The **A S C**

Animals in Science Committee

Animals in Science Committee and Animal Welfare and Ethical Review Body Hub Workshop

02 November 2022

Workshop Report

The AWERB Hub workshop was convened and held under the aegis of the ASC's AWERB Subgroup. The views summarised in this report are those expressed by attendees of the workshop, and do not necessarily represent the views of the ASC. This report is not intended to be, and should not be interpreted as, a policy statement or a work plan.

1.0 Introduction

1.1 The eighth Animals in Science Committee (ASC) and Animal Welfare and Ethical Review Body (AWERB) Hubs Workshop was convened on 02 November 2022 via a virtual platform.

1.2 The aim of the day was to enable attendees to share and discuss optimising experimental design, the ASC review of licences for antibody production, and processes for and best practice to align with the ASRU change programme and document AWERB governance processes.

1.3 Over 80 individuals attended the workshop. The attendees included the Chairs and/or their nominated representatives of over 50 regional UK AWERB's, lay members of the regional UK AWERB Hubs and Veterinary Surgeons. Also in attendance were the members of the ASC AWERB Subgroup (SG), facilitating the event, and the ASC Secretariat. The workshop was Chaired by Dr Sally Robinson (ASC AWERB SG) with presentations from Dr Esther Pearl (the National Centre for the Replacement, Refinement & Reduction of Animals in Research (NC3Rs)) and Wendy Jarrett (ASC AWERB SG). The agenda for the day can be found at Annex A.

1.4 This report sets out the key points and findings from the day. Presentations provided at the workshop had been made available to attendees to allow circulation within their Hubs.

2.0 Experimental Design

2.1 The ASC AWERB SG welcomed Dr Esther Pearl from the National Centre for the Replacement, Refinement & Reduction of Animals in Research (NC3Rs) to present on good experimental design and ethical review. A link to the presentation can be found in Annex B.

2.2 The presentation focused on the following.

- Why good experimental design is important
- The key aspects of good experimental design including examples of exceptional experiments in which best practice may not be possible. The following were shared and described as key features of good experimental design:
    - Randomisation
    - Masking (blinding)[1]
    - Using both sexes
    - Appropriate sample size
    - Pre-planned statistical analysis method

[1] Where masking (blinding) is defined as a methodological process where the allocation to an experimental group (a group of test subjects that receives the same intervention in an experiment) is concealed from the people running the experiment or analysing the data, to minimise subconscious bias and maximise the validity of the results.

- How the online Experimental Design Assistant (EDA) tool could support AWERBs to identify poor experimental design or ask questions to improve an experiment.

2.3 At the end of the presentation attendees were invited to ask any questions, the following themes and specific points were raised by Hub members and discussed with the presenter.

Addressing experimental design as an AWERB member

Developing understanding and suggesting alternatives

2.3.1 It was raised that AWERB members may not be fully trained to advise on all protocols. To aid understanding, the EDA website has explainers for various aspects of experimental design and animal characteristics. This has been developed by a working group of experts and is an open, free resource - Experimental Design | NC3Rs EDA.

2.3.2 An attendee commented that it was common for masking (blinding) not to take place within a facility for various reasons, such as cage card labels, technicians completing all tasks, or software. The group shared possible solutions to overcome this.

- Data entry could be completed by a separate individual, potentially through a buddying system.
- A masking (blinding) plan can be developed to carefully consider who needs to know what information at each stage of the trial.
- Suggestions can be shared with software developers on potential areas for improvement, to prevent software restricting the possibility of masking (blinding). This was not a short-term solution.

Valuable input as a lay member

2.3.3 As a lay member, a good method to assess experimental design is to review an application for missing information, for example, by searching for high-level keywords such as ‘bias’. Highlighting when keywords were missing could prompt other AWERB members and facilitate a discussion, which otherwise may not have taken place.

The importance and benefit of discussing experimental design, even in a limited capacity

2.3.4 If an application has multiple protocols, while it would be beneficial for an applicant to complete an EDA assessment for all experiments to get advice/feedback, completing an EDA assessment for just one, typical, protocol would prompt the applicant to clearly consider each element of the experiment. A strong EDA assessment would hopefully be reflective of all round strong experimental design.

2.3.5 Licence applications often cover a long period of time and have a certain level of generality to allow for changes over time. AWERBs were not the only place for discussions on experimental design but were a good place to raise awareness for a need to consider design elements that were often missed, such as blinding or randomisation.

