

# Developing a collaborative agenda for humanities and social scientific research on laboratory animal science and welfare.

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## Aim



Improving laboratory animal science and welfare requires both new scientific research and insights from enquiry in the humanities and social sciences. Whilst scientific research provides evidence to replace, reduce and refine procedures involving laboratory animals (the ‘3Rs’), work in the humanities and social sciences can help understand the social,

economic and cultural processes that enhance or impede humane ways of knowing and working with laboratory animals. However, communication across these disciplinary perspectives is currently limited, and they frame questions, generate results, engage users, and seek to influence policy in different ways.

## Methods

To facilitate dialogue and future research at this interface, we convened an interdisciplinary group of 45 life scientists, social scientists, humanities scholars, non-governmental organisations and policy-makers to generate a collaborative research agenda. This drew on other agenda-setting exercises in science policy, using a collaborative and deliberative approach for the identification of research priorities. Participants were recruited from across the community, invited to submit research questions and vote on their priorities. They then met at an interactive workshop in the UK, discussed all 136 questions submitted, and collectively defined the 30 most important issues for the group.

## Results

The collaborative research agenda for humanities and social scientific research on laboratory animal science and welfare is presented below. The research questions produced reflect the considerable and collective efforts of all participants. Each question provides the starting point for developing future innovative research in the social sciences and humanities responsive to, and in dialogue with, the needs of the animal research and welfare community.

### Changing Contexts in Science and Policy

How are moves towards open science, data accessibility and greater transparency influencing research design and practices in laboratory animal research?

In what contexts do the practices and governance of animal research become responsive to change (e.g. in the context of new technologies and emerging risks), and how can these inform the development of better regulation?

What are the drivers for, and implications of, international circulations of expertise in relation to changing national practices and policies of laboratory animal science?

How does, and could, attending to animal welfare generate different forms of value (e.g. research innovations, economic opportunities, social acceptability) for different groups?

How is the credibility of animal models and non-animal alternatives constructed, decided upon and challenged in different contexts?

What factors (e.g. scientific, animal welfare, economic, political) influence the sourcing, breeding and transportation of animals in laboratory animal research and use?

In what ways have legislative categories that offer enhanced protection to some species over others, shaped and been shaped by attitudes to and uses of animals in research?

How do species categories and characteristics get used and amended as indicators of sentience within animal research and care practices?

### Cultures of Animal Care

How can a *culture of care* be defined, what does it look like in institutions where it is functioning well, and what factors enable or constrain its development?

How, and with what implications, does the practice and understanding of a *culture of care* differ according to personal, professional, institutional and other contexts?

How can animal care staff and other individuals be supported or empowered to improve good welfare practices and policy, and what are the institutional and other barriers to realising this?

What is the significance of *emotional labour*, and the potential for processes of *de/sensitization*, for developing a *culture of care* and sustaining animal care as a profession?

How can innovations in practices of care be fostered within and across local, national and international contexts?

How do recruitment strategies and motivations for entering the animal care profession impact upon a *culture of care*?

How do the emotional, embodied and affective relations between animals and people shape animal research and care practices?

### Public Attitudes and Engagement

Where are the opportunities for greater and meaningful public and stakeholder engagement in the policy and practices of animal research?

What, and in what contexts, do different publics want to know about animal research?

How do peoples’ life experiences and other factors (e.g. profession, religion, health, pet-keeping) influence attitudes and behaviours around animal research?

What factors influence the construction of trust around animal research in diverse publics?

What is the influence of primary, secondary and tertiary education on people’s attitudes to the use of animals in education and research?

How do understandings of animal experience and personal motivation influence public attitudes towards the use of animals in research and how does this compare to other sectors (e.g. agriculture)?

### Ethical Review and Replacement, Reduction and Refinement (3Rs) in Animal Research

How do harm-benefit assessments of proposed animal research involve the contributions from different roles, knowledges and ethical positions, and how are these resolved in practice?

How is the promissory discourse around the translation of animal research to humans influencing practitioner, policy-maker and public understandings of harm-benefit analysis?

What are the consequences for laboratory animals, researchers and animal care staff of the new EU requirement to record the actual (as opposed to predicted) severity of procedures?

How do harm-benefits assessments vary according to the use of animals for different permissible purposes (e.g. basic research, treatment of disease, animal welfare, species preservation)?

What factors shape the format, content and communication of decision-making in the ethical review of animal research in different contexts?

In what ways have the 3Rs been taken up and interpreted in different national contexts?

What factors influence the way researchers in different types of organisations implement and use the 3Rs?

How do different stakeholders define, use, and prioritise the 3Rs, in both rhetoric and reality?

To what extent are the 3Rs still fit for purpose and in what ways might they need to be superseded or supplemented?

## Conclusions

The questions indicate a demand for new research in the humanities and social sciences to inform emerging discussions and priorities on the governance and practice of laboratory animal research, including around: international harmonisation, openness and public engagement, ‘cultures of care’, harm-benefit analysis and the future of the 3Rs. The process underlines the value of interdisciplinary exchange for improving mutual understanding of different research cultures and identifies ways of enhancing the effectiveness of future research at the interface between the humanities, social sciences, science and science policy.

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