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**REPORT ON LEGISLATION BY THE
ANIMAL LAW COMMITTEE**

**H.R. 1095
S. 587**

**Rep. Henry Johnson
Sen. Ron Wyden**

An Act to amend title 10 of the United States Code, to require the Secretary of Defense to use only human-based methods for training members of the Armed Forces in the treatment of severe combat injuries.

Battlefield Excellence through Superior Training Practices Act

THIS LEGISLATION IS APPROVED

The New York City Bar Association is an independent non-governmental organization of more than 24,000 lawyers, law professors and government officials, predominantly from New York City and also from throughout the United States and fifty other countries. The Animal Law Committee is the first committee of its kind in the country and has a history of supporting federal, state, and legislation.

SUMMARY OF THE PROPOSED LEGISLATION

The proposed legislation would amend Chapter 101 of title 10 of the United States Code by creating a new Section 2017 entitled “Requirement to use human-based methods for certain medical training.” This bill would require a complete phase-in of human-based training methods in place of the current use of live animals for training members of the Armed Forces in the treatment of severe combat trauma injuries.¹

The Act would require the Secretary of Defense to submit annual reports to the congressional defense committees on the development and implementation of human-based training methods for the purpose of training members of the armed forces in the treatment of combat trauma injuries. The Act also requires the Secretary to develop, test and validate these human-based training methods with the goal of replacing live animal-based training methods no later than October 1, 2018. The Act requires a complete transition to human-based models by October 1, 2020. The proposed legislation provides an exception to the general ban on animal-

¹ Combat trauma injuries include hemorrhage; tension pneumothorax; amputation resulting from blast injury; and other injuries. *See* proposed legislation at Sec. 3(c)(1).

training methods where the Secretary determines that human-based training methods will not provide an educationally equivalent or superior substitute for live animal-based training methods.²

JUSTIFICATION

1. Animal Welfare

The Department of Defense uses more than 8,500 live animals each year to train physicians, medics, corpsmen, infantry and other personnel in methods of responding to severe battlefield injuries.³ The U.S military's current use of animals in combat care training programs includes courses conducted by the Army, Navy, Air Force, and Special Operations Command, as well as private contractors.

During these exercises, live animals have been inflicted with traumatic injuries that cause extreme and prolonged pain and suffering. For example, in combat trauma training, live goats and pigs have been stabbed, shot, burned, and had their limbs amputated and their bones broken to simulate battlefield injuries in humans.⁴ Following infliction of such injuries, military personnel then attempt to perform patient-stabilizing procedures such as maintaining an airway, addressing chest wounds, and establishing an IV line, seeking to keep the injured animal alive for as long as possible.⁵

Ethical considerations involved in the continued use of animals in combat trauma training courses, as well as the existence of superior human-based training methods which would replace the current live-animal training, favor the enactment of this legislation.

Indeed, as noted in the congressional findings set forth in the proposed legislation:⁶

- The Department of Defense has made impressive strides in the development and use of methods of medical training and troop protection, such as the use of tourniquets and improvements in body armor, that have led to decreased battlefield fatalities;

² Each such exemption would expire after one year and would require a renewed exemption for further use.

³ See proposed legislation at Sec. 2(2).

⁴ *Fact Sheet: Medical Training Using Animals*, The Humane Society of the United States, June 12, 2012, http://www.humanesociety.org/issues/medical_training/qa/questions_answers.html; see also Physicians Committee for Responsible Medicine, PCRM Confronts the Military's Deadly Use of Animals for Medical Training, <http://www.pcrm.org/search/?cid=417> (all citations herein last visited Mar. 20, 2015).

⁵ C.J Chivers, *Tending a Fallen Marine, with Skill, Prayer and Fury*, N.Y. Times, Nov. 2, 2006, <http://www.nytimes.com/2006/11/02/world/middleeast/02medic.html?pagewanted=all& r=0> (describing how a pig was repeatedly subjected to traumatic injuries during a 15-hour period, including that the pig was shot "twice in the face with a 9-millimeter pistol, and then six times with an AK-47 and then twice with a 12-gauge shotgun. And then he was set on fire.").

⁶ See proposed legislation at Sec. 2.

- The Army Research, Development and Engineering Command and other entities of the Department of Defense have taken significant steps to develop methods to replace of live animal-based training;
- The civilian sector has almost exclusively phased in the use of superior human-based training methods for numerous medical procedures that are currently taught in military courses using animals;
- Human-based medical training methods such as simulators replicate human anatomy and can allow for repetitive practice and data collection;
- According to scientific, peer-reviewed literature, medical simulation increases patient safety and decreases errors by healthcare providers;
- As recognized in the Department of Defense report, “Final Report on the use of Live Animals in Medical Education and Training Joint Analysis Team” (2009), (1) validated, high-fidelity simulators were to have been available for nearly every high-volume or high-value battlefield medical procedure by the end of 2011, and many were available as of 2009; and (2) validated, high-fidelity simulators were to have been available to teach all other procedures to respond to common battlefield injuries by 2014;
- The Center for Sustainment of Trauma and Readiness Skills of the Air Force exclusively uses human-based training methods in its courses and does not use animals;
- In 2013, the Army instituted a policy forbidding non-medical personnel from participating in training courses involving the use of animals;
- In 2013, the medical school of the Department of Defense, part of the Uniformed Services University of the Health Sciences, replaced animal use within its medical student curriculum;
- The Coast Guard announced in 2014 that it would reduce by half the number of animals it uses for combat trauma training courses but stated that animals would continue to be used in courses designed for Department of Defense personnel;
- Effective January 1, 2015, the Department of Defense replaced animal use in six areas of medical training, including Advanced Trauma Life Support courses and the development and maintenance of surgical and critical care skills for field operational surgery and field assessment and skills tests for international students offered at the Defense Institute of Medical Operations.

