

Lord Sharpe of Epsom OBE  
Parliamentary Under Secretary of State (Home Office)  
2 Marsham Street  
Westminster  
SW1P 4DF

18 December 2023

Dear Lord Sharpe:

Following the June 2023 advice on the use of the forced swim test (FST) from the Animals in Science Committee (ASC), we – the undersigned members of Parliament – are writing to you regarding the imminent Home Office policy decision on the FST to urge you to prohibit any use of this procedure in the UK.

As you know, the FST is a behavioural experiment initially developed to screen antidepressant drugs<sup>1</sup> and later adopted for other uses.<sup>2</sup> It involves forcing a small animal into an inescapable water-filled beaker. The panicked animal swims in search of an escape, pawing at the sides or diving under the surface. Eventually, the animal stops swimming and floats. The UK's National Centre for the Replacement, Refinement, and Reduction of Animals in Research identified the procedure as “highly contentious” and “under considerable scrutiny” due to “its severity and effect on animal welfare”.<sup>3</sup>

The ASC's advice considered various uses of the procedure, including where it is used as a model of depression or anxiety, for screening anti-depressant drugs, and in the study of stress coping. The report highlighted significant limitations for where the procedure is used to model depression or anxiety and advised against licencing the FST for these purposes. For screening antidepressant drugs, the procedure is not useful.<sup>4,5</sup> A 2021 publication from the Medicines and Healthcare products Regulatory Agency reported that the FST could even rule out discovery of effective new drugs for humans.<sup>6</sup>

In terms of stress research, the advice highlighted that researchers should explain how the procedure was “naturalistically relevant” to humans.<sup>7</sup> Evidently, the translatability of data from rodents and the nature of the procedure is far removed from what would be “naturalistically relevant” to humans. Human stress-related conditions typically involve psychological symptoms not measurable in other animals, including flashbacks, emotional numbness, and detachment. The procedure is a poor approach to try to understand very complex human conditions and as such should not be authorised for this purpose.

Numerous pharmaceutical companies have committed to not using the FST, including GSK, Johnson and Johnson, Pfizer, and AstraZeneca, as well as more than a dozen of the UK's top Russell Group universities.<sup>8</sup> Newcastle University's Animal Welfare Ethical Review Body called the procedure “outdated” and “ethically unacceptable”, stating that it “cannot foresee any research where this test would be proposed or could be scientifically or ethically justified”.

The Home Office must stop licencing use of the FST in the UK and must withdraw all current licences that authorise its use. Continuing to authorise its use undermines the integrity of scientific output and public confidence in the regulatory framework. Please end it now.

Sincerely,

Sarah Champion MP  
Tracey Crouch MP  
Martyn Day MP  
Caroline Dinenage MP  
George Eustice MP  
Patricia Gibson MP  
Caroline Lucas MP  
Rachael Maskell MP  
Stuart McDonald MP  
Kirsten Oswald MP  
Tommy Sheppard MP  
Henry Smith MP

### References

- <sup>1</sup>Porsolt RD, Anton G, Blavet N, et al. Behavioural despair in rats: a new model sensitive to antidepressant treatments. *European Journal of Pharmacology*. 1978; 47: 379–391. DOI: 10.1016/0014-2999(78)90118-8.
- <sup>2</sup>Molendijk ML, De Kloet ER. Forced swim stressor: trends in usage and mechanistic consideration. *European Journal of Neuroscience*. 2022; 55(9–10): 2813–2831. DOI: 10.1111/ejn.15139.
- <sup>3</sup>National Centre for the Replacement Refinement & Reduction of Animals in Research. The forced swim test is not a regulatory requirement for the development of new antidepressants. Published 2021. Accessed 28 July 2023. <https://nc3rs.org.uk/news/forced-swim-test-not-regulatory-requirement-development-new-antidepressants>.
- <sup>4</sup>Suman PR, Zerbinatti N, Theindl LC, et al. Failure to detect the action of antidepressants in the forced swim test in Swiss mice. *Acta Neuropsychiatrica*. 2018; 30(3): 158–167. DOI: 10.1017/neu.2017.33.
- <sup>5</sup>Trunnell ER, Carvalho C. The forced swim test has poor accuracy for identifying novel antidepressants. *Drug Discov Today*. 2021; 26: 2898–2904. DOI: 10.1016/j.drudis.2021.08.003.
- <sup>6</sup>Sewell F, Waterson I, Jones D, et al. Preclinical screening for antidepressant activity – shifting focus away from the forced swim test to the use of translational biomarkers. *Reg Toxicol Pharmacol*. 2021; 125: 105002. DOI: 10.1016/j.yrtph.2021.105002.
- <sup>7</sup>Animals in Science Committee. Research and analysis: advice on the use of the forced swim test. Animals in Science Committee response to a ministerial commission for advice. <https://www.gov.uk/government/publications/advice-on-the-use-of-the-forced-swim-test>. Published July 2023. Accessed 5 July 2023.
- <sup>8</sup>PETA. Victories! PETA Is Ending Near-Drowning Experiments on Animals. <https://www.peta.org/features/peta-ends-near-drowning-tests-small-animals/>. Updated 2023. Accessed 28 July 2023.