

An Alliance for
Evidence-Based
Science



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SCIENCE MUST BE ADDRESSED BY THOSE QUALIFIED TO DO SO, IF WE ARE TO HELP LABORATORY ANIMALS

The International Journal of Clinical Medicine has [published a critique](#) by leading medical experts [Europeans for Medical Advancement](#), (EFMA) addressing a dog study co-written by FRAME and the BUAV, excerpt summary below:

...suggesting as Bailey et al., do that only recently has enough evidence existed to abandon the practice of using animals in general and dogs in particular in toxicity testing is not only scientifically unsustainable but unethical.

We would also add that Bailey et al.'s suggestion conflicts with the BUAV's crucial role in filming undercover for the historic [Cambridge Coalition](#), which hired EFMA as their chief scientific witness. Because Cambridge University were planning to build a proposed new primate lab on Green Belt land, they had to prove its primate experiments were going to be medically and scientifically 'in the national interest'. After a two week inquiry, in which scientific evidence was submitted from both sides, EFMA defeated the primate lab with an internationally precedent decision, the government inspector ruled: '[On the basis of the technical input, therefore, I could not conclude that need in the national interest is demonstrated insofar as this pertains to the scientific/medical research and procedures undertaken by the University](#)'.

For Life On Earth carefully differentiates between equally valid a) moral concerns about animal ethics and b) science, which can only ever be about objectively verifiable factual evidence. Moral concerns expressed by the BUAV, superbly illustrated in their courageous undercover cruelty exposes, are greatly admired by FLOE's advocates for animals. However, if we are to *end* experiments on animals we must honour the current scientific position.

The BUAV's study about dog experiments, co-written with [FRAME](#), was published in November 2013. FRAME support the continued use of animals as experimental subjects in laboratories; the director of their 'alternatives' laboratory is an active animal experimenter [Dr Andrew Bennett](#) and [FRAME promote](#) what they describe as 'alternatives' to the use of animals as predictive models for human patients, on the condition such alternatives exist. This position entirely ignores current understanding of evolutionary biology, which has [proven](#) that the results from animal experiments are *not capable* of predicting responses in human patients. To this end Paul Flynn MP has re-tabled [Parliamentary Early Day Motion \(EDM\) 263](#) – signed by 52 MPs last Parliamentary session – which calls for claims about animal experiments in human medicine to be held to scientific account, in properly moderated public scientific debate. Britain's leading human rights defence barrister Michael Mansfield QC has endorsed the [debate conditions](#) for this EDM (now updated as [EDM 22](#)) which also holds the animal experimentation community's 'Concordat on Openness on Animal Research' to account.

[Empirical evidence](#) documenting the failure of trying to use results from animal experiments to predict responses in human patients is acknowledged by the wider scientific community[1]; [pharmaceutical companies](#); was the focus of the Editor in Chief at the British Medical Journal's [Editors Choice in June](#) and has been placed within the wider context of current understanding of evolutionary biology by [Trans-Species Modelling Theory](#). For Life On Earth, her supporters and affiliated Beagle campaigns are at a loss to understand why the BUAV has chosen to publish a scientific paper with a pro-vivisection organisation which [ignores](#) this up-to-date scientific knowledge!

FLOE's science is illustrated by the leading medical Board at [Europeans For Medical Advancement](#), (EFMA) whose new website has just been published. EFMA's [critique](#) of the dog study written by FRAME and BUAV is published in the International Journal of Clinical Medicine and is an engaging and accessible article; highly informative, explaining why science must be only addressed by those who are qualified to do so. This, as opposed to organisations such as FRAME whose support of the continuation of experiments on sentient animals is clearly fuelled by their raison d'être: namely their remit to promote so called 'alternatives' to a method current scientific knowledge has [already abandoned](#). The definition of failure does not require 'alternative' routes that also arrive at animal model land! Failure is always dropped on its own grounds. The correct term for medical research which works for human patients is 'viable' or 'valid' – not alternative. For more on the distracting 3R's 'alternative' approach please visit the [local campaign in Hull](#), for whom FLOE illustrate the scientific evidence.

HOW YOU CAN HELP: please visit EDM 22's [new facebook page](#) and write to your MP, asking him/her to sign this valuable EDM which holds scientific claims to public account through the democratic platform of properly moderated, public scientific debate. You will find everything you need to write to your MP [here](#), thank you!

PLEASE FOLLOW FLOE! Here's our [facebook page](#), here's our [twitter](#) @forlifeonearth

We re-produce EFMA's Conclusions and Ethical Implications regarding the FRAME/BUAV dog study, below, but again strongly recommend that our readers make a space in their day to enjoy this highly accessible critique in its entirety, [here](#).

