

DE-MYTH-IFYING LABORATORY ANIMAL
LAW: THE TRUTH BEHIND FOUR COMMONLY
MISUNDERSTOOD FACTS IN LABORATORY ANIMAL
WELFARE LAW

By
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The subspeciality of laboratory animal law presents unique difficulties because it requires familiarity with two highly specialized fields: law and science. Consequently, it is not surprising that some aspects of laboratory animal law have been misunderstood. This Article highlights four such misunderstandings surrounding laboratory animal law and provides an explanation of the truth behind each myth. The myths discussed include: (1) the AWA is the only federal law applicable to laboratory animals; (2) states are preempted from regulating the laboratory animal space; (3) birds, rats, and mice are not covered under federal law; and (4) the 3Rs are explicitly required by U.S. federal law.

I. INTRODUCTION TO LABORATORY ANIMAL LAW BASICS	276
II. IDENTIFICATION AND DISCUSSION OF THE FOUR MYTHS.	277
Myth 1: The AWA is the Only Federal Law Applicable to Laboratory Animals.	277
A. BACKGROUND ON THE ANIMAL WELFARE ACT	278
B. INTRODUCTION OF THE PUBLIC HEALTH SERVICE	278
C. COMPARING AND CONTRASTING THE AWA AND THE PHS POLICY	280
i. Scope and Application	280
ii. Requirements.	282
Myth 2: States are Preempted from Regulating the Laboratory Animal Space.	284
A. BASIC PREEMPTION REVIEW	284
B. TAUB V. STATE.	287
C. POST TAUB	288
Myth 3: Birds, Rats, and Mice are Not Covered Under Federal Law.	289
Myth 4: The 3Rs Are Required by U.S. Federal Law.	291
III. CONCLUSION	293

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I. INTRODUCTION TO LABORATORY ANIMAL LAW BASICS

Animal law has a complicated history within the realm of laboratory animals. The Animal Welfare Act (AWA) came into existence in 1966 after the nation mourned the loss of Pepper, a companion dog who was stolen and sold into laboratory research.¹ In the 1980s, the infamous *Taub* (Silver Spring Monkey) case was decided and People for the Ethical Treatment of Animals (PETA) was launched onto the national stage.² Meanwhile, the AWA was amended to enhance welfare requirements and establish Institutional Animal Care and Use Committees (IACUCs).³ In the early 2000s, legal advocates for animals suffered a setback when the statutory definition of *animal* was amended to exclude 99% of animals used in research.⁴ Today, animal advocates continue to fight for the well-being of animals used in research, but it is becoming increasingly apparent that deep division between scientists and legal advocates is a hindrance to a path forward.

Matters are further complicated by the distinct natures of law and science. Both fields are complex. An expert in science—much like an expert in law—typically undergoes years of school before proceeding to a lengthy career of practice. Within each field there are numerous specialties that often create silos which hinder open communication. Additionally, each field is steeped in the wide-spread use of field-specific vernacular. All these factors reduce the ease of open dialogue between legal advocates for animals and scientific researchers who use animal-subjects in their work.

¹ *Animal Welfare Act Timeline*, U.S. DEP'T OF AGRIC. NAT'L AGRIC. LIBRARY, <https://www.nal.usda.gov/collections/exhibits/awahistory/list> (accessed Jan. 22, 2024).

² Edward Taub was a neuroscientist who conducted research with monkey subjects. In 1981 he was charged with 191 counts of violating the Maryland animal cruelty statute after a whistleblower revealed the monkeys were living with unattended or poorly attended open wounds in cages and covered with urine and feces that seemingly hadn't been cleaned in weeks. The lab was raided by police pursuant to a warrant. Although the lower courts found Taub guilty, ultimately the Maryland Supreme Court held Maryland animal cruelty statute was not applicable to animals in research. See *infra* Part II pp. 16–17 (brief discussion of *Taub v. State*, 423 A2d (MD App. Ct., 1983)); E.D. Kort, *People for the Ethical Treatment of Animals*, BRITANNICA, <https://www.britannica.com/topic/People-for-the-Ethical-Treatment-of-Animals> (accessed Jan. 26, 2024).

³ *Animal Welfare Act Timeline*, *supra* note 1; See also *The IACUC*, OFFICE OF LAB. ANIMAL WELFARE NAT'L. HEALTH INST., <https://olaw.nih.gov/resources/tutorial/iacuc.htm> (accessed Jan. 24, 2024) (“The IACUC is responsible for oversight of the animal care and use program and its components as described in the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals...and the Guide for the Care and Use of Laboratory Animals....”).

⁴ See *Animal Welfare Act Timeline*, *supra* note 1 (describing how the 2002 amendment of the Animal Welfare Act defines “animal” to exclude “birds, rats of the genus *Rattus*, and mice of the genus *Mus*, bred for use in research.”); *Facts and Statistics About Animal Testing*, PETA, <https://www.peta.org/issues/animals-used-for-experimentation/animals-used-experimentation-factsheets/animal-experiments-overview/> (accessed Feb. 12, 2024).

Fortunately, there have been efforts over the years to bridge that gap and to foster a collaborative environment where legal advocates and scientific researchers can work together toward the reduction of the use of animals in research—with the long-term goal that animals be removed from the laboratory completely. The goal of this Article is to contribute to these efforts by dispelling commonly held myths about the laws that govern animal welfare in a laboratory setting. This Article aims to reduce crosstalk and miscommunication amongst those working tirelessly to aid animals who are subject to scientific research by: (1) identifying the myth, (2) clarifying the myth, and (3) providing a discussion of the materials that support the clarification.

II. IDENTIFICATION AND DISCUSSION OF THE FOUR MYTHS

Myth 1: The AWA Is the Only Federal Law Applicable to Laboratory Animals.

In truth, the Public Health Service Policy is a federal welfare law that applies to laboratory animals. But one could be forgiven for thinking the AWA is the only federal law applicable to laboratory animals. This sentiment is repeated within both law and science and even within the animal law community; yet many federal laws regulate *the use* of animals in research. For example, the National Agricultural Research, Extension, and Teaching Policy of 1977⁵ regulates the use of farmed animals in government research and the Care and Use of Animals in the Conduct of NASA Activities regulates the use of animals in NASA programs.⁶ Both of these laws are easy to overlook due to their narrow scope. However, this statement remains unsupported, at least in part, because of Public Health Service Policy (PHS Policy).

