

2.4. The Committee discussed the Communications and Engagement Strategy document provided by [REDACTED]. [REDACTED] will discuss publishing the document on the website with [REDACTED]. An implementation plan will be drawn up based on the Strategy being accepted by AWERB.

3. NW region AWERB hub

3.1. The NW region AWERB hub will be taking place on 14 June 2018. Items for the agenda have been requested.

4. Report from the NC3Rs Regional Programme Manager

4.1. There is an experimental design workshop on 9 May which is for AWERB committee members from universities with an NC3Rs regional programme manager, and new panel members to UK funding bodies.

4.2. 18-20 July is the NC3Rs summer school, taking place at the University of Manchester, and for which there will be four Manchester PhD students invited to attend, in addition to the first year NC3Rs funded students from across the UK. Students in Manchester have been asked to complete an application form to be considered.

4.3. The webinar on 27 April was on refined mouse handling - we recorded this so [REDACTED] will circulate the link when she has it.

4.4. There will be a workshop on 18 May at the University of Sheffield for technicians across Manchester, Liverpool and Sheffield to discuss fish swabbing for genotyping as an alternative to fin clipping. One research group in Manchester will be trialling this.

5. Licences processed from 31/01/2018 – 29/03/2018

5.1 Amendments to Project Licences

The following amendments were approved by the executive committee.

5.1.1 [REDACTED] Regulation of Haematopoietic Development
(Transfer Primary from CRUKMI to UoM & Change of PPL Holder)

5.1.2 [REDACTED], Understanding Mechanisms of Fibrosis

5.1.3 [REDACTED], Understanding Inflammasome Dependent Inflammation.

5.1.4 [REDACTED], Pregnancy Complications: Targeted Interventions

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

The following amendments were approved by the executive committee.

- 5.2.1 [REDACTED], To Generate a Dysf loxP Mouse Model Using CRISPR-Cas9
- 5.2.2 [REDACTED], To Generate a Cry2-mKate2 Mouse Model
- 5.2.3 [REDACTED], To Generate a RelA-mCherry2 Mouse Model
- 5.2.4 [REDACTED], To Generate a Cry1-mRuby3 Mouse Model
- 5.2.5 [REDACTED] To Generate a NPHS2-mCherry or NPHS2-mCherry PMLS Mouse Model

5.3 Amendments to Project Licence [REDACTED], Breeding and Maintenance of Genetically Altered Rodents

- 5.3.1 None

5.4 Amendments to Project Licence [REDACTED], Generation & Breeding of Genetically Altered Rodents

The following amendment(s) were approved by the executive committee.

- 5.4.1 [REDACTED], To Create a DHX9tm1MG Mouse Line Using CRISPR.

5.5 Applications for New Project Licences

- 5.5.1 [REDACTED], Zebrafish Models of Haemorrhagic Stroke

Considered: A completed AWERB form, PPL application

Interviewed: [REDACTED]

Discussed:

1. [REDACTED] plans to apply for extra funding during his lectureship, however the current funding from the Stroke Association does cover all the costs for the work with the zebrafish over the 5-year period of the Project Licence.

2. The Committee asked [REDACTED] for clarification on how the use of zebrafish was a refinement from the use of rats. [REDACTED] explained that there are scientific advantages to the use of zebrafish rather than rats, as the fish allow real-time observations of individual cells which are not available in the rat models. The NC3Rs Regional Programme Manager clarified that the use of zebrafish (protected stages) instead of rodents is not refinement, unless a case can be made that there will be significant welfare benefits to the zebrafish.
3. [REDACTED] is actively promoting the 3Rs. He recently appeared in a film of the BSF, and members of his lab and he participate in the events organised by the NC3Rs Regional Programme Manager.