References

[1] R Greek *The Ethical Implications for Humans in Light of the Poor Predictive Value of Animal Models* **International Journal of Clinical Medicine**, 2014, 5, 966-1005
Published Online August 2014 in SciRes. <http://www.scirp.org/journal/ijcm>
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The Ethical Implications for Humans in Light of the Poor Predictive Value of Animal Models
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4. Conclusions and Ethical Implications

Bailey et al. are to be complimented for introducing more data regarding dog models of toxicity. As I stated, the study supports the current literature with an evaluation that is arguably better than has ever been published. But the study does not break new ground conceptually and the claim by the authors that it does, reinforced by the tone of the paper along with the accompanying graph, suggests the authors had an agenda when commenting on previous studies. Moreover, animal tests are not diagnostic tests, hence different rules apply for evaluating how useful PPV is under the circumstances. The fact that Bailey et al. ignored empirical evidence, theory, and the opinions of experts is also concerning. Ioannidis states in his article "Why Most Published Research Findings Are False" that "The greater the financial and other interests and prejudices in a scientific field, the less likely the research findings are to be true" [324]. I would extend this concept to the comments in a research article that are unrelated to the research itself.

There has been sufficient empirical evidence to abandon the use of all animals in testing and research since the middle of the 20th century; the exact date is immaterial. Furthermore, prior to November of 2013, there was also theory in the form of evolutionary biology and complex systems. TSMT was published online in June 2013 but the basis for it has been known for a very long time. Additionally, there were

concerns from the philosophy of science community, in terms of modeling, that date back to the early 1990s [336-338] and concerns from the evolutionary biology community dating back to the 1940s [31].

There are ethical concerns regarding the use of animals in research and testing both from the animals' perspective as well as from the perspective of humans. The animal costs are obvious: suffering and death. But the human-based concerns are the same. Patients suffer and die because of animal-based research and testing. This occurs in three ways: First, in the form of animal models offering no predictive value for human responses and consequently patients taking medications that are ineffective and/or harmful. Second, the money spent on animal-based research and testing could have been put to more dependable and thus useful research or testing methods. The most reliable estimate for the percentage of funding that goes to animal-based research is from the NIH in 1985 which calculated that around 50% went to fund animal models[339]. Relatedly, in 1964, John R. Platt wrote the classic paper Strong Inference [340]. In it, Platt anticipated some of the points I have presented in this article: "We speak piously of taking measurements and making small studies that will 'add another brick to the temple of science.' Most such bricks just lie around the brickyard" [340].

Third, in contrast to NIH funding, the cost of animal testing in drug development is minimal. The real cost comes in the form of bad drugs that make it through clinical trials only to be pulled from the market or shelved prior to going to market [216, 228, 229, 341, 342]. There is also the cost of good drugs that were lost because of animal testing [159, 166, 184, 197, 223, 343-345]. This costs patients in that an otherwise effective treatment is not forthcoming, hence more suffering and death. The US National Cancer Institute acknowledges that society may have lost cures for cancer because of misleading animal studies[166]. Moreover, the drugs that do eventually go to market are more expensive for patients because those drugs must cover the cost of developing the failed ones. It also costs pharmaceutical companies profits that would have, at least partially, gone back into research.

Considering the above, suggesting as Bailey et al., do that only recently has enough evidence existed to abandon the practice of using animals in general and dogs in particular in toxicity testing is not only scientifically unsustainable but unethical.

The reasons the animal model continues to be accepted by society in general are not unique to this situation, and can be explained by the following:

1. Animal use is now entrenched in society and it is very difficult to change traditions.
2. Along the same lines, animal use is ingrained in institutions of higher learning. Promotions and salaries are frequently tied to factors related to animal-based research and the hierarchy of power is related to the money that animal-based research generates.
3. Many scientists have dedicated their careers to animal-based research and have an emotional interest in the process.
4. Billions of US dollars are spent annually on animal-based research and testing. This money generates special interest groups that have power in the political system.
5. Society in general is not knowledgeable enough in science or medical science to discover the flaws of animal models.

6. Any discussion of the ethics of using animals in research and testing usually revolves around the pain and suffering of animals. The human implications need to be included in these conversations.

Biomedical research needs to fully embrace evolutionary biology and complexity theory and move beyond the vestiges of a creation-based research program. TSMT is one step in this process.

These conclusions should be communicated to society as: (1) society has ethical concerns regarding animal-based research; (2) these conclusions have important implications in light of what type of research is currently being funded (animal-based) and what is not (clinical research and research leading to better technology); (3) what is funded influences which disciplines young scientists consider for their careers; (4) the legal requirements for animal testing must be changed as they impede progress and drive up costs without providing a safer drug supply as the US Congress mandated.