The PHS Policy regulates the use of animals in research.⁷ It draws its authority from the Health Research Extension Act⁸ and applies to a subset of research and testing facilities that receive federal funding.⁹ Further, it regulates approximately the same number of domestic laboratories as the Animal Welfare Act (with some overlap).¹⁰ Because of its

⁵ National Agricultural Research, Extension, and Teaching Policy Act of 1977, Pub. L. No. 95-113, § 1431(b)(2)(C) (1977); *see also* 7 C.F.R. § 3401.6(c)(13)(iii) (2024) (requiring compliance with the IACUC for any use of vertebrate animals in research under the National Agricultural Research, Extension, and Teaching Policy Act).

⁶ 14 C.F.R. § 1232.100 (2024).

⁷ U.S. DEP'T OF HEALTH & HUM. SERVICES & OFFICE OF LAB. ANIMAL WELFARE NAT'L INST. OF HEALTH, No. 15-8013, PUBLIC HEALTH SERVICE POLICY ON HUMANE CARE AND USE OF LABORATORY ANIMALS 7 (2015) [hereinafter PHS POLICY].

⁸ *Id.* at Preface.

⁹ *How Animal Research is Regulated in the U.S.*, AM. PHYSIOLOGICAL SOC'Y, <https://www.physiology.org/career/policy-advocacy/animal-research/how-animal-research-is-regulated?SSO=Y> (accessed Jan. 26, 2024).

¹⁰ According to the USDA website, there are approximately 1,000 licensed research facilities in the United States. Similarly, there are approximately 1,000 research facilities

comparable reach, it is just as important to understand the PHS Policy as it is to understand the AWA when working in the animal testing space.

A. BACKGROUND ON THE ANIMAL WELFARE ACT

The Animal Welfare Act was first signed into law in 1966.¹¹ The law was passed during the national response to the case of Pepper, a canine companion who was stolen and ultimately died at a research facility.¹² The original focus of the AWA was, in large part, to address the welfare of animals traditionally considered “pets” that were used for research.¹³ The scope of this law has been expanded over the years. Today, the AWA applies to those involved in the sale of animals (dealers), those who put animals on display for profit (exhibitors), the research facilities themselves, and those involved in the transportation of animals for purposes of commerce (handlers or carriers).¹⁴

One of the most important AWA amendments concerning the use of animals for research occurred in 1985.¹⁵ This amendment implemented many of the laboratory animal welfare standards prominent today, including: minimum housing and transportation welfare standards, the requirement to reduce animal pain, consideration for the use of alternatives to animal models, and the establishment of a review committee known as the IACUC.¹⁶

B. INTRODUCTION OF THE PUBLIC HEALTH SERVICE

Also in 1985, the Public Health Services (PHS) Policy obtained a federal mandate.¹⁷ Some form of the PHS Policy had been in existence since the 1950s.¹⁸ However, it was not until the passage of section 495 of the Health Research Extension Act of 1985 (HREA 1985) that the

in the United States with an assurance on file at the Office of Laboratory Animal Welfare (OLAW). *Institutions with a PHS Approved Animal Welfare Assurance*, OFFICE OF LAB. ANIMAL WELFARE, <https://olaw.nih.gov/assured/app/index.html> (accessed Jan. 26, 2024).

¹¹ *Animal Welfare Act History*, U.S. DEP'T OF AGRIC. NAT'L AGRIC. LIBRARY, https://search.nal.usda.gov/discovery/collectionDiscovery?vid=01NAL_INST:MAIN&collectionId=81279629890007426 (accessed Jan. 26, 2024).

¹² *Animal Welfare Act Timeline*, *supra* note 1.

¹³ *Id.*

¹⁴ *Animal Welfare Act*, U.S. DEP'T OF AGRIC. NAT'L AGRIC. LIBRARY, <https://www.nal.usda.gov/animal-health-and-welfare/animal-welfare-act> (accessed Feb. 12, 2024).

¹⁵ See generally Food Security Act of 1985, Pub. L. No. 99-198, 99 Stat. 1354 (introducing the set of amendments Congress adopted in 1985 focused on animal research).

¹⁶ Food Security Act of 1985 § 1752.

¹⁷ See PHS POLICY, *supra* note 7, at 1 (noting the Health Research Extension Act was passed in 1985 and created the PHS Policy mandate).

¹⁸ See James F. Taylor, *Chapter 1: Evolution of Laboratory Animal Program, in Management of Animal Care and Use Programs in Research, Education, and Testing* (Weichbrod RH et al. eds., 2nd ed. 2018) (discussing the pre-PHS animal welfare organizations).

policy became federal law.¹⁹ The PHS Policy applies only to research conducted by PHS agencies or with the use of PHS funds.²⁰

Consequently, to understand the reach of the PHS Policy it is important to understand the government entity known as the PHS. Although PHS agencies can be thought of generally as the divisions of the U.S. Health and Human Services Department (HHS), not all divisions of HHS constitute PHS agencies. Further, the PHS Policy specifically defines which agencies are included within the PHS scope for purposes of the policy.²¹ They include: the Agency for Healthcare Research and Quality (AHRQ), the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Health Resources and Services Administration (HRSA), the Indian Health Services, the National Institutes of Health (NIH), and the Substance Abuse and Mental Health Services Administration (SAMHSA).²²

The PHS Policy references two important documents: the Guide for the Care and Use of Laboratory Animals (The Guide) and the U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training (U.S. Government Principles).²³ Both documents predate the HREA of 1985 and compliance with each is reinforced by the PHS Policy.²⁴

The Guide was first published in 1963 and is currently on its 8th edition (2010).²⁵ Unlike the PHS Policy, the Guide was developed by an independent third party and adopted by reference into federal law.²⁶ The Institute for Laboratory Animal Research of the National Academies is responsible for the Guide.²⁷

The U.S. Government Principles consists of nine principles, which were established in 1984 and are based on international ethical

¹⁹ PHS POLICY, *supra* note 7, at Preface, 1.

²⁰ *Id.* at 7.

²¹ *Id.* at 8.

²² *Id.*

²³ *Id.* at 4, 9.

²⁴ *Id.* at Preface, 4; COMM. FOR THE UPDATE OF THE GUIDE FOR THE CARE AND USE OF LAB. ANIMALS, NAT'L RESEARCH COUNCIL, GUIDE FOR THE CARE AND USE OF LABORATORY ANIMALS xiii (The National Academies Press 8th ed. 2011).

²⁵ COMM. FOR THE UPDATE OF THE GUIDE FOR THE CARE AND USE OF LAB. ANIMALS, NAT'L RESEARCH COUNCIL, *supra* note 24, at xiii.

