APPROVED
CONFIDENTIAL MATERIAL

THE UNIVERSITY OF BIRMINGHAM

ANIMAL WELFARE AND ETHICAL REVIEW BODY (AWERB)

18th December 2025 via Teams

MINUTES

25/09-01	Apologies
25/09-02	Minutes The minutes of the meeting held on 30th October 2025 were reviewed by the Committee and approved, subject to minor amendments. Any further comments can be sent to the Chair and/or Committee Secretary offline. Extraordinary Meeting 27th November 2025 The minutes of the meeting held on 27th November 2025, were considered by the Committee and were approved subject to minor amendments.
25/09-03	Matters Arising There were no matters arising.
25/09-04	Chairperson's Items The Chair welcomed the newly appointed Committee Secretary, who will take up the role from January 2026. The Committee was updated on progress made by the AWERB Working Group reviewing documentation for work undertaken outside of UoB. The Group has now held further productive discussions and reached agreement on all forms. A report outlining the findings and proposed draft forms will be prepared for submission to AWERB. The intention is to bring these forward for initial and subsequent approvals at the next meeting in late January.
25/09-05	Verbal Reports from the Director of BMSU, NVS and NACWOs Director of BMSU: • An additional NACWO will be joining the AWERB, initially as an observer, with the intention of moving to full attendance. This will provide a complete complement of NACWOs in attendance, which is important both for committee function and also for providing downstream context when working with the approved licences. • BMSU is preparing for reduced staffing numbers over the Christmas period. A minimum of three staff members will be onsite each day throughout this period to ensure that all husbandry and welfare checks continue to the usual standard. • Due to reduced staffing levels over the holiday period, short-term projects are requested to begin after the Christmas break. Priority during this time will be given to ongoing or long-term work, or projects that must continue across the closed period. • Another Establishment has approached BMSU regarding the DVT model following challenges in their own work. They have sought support from a UoB PI and colleagues with relevant expertise. BMSU is assisting their NCTO, and this reflects positively on UoB's capability and reputation. • Mandatory PILh refresher training will take place in the New Year, as agreed by the BMSU Steering Group and supported by Heads of School. Most PIL holders have already provided availability, and follow-up with remaining individuals is ongoing. • A recent pilot study involving a surgical model resulted in 3 out of 6 animals reaching the humane endpoint. Whilst remaining compliant as animals were killed within the humane endpoints, the proportion of animals affected was higher than expected and so further work has been paused whilst a stakeholder meeting takes place to better understand the issues. The committee was assured that systems operated correctly, and the team remains engaged and cooperative.

	NVS: • No issues to report. NACWOs: • No issues to report.
25/09-06	Report from the Fast-Track Procedure • There are currently no amendments progressing through the Fast-Track process. • Several amendment requests have been received to the inbox, which will be reviewed and brought to the Committee for consideration in January.
25/09-07-01	PPL Applications for Consideration: "Examining SLFN14 function in haemostasis and thrombosis". Summary The project aims to: Determine how the novel gene/protein called SLFN14 regulates blood cell development and function and how gene mutations lead to excessive bleeding and reduces blood clots in humans. • The human condition described is caused by mutations in the SLFN4 gene. • These mutations lead to inherited cytopenia, specifically thrombocytopenia (low platelet count). Normal human platelet count; 150-400 billion platelets per litre of blood • Patients experience mild to moderate bleeding, such as bleeding gums when brushing teeth, prolonged bleeding from minor cuts, Petechiae and increased bleeding risk during surgery. • Patients show macrothrombocytopenia, likely caused by a reduced number of megakaryocytes, the precursor cells that produce platelets. Platelets themselves are dysfunctional due to the SLFN14 mutation. • The project aims to building on existing data from the current SLN14 mouse models (K208N and PF4-Cre) to assess the mechanistic cause of how SLFN14 leads to abnormal numbers of faulty platelets (megakaryocytes) and red blood cells, and why SLFN4 protects against blood clots. The work may also identify a possible future (anti-thrombotic) drug target. The following points were discussed: • It was agreed that Protocol 2 requires amendment to include the mandatory administration of modulators as this is currently optional. As some mice may not require modulators or control treatments but may still require blood sampling, those animals should instead fall under Protocol 1, which covers procedures without modulators. The majority of animals will therefore be managed under Protocol 1. • Clarification is needed regarding the proportion of animals expected to experience adverse effects during- and post-surgery in Protocol 2 (deep vein thrombosis model; DVT). • A query was raised about whether volatile anaesthetics affect platelet function; there is currently no evidence or indications of issues regarding this. • Within the NTS, further clarification is needed in the project harms section, and technical terms such as power calculations, parametric and non-parametric should not appear before their definitions. These technical references will be removed. • As highlighted in the presentation, the DVT model and its justification should be moved further up in the main body of the licence. • A sentence should be added to explain why taking a large blood sample under terminal anaesthesia is required to obtain high-quality platelets, along with at least one example demonstrating how group sizes have been determined in previous experiments. **Decision: The Committee agreed that the application is ethically approved, subject to the amendments discussed. The revised version will be made available to the Committee for further comment for a period of seven days.**
25/09-07-02	"Enhancing immune therapies in cancer" Summary The project aims to:

Optimise immunotherapy combinations to improve cancer treatment.

