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THE UNIVERSITY OF BIRMINGHAM
BIOMEDICAL ETHICAL REVIEW SUB-COMMITTEE (BERSC)

9th November 2017

MINUTES

Present:

17/11-01 Apologies

17/11-02 Minutes

The minutes of the meeting held on 28th September 2017 were considered by the Committee and were approved subject to minor amendments.

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17/11-03

Matters Arising

In relation to the licence application discussed in minute 17/09-07-1, the Committee was informed that the proposed meeting between the NC3Rs Midlands Programme Manager and the researchers has not yet taken place as the researchers have yet to progress their application.

The application discussed in minute 17/09-07-2 has now been approved.

The application discussed in minute 17/09-07-3 was referred to a special Home Office sub-committee which deals with applications involving addictive drugs and it has now been approved.

17/11-04

Chairperson's Items

There were no Chairperson's items to report.

17/11-05

Verbal Reports from the Director of BMSU and Named Persons

Report from the Director of BMSU:

- BMSU is running smoothly and a very good relationship has been established with the new Home Office Inspector. Amendment applications are being turned around quickly, usually within two weeks. The approach being taken is that Project Licences are living documents – they should initially be short and concise and it is anticipated that multiple amendments may be required over time as the work progresses and evolves.
- An exercise is underway within BMSU to look at existing and past Project Licences to assess the proportion of approved work which has actually been carried out. The findings of this will be reported to BERS. Regarding the reasons for approved work not taking place, sometimes approval has to be sought at funding application stage but then funding is ultimately not granted. Also, sometimes applications are made to cover fieldwork which is subsequently not possible due to external factors (e.g. because of the unpredictable movement patterns of free living birds).
- The refurbishment of the service area of BMSU is now complete, including the installation of the vacuum-exhausted bedding disposal system. This represents a considerable

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improvement to the working environment within BMSU.

- Two new two-photon microscopes are being installed within BMSU, one of which is being delivered this week.
- It was reiterated that the new intravital suite is extremely well-managed, is proving successful and is generating interest from researchers.

Report from the Named Veterinary Surgeon:

- The most recent health screens have come back entirely clear. It is believed that the installation of IVCs in BMSU has improved the overall health of the animals, as it is now harder for disease to spread. Careful monitoring will continue to ensure that the health of the animals remains a priority.
- The Committee was reminded that a very experienced NACWO has recently left the BMSU to pursue other interests. Whilst the loss of his experience is unfortunate, extensive notice of his leaving was given and this has allowed the recruitment of replacement staff with the necessary skills and an appropriate handover period. Also, the recruitment of new staff provides an opportunity for BMSU to reflect upon its practices and procedures with the support of the NVS.

Report from the Named Animal Care and Welfare Officers:

No items to report.

17/11-06

Report from the Fast Track Procedure

The fast track procedure is up-to-date and a record of matters discussed is stored on the Committee's Collaborate pages.

17/11-07-1

Application Ref TBA – The role of inflammation in vascular disease

The overall aim of this project is to understand whether it is possible to target the processes of inflammation in order to treat cardiovascular disease.

The PI gave a presentation explaining the application to the Committee.

The application should be amended to make it clear that thrombocytopenic animals will be maintained for up to 6 weeks and

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that this may involve periods of single housing. Further discussion is required about the need for single housing. The reason for potentially singly housing animals is to remove the small risk of losing animals due to superficial skin bleeds. However, where possible single housing should be avoided for welfare reasons and it was noted that during the PI's earlier work, only two animals were lost due to bleeds and these were gastrointestinal bleeds, which probably wouldn't have been prevented by single housing. It was suggested that one option might be 'protected contact' (i.e. allowing the animals contact but with a barrier to ensure that no injuries occur); however, it was explained that the cages within BMSU are not suitable for this.

There may be a need to use additional models, based upon feedback from various stakeholders. Alternative models will focus upon different types of plaques and some will model certain aspects of human CVD better than others. If other models will be used, they should be submitted as amendments to the licence in the future.

Overall, it was felt that the 3Rs section of the application requires further work and comments on this from the NC3Rs Midlands Programme Manager will be fed back to the PI. Further clarity is required in the NTS about refinements – currently the description is very general and specific refinements should be explained. In relation to reduction, further information should be included on the statistics underpinning the proposed group sizes and the use made of the EDA.

It was clarified that in reducing the disease model from 14 to 6 weeks, the PI is reducing the number of interventions experienced by the animals (e.g. the number of injections). It does not represent a reduction in the disease burden on the animals, as the animals will not experience disease symptoms as part of the model.

Given that there is currently no cure for CVD, it was queried what such a cure might look like if one is discovered. The PI suggested that a good outcome would be to establish a way of stabilising vulnerable plaques, thus making them less problematic – to an extent, statins already do this. Further, it would be beneficial to investigate ways in which existing damage might be reversed.

The PI will meet with the Named Persons to work through some of the fine detail of the techniques to be used.