²⁶ *Id.*

²⁷ *Id.*

principles developed a few years prior.²⁸ Both the PHS Policy and the U.S. Government Principles require compliance with the AWA.²⁹

C. COMPARING AND CONTRASTING THE AWA AND THE PHS POLICY

i. Scope and Application

Both the AWA and the PHS Policy apply to facilities that conduct research using animals. Each law also contains further specifications that limit their scopes. These limitations stem from different aspects of the law and include who is covered, the definition of the word “animal,” and exclusions. For each law, the scope is defined by the intersection of these specifications.

Originally, the AWA exclusively covered research facilities that use animals. Since its original enactment, the AWA has expanded the types of work covered by the law to include Dealers (including breeders), Exhibitors, Intermediate Handlers, and Carriers.³⁰ The PHS Policy, on the other hand, is narrow, and only covers specific research facilities:³¹ facilities that are part of one of the PHS agencies, facilities that receives funding from a PHS agency, and facilities that are otherwise supported by a PHS agency.³²

Both the AWA and the PHS Policy define the term “animal” in ways that are more limiting than general vernacular or scientific use.³³ The AWA’s definition states a finite list (dog, cat, monkey . . . , guinea pig, hamster, rabbit) and then includes a more general provision of “any other warm-blooded animal.”³⁴ The scope is further refined by including

²⁸ U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research and Training, 50 Fed. Reg. 20864, 20864-20865 (May 20, 1985). U.S. Gov. Principles are also incorporated into the work of other federal agencies. *See e.g. Public Policy Requirements*, ENV’T. PROT. AGENCY, <https://www.epa.gov/grants/public-policy-requirements> (accessed Feb. 19, 2024); *Laws, Regulations, and Standards Governing Research with Animals*, CENT. FOR DISEASE CONTROL, <https://www.cdc.gov/labs/animal-care.html> (accessed Feb. 20, 2024); U.S. FOOD & DRUG ADMIN., PRODUCT DEVELOPMENT UNDER THE ANIMAL RULE, GUIDANCE FOR INDUSTRY (2015), <https://www.fda.gov/media/88625/download> (accessed Feb. 20, 2024); INST. FOR LAB. ANIMAL RESEARCH, NAT’L RESEARCH COUNCIL, THE DEVELOPMENT OF SCIENCE-BASED GUIDELINES FOR LABORATORY ANIMAL CARE 240 (2004).

²⁹ *U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training*, OFFICE OF LAB. ANIMAL WELFARE NAT’L INST. OF HEALTH, <https://olaw.nih.gov/policies-laws/gov-principles.htm> (last updated Mar. 30, 2018) (accessed Jan. 27, 2024); PHS POLICY, *supra* note 7, at 7.

³⁰ *See generally* 7 U.S.C. §§ 2133-2140 (listing that the AWA regulates dealers, exhibitors, carriers, and intermediate handlers in the Table of Contents).

³¹ PHS POLICY, *supra* note 7, at 7.

³² *Id.*

³³ *See, e.g., Animal*, MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY (11th ed. 2022) (defining animal as “any of a kingdom (Animalia) of living things including many-celled organisms...”).

³⁴ 7 U.S.C. 2132(g).

in the definition only those beings that are used for a specific purpose: research, testing, experimentation, exhibition, or being kept as a pet.³⁵

The PHS Policy's approach is different. There is no use of a finite list, and rather than limiting the scope to "warm-blooded animals," the scope is limited to vertebrates.³⁶ However, the PHS Policy's definition is similar in that the scope is further refined by specific uses that are similar though not identical: research testing, experimentation, biological testing, and related uses.³⁷

The AWA is famous for its exclusions, which are primarily contained within the definition of "animal." These exclusions include: (1) birds, rats, and mice bred for research purposes, (2) horses not used for research, and (3) farmed animals.³⁸ While the PHS Policy has no stated exclusions in its definition of "animal,"³⁹ it does allow for covered entities to request a waiver.⁴⁰

Of particular importance is that while the AWA excludes birds, rats, and mice bred for research purposes, those animals are included within the scope of the PHS Policy.⁴¹

TABLE 1:

	AWA	PHS Policy
Who is Covered:	Research Facilities, Dealers, Breeders, Intermediate Handlers, Carriers, and Exhibitors.	PHS Agencies, PHS Awardee Institutions, Facilities supported by PHS.
"Animal" Definition:	Live or dead warm-blooded, <i>and</i> used or intended for use in: research, testing, experiment, exhibition purposes, or as a pet.	Live vertebrate, <i>and</i> used or intended for use in: research research training, experimentation, biological testing, or related purposes.
Exclusions:	(1) Rats, mice, and birds bred for research purposes, (2) horses not used for research, and (3) farmed animals.	No explicit exclusions <i>but</i> waiver provision.

Source: Animal Welfare Act and PHS Policy.

³⁵ 7 U.S.C. 2132(g).

³⁶ PHS POLICY, *supra* note 7, at 8.

³⁷ *Id.*

³⁸ 7 U.S.C. § 2131(g).

³⁹ PHS POLICY, *supra* note 7, at 8.

⁴⁰ *Id.* at 19. "Institutions may request a waiver of a provision or provisions of this Policy by submitting a request to OLAW. No waiver will be granted unless sufficient justification is provided and the waiver is approved in writing by OLAW".

⁴¹ *See infra* p. 7.

ii. Requirements

The proper care of animals used in research is the guiding principle of both the AWA and the PHS Policy. While there are considerable similarities between the two laws, there are also important differences. This Part provides a summary of the similarities and differences between the two laws.

Both laws require facilities to self-declare through registration, a license application, or filing an Assurance. Under the AWA, research facilities⁴² must register with the United States Department of Agriculture (USDA).⁴³ Dealers—including breeders—and exhibitors meeting minimum size requirements must apply to the USDA for a license.⁴⁴ Under the AWA, registrations and licenses are valid for three years.⁴⁵

The PHS Policy requires facilities to file an Assurance with the Office of Laboratory Animal Welfare (OLAW).⁴⁶ An Assurance is a written plan and/or affirmation from an institution to comply with the PHS Policy.⁴⁷ It is subject to OLAW approval and valid for no more than five years.⁴⁸

The most important comparison between the AWA and PHS Policy, when it comes to welfare standards, is that each law takes a very different approach—such that they are not directly comparable. The AWA provides directly for the standards primarily in Part 3 of the regulations.⁴⁹ The PHS Policy, however, states broad principles of conduct but then defers to the Guide for specific standards.⁵⁰ One consequence of this is that the PHS Policy requirements—through the Guide—are more extensive.

