SOUTH CAROLINA RESEARCH ANIMALS

Stacey E. Besser (8/2021)

Research animals are used within many occupational and educational fields. The most well-known fields are probably biomedical research and consumer product testing. They are also used in aeronautic, military, agricultural, behavioral and cognitive testing as well as educational instruction and training. Incomplete reporting methods make it difficult to ascertain numbers with certainty, but it is estimated that 115 million vertebrates are tested on worldwide each year.[1]

The Animal and Plant Health Inspection Service (APHIS) Animal Care program is the agency within the Department of Agriculture responsible for regulating animal research facilities, dealers, and carriers, as required by the Animal Welfare Act of 1966 (AWA). In South Carolina, currently there are nine private entities registered with APHIS as animal research facilities. [2] Both Veterans' Hospitals in South Carolina also perform testing on animals and fall into their own category of registered entities.[3] In 2020, APHIS reported 2,413 animals subjected to testing in South Carolina.[4] The species reported included dogs, cats, nonhuman primates, pigs, rabbits, guinea pigs, hamsters and "other animals". In addition to the animals used for testing, another 2,997 lab animals were held at the testing facilities, but not used for testing that year.[5]

These numbers, however, do not include birds, rats of the genus Rattus, mice of the genus Mus, fish, reptiles, amphibians, invertebrates, or farm animals used for agricultural purposes, as none of these species are protected by the AWA.[6] It is believed that unprotected animals make up 85 to 95% of all animals used for testing purposes in the United States.[7] In other words, APHIS' reported number of animals used is a small fraction of the total number of animals used for research and testing in South Carolina and elsewhere.

LAWS PERTAINING TO RESEARCH ANIMALS AND FACILITES

I. Research Animal Laws

The AWA is the principle federal law that creates regulations for research animal facilities. The law excludes elementary and secondary schools[8] and federal research facilities[9]. Its purpose is to "regulate transportation, purchase, sale, housing, care, handling

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[1] Humane Society International, *Animal Use Statistics*, Oct. 21, 2012, http://www.hsi.org/campaigns/end_animal_testing/facts/statistics.html.

[2] U.S.D.A. Animal and Plant Health Inspection Service, *List of Active Licensees and Registrants under the AWA*, June 10, 2021, https://www.aphis.usda.gov/animal_welfare/downloads/List-of-Active-Licensees-and-Registrants.xlsx.

[3] Ibid.

[4] U.S.D.A. Animal and Plant Health Inspection Service, *Annual Report for Research Facility, 56-R-0001, 56-R-0002, 56-R-0003, 56-R-0004, 56-R-0105, 56-R-0109, 5-R-0110, 56-R-0114, 56-R-0117, 56-V-0002, 56-V-0003* (2020).

[5] Ibid.

[6] 7 U.S.C. 54 § 2132(g) (2020).

[7] Animal Legal Defense Fund, *Overview: The Horrors of Animal Testing*, https://aldf.org/focus_area/animals-used-in-research/ (last visited June 24, 2021).

[8] 7 U.S.C. 54 § 2132(e) (2020).

[9] 9 C.F.R. § 2.30(a)(1) (2020).

and treatment"[10] of animals covered by the act. The AWA requires "routine" inspections of dealers and research facilities, with the specific requirement that research facilities be inspected annually.[11] APHIS will also perform inspections of regulated facilities in response to public concerns.[12] AWA provides for a fine of up to $10,000 for a violation of its terms.[13] It also allows for criminal penalties of not more than $2,500, one year imprisonment, or both, for knowing violations.[14] Unlike other federal laws such as the Endangered Species Act and the Environmental Protection Act, the AWA does *not* contain a private citizen suit provision for violations.

The AWA does not prohibit states from enacting laws that add protections for research animals.[15] Although South Carolina law does not provide specific protection for research animals, the animal cruelty statute also does not contain any specific exception for them as it does for many other categories of animals.[16] As such, there may potentially be room for prosecution for research animal abuse in South Carolina, particularly those animals not covered by the AWA.

