

CONFIDENTIAL MATERIAL

THE UNIVERSITY OF BIRMINGHAM

ANIMAL WELFARE AND ETHICAL REVIEW BODY (AWERB)

7th August 2025 via Teams

MINUTES

25/06-01	<u>Apologies</u>
25/06-02	<u>Minutes</u> The minutes of the meeting held on 3 rd July 2025 were considered by the Committee and were approved.
25/06-03	<u>Matters Arising</u> 25/05-07-01 “ <i>Investigating the role of neutrophils in inflammation and thrombosis during COPD exacerbations</i> ”. This will be reviewed via AWERB fast-track prior to submission to the Home Office.
25/06-04	<u>Chairperson’s Items</u> A new Deputy Chair of AWERB has been appointed from within the Committee membership. The Chair thanked the Director of BMSU for all of the work undertaken ahead of the internal audit and the Home Office facilities audit.
25/06-05	<u>Verbal Reports from the Director of BMSU, NVS and NACWOs</u> <u>Director:</u> <ul style="list-style-type: none">• The BMSU has undergone an internal audit. Compliance was one of the areas that was considered, including the functioning of AWERB. The report has been received, with compliance rated as effective with no actions required.• The Home Office has undertaken a facilities audit, and the report has been received with no conditions or recommendations, and no actions required.• The current Named Person Responsible for Compliance is retiring in September, and a replacement has been identified. They have met with the Home Office, and the transfer of responsibilities has been approved.• All Animal Technicians who hold personal licences have undertaken refresher training.• All of the Senior Technicians will be undertaking NACWO refresher training. <u>NVS:</u> <ul style="list-style-type: none">• During the Home Office facilities audit, the inspector was interested in the welfare of the animals and was reassured that BMSU are operating effectively and efficiently. <u>NACWOs:</u> <ul style="list-style-type: none">• No concerns from the NACWOs. Health screening has been returned for the xenopus and everything is as expected. We are awaiting zebrafish screening results.
25/06-06	<u>Report from the Fast-Track Procedure</u> <ul style="list-style-type: none">• All fast-track applications are uploaded to Teams for comments by AWERB.• There is an increased awareness of the need to monitor work that is being undertaken outside of BMSU.• The forms being used for capturing work involving species protected under ASPA but performed outside of BMSU are being reviewed to ensure that they are fit for purpose and that all of the work is being captured correctly. Work should be considered by the AWERB regardless of whether undertaken in the UK or overseas.• A working group will be convened to undertake this review of forms and processes.