Both federal laws require research facilities to have an internal oversight committee that reviews the care and use of animals in research studies. The mandatory composition of the IACUC differs under each federal law. Under the AWA, IACUCs are required to have no fewer than three members, which must include a veterinarian and community representative.⁵¹ Under the PHS Policy, IACUCs are required

⁴² Carriers, intermediate handlers, and non-licensed exhibitors are also required to register under the AWA. ANIMAL AND PLANT INSPECTION SERVICE, PROGRAM AID NO. 1117, LICENSING AND REGISTRATION UNDER THE ANIMAL WELFARE ACT: GUIDELINES FOR DEALERS, EXHIBITORS, TRANSPORTERS, AND RESEARCHERS 8-9, 12 (1992), https://www.aphis.usda.gov/animal_welfare/downloads/graybook.pdf.

⁴³ ANIMAL AND PLANT INSPECTION SERVICE, *supra* note 42, at 12.

⁴⁴ 7 U.S.C. § 2133.

⁴⁵ ANIMAL AND PLANT INSPECTION SERVICE, *supra* note 42, at 2.

⁴⁶ PHS POLICY, *supra* note 7, at 9.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ See generally 9 C.F.R. §§ 3.1-3.168 (2024) (listing extensive standards for humane handling, for instance what is required in constructing housing for dogs and cats).

⁵⁰ PHS POLICY, *supra* note 7 at 4, 5.

⁵¹ 7 U.S.C. § 2143(b)(1).

to have no fewer than five members, including a veterinarian, a scientist, a non-scientist, and a community representative.⁵²

The role of an IACUC is also similar under each federal law. An IACUC should conduct periodic inspection of the animal care and housing facilities and review proposed experiments that involve the use of animals (within the respective definition).⁵³ Experiments that use animals must receive IACUC approval to proceed.⁵⁴

Recordkeeping requirements are minimal under the AWA statute and most recordkeeping requirements are found in the regulations. The AWA requires research facilities to keep records pertaining to the acquisition of dogs and cats, training personnel on animal care and handling, and their IACUC (including meeting minutes, proposed experiments and IACUC decisions, amendments to decisions, and audit reports).⁵⁵ AWA facilities are also required to submit an annual report to Animal & Plant Health Inspection Service (APHIS).⁵⁶ While the requirements of this report are largely in the form of “assurances,” facilities are required to report on the number of animals housed, used for research purposes, or being bred.⁵⁷

Under the PHS Policy, facilities record keeping requirements are more focused around IACUC activity including IACUC meetings and inspections, IACUC approval status of proposed experiments, and IACUC inspection reports.⁵⁸ Facilities must keep a copy of their approved Assurance on file.⁵⁹ The PHS Policy also requires an annual report, but it focuses primarily on whether there have been any changes since the Assurance was approved.⁶⁰ While part of completing the Assurance includes a rough estimate of the number of animals housed and a change is only required if it affects the categorization of the facility, it is not as detailed as the AWA annual reporting requirement.⁶¹

⁵² PHS POLICY, *supra* note 7 at 11.

⁵³ 9 C.F.R. § 2.31(a); Interestingly the AWA regulations contain language seemingly intended to keep an IACUC from drifting outside of its scope (“Except as specifically authorized by law or these regulations, nothing in this part shall be deemed to permit the Committee or IACUC to prescribe methods or set standards for the design, performance, or conduct of actual research or experimentation by a research facility.”). *Id.* The PHS Policy contains no similar language. PHS POLICY, *supra* note 7 at 7.

⁵⁴ 9 C.F.R. § 2.31(a).

⁵⁵ 7 U.S.C. §§ 2140, 2143(d). The AWA also includes relatively extensive requirements specifically for “swim-with-the dolphin” programs. 9 C.F.R. §§ 2.35(a), 3.111.

⁵⁶ 9 C.F.R. § 2.36(a).

⁵⁷ 9 C.F.R. § 2.36(b).

⁵⁸ PHS POLICY, *supra* note 7, at 17.

⁵⁹ *Id.* at 17.

⁶⁰ *Id.* at 18.

⁶¹ *Id.* at 17.

The AWA is administered by APHIS, a subagency of the USDA.⁶² APHIS goes on site to regulated facilities to conduct inspections.⁶³ The PHS Policy is administered by the Office of Laboratory Welfare (OLAW), which is part of the NIH.⁶⁴ It has the authority to conduct on site audits at any time or when it receives a report of concern or noncompliance.⁶⁵ Unlike the USDA, which inspects research facilities annually, OLAW is not required under the PHS Policy to inspect facilities regularly.⁶⁶

Myth 2: States are Preempted from Regulating the Laboratory Animal Space.

In fact, the AWA invites states to further legislate laboratory animal law. Though some point to the Maryland supreme court *Taub v. State* (1983) decision to support the notion that states cannot implement animal welfare requirements, in truth the Maryland court did not rest its decision on the issue of preemption. Below is a review and analysis of basic preemption principles that demonstrate states are not preempted from regulating animal law, a discussion of the *Taub* decision, followed by examples of ways in which states have in fact been regulating the use of laboratory animals.

A. BASIC PREEMPTION REVIEW

The United States is governed by a system of federalism where both the federal government and each state has the authority to promulgate, regulate, and enforce laws within their jurisdictions. In short, both the federal government and the states are authorized to govern. The U.S. Constitution states two important notes on this point: (1) authority not explicitly reserved for the federal government is delegated to the states⁶⁷ and (2) where federal and state law conflict, federal law dominates.⁶⁸ The second element originates from the Supremacy Clause of the U.S. Constitution:

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the contrary notwithstanding.⁶⁹

⁶² *Animal Welfare Act*, U.S. DEPT. AGRIC. NAT'L AGRIC. LIBR., <https://www.nal.usda.gov/animal-health-and-welfare/animal-welfare-act> (accessed Jan. 27, 2024).

⁶³ 7 U.S.C. § 2146(a).

⁶⁴ PHS POLICY, *supra* note 7, at 18.

⁶⁵ *Id.* at 19.

⁶⁶ PHS POLICY, *supra* note 7, at 19; 9 C.F.R. § 2146(a).

⁶⁷ U.S. CONST. amend. X.

⁶⁸ U.S. CONST. art. VI, cl. 2.

⁶⁹ U.S. CONST. art. VI, cl. 2.

When federal law dominates state law such that the state law is made inoperable, the federal law is said to “preempt” state law. There is a presumption against federal preemption that mandates an interpretation of federal law as supplementary to state law.⁷⁰ This presumption can of course be overcome. Theories of preemption have evolved since the writing of the U.S. Constitution. This section provides a review of present-day preemption law.

