RSPCA international meeting - Focus on severe suffering

Summary report

On 16 and 17 June 2016, 150 delegates from 24 countries gathered in Brussels for a unique event aiming to share knowledge, discuss new ideas, and promote approaches and practical steps, to help reduce or avoid 'severe' suffering in animals used in research and testing. The event was part of an ongoing RSPCA initiative focusing on severe suffering, which has also involved the production of a dedicated website: www.rspca.org.uk/severesuffering

Participants at the event included representatives of the European Commission, of government authorities involved in the regulation of animal research, members of National Committees on animal experiments, members of local Animal Welfare Bodies at establishments, veterinarians, scientists, animal facility managers, animal technologists, representatives from 3Rs centres, and individuals involved in education and training.

After introductory presentations from the RSPCA and the European Commission, participants heard four different perspectives on the issue of severe suffering:–from a regulator, a representative from the pharmaceutical industry, from an animal welfare organisation, and from academia. These were followed by a presentation on the EC requirements for reporting actual severity, and a keynote address looking both to the past and the future to inspire further progress with avoiding severe suffering.

The second day began with case studies reviewing the current prevalence of severe suffering - and opportunities for avoiding or reducing this - within particular animal 'models' (e.g. of sepsis, rheumatoid arthritis) and areas of animal use (such as vaccine development, and regulatory toxicology). The final part of the meeting began by exploring how severe suffering is, or may be, considered as part of the harm-benefit analysis. A series of speakers then reviewed opportunities for tackling severe suffering available to regulatory bodies, 3Rs centres, National Committees, local Animal Welfare Bodies and scientific journals, with examples of their current initiatives. The meeting concluded with advice on how to search for information on refining or avoiding severe 'models' or tests, a panel discussion, and a summary of some 'action points' for progress suggested during the course of the meeting.

Requests for the **presentations** from the event, along with the **conference abstract booklet**, can be made via email to: research.animals@rspca.org.uk .

The concluding comments and **action points** arising from the meeting are listed below. These have been broadly grouped into general principles and points relating to specific individuals or bodies, acknowledging that regulations and processes vary between Member States, and that

each establishment has its specific internal culture and management systems. We hope that the list below will provide some useful principles and topics for discussion and would welcome any further comments with respect to how these might be, or have been, achieved.

General principles

- Everyone involved in the use, care and regulation of animal research can commit to tackling 'severe' suffering.
- Everyone involved should embrace the concept of ensuring that every animal used in research has 'a life worth living'.
- It is widely recognised that avoidable pain and distress affects more than animal welfare - this can also confound the scientific outcomes of the study.
- A good approach to tackling severe suffering is the 'aggregation of marginal gains' concept, which involves considering the animal's lifetime experiences and trying to make at least a small refinement to each one, which should combine to make a significant difference.
- Instead of thinking 'why' a refinement should be employed (e.g. analgesia in disease models), the thought process should be 'why not'?
- Reduction in animal numbers does not always come first. It is more important to consider the lifetime experience of each individual animal, and how suffering can be ameliorated. Even if implementing refinement would mean using a larger number of animals overall on a study, this can be justified if each individual animal suffers less as a result.
- A culture of good communication is essential for addressing severe suffering, so that staff with all relevant roles are aware of the animal welfare impacts of a study, how to assess suffering and when/how to act when clinical signs are observed, and they actively share good practice within the establishment and with external colleagues.
- Those using or caring for animals, or regulating animal use, should work closely with 3Rs centres, animal welfare organisations, professional bodies etc. and participate in any initiatives around reducing severe suffering, also helping to implement and disseminate the outputs.

Actions at the establishment level

- Establishments can set up internal focus groups to review and tackle severe suffering (e.g. in liaison with their Animal Welfare Body). This could include reviewing current scientific practices and protocols, to check whether any refined approaches are available but not yet implemented.
- An establishment policy of considering whether pilot studies may be justified for severe studies, especially for novel studies, could allow the early review of potential issues of concern and identify opportunities for refinement. Ideally, such studies should be conducted so that they can contribute to the data set and do not use any additional animals. The Animal Welfare Body (AWB) and regulator should be part of the decision making process.
- Establishments should have an internal mechanism in place for keeping up to date with the activities of organisations such as regulatory bodies, 3Rs centres, national committees, educational forums (e.g. ETPLAS), and having an input where possible.

