

Alissa Pabon

Cell Biology

Christina Steel

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Animal Testing: Positive or Negative

Animal testing has always played a big part in FDA research due to the easy access and diversity of animals, but things are changing. According to the FDA, reducing animal testing will actually improve drug safety and save animals (U.S. Food and Drug Administration, 2025). While there are many positive aspects of discontinuing animal models, there are also beneficial reasons to continue them.

For instance, more breakthroughs occur through animal testing, rather than through alternative models, due to the similarity of our internal pathways. Up to 90% of our genes with mice are identical, which is primarily why they are bred for testing (Mayor, 2002). Treatment for certain diseases or disorders can be found through testing on mice because of these similarities. In addition, certain animals have a more condensed life when compared to humans, making them a key species to study during research because of the many generations produced in such a short span of time (Stanford Medicine, n.d.). Animal testing is also favored because they are living systems, as opposed to lab-grown models. In this case, animals are more accurate for performing research tests on. Lastly, researchers have the ability to control animal testing, unlike in humans or non-living systems. They may control the experiment by using a diet with strict feeding times, or a germ-free environment to ensure the testing isn't skewed (Harvard Medical School, n.d.). Animal testing plays a big role in the scientific world and will be hard to fully replace without adequate systems.

On the other hand, animal testing can be cruel and inhumane, leaving many people to question the morality of it. Animal testing can cause harm in countless ways, including suffering from isolation, administered medication, or even environmental conditions. Animals are sentient beings, meaning they can perceive things like humans, so being bred specifically for captivity and experiments is cruel. While researchers attempt to reduce the harm done, it will never fully diminish their pain (American Anti-Vivisection Society, n.d.). Secondly, while animals can be closely related to humans, their biological systems will never be completely identical to them. This is a major downside during testing because the outcomes are unpredictable when transitioning from animals to humans. For instance, during 2023, a total of 649,519 animals were reported to have been tested on (Cruelty Free International, 2025). With this in mind, the FDA stated that over 90% of drugs used in animal testing were not deemed safe or effective for human use (U.S. Food and Drug Administration, 2025, p. 1). This means a majority of those animals were unnecessarily tested on because the treatment never made it to human trial. In general, animal testing is negative because it isn't necessary for scientific discoveries. There are alternative methods like in vitro testing, which is a controlled experiment of cellular molecules in a petri dish, or 3-D printing utilized for tissues (Britannica, 2026).

In conclusion, animal testing is not a necessary process in the scientific world. The outcomes of these experiments are usually unpredictable and unusable, so there are other humane ways to go about getting the desired results. As the FDA reduces the amount of animals used in testing, it opens a door to new, improved ways of research and experimental procedures without raising ethical questions about harmfulness.

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