II. Laws for the Protection of Research Animal Facilities

While there is an absence of state legal protections for animals used or sold for research in South Carolina, there are specific protections in place for the facilities that conduct breeding, sale and testing of research animals. The South Carolina Farm Animal and Research Facilities Protection Act, also known as the South Carolina Ecoterrorism Act, provides penalties for a person who damages an animal facility, its animals or property, [17] or exercises control over the facility or its animals.[18] Violation for damage is a misdemeanor and carries a fine of up to $10,000 and/or 3 years imprisonment.[19] A person also violates the law if he or she enters an animal facility without the owner's consent and remains concealed with the intent to disrupt or damage the business conducted at the facility.[20] Violation for illegal entry is a misdemeanor with a fine up to $5,000 and/or one year imprisonment.[21] The statute also provides a civil cause of action for any person who suffers damages from an act prohibited by this law with recovery up to three times the monetary value of the actual damage caused to the facility.[22]

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[10] 7 U.S.C. 54 § 2131 (2020).
[11] 7 U.S.C. 54 § 2146(a) (2020).
[12] U.S.D.A. Animal and Plant Health Inspection Service, *Animal Welfare Act Inspections*, Nov. 18, 2020. https://www.aphis.usda.gov/aphis/ourfocus/animalwelfare/awa/ct_awa_inspections, (last visited June 24, 2021).
[13] 7 U.S.C. 54 § 2149(b) (2020).
[14] 7 U.S.C. 54 § 2149(d) (2008).
[15] 7 U.S.C. 54 § 2143(a)(8) (2015).
[16] S.C. Code Ann. § 47-1-40(C) (2002).
[17] S.C. Code Ann. §47-21-40 (2002).
[18] S.C. Code Ann. §47-21-30 (2002).
[19] S.C. Code Ann. §47-21-80 (A) (2002).
[20] S.C. Code Ann. §47-21-50 (2) (2002).
[21] S.C. Code Ann. §47-21-80 (B) (2002).
[22] S.C. Code Ann. §47-21-90 (2002).

SOUTH CAROLINA RESEARCH FACILITES and DEALERS

In South Carolina, the eleven reported animal research facilities include seven colleges or universities, two privately owned businesses and two Veterans' Administration Hospitals.[23] One additional facility in South Carolina is registered solely as a dealer that does not perform testing onsite.[24]

Dealers are regulated by the AWA in the same way that research facilities are.[25] A "Class A" dealer is anyone who sells animals bred at their facility while "Class B" dealers buy and sell animals who were obtained from an outside source.[26] When it comes to research animals, Class B dealers may obtain animals from the wild, from auctions, small breeders, re-homing ads, or even stolen. While many states allow or even, in the case of five states, *require* publicly funded shelters to provide animals to Class B dealers, South Carolina is one of fourteen states that fortunately prohibits "pound seizure".[27]

Lowcountry Biosource, Inc., formerly Technical Services Specialists of Walterboro, is a research animal facility and a Class B dealer which reported using 120 guinea pigs for testing in the year 2020.[28] In each years between 2015 and 2017, Lowcountry Biosource, Inc. had non compliant violations at the time of their routine USDA inspections.[29] Violations in one inspection report described rabbits with splayed legs and a monkey with "total fur loss in every area he can reach"[30] which is a common sign of psychological distress.[31]

Alpha Genesis in Yemassee is a primate research facility and Class B dealer, stating that it maintains "the largest commercial breeding colony of research primates outside of Asia and provides primate research subjects and services worldwide."[32] In the past five years from 2016 to 2020, Alpha Genesis has received over $23 million in grants from the National Institutes of Health, a government entity that funds biomedical research.[33] The facility was

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[23] U.S.D.A. Animal and Plant Health Inspection Service, *List of Active Licensees and Registrants under the AWA,* June 10, 2021, https://www.aphis.usda.gov/animal_welfare/downloads/List-of-Active-Licensees-and-Registrants.xlsx (last visited June 24, 2021).

[24] On February 2, 2021, the USDA APHIS inspection report of Whale Branch Animal Services, Inc. in Seabrook, South Carolina, a Class B dealer licensee, indicated that they had 145 monkeys present at their facility.

[25] 7 C.F.R. 9 §1.1 (2016).

[26] Ibid.

[27] S.C. Code Ann. §47-3-60 (2002).

[28] U.S.D.A. Animal and Plant Health Inspection Service, *Annual Report of Research Facility, 56-R-0110* (2019).