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25/06-07-01	<p><u>PPL Application for Consideration:</u> <i>“Understanding the role of Nicotinamide Adenine Dinucleotide (NAD) synthesis in immune cells”</i></p> <p>Summary The project aims to:</p> <ul style="list-style-type: none">• Understand how NAD synthesis from Vitamin B3 and its precursors supports key functions of immune cells, and to underpin their roles in infection and immunisation responses.• Immune cells (white blood cells) protect from infections and cancer. Sometimes these cells can be over-active, causing inflammatory or autoimmune diseases, whereas in some cases they can also not work as well as they should, leading to chronic infections and poor immune responses to cancer or vaccination.• Understanding of how immune cells work has recently been transformed by the observation that their activity is very closely linked metabolism (i.e. the process of breaking down nutrients such as carbohydrates, to provide energy and building blocks for the cell).• Immune cells dramatically change how they break down nutrients when they carry out their protective functions. It is hoped that drugs can be identified that correct these changes in metabolism to restore normal, safe immune cell activity, and better treat diseases.• This project will investigate one possible pathway to control immune cell metabolism and their protective function <p>The following points were discussed:</p> <ul style="list-style-type: none">• It was queried how the animals may respond to infection, and whether strains of mice carrying different genetic alterations may have an altered response? It was stated that from the previous work there are no expectations that the animals will have an increased response to infection.• The administration of B3 compounds was discussed, and it was confirmed that where possible compounds will be administered via diet and drinking water as these are more refined routes than administering via injection.• The variability of food and water intake between animals was discussed and what impact this will have on experimental design. It was stated that the degree of B3 uptake can be measured in plasma to see how the circulated levels change and confirm sufficient uptake is being achieved. Measured levels can also be directly linked to the metabolic rates.• The IV fungal meningitis model is a severe model, and it was queried whether this route of administration was required in addition to the less severe intranasal approach also included in the application. It was stated that the intranasal route is the natural route of infection, whereas the IV route gives a more directed route of infection and gives more consistent brain infection. It was acknowledged however that initially the intranasal route is more informative and is the preferred route, with fungal burden measured in the airways and the brain. In this model, not all animals develop brain infection. If fungal brain infection is required at a later date, the IV model ensures that the fungal burden is in the brain. It was queried whether the intranasal model should be included in this application, and the IV model be removed from this application.• The number of animals quoted on the licence was queried. The number of animal lines were discussed, and the programme of work will depend upon funding applications. It was recommended to reduce the animal numbers initially and submit an amendment later if required.• It was queried whether weight losses are due to changes in whole-body metabolic rates or whether this is because of reduced palatability of diet and water following addition of B3 compounds. It was explained that weight loss is expected due to the fungal infection, but whole-body metabolic studies have not been undertaken by this group. A collaborative partner has experience of undertaking whole-body measurements and will be consulted if needed.• The choice of injection sites for immunisation was discussed, and justification for the use of foot pad injection and subcutaneous injections needs to be considered in the application. The animal experience in each protocol should be considered, and what the cumulative effects might be.• It was stated that the non-technical summary was generally well written and needs very few minor amendments to remove some of the scientific terminology. <p>Decision: The Committee agreed that the application should be amended following discussion between the NVS, BMSU, NACWO and PI and reviewed via Fasttrack or AWERB (depending upon whether the IV protocol is removed or not), prior to being sent onto the Home Office.</p>
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25/06-07-02	<p><i>“Understanding the interactions between host and microbes leading to colonisation, drug resistance and systemic infection” (PPL amendment)</i></p> <p>Summary The project aims to:</p> <ul style="list-style-type: none"> • Identify pathways regulating microbial colonisation/infection and subsequent development of antimicrobial drug resistance in vulnerable hosts. <p>Amendment summary:</p> <ul style="list-style-type: none"> • The antibiotic vancomycin has been found to alter immune responses to fungi. This finding has primarily involved use of cell culture systems, but mouse models are now required to confirm these observations and determine the relevance of antibiotic-associated immune cell-dysfunction in the control of fungal infection. • The licence is being amended to include a protocol that allows antibiotics and fungi to be injected into the abdominal cavity of mice, so as to localise the fungal infection and antibiotic effects to one specific area. <p>The following points were discussed:</p> <ul style="list-style-type: none"> • It was queried whether a Phosphate-Buffered Saline control (PBS-control) is the most scientifically appropriate control. This will be amended to instead state control rather than specifically PBS. • The new protocol should state that the fungal infection will be injected once, and the number of antibiotic injections will be reviewed as part of a pilot study. It is thought that 1 or 2 antibiotic injections will be required, and this would also be clinically translatable. The experience of the animals and maximum numbers of injections needs to be included. • There is the option to use fluorescently tagged antibiotics in order to determine whether the antibiotics are targeting the immune cells, and this also allows the uptake to be measured from the first dose. The intention is that this will avoid the need for multiple injections. • The type and delivery of antibiotic was discussed. Vancomycin will be used and will be administered via IV as this mimics the clinical model. It was confirmed that no toxic effects are expected. • Humane end points were discussed. It was explained that many of the mice lose weight initially in the first few days and recover. • It was queried whether there would be any pain relief administered to the animals. It was stated that pain relief is not required as the humane endpoints in place ensure that animals are killed prior to them reaching a stage where pain will occur. • It was queried how the microbiome will be monitored, and it was stated that faecal samples will be studied. <p>Decision: The Committee agreed that the application should be amended following discussion between the NVS, BMSU, NACWO and PI and reviewed via Fasttrack prior to being sent onto the Home Office.</p>
25/06-08	<p><u>3Rs Update</u></p> <ul style="list-style-type: none"> • The Technicians have developed a new method to aid with post-anaesthesia monitoring. All of the required information is attached to the cage using a standard template and now travels with the animal, in addition to being recorded in the post-surgical logbook. This allows for more effective handover and better-informed cage-side monitoring.
25/06-09	<p><u>Condition 18 Reports</u></p> <ul style="list-style-type: none"> • There have been no Standard Condition 18 reports since the last meeting.
25/06-10	<p><u>Retrospective Review</u></p> <p>There has been one licence that has expired which legally requires a retrospective assessment. This has been submitted to the Home Office.</p> <p>The UoB retrospective review process for all licences remains in place with the reports uploaded to the AWERB Teams site for awareness.</p>
25/06-11	<p><u>Any Other Business</u></p> <p>There was no further business.</p>

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25/06-12	<p><u>Date of Next Meeting</u> - please note the amended dates for 2025. Updated calendar invites have been sent.</p> <p>18th September 2025 venue via Teams 30th October 2025 via Teams 18th December 2025 venue Stanley Barnes Meeting Room</p> <p>All will be from 10am until 1pm.</p>
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GLOSSARY

3Rs	Replacement, Reduction and Refinement
ARRIVE	Animal Research: Reporting of In Vivo Experiments
ASPA	Animals (Scientific Procedures) Act 1986
ASRU	Animals in Science Regulation Unit
AWERB	Animal Welfare and Ethical Review Body
BMSU	Biomedical Services Unit
IV	Intravenous
NC3Rs	National Centre for the Replacement, Refinement and Reduction of Animals in Research
NCTO	Named Competency and Training Officer
NACWO	Named Animal Care and Welfare Officer
NIO	Named Information Officer
NTS	Non-Technical Summary
NVS	Named Veterinary Surgeon
PBS	Phosphate-Buffered Saline
PEL	Establishment Licence
PI	Principal Investigator
PIL	Personal licence (Procedure Individual Licence)
PPLs	Project licence (Procedure Project Licence)
UoB	University of Birmingham