There are two types of preemption: express and implied. Implied preemption includes both (1) field preemption and (2) conflict preemption.⁷¹ Standard preemption analysis begins with checking for express preemption, which exists when Congress has stated within the language of the statute its intention to occupy this space.⁷² In its absence, the analysis moves to look for field preemption—present where the federal government has legislated so extensively as to leave practically no room for state law.⁷³ In the absence of field preemption, one looks for conflict preemption, which occurs when state law actually prevents compliance with or impedes the goals of the federal law.⁷⁴

The Animal Welfare Act states, “[p]aragraph (1) shall not prohibit any State (or a political subdivision of such State) from promulgating standards in addition to those standards promulgated by the Secretary under paragraph (1).”⁷⁵ The paragraph referenced in this text gives the Secretary of Agriculture the authority to “promulgate standards to govern the humane handling, care, treatment, and transportation of animals by dealers, research facilities, and exhibitors.”⁷⁶ Further, the Act authorizes the Secretary of Agriculture to work with “the various States . . . [to carry] out the purposes of this chapter and any State . . . legislation on the same subject.”⁷⁷ No other text in the AWA makes direct reference to federal versus state authority. The text of AWA Section 2143 asserts, explicitly, that states have the authority to create standards for research facilities around the humane *handling, care, treatment, and transportation* of animals.⁷⁸ Section 2145 text anticipates state laws “on the same subject.”⁷⁹ A federal act that invites states to

⁷⁰ *Presumption Against Federal Preemption*, BLACK’S LAW DICTIONARY, (11th ed. 2019).

⁷¹ BRYAN L. ADKINS ET AL., CONG. RSCH. SERV., R45825, FEDERAL PREEMPTION: A LEGAL PRIMER (2023).

⁷² See *id.* (“[F]ederal law can expressly preempt state law when a federal statute or regulation contains explicit preemptive language.”).

⁷³ *Id.*

⁷⁴ See *id.* (“Conflict preemption, in contrast, occurs when simultaneous compliance with both federal and state regulations is impossible (impossibility preemption) or when state law poses an obstacle to the accomplishment of federal goals (obstacle preemption).”).

⁷⁵ 7 U.S.C. § 2143(a)(8).

⁷⁶ 7 U.S.C. § 2143(a)(1).

⁷⁷ 7 U.S.C. § 2145(b).

⁷⁸ 7 U.S.C. § 2143(a) (emphasis added).

⁷⁹ 7 U.S.C. § 2145(b) (identical language was included in the original version at Pub. L. No. 89-544, 80 Stat. 352 (1966)).

legislate within the act's subject area and directs U.S. personnel to work with the states for the implementation of state law in the act's subject area, cannot reasonably be said to expressly preempt state law.⁸⁰ There is no express preemption under the AWA.

In the face of express invitation to the states to regulate alongside the AWA, it is difficult to fathom the presence of implied field preemption. Even in the absence of the Section 2143 clause, the AWA and federal law generally do not provide a comprehensive federal scheme of animal protection laws.⁸¹ One of the difficulties in conducting a field preemption analysis is properly stating the scope. For example, is it appropriate to consider whether the AWA sufficiently covers the field of animal protection law? Some might define the scope more narrowly by only considering whether the AWA sufficiently covers the field of laboratory animal protection concerning handling, care, treatment, and transportation.

If it is the former, the AWA clearly does not preempt states under a field preemption analysis.⁸² Consider, for example, animal cruelty laws. Every state has animal cruelty laws—most often codified in their criminal code.⁸³ Some of these laws predate the AWA.⁸⁴ They have continued to be enforced since the inception of the AWA, and the codes are regularly updated.

If it is the latter, however, the answer may be less obvious. Yet, the analysis yields the same outcome: there is no preemption. Field preemption exists where there is no room for state law.⁸⁵ The AWA explicitly invites state law on the topic of human handling, care, treatment, and transportation of animals used in research facilities.⁸⁶ One cannot make sense of the inclusion of section 2143(a)(8) and claim that the AWA so extensively legislates and regulates the space of human animal care for laboratory animals that it preempts state law in this

⁸⁰ See ADKINS ET AL., CONG. RSCH. SERV., *supra* note 71 (explaining that statutes with “Anti-Preemption Provisions” evince Congress’s intent to allow states to adopt regulations that are consistent with federal law).

⁸¹ 7 U.S.C. §§ 2131–2160; David Favre, *Overview of U.S. Animal Welfare Act*, ANIMAL LEGAL & HISTORICAL CENTER (2012), <https://www.animallaw.info/article/overview-us-animal-welfare-act>. (accessed Jan 21, 2024).

⁸² See Ani Satz, *Animal Welfare Act: Interaction with Other Laws*, 25 ANIMAL LAW REVIEW 185, 186 (2019) (explaining that the AWA explicitly allows states to regulate in this field).

⁸³ *Animals’ Legal Status*, ALDF, <https://aldf.org/issue/animals-legal-status/> (accessed Jan. 28, 2024).

⁸⁴ *Id.*; *Laws that Protect Animals: Federal, State, & Local*, ALDF, <https://aldf.org/article/laws-that-protect-animals/>. (accessed Jan. 28, 2024).

⁸⁵ JAN SYKES & NICOLE VANATKO, CONG. RSCH. SERV., R45825, FEDERAL PREEMPTION: A LEGAL PRIMER 2 (2019).

⁸⁶ 7 U.S.C. § 2143(a)(8).

space. Under standard legislation interpretation principles,⁸⁷ this leads to a conclusion that there is no field preemption.

Finally, any preemption of state law by the AWA would occur under a theory of conflict preemption. Federal law properly implemented within the scope of federal authority will always preempt state law that is in direct conflict with, or otherwise creates an obstacle for, compliance with the federal law. The question then is whether state law conflicts with the AWA. This, of course, requires consideration of a specific state law, which this paper will not take up. However, one can imagine a state law concerning the treatment of laboratory animals that is truly supplemental to the AWA, such that there is no conflict preemption.

B. TAUB V. STATE

Despite what appears to be a relatively straightforward legal analysis, there has been confusion regarding the issue of federal preemption as concerns state regulation of the use of animals for research purposes. Much of this confusion stems from the 1983 *Taub v. State*⁸⁸ case. The case concerns researcher Edward Taub and his use of seventeen macaques for human stroke research.⁸⁹ However, the final 1983 court decision by the Maryland Court of Appeals was not based on federal preemption.⁹⁰ Consequently, the use of this case to make legal arguments against state authority to legislate the manner in which animals are used in research is erroneous.