It was felt that the cumulative incidence of anaesthesia is quite high; the PI explained that the use of osmotic mini-pumps should reduce this. The number of repairs to the mini-pumps will be restricted to one per animal. Any adverse effects of such repairs and the required analgesia will be explained in the application.

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Further information was requested about the air pollution particles to be used in protocol 3. The PI explained that they are diesel nanoparticles which are bought as a standard reagent from a company in the US. This will be detailed in the licence.

Regarding protocol 2, it is currently stated that any reduction in body weight will result in the animal being humanely killed. As the implantation of devices may cause temporary minor weight loss, the application should be amended to accommodate this without the need to kill the animal.

It was felt that the adverse effects and humane endpoints detailed in the application should be reworked to be more specific.

A copy of the score sheet to be used to monitor the humane endpoints should be provided.

After the PI left the meeting, the Committee continued its discussions.

The total number of animals stated in the licence is inconsistent, as the maximum is stated in one section as 6000 and then elsewhere as 11000. This inconsistency relates to the numbers required for breeding and the stated maximums will be clarified.

It was agreed that the NTS requires further work to bring out the adverse effects and the welfare impact upon the animals. It was recommended that the person who will actually be carrying out the experiments should have input into the application. The Committee reinforced the view that it is helpful for the person actually carrying out the experiments to be present during the presentation.

Resolved that:

The revisions discussed above will be made and the revised application will be recirculated to the Committee for information. Once the Chair is happy with the changes, a recommendation will be made that the Establishment Licence Holder submits the application to the Home Office.

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17/11-07-2

Application Ref TBA – Creation, breeding and maintenance of zebrafish (Danio Rerio)

The overall aim of this application is to breed and maintain zebrafish (genetically altered and wild type) to support scientific projects using fish embryos in non-regulated procedures.

This is a renewal of an existing service licence, to provide larvae up to 5 days old for use in experiments. Any work requiring larvae older than this or adult fish will necessitate a separate licence.

The PI gave a presentation explaining the application to the Committee.

The application should be amended to allow swabbing with or without anaesthesia.

The option of carrying out microinjections of drugs should be added to the application.

The reference to mice in the section on reduction should be removed.

The Committee queried whether there is a minimum and/or maximum number of fish per tank. There is a maximum per litre of water, and for adult fish this is 5. Whilst there is no minimum, where appropriate and necessary companion fish of a different phenotype will be used.

It was explained that when anaesthetised, fish become still and may turn over in the water. The anaesthetic is added to the water in which the fish are immersed; afterwards the fish are put into fresh water allowing them to recover from the anaesthetic.

The PI clarified that there is no risk of damage to the fish from the procedure used for sperm collection. Whilst the majority of sperm collection is done as a non-recovery technique, the option of doing it as a recovery technique is included to allow the collection of multiple sperm samples where appropriate.

Regarding the use of swabbing versus fin clipping for genetic analysis, swabbing is preferable from both a welfare and practical perspective and will be encouraged wherever possible. Fin clipping is included in the application as a reserve method and will only be used as a last resort. It is understood that another nearby University has considerable experience in the use of swabbing; in particular, they have found that it is possible swab without anaesthesia because it is less invasive and extremely quick. It is hoped that BMSU staff will be able to visit and learn from the experience of staff at this University.

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After the PI left the meeting, no additional issues were raised by the Committee.

Resolved that:

The revisions discussed above will be made and feedback will be obtained from the Home Office Inspector and incorporated into the application. Once the Chair is happy with the changes, a recommendation will be made that the Establishment Licence Holder submits the application to the Home Office.

17/11-08

Matters relating to the 3Rs

Report from the NC3Rs Midlands Programme Manager

The NC3Rs Midlands Programme Manager reported that researchers have recently shown considerable interest in the NC3Rs funding schemes and she has been liaising with them to progress this.

In discussion with Communications staff at the University of Birmingham, work is being undertaken to develop 3Rs content and case studies for the externally facing website.

The University of Birmingham will be contributing to the NC3Rs' mouse aggression project.

Whilst establishing contact with researchers had recently been proving a challenge, the Programme Manager has now met with the Heads of School and Institutes and has arranged to attend and present at School/Institute meetings. It is hoped that this will provide access to a wider audience. She will also be presenting at the University's Drug Discovery Club and will be working with the Research Support Partners to encourage interest in the NC3Rs' CRACK IT programme.

17/11-09

Any Other Business

The Committee was informed that the Chair of BERSC will be attending a forthcoming 3Rs event for lay members.

17/11-11

Date of Next Meeting

The date of the next meeting is 14th December 2017.

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GLOSSARY

3Rs	Replacement, Reduction and Refinement
BERSC	Biomedical Ethical Review Sub-Committee
BMSU	Biomedical Services Unit
CVD	Cardiovascular Disease
EDA	Experimental Design Assistant
IVC	Individually Ventilated Cages
NACWO	Named Animal Care and Welfare Officer
NC3Rs	National Centre for the Replacement, Refinement and Reduction of Animals in Research
NTS	Non-Technical Summary
NVS	Named Veterinary Surgeon
PI	Principal Investigator
TBA	To Be Announced
US	United States