CONFIDENTIAL MATERIAL

THE UNIVERSITY OF BIRMINGHAM

ANIMAL WELFARE AND ETHICAL REVIEW BODY (AWERB)

11th March 2021 (via Zoom)

MINUTES

Present:

21/03-01	Apologies Apologies had been received
21/03-02	Minutes The minutes of the meeting held on 28th January 2021 were considered by the Committee and were approved subject to some minor amendments.

21/03-03	Matters Arising It was confirmed that two applications had been sent to the HOI for consideration.
21/03-04	Chairperson's Items There were no Chairpersons Items
21/03-05	Verbal Reports from the Director of BMSU and Named Persons All PPLs were informed of vibrations and noise from the ongoing works at the railway station. Checks are ongoing regarding PPLs who are still working in the lab, and 40 licences have been revoked, as members of staff have now left the University or no longer require a personal licence. At present, there were no concerns raised by the NVS. There had been a request from BSc students for them to watch surgical procedures. This has been declined, and still images will be used to talk through procedures. This was agreed by AWERB BMSU will be operating at full capacity staffing levels after Easter, but retaining the limits for the number of people accessing BMSU.
21/03-06	Report from the Fast Track Procedure Fast track procedures are in progress as normal and no queries had been raised. The application *Dissecting the response to metabolites in the inflammatory microenvironment* (considered at AWERB on 23rd April 2020 ref. 20/04-07-1) had been recirculated for comment and has now been sent onto the HOI.
21/03-07-1	Project Licence Applications *a) The role of hormones, genes and diet in diabetes in rodents* Summary: • This project aims to use the latest rodent models of diabetes to provide new insight into how genes, diet and environment influence Type 2 diabetes mellitus (T2DM), and how this can be treated. • T2DM currently affects approx. 5% of the UK population, with a rising incidence. • Patients with T2DM suffer a number of complications, including retinopathy, amputation, nerve problems, kidney problems, as well as increased risk of developing cancer and heart disease. They live, on average, 10 years less than someone without the disease. • Over the last two decades, rodent models have made important contributions to the understanding of how genes and environment interact to cause T2DM. • 'Preclinical' rodent models have been used to test responses to diabetes therapy, with a number of these treatments now used widely in the clinics (e.g. incretin-mimetics). The results of this project are directly relevant for human medicine and will go on to inform new treatments for T2DM.

	The Committee raised the following points: There was a query regarding adverse effects, and whether a 20% body weight loss was an appropriate humane end point. It was stated that body condition score is an appropriate measure as most of the animals gain weight with being on a high fat diet. Refinement of repeated blood sampling was discussed. It was confirmed that apart from breeding, no animals will move between protocols. The NTS states that 80% of mice will undergo moderate severity procedures. It was confirmed that all of the breeding is mild, however the induction of diabetes due to a high fat diet combined with tail bleeding would be considered moderate procedure. Less than 1% of animals will exhibit hypoglycaemia and is overcome with glucose injections rather than feeding sweet substances. The main risk of an animal exhibiting hypoglycaemia is when the insulin tolerance tests are undertaken. The humane end point regarding skin irritation needs to be reviewed and refined to ensure animals are not culled unnecessarily. There were some concerns regarding the information provided in the presentation compared to the reality of the protocols. The Chair and sub-Chair will liaise with the applicant. **Decision: Committee agreed that further discussions are needed between the NVS, BMSU, NACWO and PI. The project will be re-circulated for electronic approval prior to being sent to the HOI.**
21/03-07-2	*b) B Cells in tumour immunity* <u>Summary:</u> • The aim of this project is to characterise B cell function in anti-tumour immunity, and develop a new tumour-specific B cell vaccination approach. • Recent major advances in cancer immunotherapy have shown that the immune system is able to attack and destroy cancerous growth. • Tumour tissue is made of the patient's own tissue, i.e. it consists of immunological self-structures (or autoantigens). The immune system is very good at avoiding attacking immunological self, a phenomenon called immunological tolerance to self. • This project aims to harness vaccination in order to let the patient generate antibodies against self-structures on the tumour The Committee raised the following points: Some confusion in the size of the tumour and whether this should be 1.25cm^3. The tumour cell line chosen can be one that ulcerates easily as this is a fast-growing tumour. Pilot studies have been carried out on this tumour line, but it was agreed that alternative tumour cell lines are available and should be considered. Rate of tumour growth can be affected by the number of cells introduced. The issue of injecting the vaccine prior to evidence of the disease was raised and whether this would be translational. In clinical applications the disease is already present and the vaccine would be used alongside other therapies. It was queried whether the tumour implantation is completed under aesthesia. The injection is straightforward, but does require a skilled person to do the injection to ensure the correct location of the tumour. The NTS is very technical and needs to be rewritten to be accessible for the lay person. Tumour size is undertaken by calliper measurements and it was stated that this needs to be undertaken by the same person to ensure consist measurements. Tumour vaccine is administered several times over a number of weeks and this dose appears high. Optimisation studies will be undertaken. The model environment was discussed, and whether there were alternative vaccine models available. The latest published models need to be reviewed to ensure that animal use is appropriate. There is expertise in BMSU and AWERB to support the applicant with the refinement and clarification of this application. **Decision: Committee agreed that further discussions are needed between the NVS, BMSU, NACWO and PI prior to being sent to the HOI**
21/03-07-3	*c) Investigating potential therapeutic agents using models of gastrointestinal cancer* <u>Summary:</u>

