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NON-TECHNICAL SUMMARY

# Production of antibodies, antisera and blood products III

5 years 0 months

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Blood products, Tissue samples, In-vitro diagnostic reagents, Controlled environment, Antibodies

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Rabbits	adult, juvenile
Llamas and Alpacas	juvenile, adult
Pigs	juvenile, adult

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Goats	juvenile, adult
Sheep	juvenile, adult
Cattle	juvenile, adult
Guinea pigs	juvenile, adult
Mice	juvenile, adult
Rats	juvenile, adult

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■ The Secretary of State has determined that a retrospective assessment of this licence is not required.

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This service provided under this project licence will supply in-vitro diagnostic reagents and animal tissues to research groups and biomedical companies, nationally or internationally to further their fundamental and applied research for the development and application of research projects and new treatments in support of human and animal healthcare.

This includes:

- Provision of blood products
- Provision of tissue samples
- Production of antibodies to microorganisms e.g. bacterial / viral antigens for use in diagnostic tests
- Production of antibodies to purified peptides / proteins

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Isolated tissue and organ preparations allow researchers to investigate the physiology and pharmacology of various tissue samples in a controlled environment without the complications of an

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One of the key goals of our academic clients will be to publish the results via scientific publications conference presentations, in order to promote the general advancement of the fields studied.

- Cattle: 300
- Sheep: 375
- Goats: 135
- Pigs: 450
- Camelids: No answer provided
- Mice: 350
- Rats: 350
- Rabbits: 110
- Guinea pigs: 275
- : 150
- : 150

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particularly adapted to small antigens or small epitopes. In addition sheep and goats allow the production of larger volumes compared to smaller species and the animal does not necessarily need to be culled as part of the process.

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After arrival all animals will be allowed at least 7 days to become acclimatised to the unit.

Then depending on the protocol:

**Blood sampling:** One or more blood samples will be taken. The animal will be assessed between each sampling and only sampled if considered to be fit and healthy. At the end of the blood sampling period the animal will either be re-used for tissue sample collection, returned to stock or re-homed.

**Tissue collection:** The animal will be terminally anaesthetised and, the tissue sample collected. . After which the animal, still under terminal anaesthesia, is euthanised .

**Antibody production:** The animal will be immunised with the antigen, given a booster injection if required and blood samples taken for antibody extraction. The animal may be used in one or more rounds of antibody production. The animal will be assessed between each round and only used if considered to be fit and healthy. At the end, the animal will either be re-used for tissue sample collection, returned to stock or re-homed.

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The provision of tissue samples should have no adverse effects on the animals. The collection will either be a simple blood sample or collection under terminal anaesthesia.

Antibody production should also have little or no impact on the animals. This will involve simple injections and blood sample collection. There is the potential for an animal to have an allergic reaction to the antigen which may induce some adverse effects. This is expected to be transient and have no lasting effect on the animal.

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For the majority of animals, the severity level will be mild. However, as stated above, in some studies the animals may experience some adverse effects. These would only cause the animal a moderate level of distress which will in most cases be transient.

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- Killed
- Kept alive
- Rehomed

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In many cases, the numbers of animals required will be reduced by re-using animals for the mild procedures e.g. blood sampling. There is evidence that the immunisation of animals with multiple

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The least invasive route of substance administration will be used. Along with the minimum number of injections to produce the required response and smallest needle gauge appropriate will be used

If the blood sampling can be fulfilled, (e.g. minimum blood volume for the species fits with the scientific aims) with one or more species e.g. sheep or cattle, then the species which is easier to handle (therefore the procedure will be less stressful for the animal) and in ready supply will be chosen.

All animals will receive appropriate operative care in terms of anaesthesia and pain management both during and after the procedure.

When appropriate, blood sampling maybe conducted on farms, thereby reducing the stress to the animal by transporting them and introducing them to a new environment prior to sampling.

In house expertise further enhances animal welfare, by providing close collaboration with dedicated