

Comprehensive curricula, applicable across the Biosciences, for level 6 and 7 education in the use of animals in research.

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Background and Aims: Historically, the British Pharmacological Society has supported undergraduate education in the use of animals in research by providing financial support for final-year in-vivo pharmacology research projects, taught modules and residential courses in partnership with industry and the Physiological Society(1). In 2016, the Society released its evaluation of the Integrative Pharmacology Fund(2) which recommended that the Society should develop learning outcomes for undergraduate education in the use of animals in research, continue financial support for the education modules, and facilitate the sharing of educational resources. The aim of this project was to develop a curriculum to support undergraduate and Masters degree programmes across the Biosciences in which students are expected to analyse and critique literature and/or data that has been generated from studies involving research animals. Further, that this curriculum is accessible to students at Institutions that have research animal facilities and also those that don't.

Summary of work and outcomes: The project was led by the authors of this communication. An Expert Group was formed, comprising 34 stakeholders with expertise in education, research, animal welfare, Industry and regulation. Two curricula were developed: a core curriculum for all students (that doesn't require any hands-on animal work), and a supplementary curriculum, which provides experiential learning for students who wish to go on to study research animals in their education and/or careers. To support educators in the delivery of these curricula, individual learning outcomes are being mapped onto resources within ETRIS(3), a repository of free, online research animal educational resources. The Society is also working with educators to identify where additional educational resources are required and to facilitate their creation and sharing.

Discussion: These curricula will support students to develop knowledge and understanding of the appropriate use of research animals and the data generated from such studies, of the ethical, legal and welfare issues surrounding research animal studies, and to be better able to analyse and critique the literature and data from them. They will also facilitate students to make informed career choices.

Conclusion: This initiative will greatly facilitate the development and delivery of research animal education across the Biosciences, including at UK Institutions where, traditionally, this has not been provided.

References:

1. Collis MC (2016). *Nat Rev Drug Discov.* **5**: 377-379.
2. Lowe JWE *et al.* (2016). An evaluation of the Integrative Pharmacology Fund: Lessons for the future of in vivo education and training. London: British Pharmacological Society. www.bps.ac.uk/futureinvivo
3. ETRIS, www.etrис.leeds.ac.uk