[29] U.S.D.A. Animal and Plant Health Inspection Service, Inspection Reports Search, https://aphis-efile.force.com/PublicSearchTool/s/inspection-reports, (last visited July 9, 2021).

[30] U.S.D.A. Animal and Plant Inspection Service, *Inspection Report*, August 27, 2015, https://acis.aphis.edc.usda.gov/ords/f?p=118:21:::NO::RXQIZAVXA:239151627090993&cs=11A1D75CBA30221DB2C8024015F3AE900.

[31] Identification of Technical Services Specialists as the subject facility of these reports is inferred from the location of the facility in the report in addition to the location of Technical Services Specialists as indicated in the List of Certificate Holders.

[32] Alpha Genesis Incorporated, *Alpha Genesis Primate Center Joins Coronavirus Battle,* https://www.alphagenesisinc.com/news-release, Feb. 2 2020 (last visited June 23, 2021).

[33] National Institutes of Health Research Portfolio Online Reporting Tools, https://report.nih.gov/award/index.cfm (last visited June 23, 2021).

involved in vaccine production efforts starting prior to the Covid 19 pandemic of 2020, providing macaque monkeys for vaccine development and other studies,[34] and has also been involved in production of vaccines for Covid-19.[35] Chief Executive Officer, Greg Westergaard, states that at any given time, Alpha Genesis is "responsible for roughly 6,000 monkeys."[36] Unfortunately, numerous animal deaths, injuries and even escapes have been reported at Alpha Genesis over the years,[37] including eleven monkey deaths that were reported in 2018 and 2019 alone. The facility was fined $12,600 in 2017 due to violations, which has questionable punitive effect in light of company profits.

Relevant to a discussion of animal testing in South Carolina is a place called Morgan Island off the coast of Beaufort, also referred to as "Monkey Island." In 1979, 1400 rhesus moneys were shipped to this island from a primate research center in Puerto Rico. [38] Previously leased by Alpha Genesis, the Island was purchased in 2002 by South Carolina's Department of Natural Resources with $20.5 provided by federal agencies.[39] The National Institutes of Health currently owns the colony for production of monkeys used for testing. [40]

ANIMAL TESTING FOR COSMETIC PRODUCTION

California,[41] New Jersey,[42] New York[43] and Virginia[44] have now banned animal testing for cosmetics. Seven states have taken it a step further, enacting bans on animal testing for cosmetics as well as the sale or import of cosmetics that have been tested on animals, namely California,[45] Nevada,[46] Illinois,[47] Maryland,[48] Virginia,[49] Hawaii,[50] and Maine.[51] Four of these seven statewide laws were just passed in 2021. Meanwhile, several other states are considering humane cosmetics acts of their own. Passage of the state laws may encourage

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[34] Alpha Genesis Indonesian Macaques Show Unique Research Potential, (2018), https://www.alphagenesisinc.com/news-release (last visited July 5, 2021).

[35] Alpha Genesis Primate Center Joins Coronavirus Battle, (2020), https://www.alphagenesisinc.com/news-release (last visited July 5, 2021).

[36] Ibid.

[37] Michael Majchrowicz, *South Carolina Research Group Fined after Animal Mishaps,* The Post and Courier, June 14, 2018, https://www.postandcourier.com/news/yemassee-animal-research-group-alpha-genesis-fined-after-monkey-mishaps/article_ee2f1a70-6f30-11e8-a807-03c4809eb338.html (last visited August 1, 2018).

[38] D.M. Taub, P.T. Mehlman, *Development of the Morgan Island rhesus monkey colony*, PR Health Sci J. 8(1):159-69, (April 1989), https://pubmed.ncbi.nlm.nih.gov/2780958/ (last visited August 28, 2021).
Dustin Waters, *A look at South Carolina's very own Monkey Island*, Feb. 10, 2016, https://www.charlestoncitypaper.com/story/a-look-at-south-carolinas-very-own-monkey-island (last visited Aug. 29, 2021).

[40] Ibid.

[41] Cal. Civ. Code § 1834.9 (2002).

[42] N.J. Rev. Stat. § 4:22-59 (2007).

[43] N.Y. Pub Health Law § 505 (2014).