Before ethical approval can be granted, the Committee requires that your application is revised according to the following points:

4. The Committee would prefer the use of the term animal instead of organism in the NTS.
5. The NTS would benefit from a change of wording when referring to the zebrafish which are not classed as protected.
6. In the NTS under replacement, it should be made clear that the use of zebrafish instead of rats would not be classed as a replacement unless the zebrafish were under 5 days post-fertilisation.
7. The AWERB application form and PPL should be checked to ensure that all mention of retro-orbital injections from an earlier draft have been removed.
8. The application should include that analgesia will be used during fin clipping.
9. The use of the two models (chemical and mutant line) should be explained in more detail, including why the chemical model will be used.
10. Previous versions of the AWERB form contained an appendix. Please can this be re-added to the final version.

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

5.5.2 [REDACTED], The Role & Regulation of Reactive Oxygen Species in Development & Regeneration

Considered: A completed AWERB form, PPL application

Interviewed: [REDACTED]

Discussed:

1. The Committee asked for clarification on if there is distress to the fish after fin removal. [REDACTED] stated that while there will be some

transient swimming behaviour changes after the removal of the tip of the fin, he would classify these as being physical rather than distressing.

2. The Chair and AWERB members recommend that [REDACTED] prepares any future applications in adequate time.

Before ethical approval can be granted, the Committee requires that your application is revised according to the following points:

3. Protocols 5 and 7 require specific end points for any adverse events. The Committee suggest that the phrase “failure to feed or thrive over 24 hours” be added and that this would lead to culling.
4. The Committee thought the NTS would benefit from the removal of the mention of benefit to the pharmaceutical industry, if the end goal is for patient benefit.
5. Humane end points need to be added to all sections that discuss amputation.

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

5.5.3 [REDACTED], Dysregulation of Skin Homeostasis

Considered: A completed AWERB form, PPL application

Interviewed: [REDACTED]

Discussed:

1. The worst-case scenario for a moderate banding would potentially be in Protocol 2 which investigates diabetes. The animals in this protocol may develop hypoglycaemic shock. The animals will tend to eat more and urinate more, which leads to an increase in husbandry. The animals can also develop cataracts. Muscle mass may be lost therefore increased handling will occur as the animals are required to be a certain weight to go forward to the wound healing part of the study. Diabetic mice tend to be obese and develop neuropathy.
2. The Committee asked for assurance that publication of the data will occur in line with University of Manchester policy. Where possible [REDACTED] does aim to publish the work and adhere to the ARRIVE guidelines.
3. The Committee queried if ovariectomy was the best model of ageing.
4. For some studies carried out at [REDACTED] the person completing the experiment will be blinded to the study/dose, however in some studies this is not possible as dosing may occur on different days or the compounds being tested may be obvious due to colour.

5. The use of rats in Protocols 1 and 2 instead of mice is due to some compounds being species specific.

Before ethical approval can be granted, the Committee requires that your application is revised according to the following points:

6. The NTS should use the term “humane killing” rather than euthanised.
7. Details of what the project licence involves should be included in the adverse effects section.
8. In the adverse event section of Protocol 7 on p67 of the project licence, the sentence needs to be amended to read “from 3 weeks of age”.

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

5.6 Applications for Category B work

- 5.6.1 None

5.7 Applications for secondary availability for new or current project licences

- 5.7.1 None

5.8 Application for secondary availability for imaging purposes

- 5.8.1 None

5.9 Project Licences for review

- 5.9.1 None

5.10 Any other business

- 5.10.1 [REDACTED] provided some feedback on the AWERB process which she thought may be helpful for other applicants. [REDACTED] will include this in the information that he sends to applicants.

**The next meeting will be on Thursday 7th June 2018 at 10am-12pm,
in [REDACTED].**

Future meetings for this academic year are:

- 12th July 2018, [REDACTED]

Dates of meetings for the 2018/2019 academic year are:

- 13th September 2018, [REDACTED]
- 8th November 2018, [REDACTED]
- 17th January 2019, [REDACTED]
- 14th March 2019, [REDACTED]
- 16th May 2019, [REDACTED]
- 4th July 2019, [REDACTED]