

The Value of Looking Back: Improving Science and Welfare through Retrospective Review

Maggy Jennings ¹, Bryan Howard ² & Manuel Berdoy ³

¹ Royal Society for the Prevention of Cruelty to Animals, UK, ² Laboratory Animal Science Association, UK, ³ Oxford University, UK.

SUMMARY

Several European countries now require retrospective review of research projects. This provides a clear time point at which to review the scientific progress in relation to the actual versus predicted harm/benefit assessment, to consider further implementation of the Three Rs and to facilitate project management. Retrospective Review can improve welfare, science, ethics and project management *when it is done well* but its value is heavily dependant upon how it is carried out.

The following presents the conclusions and recommendations of two workshops organised by the Ethics, Training and Education Section of the UK Laboratory Animal Science Association (LASA).

- A) It identifies the key benefits and objectives of retrospective review and provides a set of '25 points to consider' within the review.
- B) It provides some guidance on how the efficiency and effectiveness of the process can be optimised.

The general principles are relevant to any arrangement for reviewing animal work, including reviews carried out by funding or grant-awarding bodies.

A THE KEY OBJECTIVES OF THE RETROSPECTIVE REVIEW & 25 POINTS TO HELP ENSURE THAT THEY ARE MET

Key Objective 1:	Key Objective 2:	Key Objective 3:
To determine whether the actual harms & benefits are in line with those anticipated.	To identify, build on and encourage implementation and improvements in the 3Rs during the course of a project.	To facilitate project management.
<i>i.e. the current state of the harm/benefit ratio:</i>	<i>i.e. the technical aspects of easing the harm/benefit ratio:</i>	<i>i.e. the managerial aspects of easing the cost/benefit ratio:</i>
<ol style="list-style-type: none"> 1. Are the adverse effects and severity in line with what was predicted? 2. Is the science on track? Are the results as expected? Are there successes to be recognised (including unexpected ones)? 3. Is the animal model still the most appropriate for this type of study? 4. Are there any recent developments in science or technology which should influence the direction or conduct of the study? 	<ol style="list-style-type: none"> 5. Are there alternative methods/models (including new <i>in vitro</i> techniques) available that would involve less suffering? 6. Can the experimental design be improved to answer the hypothesis more effectively? 7. Are the numbers of animals used statistically appropriate (not enough/too many) in the light of the results to date? 8. Could procedures (e.g. surgery, administration, sampling) be further refined? 9. Could monitoring regimes be improved? Are score sheets working well? Can humane endpoints be refined? 10. Can any negative effects to animals associated with supply and transport, or housing and care, be reduced and welfare improved? 11. How are animals on long term studies coping? Are there any physical or behavioural problems? 12. Have special housing and care needs arisen? 13. Can euthanasia be refined? 14. Is there any animal wastage and can this be avoided? 15. Is there opportunity for rehoming and is this in the best interests of the animals? 	<ol style="list-style-type: none"> 16. Are any amendments likely to be needed in the near future, perhaps due to unexpected harms or unexpected discoveries as highlighted in key objective 1? 17. Is the programme of work appropriately flexible? 18. Are the facilities (still) appropriate? Is there anything that the researcher should be made aware of (e.g. refurbishment, equipment supplies)? 19. Are there any human resource issues (e.g. staff shortages)? 20. Is communication within and/or between research team(s) appropriate? 21. Has a training need been identified? 22. Do the Animal Care staff or the Veterinary Surgeons have any general concerns? 23. Are their roles well supported by the establishment? 24. Has/can the information on 3Rs be disseminated within and/or between institutions? 25. Are commendations possible within the establishment?

B The BEST PROCESSES lead to the BEST OUTPUTS
There is no clear harmonised guidance on how retrospective review should be done. A 2005 FELASA survey shows a variety of approaches, including ongoing or annual reviews, or at completion of the project. The focus should be on achieving a successful output rather than on developing overly bureaucratic processes. The following factors are key to its success.

Key factor 1:	Key factor 2:	Key factor 3:
Make it a positive & constructive experience	Create a workable process - there is no one rule for all!	Ensure that it is properly resourced
<ul style="list-style-type: none"> • Staff need to see how it benefits them, their science and animal welfare • The process and objectives should be clear • Include information in local training courses • Be inclusive of all relevant staff • Focus on discussion and outputs not filling in forms • Provide - and explain - feedback. If there are concerns (about the project or the process), do something about it! 	<ul style="list-style-type: none"> • Be flexible with timing - think about this at the outset of a project • Prioritise projects for review e.g. those using large numbers of animals, severe procedures, new models, certain species • Keep documentation to a minimum - be clear about input, and how this should be provided • Be clear who is involved - it may not need a whole committee • Focus on the outputs and how to take things forward 	<ul style="list-style-type: none"> • Make it an integral part of project management & team meetings • Combine with other activities (e.g. review by grant-awarding body, preparing papers or presentations for publication, submission of amendments) • Involve senior management so they see the value

Further Information	References
<p>LASA (2004) has defined a list of key objectives and ideas for effective operation, which are already in use in the UK. LASA is now developing further resources. The current & updated report will be on the LASA website www.lasa.co.uk/position_papers/publications.asp</p> <p>An electronic copy of this page can be obtained by writing to: training@vet.ox.ac.uk</p>	<p>FELASA (2005) Principles and practice in ethical review of animal experiments across Europe. A report prepared by the Working Group on Ethical Evaluation of Animal Experiments. www.felasa.eu/recommendations.htm</p> <p>LASA (2004). Guidance Notes on Retrospective Review. A Discussion Document Prepared by the LASA Ethics and Training Group (M. Jennings and B. Howard eds). Available for download from www.lasa.co.uk/position_papers/publications.asp</p>