals in the study. Can you clarify?
  - 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 approval
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- Writing a clear NTS is a second language is an achievement, and there are only small typos/minor grammatical errors to be corrected.
  - I do feel that it is helpful to lay readers to know that the animals go through minor procedures such as ear and tail clipping, hair sampling, mouth swabbing in the 'what will be done to the animals' section of the NTS.
  - It might be good to add in refinement in the NTS that all cage enrichment will have adequate size entrance holes to avoid risk of skin catching/rubbing following implantation of the telemetry device/osmotic pumps and mice will be allowed to recover for at least 7 days after implantation of telemetry devices.
  - Page 3 - In particular, there is a need to understand the role of diet, systemic inflammation and environmental pollution in the modulation of severity of genetic cardiac conditions.' - this is not an aim as such so could be deleted?
  - Page 3. in ***why is it important?*** There is a typo in line 4 – you for young
  - Page 3 - "(this is called variable penetrance)" - as variable penetrance is not repeated elsewhere as far as I can see delete from NTS?

- Page 3 and 4, The benefits are listed as "will" which suggests you know this is guaranteed and "could" which suggests a possibility. Do you mean to say that the project will definitely produce important benefits for patient management and will produce new treatments? If not guaranteed perhaps rethink use of will?
- Page 4. in **short term beneficiaries**. There are a couple of typos – line 3 – singular or plural? Line 6 if for of
- Page 4. in **medium long term**, again: plural (findings) or singular (has the potential) [there are a number of instances where singular verbs link to plural subjects, and vice versa – I'll not list them from now on, but please check for these].
- Page 5 – “pathophysiology” is slightly technical - a simpler term?
- Page 5 – “cardiomyopathies” - again this is technical. Could it be defined or simplified for NTS?
- Page 6. first paragraph line 3, asses for assess
- Page 6. final two paragraphs, associated **with** overgrooming interaction with **peers**
- Page 7. in **expected severities**, as for is ....expected to be mild, withing for within the moderate severity boundary
- Page 8. in **non-animal alternatives**, “cardiomyocytes” – not a term the lay reader will recognise or understand – you explain it in the next paragraph, so you can simply shift the explanation
- Page 10 - This sentence doesn't make sense: "Over the last licence we established general anaesthesia hugely decrease the inducibility of adrenergically driven arrhythmias and these need to be studied in conscious animals"
- Page 10 - how will you know if pain is uncontrolled?

*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. Cat B application (for information only)

4.1. [REDACTED]

*Considered:* A completed Cat B form.

*Committee discussion:* • The proposal has been reviewed by the NVS and NACWOs and the executive team in the BSF went through any points raised with the applicants prior to approval being given.

#### 5. Report on licences processed from 07/07/2023 to 31/08/2023

The following amendments were approved by the executive committee.

##### 5.1. Amendments to Project Licences

[REDACTED], Pathology & Treatment of Orphan Diseases  
[REDACTED], The Neuroscience of Circadian Rhythms in Health & Disease

[REDACTED], Understanding the Role of the Body Clock in Behaviour & Physiology

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

[REDACTED] #1 Creation of IL-1b mNeonGreen Reporter Mouse Line Using CRISPR

[REDACTED] #2, Creation of IL-1a mScarlet Reporter Mouse Line Using CRISPR

**5.3. Application for Cat C work**

[REDACTED] Spinal Cord Histology Practical for Human Sciences EDM (Undergraduate Lab)

**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 committee were provided with reports from June, July and August. No queries were raised. The vet explained what red leg was and that it is not uncommon.

**8. 3Rs AWERB subgroup report**

- 8.1. The committee received the minutes and papers from the most recent 3Rs AWERB subgroup meeting. No comments or questions were raised.

**9. AWERB/BSF events**

- 9.1. The 3Rs symposium was a great success. Over 100 people attended and the outstanding quality of the posters was commented on.

**10. Any other business**

**10.1. Membership on AWERB**

[REDACTED] would like to join AWERB. The Secretary will start the process of induction.

Lay members are needed for the committee. If anyone has any ideas they should speak with the Chair and/or Secretary.

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**The next meeting will be on 19 October 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