Responsible Animal Research: Critical, Challenging & Creative Thinking

Course description: This online course is aimed at research students and researchers at any stage of their career who are actively planning, conducting, supervising, or managing research involving the use of live animals or animal derived material.

NOTE - This course does not require participants to hold a personal licence or to have undertaken licensee training. It is intended to compliment licensee training, not duplicate it.

In summary:

Course title	Responsible Animal Research: Critical, Challenging and Creative Thinking
Who for	Bioscience researchers at any stage of their research career who are actively who are actively using animals, or animal-derived material for their research.
Length	4x 2.5-hour live webinars (Monday-Thursday, 10-12:30), including a 15-minute comfort break.
Format	Interactive mix of live webinar presentations, plus individual and group activities with discussion.
Overall Purpose	To support participants to: think critically when reading research and designing their own experiments; challenge research methods, models and practices to identify the best approach to test their hypothesis; be creative and innovative in how they conduct and communicate their research.
Key content	1. Theory: • **Introduction to animal use in research and the 3Rs** includes: the historical context for animal use in research, the range of Societal viewpoints on the use of animals in research and ethical theories unpinning them, an overview of the 3Rs principles. • **Animal research integrity** includes: discussion of the research framework as it relates to the responsible use of animals in bioscience research; good practice expectations regarding openness and transparency plus the dissemination of research outputs. Real-life examples of non-compliance with ASRU, plus fabrication, falsification, plagiarism, improper conduct and misrepresentation will be discussed. • **Common pitfalls in experimental design, how to identify and avoid them** includes: topics to improve the rigour and reproducibility of results (how to maximise statistical power, sources of bias, identifying the experimental unit, hypothesis testing); a brief introduction to systematic reviews and meta-analysis; plus free tools and resources including the

	PREPARE and ARRIVE guidelines. • **Animal welfare and the 3Rs in practice** includes: what is animal welfare and why it is important; factors to consider throughout an animal's lifetime experience; potential sources of uncontrolled variables and confounding factors; and an introduction to concepts such as the refinement loop and marginal gains. 2. Activities: • Participants will write and receive feedback on a non-technical summary of their research project • Participants will discuss real-life case studies of common misconduct issues and ethical dilemmas • Participants will use the ARRIVE guidelines to assess a research paper, what is/is not reported, and how this impacts the results, conclusions, and study reproducibility • Participants will write and receive feedback on a draft experimental protocol to apply what they have learnt and identify opportunities to further implement the 3Rs.
Learning outcomes	By the end of this course participants will be able to: • communicate their research in an open and transparent manner, with an informed understanding of how animals are used for scientific purposes within the UK and of the range of societal opinions that exist on this issue. • recognise what responsible, ethical, good practice research means in the context of their individual research project, and why it is important for the quality, reproducibility and reliability of their research data. • design and plan their experiments using a range of tools and resources that are available to support them to implement best practice. • understand what good animal welfare means, consider what factors can impact on the welfare of the animals used in research, and reflect on how the 3Rs can be effectively implemented during the course of their own research project/activities
Pre-requisites/pre-work	None
Course provider ***Course Tutor***	Responsible Research in Practice Nikki Osborne
Max no. of attendees	20
Specifications	The course can be tailored to individual establishment requirements.