In 1981, Taub was charged with violating state criminal animal cruelty laws for “failing to provide necessary veterinary care.”⁹¹ He was convicted of six counts of animal cruelty at the district court.⁹² The case was appealed to the circuit court, where a jury trial was held.⁹³ Only one of the six convictions was upheld.⁹⁴ The single conviction was appealed to, and reversed by, the Maryland Court of Appeals.⁹⁵

According to a Washington Post article, the laboratory condition of the seventeen monkeys seized by police was unquestionably awful: cages that appeared not to have been cleaned in days, open wounds on

⁸⁷ See *Chi v. EDF*, 511 U.S. 328, 338 (1994) (citing *Keene Corp. v. U.S.*, 508 U.S. 200, 208 (1993)) (“It is generally presumed that Congress acts intentionally and purposely when it ‘includes particular language in one section of a statute but omits it in another.’”).

⁸⁸ *Taub v. State*, 463 A.2d 819 (Md. 1983).

⁸⁹ *Id.* at 819–20.

⁹⁰ *Id.* at 820.

⁹¹ *Id.*; see also MD. CODE ANN., CRIM. LAW § 10-604 (West 2019) (noting no substantive changes made to the 1957 version of the Maryland Criminal Code, Art. 27 § 59 that Taub was charged under).

⁹² *Taub*, 463 A.2d at 820.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.* at 820, 822.

the animals, and animals engaging in self-harming behaviors.⁹⁶ One police officer noted that he feared for his own health.⁹⁷ Yet this, seemingly, was of little importance to the Maryland appellate court according to how they phrased and addressed the legal question. “The issue in this case is whether the animal cruelty statute . . . is applicable to a research institute conducting medical and scientific research pursuant to a federal program.”⁹⁸ Although raised by the appellant, the court declined to consider the issue of preemption.⁹⁹ Instead the court focuses on the State legislature’s intent, noting the statutory language of “unnecessary” harm; the legislature’s likely awareness of the Animal Welfare Act; and that Taub’s work was subject to federal oversight.¹⁰⁰ The court at no point stated that the Animal Welfare Act superseded the relevant Maryland code; the court merely noted that it did not think the Maryland animal cruelty law was intended by the legislature to apply to “research activity under a federal program.”¹⁰¹

C. POST TAUB

The *Taub* decision had a chilling effect on state and local government oversight of the use of laboratory animals. For example, many states revised their animal cruelty statutes to explicitly exempt animals used in research or science.¹⁰² However, some state and local jurisdictions continue to regulate in the space. Since the late 1980s, Cambridge, MA—a popular home to Biotech startups—has required research facilities to register, maintain an animal oversight committee, and submit annual reporting data that includes “number and species of animals used.”¹⁰³ Additionally, the State of Massachusetts requires facilities that use dogs or cats in research to license with the state.¹⁰⁴ Further, in 2022, Massachusetts voters passed a law that requires a “reasonable effort” be made for dogs and cats to be adopted after the

⁹⁶ Peter Carlson, *The Great Silver Spring Monkey Debate*, WASHINGTON POST (Feb. 24, 1991), <https://www.washingtonpost.com/archive/lifestyle/magazine/1991/02/24/the-great-silver-spring-monkey-debate/25d3cc06-49ab-4a3c-afd9-d9eb35a862c3/> (accessed Jan. 28, 2024).

⁹⁷ *Id.*

⁹⁸ Taub, 463 A.2d at 819.

⁹⁹ *Id.* at 820 (“While [Taub] raised . . . preemption of this section by the Federal Act . . . we believe the matter may disposed of by our conclusion that [the animal cruelty statute] simply is inapplicable. . .”).

¹⁰⁰ *Id.* at 821.

¹⁰¹ *Id.* at 822.

¹⁰² Pamela D. Frasch, *Gaps in US Animal Welfare Law for Laboratory Animals: Perspectives From an Animal Law Attorney*, 57 ILAR J. 285, 286 (May 4, 2017).

¹⁰³ CAMBRIDGE, MASS., CODE OF ORDINANCES Ch. 6.12 (defines ‘animal’ as “any nonhuman vertebrate”) (1989); Rob Matheson, *Birthplace of Biotech*, MIT NEWS (Mar. 19, 2013), <https://news.mit.edu/2013/kendall-square-birthplace-of-biotech-0319> (accessed Jan. 29, 2024).

¹⁰⁴ MASS. GEN. LAWS ch. 140 § 174D (2024).

conclusion of an experiment.¹⁰⁵ Other states have begun to mandate the use of alternatives when available¹⁰⁶ or require laboratories that use animals to contribute to a fund for the development of non-animal alternatives.¹⁰⁷ These laws demonstrate not only an authority to regulate the use of laboratory animals, but also the importance of state and local legislation in this space.

Myth 3: Birds, Rats, and Mice Are Not Covered Under Federal Law.

While the Animal Welfare Act explicitly excludes some birds, rats, and mice, it does not exclude *all* birds, rats, and mice; further, the PHS Policy has no such exclusion. When the AWA was first passed in 1966 it contained a sensible—though perhaps limited—definition of *animal*: “live dogs, cats, monkeys (nonhuman primate mammals), guinea pigs, hamsters, and rabbits.”¹⁰⁸ Over the years, however, the statutory definition was amended in ways that impacted the scope of the Act.¹⁰⁹ The Act applies to those who engage with animals in particular ways, but if the Act does not consider a particular being or species an animal, then conduct that might otherwise be regulated is no longer under the purview of the statute. Today, the statutory definition of *animal* is lengthy. For the purposes of this myth, however, focus can be reduced to the first listed exclusion: “birds, rats of the genus *Rattus*, and mice of the genus *Mus*, bred for use in research.”¹¹⁰ This exclusion is often truncated to “[b]irds, rats, and mice are not covered under federal animal welfare law.”¹¹¹ But a plain reading of the language demonstrates this is not

¹⁰⁵ Mass. Gen. Laws ch. 140 § 174D1/2 (2024); *see also*, 2022 – *An Act Protection Research Animals*, MSPCA-ANGELL, https://www.mspca.org/animal_protection/protecting-research-animals/ (accessed Jan. 29, 2024) (explaining the requirement to place a laboratory animal up for adoption); *see generally*, Laura Helwig, *The 4th R: Rehoming, Retirement and Release*, OFFICE OF LAB. ANIMAL WELFARE NAT’L. INST. OF HEALTH (June 13, 2019), <https://olaw.nih.gov/education/educational-resources/webinar-2019-06-13.htm> (accessed Jan. 30, 2024) (discussing an extension of the 3R principles to include the adoption of laboratory animals).