[44] VA Code Ann. § 672 (2018).

[45] Cal. Civ. Code § 1834.9.5 (2002).

[46] Nev. Rev. Stat. § 598.993 (2019).

[47] 410 ILCS 620/17.2 (2019 State Bar Edition).

[48] MD SB 282, MD HB 611 (2021).

[49] VA S.B. 1379 (2021).

[50] H.B. 1088, 31st Leg., Reg. Sess. (Haw 2021).

[51] ME L.D. 1551 (130th Legis. 2021).

movement of the federal Humane Cosmetics Act, which was originally introduced in the United States in 2014.

The state laws follow a global trend of banning cosmetics testing in forty countries. The world market of cosmetics was previously complicated by China's legal requirement that all cosmetics imported into China be previously tested on animals.[52] A new Chinese regulation lifts the requirement for 'ordinary' imported cosmetics to be tested on animals beginning May 1st, 2021. This relieves some pressure felt by manufacturers who wanted to sell their products within the geographic boundaries of China to test on animals.

PUBLIC OPINION and ALTERNATIVES TO ANIMAL TESTING

Although Gallup poll results have fluctuated slightly from year to year since they first monitored the issue of animal testing in 2001, the overall trend has been a decrease in public approval of testing on animals. There has been a thirteen percent decrease in approval of animal testing was and an eighteen percent increase in the number of persons who believe animal testing to be morally wrong.[53] An earlier poll by Gallup showed that 67% of Americans were either "very concerned" or "somewhat concerned" about animals used in research.[54] Similarly, Johns Hopkins Center for Alternatives to Animal Testing, the National Institutes of Health, the Department of Defense, the USDA, and FDA are among numerous agencies and organizations that encourage alternatives to animal testing.

Disagreement about the reliability of animal testing is based largely in biological differences between human and nonhuman animals. According to the FDA, just 8% of drugs tested on animals are deemed safe for human clinical trials.[55] Of the 8% of drugs that test safe in animals, 30% fail because they are found to be toxic in humans.[56] Another 60% fail the human trials because they are found ineffective in humans,[57] totaling 90% of all drugs that pass the animal phase but fail in humans. Conversely, numerous drugs widely used today are toxic or ineffective in animals,[58] raising the concern that beneficial drugs may never make the market while relying on animal testing methods.

Examples of alternatives to animal testing include in vitro testing, computer simulations, two- and three-dimensional models made of human cells, seeding cells on

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[52] Chinese regulations had previously been relaxed for "non-special use" cosmetics manufactured in China in 2014.
[53] In Depth: Topics A-Z: Moral Issues, (2021), https://news.gallup.com/poll/1681/Moral-Issues.aspx (last visited July 5, 2021).
[54] Rebecca Rifkin, In U.S., More Say Animals Should Have Same Rights as People, May 8, 2015, https://news.gallup.com/poll/183275/say-animals-rights-people.aspx.
[55] Anne Harding, *More Compounds Failing Phase 1,* The Scientist, August 6, 2004.
[56] See National Center for Advancing Translational Services, National Institutes of Health, *About Tissue Chip,* Aug. 28, 2018, https://ncats.nih.gov/tissuechip/about.
[57] See National Institutes of Health, *NIH Awards $15 Million to Support Development of Human Tissue Models,* Sept. 12, 2017.
[58] See John J. Pippin, M.D., *Dangerous Medicine, Examples of Animal-Based "Safety" Tests Gone Wrong*, Physicians Committee for Responsible Medicine, https://www.pcrm.org/sites/default/files/pdfs/research/testing/exp/dangerous_medicine.pdf, (last visited Aug. 29, 2018).

silicon chips to behave like human organs, robotic technology that can screen thousands of chemicals at once using cells grown in the lab, and using donated human organs.[59] While animal testing has been heavily relied on by biomedical and consumer industries in the past, legislative trends, technological advances and opposing public opinion present the possibility that the future of research may very well move away from the use of animals to more humane methods of chemical and drug testing.

[59] Physicians Committee for Responsible Medicine, Nonanimal Testing Methods, https://www.pcrm.org/research/animaltestalt/tailtox/nonanimal-testing-methods, (last visited Aug. 16, 2018).