Comments regarding the EDA tool

2.3.6 Recorded demonstrations as well as monthly live demonstrations for the EDA tool are available. The recording can be accessed at the home page of the EDA tool website Home | NC3Rs EDA and at the user guide page Overview and demonstration of the EDA | NC3Rs EDA. Registration details for live demonstrations can be found at the NC3Rs events page Events | NC3Rs.

2.3.7 There was no current mandate to use the EDA tool, this was to encourage individuals to use the tool to maximum capability.

2.3.8 At the time of this workshop there were roughly 13,000 EDA users worldwide but no data regarding which AWERBs use the tool.

2.3.9 If any users have difficulties or frustrations with the EDA tool, the sharing of these with the team at NC3Rs was encouraged as insight regarding user difficulties was beneficial in the ongoing development process.

2.4 The session closed by highlighting that links to further resources can be found within the presentation.

2.5 ASC review of Licences for antibody production

2.6 Wendy Jarrett, a member of the ASC, chairs the 'Project Licence Strategic Review Subgroup'. This subgroup previously advised the Animals in Science Regulation Unit (ASRU) of the Home Office each year on a selected number of specific topics and now advises the Animals in Science Policy and Co-ordination Function at the Home Office.

2.7 In late 2022 the subgroup had completed a review on antibody licences. Reviews on the forced swim test and non-human primates (excluding neuroscience) were expected to be completed in 2023.

2.8 As an output of the review, the subgroup had published a report evaluating 31 current licences in Great Britain which authorised the use of animals for the development or production of antibodies. This report is accessible on the ASC gov.uk website Review of antibody licences: report by the Animals in Science Committee - GOV.UK (www.gov.uk).

2.9 Wendy Jarrett presented a high-level overview of this report, its purpose, findings, and recommendations to the attendees at the workshop. The report identifies principles which can be used by the Animals in Science Regulation Unit (ASRU) in their assessment of evidence and provides general recommendations to applicants for writing a strong report.

2.10 A link to the presentation can be found in Annex B.

2.11 At the end of the presentation attendees were invited to ask any questions, the following points were raised by Hub members and discussed with the presenter.

2.11.1 An attendee questioned whether expense was a strong enough explanation for not using phage display to produce monoclonal antibodies. In response Wendy Jarrett highlighted that the purpose of the report was to review the typical reasons given and assess how well they were described, rather than to review the value of each specific justification.

2.11.2 The group discussed whether it was still feasible to use animal-derived antibodies and concluded that it was but that the justification should be strong and well-argued.

2.11.3 The group discussed that having negative results published would support the scientific community in developing best practice and research and would be beneficial for the justification process.

2.11.4 The Research Resource Identifier (RRID) Portal tool was shared with the group. It was described as a database for obtaining and exploring RRIDs – persistent and unique identifiers for referencing a research resource. RRIDs can support researchers for writing (within methodology sections for example) and the tool was a resource which draws reviews from multiple databases so could be useful in identifying non-animal alternatives. The resource can be accessed via: https://scicrunch.org/resources.

2.11.5 It was suggested that a central UK-wide facility where expertise could be accessed for phage display would support people in utilising the technology.

3.0 AWERB Governance Processes and the ASRU Change Programme

3.1 Ahead of the workshop the ASC AWERB SG had prepared a set of nine questions which were circulated to attendees (Annex C). The questions were focused on the ASRU Change Programme and the AWERB governance programme.

3.2 The aim of the session was to facilitate discussion in small groups regarding the Change Programme and AWERB governance, and to share examples of good working practice, in order to support AWERBs through the process.

3.3 The feedback from each group discussion is summarised for each question. All AWERBs are encouraged to consider these varied insights, suggestions and practices to identify any that may be relevant to their situation and needs.

3.3.1 **Has your AWERB reviewed its governance processes in relation to being able to evidence how general tasks are delivered or how licence standard conditions are met?**

and

Are you able to share any general examples of new governance processes/documentation put into place?