¹⁰⁶ Kitty Block & Sara Amundson, *Progress! California Passes Law to Expand Use of Non-Animal Alternatives in Testing Labs*, HUMANE SOC’Y U.S. (Oct. 11, 2023), <https://www.humanesociety.org/blog/progress-california-passes-law-expand-use-non-animal-alternatives-testing-labs> (accessed Jan. 30, 2024).

¹⁰⁷ Kitty Block, *Maryland Becomes First State to Require Animal Testing Labs to Contribute Money to Non-Animal Research*, HUMANE SOC’Y U.S. (May 9, 2023), <https://www.humanesociety.org/blog/maryland-becomes-first-state-require-animal-testing-labs-contribute-money-non-animal-research> (accessed Jan. 30, 2024).

¹⁰⁸ Annie Ross, *The Animal Welfare Act Grants Protection to Pets and More*, LIBR. OF CONG.: BLOGS (Aug. 24, 2022), <https://blogs.loc.gov/law/2022/08/the-animal-welfare-act-grants-protection-to-pets-and-more/> (accessed Jan. 30, 2024); Laboratory Animal Welfare Act of 1966, Pub. L. No. 89-544.

¹⁰⁹ Ross, *supra* note 108.

¹¹⁰ 7 U.S.C. § 2132(g).

¹¹¹ *See Rats, Mice, and Birds*, ANIMAL WELFARE INST., <https://awionline.org/content/rats-mice-birds> (accessed Jan. 26, 2024) (“The US does not include within its animal

true. Rather, birds, rats (of a certain genus), and mice (of a certain genus) are excluded under the Animal Welfare Act *if* bred for research. Admittedly, this strict adherence still leaves most birds, mice, and rats used for research outside of the scope of the AWA.¹¹² However, adherence to the actual language is important.

First, if a bird, mouse, or rat was born in the wild, it is not captured by this exclusion.¹¹³ Further, the AWA does not apply only to the use of animals for research. For example, one might exhibit birds in such a manner as to fall within the scope of the AWA.¹¹⁴ As previously discussed, the AWA is not the only federal law that concerns the welfare of animals. The PHS Policy also regulates the welfare of animals used for research. This Policy relies on a vertebrate-invertebrate distinction in defining *animal* and contains no relevant exclusion to remove birds, rats, or mice from its scope.¹¹⁵ It is also interesting to note that the AWA section on animal fighting contains its own definition of animal that explicitly includes birds—as well as mammals more generally (capturing rats and mice)—with no relevant exclusionary language.¹¹⁶

The history of this exclusion can be traced back decades. In 1970, the AWA statutory definition of *animal* was amended to include “such other warm-blooded animal, as the Secretary may determine is being used [for research] . . . or as a pet.”¹¹⁷ There was no mention of birds, rats, or mice and the only exclusionary language dealt with horses or farmed animals.¹¹⁸ Then, in 1971, the USDA implemented regulatory language that excluded “birds, mice, and rats.”¹¹⁹ Seemingly inconsistent with the statutory definition, several animal advocate organizations first filed a petition with the USDA to remove this regulatory language¹²⁰ and subsequently filed a suit against the USDA with the

welfare laws and regulations the rats, mice and birds who are subjected to research and testing.”)

¹¹² *Animal Testing and Experiments FAQ*, HUMANE SOC’Y. U.S., <https://www.humanesociety.org/resources/animals-used-experiments-faq> (accessed Jan. 26, 2024).

¹¹³ Standards for Birds Not Bred for Use in Research Under the Animal Welfare Act, 88 Fed. Reg. 10654, 10659 (Feb. 21, 2023) (to be codified at 9 C.F.R. pts. 1-3); Larry Carbone, *Estimating mouse and rat use in American laboratories by extrapolation from Animal Welfare Act-regulated species*, 11 SCI. REPS. 1, 1 (2021).

¹¹⁴ *Id.* at 10660. Under the AWA, an exhibitor is specifically defined; it includes entities such as zoos but excludes, e.g., retail pet stores 7 U.S.C. § 2132(h).

¹¹⁵ PHS POLICY, *supra* note 7, at 8.

¹¹⁶ 7 U.S.C. § 2156(f) (containing an exclusion for “man.” This author has chosen not to inquire whether “woman” is equally excluded, as “the term ‘animal’ means any live bird, or any live mammal, except man.”).

¹¹⁷ Animal Welfare Act of 1970, Pub. L. 91-579, 84 Stat. 1560, 1561 (Dec. 24, 1970).

¹¹⁸ *Id.*

¹¹⁹ *Animal Legal Def. Fund v. Yeutter*, 760 F. Supp. 923, 925 (D.D.C. 1991); Miscellaneous Amendments to Chapter, 36 Fed. Reg. 24,919 (Dec. 24, 1971) (to be codified at 9 C.F.R. pt. 1).

¹²⁰ *Birds, Rats, and Mice*, AM. ANTI-VIVISECTION SOC’Y, <https://aavs.org/our-work/campaigns/birds-mice-rats/> (accessed Jan. 26, 2024).

same objective.¹²¹ These efforts against the USDA did not begin until the late 1990s, and were finalized in a 2000 settlement that would see the regulatory language removed.¹²² This would be a short-lived victory for animal advocates because in 2002 an AWA amendment was passed via the Farm Bill.¹²³ This amendment added the exclusion for “birds, rats (of the genus *Rattus*), and mice (of the genus *Mus*) bred for use in research.”¹²⁴ In 2004, the USDA began a rulemaking process for those birds, rats, and mice still covered by the AWA.¹²⁵ This process would only be completed in the spring of 2023, subsequent to a court order.¹²⁶

Myth 4: The 3Rs Are Required By U.S. Federal Law.

Although no U.S. federal law has mandated the use of the 3Rs, the essence and influence of the 3Rs can be found in the AWA and the PHS Policy. The 3Rs are a set of well-known ethical principles employed in animal research. William Russell and Rex Burch authored the 3Rs in 1959 in their text *The Principles of Humane Experimental Technique*.¹²⁷ The 3R principles include “replacement, reduction, and refinement.”¹²⁸ Although these principles are relied upon in U.S. animal-based research and in advocacy for U.S. policy,¹²⁹ they are not required by name under U.S. federal law.