	• Colorectal cancer (CRC) is the 3rd most diagnosed malignancy and the 4th leading cause of cancer-related deaths in the world. Its burden is expected to increase by 60% to more than 2.2 million new cases and 1.1 million cancer deaths by 2030 • Current treatment options for gastrointestinal cancers depend on the stage and location and include surgical resection, chemotherapy, targeted therapies and / or immunotherapy. • The aim of this project is to test potential therapeutic compounds and drug candidates using in vivo models of cancers in the gastrointestinal tract. • The project aims to identify new treatments that can either prevent polyps developing and/or reverse the development of pre-existing polyps. • Compounds may be given at different stages of the disease model to determine whether the compound modulates disease development, at what stage, and how. • This licence application is to allow BMSU staff to undertake Service provision for collaboration activity which will validate in vitro methods. The Committee raised the following points: There were some queries around the power calculations and whether 90% power should be used, or 80% power. A pilot study would be taken initially to confirm figures for experimental work and also to confirm repeatability. The frequency of treatment was discussed. The collaborator has been flexible in the treatment regime, and this needs to be confirmed. This is the very start of a collaboration, and there will be potential to work with BMSU further. The issue of due diligence was raised, and whether this is a research licence or a service licence. There will be a standard document for each stage of the experimental work to confirm that each experiment is well considered. It was confirmed that the proposed treatment is a traditional Chinese medicine, and this will go forward as a drug treatment rather than a food supplement. It was confirmed that the licence is for the investigation of one compound and the impact on polyps, and that if further compounds were needed than amendments would be needed. The husbandry modifications need to be included. **Decision: Committee agreed that further discussions are needed between the NVS, BMSU, NACWO and PI prior to being sent to the HOI.**
21/03-08	Matters relating to the 3Rs • One of the BMSU Assistant Directors and the BMSU Director held a Q&A session with a group of MSc Toxicology students. Questions focussed around ethics, legislation and application of the 3Rs at University of Birmingham. • A 3Rs update was given at the recent BMSU User's Forum meeting to ensure relevant 3Rs information is disseminated to all PPL holders. • Several BMSU technicians attended the NC3Rs webinar 'Efficient Management of Genetically Altered Mouse Colonies'. This is a key part of their CPD and an opportunity to learn more about applying the 3Rs during breeding colony management. • BMSU technicians are attending IAT Congress remotely, including sessions on welfare and application of the 3Rs. • The 3Rs Focus Group has recently reviewed the results from the 3Rs Self-Assessment Tool which will undergo further discussion in due course.
21/03-09	<u>Any Other Business</u> The was no further business
21/03-10	<u>Date of Next Meeting</u> The date of the next meeting – 15th April 2021

CONFIDENTIAL MATERIAL

GLOSSARY

3Rs	Replacement, Reduction and Refinement
AWERB	Animal Welfare and Ethical Review Body
B Cell	A type of white blood cell
BMSU	Biomedical Services Unit
CPD	Continuing Professional Development
CRC	Colorectal Cancer
HOI	Home Office Inspector
IAT	Institute of Animal Technology
MSc	Masters of Science
NC3Rs	National Centre for the Replacement, Refinement and Reduction of Animals in Research
NACWO	Named Animal Care and Welfare Officer
NTS	Non-Technical Summary
NVS	Named Veterinary Surgeon
PI	Principal Investigator
PIL	Personal licence (Procedure Individual Licence)
PPLs	Project licence (Procedure Project Licence)
Q&A	Question and Answer
T2DM	Type 2 diabetes mellitus
UoB	University of Birmingham