Generate new information on how different treatment combinations that affect T cells may work together to boost their anti-cancer functions. This information can be used to support a rationale for early studies in humans. They envisage that this work will lead to several publications in reputable open access journals in the immunology/cancer field.

The following points were discussed:

- The presentation was considered very clear, and the licence was commended as well written.
- A query was raised regarding the suitability of the calliper measurements for monitoring tumour progression, with IVIS imaging suggested as a potentially more precise alternative. It was noted, however, that IVIS would require anaesthesia and could increase cumulative severity, whereas calliper measurement may be less burdensome to the animal for repeated assessments.
- In relation to immunotherapy dosing, the Committee discussed how responses would be used to determine an appropriate degree of immuno-boosting and whether corresponding animal numbers had been fully considered. It was clarified that dosing regimes are informed by the literature and human dosing levels. Where new compounds are used, the protocols in the licence are structured so that the mandatory step is the treatment rather than the tumour induction, allowing therapeutic doses to be evaluated without requiring additional control groups. Standard concentrations can be estimated based on known blocking requirements for antibodies.
- Clarification was requested regarding the two protocols that relate to tumour generation for ex vivo analysis and tumour development respectively. The applicant confirmed that ex vivo culture conditions had been established under the previous licence and that the MC38 cell line work used in the translational model had already demonstrated strong data supporting this approach.
- The Committee further queried the decision not to have the ability to implant tumour fragments as opposed to tumour cell suspensions. as using tumour fragments can reduce heterogeneity and therefore potentially reduce animal numbers. Although technically achievable, implantation of tumour fragments constitutes a more severe surgical procedure, and the current cell-line approach has proven robust, with published success including use in models associated with a Nobel Prize-winning publication (2018). The suggestion may however be explored in future.
- The general humane endpoint section in the tumour development step within the relevant protocols requires clarification, as 15% weight loss is both a standalone endpoint and part of the broader two-sign threshold, which may cause confusion. This will be reviewed for alignment. A typo regarding tumour size (1.25 cm^3, not cm^2) was also noted.
- Regarding cell transfer procedures, the Committee discussed whether acute pain should be anticipated and therefore analgesia included. It was reported that pain has not been observed in practice within the unit; therefore, analgesia should only be included where pain as an adverse effect is expected.
- The Committee queried whether more refined alternative routes to intraperitoneal injection were available (e.g., orally or IV routes). It was confirmed that IV administration is not practical and oral dosing is unsuitable due to degradation of molecules in stomach acid.
- Within the NTS, clarification was requested about references to possible pain. It was confirmed that any expected pain would be transient (e.g., momentary discomfort from injections). Localised discomfort from tumour growth is possible but rarely observed. The Committee noted that tumours located low on the flank may occasionally be knocked or rubbed; however, this is typically well tolerated, and refinement measures such as soft bedding are used. Any ulceration would trigger an immediate humane endpoint.
- Further refinement measures were discussed, including environmental adjustments such as placing food on the floor and providing longer waterspouts. Reassurance was provided that technical staff are trained to monitor for recognised indicators of pain ("pain face") such as narrowed eyes, whisker retraction, and lowered ears, and so any signs of pain would not go undetected.
- Under non-animal alternatives, it was clarified that “in silico” refers to the use of biological datasets in computational research and will be rephrased to avoid ambiguity.

	Decision: The Committee agreed that the application is ethically approved, subject to the amendments discussed. The revised version will be made available to the Committee for further comment for a period of seven days.
25/09-08	3Rs Update • The Committee were advised that BMSU technicians will be presenting three posters at the Institute of Animal Technologists Conference early next year. These will cover refinements to diabetic animal models, and approaches to training new users in animal handling and Schedule 1 procedures, showcasing the bespoke methods used within the facility and the Culture of Care.
25/09-9	Condition 18 Reports There were no Standard Condition 18 matters to report since the last meeting. A potential non-compliance raised previously, relating to a pregnant animal unknowingly supplied and subsequently used in an experiment, has been reviewed by the Home Office, who have confirmed that it will not be pursued as a non-compliance.
25/09-10	Retrospective Review There is one retrospective review due to be uploaded, and this will be completed shortly.
25/09-11	Any Other Business. None.
25/09-12	Date of Next Meeting 29th January 2026 via Teams

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
MHRA	Medicines and Healthcare products Regulatory Agency
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
PEL	Establishment Licence
PI	Principal Investigator
PIL	Personal licence (Procedure Individual Licence)
PPLs	Project licence (Procedure Project Licence)
UoB	University of Birmingham