Project designers, reviewers and evaluators, and the Animal Welfare Body

- Projects that may cause severe suffering should be given extra scrutiny at each stage of the project design and ethical review process. This can include the researcher themselves and their team; the Animal Welfare Body and/or local ethics committee; the regulator/competent authority; the National Committee for the Protection of Animals used for Scientific Purposes; and journal editors publishing research involving animals.
- Those undertaking the role of project evaluator/authoriser should ensure that good practice is employed with regard to achieving the fullest implementation of the 3Rs.
- Those involved in developing and/or reviewing project plans should provide constructive, but robust, challenge as to the 'scientific need' and the ethical justification for using a particular 'severe' model or test.
- The basis of the arguments made by those proposing to use a severe animal model because "we've always done it this way", or "we have a body of data linked to this method", and the use of 'traditional' methods or entrenched practices should be critically reviewed and rigorously challenged.
- The translatability of specific severe models, including different 'validities' should be reviewed and critically questioned. For example, is it necessary to actually create the disease state?

Scientists

- It is good practice for scientists to liaise with a wide range of other research groups working in their field who may be using equivalent models (either *in vivo* or *in vitro/silico*), or attempting to answer similar scientific questions, to share good practice with respect to refinement and avoiding severe suffering.
- Expert advice can be obtained on search strategies for the relevant literature and how to use appropriate databases, to ensure that all information relevant to avoiding or reducing severe suffering is retrieved, assessed, and implemented wherever possible.
- If those involved in pre-clinical research maintain close dialogue with clinicians working on the human condition, they will be better able to ensure that the results of studies using animal models will be valued, translated and used.
- Scientists should take full advantage of the expertise available from the local Animal Welfare Body at their establishment.
- The steps taken to refine animal use (relating to housing and care, and to procedures), should be reported in publications arising from the research (e.g. see the ARRIVE guidelines and Gold Standard checklist).
- Peer reviewers of papers submitted to journals for publication should be tough, but constructive, in requiring the manuscript to include all relevant details relating to how the project has been ethically reviewed, how it has been refined, and the impact on the animals involved.

All roles, including animal technologists and veterinarians

- Animal welfare officers, animal technologists and veterinarians can use interpersonal 'soft skills' to influence and negotiate good practice regarding recognising causes of suffering, monitoring and alleviating these, and promoting refinement in general.
- A team approach (e.g. involving the expertise of veterinarians, scientists, animal technologists etc.) should be employed to define humane endpoints that eliminate avoidable suffering while permitting the scientific objectives.
- As a project progresses, and at its conclusion, feedback on successful refinements and ongoing concerns should be provided to all those who have been involved in addressing severe suffering.
- Good animal welfare practices, new 3Rs developments, or relevant data should be actively shared and promoted externally to the wider scientific community.
- Individuals can set up Expert Working Groups on refining particular severe procedures, in conjunction with external colleagues including scientists, animal technologists and vets from industry and academia, plus regulators, scientific animal welfare organisations and 3Rs centres. They should also participate in these if asked! It is also possible to suggest topics for 'thematic review' to the European Commission (see Directive 2010/63/EU Article 58).

Funding bodies

- Funding bodies should encourage applicants to include the financial costs of implementing specific refinements into a study when writing the budget for a research project, making it clear that this can and should form an integral part of the grant funding application.

Regulatory bodies

- Regulatory bodies (such as the OECD and EDQM) should regularly review prescribed tests and processes with a priority of identifying opportunities for avoiding, replacing or reducing those which involve severe animal suffering.

The RSPCA would like to thank all of the participants who attended this event, along with the donor who provided the funding to the RSPCA to enable it to take place. We hope that delegates feel inspired to take away the information and ideas that were presented and discussed in order to make whatever difference they can in their own role.

We will be working to continue to take this work forwards over the coming months and will keep people informed through future newsletters and website updates.