- A key takeaway was to use meeting time effectively. This could be through reviewing the Terms of Reference (ToR) for the group and ensuring it was still reflective of needs, or by setting standing agendas to ensure there is discussion for a range of AWERB tasks (also scheduling time to allow for reflection), accepting that the Chair may need to be flexible with timings depending on discussions.
- Scheduling themed workshops or developing small strategic meetings to review particular areas can be an effective use of time. This facilitates discussion and ensures all topics were covered and explored in depth.
- Conducting regular and ongoing reviews of processes as well as reporting of outcomes in either monthly or in annual reports. Reports could include metrics and discussion of additional processes in place.
- There was strong agreement that maintaining a paper trail and documenting processes and tasks was important.
- Many AWERBs were conducting gap analysis against the ASRU audit documents and developing documentation (e.g. standard operating procedures (SOPs)) to cover any missing processes which may not already covered in other documentation. This was to ensure everything was in place and auditable.
- Some AWERBs expressed the importance of developing systems for easy dissemination of findings and of information, allowing any gaps to be systematically addressed. This could be via developing a SharePoint drive or a collated document which outlines any gaps which may be identified.
- Utilising documents which have already been shared, including the guidance on standard conditions, guidance on patterns of low-level concerns and establishment systems audit process, from the Home Office, to support the process or develop checklists highlighting the changes.

3.3.2 **How could your AWERB/establishment demonstrate PEL standard condition 1 is being met?**

PEL standard condition 1: The licence holder shall ensure that the regulated activities carried on at the establishment are carried on in a manner that is consistent with the principles of replacement, reduction, and refinement.

- Standing committees for each of the 3Rs (replacement, refinement, and reduction) can be established which feed into the AWERBs. These could include representatives from outside bodies such as the NC3Rs regional

managers and should act as a central group for dissemination of information.

- Annually reviewing the ToR of the AWERB to ensure that it is still appropriate and covers all the 3Rs as well as having the 3Rs on the agenda at every AWERB meeting.
- Having facilities staff or research scientists give presentations to user groups and the AWERB regarding what processes they have and what they do to address each of the 3Rs.
- Having separate awards for each of the 3Rs.
- It was acknowledged that not each of the 3Rs was equally addressed or feasible, with replacement being the hardest. Asking licence holders to report at the end of the licence period on each of the 3Rs individually or having meetings specifically for each of the 3Rs could help address this.
- It can be helpful to have a 3Rs champion within the AWERB, an individual who has a dedicated workload to focus on the 3Rs.
- The NC3Rs self-assessment tool can be beneficial in supporting the assessment of the 3Rs and effective experimental design.
- By maintaining paperwork and documenting decisions before and after projects, it is possible to evidence the process by which a licence was written and the 3Rs considered.

3.3.3 How could your AWERB/establishment demonstrate PEL standard condition 5 is being met?

PEL standard condition 5: The licence holder must ensure suitable numbers of suitably trained and competent animal care staff are available.

- Some AWERBs were receiving monthly reports on staffing levels from facility managers or the named animal care and welfare officer (NACWO). Where there were any difficulties, the establishment could speak to the licence holder who is responsible for ensuring adequate staff.
- As a result of the COVID-19 pandemic many establishments had developed new methods of ensuring sufficient levels of trained staff, for example training students to carry out basic checks, having emergency cover documents up to date and available or using agency staff for cover.
- Larger establishments were able to train all staff on multiple, if not all, protocols which provided a pool of staff who can step if necessary. This was more challenging in smaller institutions where there was only one person in each role.
- Having a planner to manage staff workload was considered important as this ensures that there were no surprises and workloads could be balanced.

3.3.4 **How could your AWERB/establishment demonstrate PEL standard condition 6 is being met?**

PEL standard condition 6: The licence holder must ensure the existence of an effective AWERB constituted in line with statutory functions which performs all the functions required in law.

- There was agreement amongst attendees that it was challenging to find lay members who provide a strong contribution and were adequately trained. It was discussed whether there was opportunity to share lay members between AWERBs.
- Ensuring there are enough people within an AWERB with a range of experience to meet the tasks and functions. In particularly busy times it was beneficial to split these tasks amongst members, it was effective to allocate tasks based on expertise and experience.
- It was important to recognise, and reward lay members.
- Some AWERBs reported having connections to schools, for example, where they could recruit external lay members.

3.3.5 **How could your AWERB/establishment demonstrate PEL standard condition 15/16 is being met?**

PEL standard condition 15/16: The licence holder is responsible for the performance of the named persons. There are adequate arrangements for cover when named persons are not available.

- Focusing on and ensuring vital (legally-required) roles were being undertaken was the priority. Providing support to ensure there is back up (succession planning, shadowing) where an important role is only held by one individual.

