Anh Vo

**Do We Need another Cosmetic Product?**

Carrying legal responsibilities for approving and labeling products on markets, the Food and Drug Administration (FDA) requires manufactures to produce safe and non-irritating cosmetics and personal care products. Although alternative non-animal tests prove the efficiency of products, companies prefer conducting tests on animals to demonstrate the safety of their products. Under the act of protecting public health, uncountable animals suffer stress and sacrifice their lives for commercial purposes. Protecting human health by harming other small living things is unethical; animal-based research must be banned worldwide and replaced with viable alternatives.

Animal testing has been widely known as the most efficient method to check and control the variables in sample products before exposing them to humans. It is defined as performing procedures on an organism from Animalia taxonomy, including vertebrates and invertebrates and is known as experimentation on vertebrates only in the majority (Kolar). Regarding conducting research on personal care products, cosmetics manufacturers and marketers prefer testing their new products on animals and claim its safety based on their collected data despite the fact that they can opt out animal research. The Federal Food, Drug and Cosmetic Act categorizes cosmetics as "articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body... for cleansing, beautifying, promoting attractiveness, or altering the appearance" (FDA). While the society believes it is acquainted with the practices of animal testing and its benefits, some scientists and laboratory technicians neglect the negative consequences and conceal them from the media.
Cosmetic research on live animals is unnecessary and inaccurate. Although the FDA has the obligation to protect customers' health and regulate goods, no cosmetics and personal care products need FDA approvals before being marketed. In fact, while the FDA requires cosmetic manufacturers to publish their ingredients and label correctly, the FDA does not approve their ingredients and labels. Furthermore, humans and animals react differently to the same chemicals. Manufacturers commonly study new cosmetic products on rabbits and conduct the Draize eye and Skin tests. These tests involve dripping chemicals into eyes or on shaved skins of rabbits in order to measure irritations caused by new ingredients. Differences in structures of eyelids and corneas between rabbits and humans with differences in secretions of tears obviously limit the reliability of the experiments. Evidently, animal-based testing can only measure irritations of ingredients, but not the toxicity, and raises concerns about the long-term safety. It should not be used as a safety standard for evaluating quality of human products. Moreover, living conditions in laboratories influence animals' behavior and alter testing results. Scientists and technicians use captured animals, whose participation is involuntary, and routinely perform experiments in artificial environments. Being enclosed in small spaces with human noise and isolated from nature results in anxiety, stress, and abnormal behavior. Last but not least, accuracy and truthfulness about the ingredients of products should be based on results from their intended consumers. For instance, the safety of products for animals should be claimed after those products pass reliable research on animal models; the same rule should be applied for human products though. So relying on unnecessary animal research raises objections about its dubious scientific accuracy; perhaps a deeper issue, however, involves the animal rights.

Performing research on living animal species violates animal rights; most animals suffer in pain and do not receive any legal protections. Giving no pain relief to animals before the
experiment, laboratory technicians rub chemicals on the animals' eyes and skins. In some research, animals suffer irritations and pain constantly as humans perform repeated tests and wait for the signs of healing and side effects, which sometimes never come. Cruelly, some tests require forcing animals to swallow chemicals. According to the Humane Society of the United States, animals are killed after testing in front of other animals. Usually, scientists perform asphyxiation, neck-breaking, or decapitation. The website also confirms that the real number of animals used in lab exceeds the official data and none of animals receive their legal protections ("Fact Sheet").

As an alternative for animal-based research, scientists propose promising non-animal testing by taking the advantage of the computer science and the technology. *In vitro* technique performs experiments outside of living organisms. In other words, technicians create artificial environments, manipulate organs and tissues, and study biomolecules in laboratory tubes. International Journal of Cosmetic Science published a research applying *in vitro* method as an alternative to the Draize eye irritation test to develop an inexpensive mascara. The study focused on protozoa, a group of heterotrophic protists with some animal-like characteristics; these features enhanced the accuracy, reliability of the research and the potential of developing alternative methods. Recording the growth rate of models in response to the concentration of six random mascara products revealed the toxicity of samples and suggested that some brands potentially had negative effects on consumers. The research proposed that *in vitro* technique may evaluate the toxicity of given ingredients and required further experimentation and collaboration (Thomason and Montagnes 135). Moreover, the Basic & Clinical Pharmacology & Toxicology journal discussed the development of skin sensitizers using non-animal studies in 2014. Not only mentioned *in vitro* assessment as "the most promising for future routine testing, based on
maturity level, prediction performance and progress towards validation," the research introduced another alternative called in silico. This technique carried out the experimentation on computer and predicted chemical and biological effects of compounds.

While the process of eliminating animal testing appears to be complicated, some countries and unions have already paved the way to build a moral society. The European Union bans animal examinations on cosmetic products, regulates the rule on imports, and demands their trade partners do the same. Following that trend, Norway, Israel, and India have put an end to animal research for cosmetics and mandate alternative non-animal tests. Hard to believe, on the other side of the continent, the Chinese government insists on performing animal experimentation on cosmetic products before they are put on sale, including imports. Not until November 2016, after spending four years to conduct non-animal researches and prove the efficiency, scientists at the Institution for In Vitro Sciences, funded by People for the Ethical Treatment of Animals, successfully persuaded the Chinese government. The Chinese FDA promised soon to recognize non-animal methods for the cosmetic safety testing (PETA). Societies have been adapting and changing their views on how to evaluate the quality and safety of personal care products globally.

Cosmetic companies examine new chemical compounds with purposes of finding low-cost and efficient ingredients, getting the most profits, and pricing their products competitively. While manufacturers defend their actions by proclaiming innocent intentions to protect consumers' health, commercial businesses constantly harm and kill thousands of small living things in order to examine unknown chemicals with unpredictable effects. The wholesale sacrificing of these animals should be eliminated worldwide with immediate effects.
Words cited