Broadly, the principle of “replacement” argues for using means other than animals when feasible; “reduction” argues for using fewer animals while maintaining experimental validity; and “refinement” concerns the promotion of procedures and techniques that subject the animal to as little pain or distress as possible.¹³⁰

The AWA does not discuss the 3Rs nor mandate compliance with these ethical principles. However, 3Rs principles have impacted both the statutory and regulatory language. The principle of “replacement” is apparent in language that requires consideration of “alternatives to any procedure likely to produce pain [or] distress”¹³¹ and “alternatives to procedures that may cause more than momentary or slight pain or

¹²¹ *Id.*

¹²² *Id.*

¹²³ Farm Security and Rural Investment Act of 2002, Pub. L. 107-171, § 10301, 116 Stat. 135, § 491 (2002).

¹²⁴ 116 Stat. 491.

¹²⁵ *Birds, Rats, and Mice*, *supra* note 120.

¹²⁶ *Id.*; Standards for Birds Not Bred for Use in Research Under the Animal Welfare Act, 88 Fed. Reg. 10654, 10659 (Feb. 21, 2023) (to be codified at 48 C.F.R. pts. 1, 2, 3).

¹²⁷ *Animal Use Alternatives (3Rs)*, U.S. DEP’T AGRIC., <https://www.nal.usda.gov/animal-health-and-welfare/animal-use-alternatives> (accessed Feb. 4, 2024).

¹²⁸ WILLIAM RUSSELL & REX BURCH, *THE PRINCIPLES OF HUMANE EXPERIMENTAL TECHNIQUE* 64 (1959).

¹²⁹ *Animal Use Alternatives (3Rs)*, *supra* note 127.

¹³⁰ RUSSELL AND BURCH, *supra* note 128, at 64-66.

¹³¹ 7 U.S.C. § 2143(a)(3)(B).

distress”¹³² The “refinement” principle is evident in requirements to ensure “animal pain and distress are minimized”¹³³ and “no animal is used in more than one major operative experiment.”¹³⁴ Though less pervasive, the principle of “reduction” is present in the AWA through two requirements. First, researchers must provide assurances that the proposed experiment does not “unnecessarily duplicate previous experiments.”¹³⁵ Second, research must provide a “rationale . . . for the appropriateness of the species and number of animals to be used.”¹³⁶ To support these requirements the Act also requires the Secretary of Agriculture to provide related information through the National Agricultural Library.¹³⁷ Toward that end, the Animal Welfare Information Center (AWIC) was created.¹³⁸ The AWIC provides literature review services as well as training on literature review to help researchers identify potential alternatives that could be used in lieu of animal models.¹³⁹ The 3R principles are a major focus of the AWIC work.¹⁴⁰

Similarly, the PHS Policy does not explicitly mandate compliance with the 3R principles.¹⁴¹ However, the relevance of these principles to the development of both the PHSP and the accompanying U.S. Government Principles is undeniable. Replacement is observed in Principle III, which requires that alternatives be considered.¹⁴² Principle III also states “[t]he animals . . . should be of . . . the minimum number required to obtain valid results;” this reflects the reduction principle.¹⁴³ Refinement is captured in Principles IV and V, which require distress to be minimized and the use of analgesics where appropriate, respectively.¹⁴⁴

¹³² 9 C.F.R. § 2.31(d)(1)(ii).

¹³³ 7 U.S.C. § 2143(a)(3)(A).

¹³⁴ 7 U.S.C. § 2143(a)(3)(D); *see also* 9 C.F.R. § 2.31(d)(1)(i) (2023) (“Procedures involving animals will avoid or minimize discomfort, distress, and pain to the animals”); *see also* 9 C.F.R. § 2.31(d)(iv) (2023) (setting out additional requirements for procedures that “may cause more than momentary or slight pain or distress....”).

¹³⁵ 9 C.F.R. § 2.31(d)(1)(iii).

¹³⁶ 9 C.F.R. § 2.31(e)(2).

¹³⁷ 7 U.S.C. § 2143(e).

¹³⁸ *Animal Welfare Information Center (AWIC)*, U.S. DEP’T OF AGRIC., <https://www.nal.usda.gov/programs/awic> (accessed Jan. 23, 2024).

¹³⁹ *Literature Searching: How to Find Animal Use Alternatives*, U.S. DEP’T AGRIC., <https://www.nal.usda.gov/services/literature-searching-animal-use-alternatives> (accessed Jan. 23, 2024).

¹⁴⁰ *Animal Welfare Information Center (AWIC)*, *supra* note 138.

¹⁴¹ *See generally* PHS POLICY, *supra* note 7 (mentioning none of the 3Rs in the PHS Policy).

¹⁴² *Id.* at 4 (“Methods such as mathematical models, computer simulation, and *in vitro* biological systems should be considered.”).

¹⁴³ *Id.*

¹⁴⁴ *Id.* at 13 (“[A]voidance or minimization of discomfort, distress, and pain when consistent with sound scientific practice, is imperative.”, “[M]ore than momentary or slight pain or distress should be performed with appropriate sedation, analgesia, or anesthesia.”).

Additionally, the PHS Policy requires institutions to comply with the Guide for the Care and Use of Laboratory Animals.¹⁴⁵ Unlike the AWA or the PHSP, the Guide explicitly acknowledges the 3R principles. Reference of the 3Rs is made in its Statement of Task and its Overview and the 3R principles are discussed in greater detail in their own section.¹⁴⁶ Researchers are mandated by the Guide to comply with the 3R principles.¹⁴⁷

III. CONCLUSION

Humans are wired to want to simplify information whenever possible.¹⁴⁸ This allows us to use fewer resources and yet achieve the same benefit. But when it comes to the nuances of law—particularly when it overlaps with another field that is equally complicated—it is imperative that the details are accurate. There are other oft cited inaccuracies in this space, but the myths addressed in this Article were chosen because of their prevalence as well as their import. A viable shorthand for this paper would simply be: (1) do not forget the PHS Policy, (2) the AWA does not preempt lower jurisdictions through express or field preemption, (3) some birds, rats, and mice are covered under federal animal welfare laws, and (4) the 3Rs are implicitly, but not expressly, required by law in the United States.

¹⁴⁵ *Id.* at 9.

¹⁴⁶ COMM. FOR THE UPDATE OF THE GUIDE FOR THE CARE AND USE OF LAB. ANIMALS, *supra* note 24, at xvii, 4-5, 201.

¹⁴⁷ *Id.* at 5, 17.

¹⁴⁸ See Alexander S. Gillis & Corinne Bernstein, *What is Cognitive Bias?*, TECHTARGET, <https://www.techtarget.com/searchenterpriseai/definition/cognitive-bias> (accessed Jan. 23, 2024) (“Cognitive bias is a systematic thought process caused by the tendency of the human brain to simplify information processing through a filter of personal experience and preferences.”).