3.3.6 **How could your AWERB/establishment demonstrate PEL standard condition 20 is being met?**

PEL standard condition 20: The licence holder must take adequate precautions to prevent unauthorised procedures.

- By having detailed study plans to refer to that outline what will happen during each experiment and who will complete each task, licensed activity can be reviewed by the project licence holder and checked against training and competency records. Whilst this requires a level of input it was considered an effective method of picking up errors in advance of procedures being conducted.

3.3.7 **How could your AWERB/establishment demonstrate PEL standard condition 21 is being met?**

PEL standard condition 21: The licence holder must ensure effective communication and liaison between animal care staff, named persons and licence holders.

- It was debated that it is important to recognise the roles and tasks of the AWERB, and while an AWERB can support establishments to resolve communication barriers, the ownership of communication was the responsibility of the licence holder and not the AWERB. Some suggestions included:
    - Establishment licence Holder arranging meetings for example with the Named People.
    - Establishment Licence Holder sponsoring an annual licensee meeting.
    - Establishment Licence Holder sponsoring 3Rs awards.
    - Establishment Licence Holder supporting the AWERB to set up 3Rs and Culture of Care subgroups with staff across licenced roles, care staff and Named People and other disciplines.
    - Establishment Licence Holder to attend at least one AWERB meeting a year.
    - Establishment Licence Holder to support AWERB to run sponsored talks relevant for researchers, named people and care staff.

4.0 Final thoughts and feedback

4.1 The ASC AWERB Subgroup would publish the workshop report and presentations from the day on the gov.uk website and AWERB Knowledge Hub.

4.2 The Subgroup would organise another workshop in 2023 and seek input from the Hub Chairs on the topics they would like to discuss.

Annex A

The ASC
Animals in Science Committee

Animals in Science Committee AWERB Hubs Workshop
2nd November 2022 13:00 – 16:30

13.00 - 13.05	**Welcome, Introductions and Workshop Outline**	Sally Robinson
13.05 - 14.05	**Experimental Design**	Esther Pearl NC3Rs
14:05 - 14:45	**ASC review of licences for antibody production**	Wendy Jarrett
14:45 - 14:55	*Break*	
14:55 - 15:55	**AWERB Governance Processes and the ASRY Change Programme (breakout discussion)**	All
15:55 - 16:00	**Final thoughts and feedback**	Sally Robinson

Annex B

Resource Hyperlinks

Workshop presentations (available only to AWERB members via the Knowledge hub):

Presentation 1: Experimental design and ethical review – things to check and recourses that can help

Presentation 2: Project licence Strategic Review Subgroup. Antibodies

Additional resources

ASC Website

NC3Rs Website

Experimental Design Explainers and Definitions | NC3Rs EDA

EDA Tool Home | NC3Rs EDA

Overview and demonstration of the EDA | NC3Rs EDA

Events and Live Demonstrations | NC3Rs.

Review of antibody licences: report by the Animals in Science Committee - GOV.UK (www.gov.uk)

RRID | Welcome... (scicrunch.org)

AWERB directory | Science | RSPCA

Annex C

Questions for AWERB workshop on Governance

1) Has your AWERB reviewed its governance processes in relation to being able to evidence how general tasks are delivered or how licence standard conditions are met? Yes/No
2) Please provide your rationale for the answer to Question 1
3) Are you able to share any general examples of new governance processes/documentation put into place (note follow up questions below that will focus on more specific examples)

Please can you look at the following Establishment Licence Conditions and discuss how your AWERB/establishment could demonstrate these are being met. Please come prepared to share examples

4) PEL standard condition 1. The licence holder shall ensure that the regulated activities carried on at the establishment are carried on in a manner that is consistent with the principles of replacement, reduction, and refinement.
5) PEL standard condition 5. The licence holder must ensure suitable numbers of suitably trained and competent animal care staff are available.
6) PEL standard condition 6. The licence holder must ensure the existence of an effective AWERB constituted in line with statutory functions which performs all the functions required in law.
7) PEL standard condition 15/16. The licence holder is responsible for the performance of the named persons. There are adequate arrangements for cover when named persons are not available.
8) PEL standard condition 20. The licence holder must take adequate precautions to prevent unauthorised procedures.
9) PEL standard condition 21. The licence holder must ensure effective communication and liaison between animal care staff, named persons and licence holders.