



Home Office

Animals in Science Committee

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Home Office

Project Licence Strategic Review Subgroup

Forced swim test



- The purpose of this group is to carry out reviews of selected groups of project licences in order to provide strategic advice on specific topics to the Animals in Science Regulation Unit of the Home Office (ASRU).
- Selected topics:
 - Antibodies
 - The forced swim test
 - Non-human primates excl. neuroscience



Commission from Home Office

On 22 August 2022, the Home Office commissioned the ASC:

“The UK Government wishes to receive advice from the Committee on the evidence of alternative methods and appropriate justification for the use of the forced swim test, under the Animals (Scientific Procedures) Act (ASPA), with due consideration to the legitimate requirements of science and industry and to the protection of animals”.

In addition, the ASC was asked to answer the question: “How should the 3Rs be applied regarding the forced swim test, drawing on the available evidence and licence review?”

Methodology

- The PLSRG assessed 18 current licences, provided by The Home Office, identified using the search criteria ‘swim test’, ‘FST’ and ‘Porsolt’.
- Questionnaire sent to PPL holders. Responses to this indicated that the FST was not currently being used in all cases, since it is often included in a suite of potential tests that may or may not be used.
- Wider call for evidence from stakeholder groups – provided a wide range of views.
- NB – this is advice to the Minister, the Home Office will decide on its implementation.



Overview of the report

- The FST is potentially being used for a number of purposes, but in many cases, it was not clear from the licence whether it would actually be used, as it is often included as one of a suite of tests
- We found differences in views relating to the severity of the procedure, and in the descriptions of what the procedure entailed
- The FST may be justifiable for the screening of potential antidepressants and when studying the neurobiology of stress
- It should not be used as a model of depression or to study depression-like behaviour, or for studies of anxiety disorders and their treatment
- We found no evidence of reliable, reproducible and accepted non-animal alternatives for the FST where it may be justifiable



Recommendations

1. Formal evaluation of project licence applications should include a consideration of the specific scientific justification for use of the FST, including relevance to the diagnostic features of human illness of interest or specific induced physiological changes that are being investigated. (ASRU)



Recommendations

2. The use of the FST in project applications should be rejected if it is being proposed as a 'model' of depression (including in the phenotyping of genetically altered mice) or for studies of anxiety and its treatment. (ASRU)

Recommendations

3. The processes of local project review should ensure that the proposed purpose for using the FST has been clearly explained and assessed and opportunities for adoption of the 3Rs fully explored. **(AWERB)**

Recommendations

4. Further research should be conducted into non-animal methods for studying depression, antidepressants and other areas of research where the FST is currently used. Funders should consider specific funding calls in these areas. (Funders)

Recommendations

5. When it is proposed to use the FST in a programme of work, details of the experimental design and the number of animals to be used in the test should be included in the licence. (Applicant)

Recommendations

6. An optimum water temperature should be identified for both mice and rats, aiming for the water to be at a temperature that minimises the risk of hypothermia while achieving the scientific aims of the study. In addition, the water should be changed between each animal and the equipment cleaned. (Applicant)

Recommendations

7. Applicants should provide robust, scientific justification for the typical and maximum length of swim time, and this should be reduced to the minimum necessary, commensurate with reliable evaluation of animals' behaviour in the test. (Applicant)

Recommendations

8. All protocols proposing use of the FST should provide details of how the animals will be monitored during the procedure and cared for after the test has been completed.
(Applicant)

Recommendations

9. Applicants should assess the severity of their intended procedure in the light of the relevant guidance note (Home Office, 2014). (Applicant)

Recommendations

10. The AWERB should review the NTS and ensure that the FST is included and clearly described as a potential procedure if it is listed in the protocols. **(AWERB)**

Questions