2. Availability of Superior Non-Animal Alternatives

Animal methods of combat trauma training are regarded by the scientific community as suboptimal due to the animals' anatomical differences from humans. Compared with humans, goats and pigs have smaller torsos and limbs, thicker skin, and important differences in anatomy of the head and neck, internal organs, rib cage, blood vessels, and airway.⁷

The viability of non-animal based alternatives has been acknowledged by the Department of Defense itself. In December 2011, for example, the Department of Defense voluntarily ceased the use of live animals in military chemical casualty training, and replaced the animal training programs with non-animal alternatives such as high-fidelity simulators and moulage.⁸ Viable alternatives to animal-based methods of combat trauma training are also available, including sophisticated mannequins that simulate a living human body. As noted in the Congressional findings of the proposed legislation, the vast majority of Advanced Trauma Life Support courses already use simulators rather than animals in civilian medical training. A report on Department of Defense Animal Care and Use Programs for fiscal years 2004–2005 reports that “the use of sophisticated computer simulators in advanced trauma and life support training has reduced or completely eliminated large animals such as sheep in some institutions.”⁹

Other available simulators include: Simulab TraumaMan, Medical Education Technologies, Inc. Human Patient Simulator, Laerdal Medical Simulation SimMan, Medical Education Technologies, Inc. Emergency Care Simulator, and Medical Education Technologies, Inc. iStan.¹⁰ In 2001, the American College of Surgeons, which oversees Advanced Trauma Life Support courses, approved the use of Simulab's TraumaMan System simulator in teaching the courses. Additional training alternatives, such as the use of human cadavers (also approved by the American College of Surgeons) are gaining clinical experience at emergency trauma centers in major metropolitan areas.¹¹

Cutting edge simulators provide the opportunity for students and military personnel to gain familiarity and comfort with medical procedures through unlimited repetition. Given the differences between human and animal anatomy, the mannequins provide markedly improved

⁷ *Frequently Asked Questions: Implementing Nonanimal Training Methods in U.S. Military Medical Courses*, Physicians Committee for Responsible Medicine, <http://www.pcrm.org/research/edtraining/military/faqs-implementing-nonanimal-training-methods>.

⁸ *The U.S. Army Will Stop Using Monkeys in Harmful Training Courses*, The Humane Society of the United States, October 19, 2011, http://www.humanesociety.org/news/news/2011/10/army_monkey_training_101911.html?credit=web_id88196873.

⁹ *Department of Defense Animal Care and Use Programs: Fiscal Years 2004-2005*, Section 3.6

¹⁰ *Fact Sheet: Medical Training Using Animals*, The Humane Society of the United States, <http://www.humanesociety.org/issues/medicaltraining/qa/questionsanswers.html>. For a detailed discussion of available simulators, see, E.M. Ritter and M.W. Bowyer, *Simulation for Trauma and Combat Casualty Care*. 14 Minimally Invasive Therapy, 224-234 (2005).

¹¹ *Id.* At 225.

anatomical and physiological realism when compared with live animals. In addition, the long-term cost savings are substantial compared to the use and care of live animals.¹²

A number of other countries have discontinued the use of live animals in military training, relying exclusively on non-animal trauma training methods. These countries include 22 of the 28 members of the North Atlantic Treaty Organization.¹³

3. Consistent Application of the Animal Welfare Act and Department of Defense Directives

The proposed legislation would also resolve several inconsistencies in application of the Animal Welfare Act (“AWA”) with respect to military training activities involving animals. Currently, the AWA provisions present problems in interpretation and enforcement with respect to Department of Defense activities using animals.¹⁴ Specifically, certain statutory terms and provisions, including the standards for the “humane handling” and “care” of animals used in combat training courses, and requirements for what is considered a “scientific necessity,” leave open to interpretation the issue of what constitutes permissible treatment of animals under the Act.¹⁵

¹² *Fact Sheet: Medical Training Using Animals*, The Humane Society of the United States at <http://www.humanesociety.org/issues/medicaltraining/qa/questionsanswers.html>. The United States Army’s own Combat Trauma Patient Simulator has been described as “simulating, replicating, and assessing battlefield injuries by type and category such as hemorrhaging, fractures, amputations, and burns; monitoring the movement of casualties on the battlefield; capturing the time of patient diagnosis and treatment; comparing interventions and outcomes at each military healthcare service delivery level.” Petition for Enforcement prepared by Physicians Committee for Responsible Medicine (“PCRM”), signed by numerous retired military physicians and other military person personnel, submitted to the Department of Defense (June 3, 2009), citing, DOD First Annual Report to Congress: Defense Acquisition Challenge Program Fiscal Year 2003. Sue C. Payton, Deputy Under Secretary of Defense (Advanced Systems and Concepts): 10.

¹³ Gala G. Shalin et al., “Use of Animals by NATO Countries in Military Training Exercises: An International Survey,” *Military Medicine* 177 (2012): 8-9; Drew Brooks, *Ft. Bragg May Stop Using Goats for Trauma Training*, Fayetteville Observer, Jan. 14, 2013, <http://www.military.com/daily-news/2013/01/14/ft-bragg-may-stop-using-goats-for-trauma-training.html>. See also Ben. Knight, “U.S Medic Training on Live Pigs Faces Opposition,” *The Local* (October 18, 2011) available at <http://www.thelocalde/society/20111018-38195.html>; Jean-Baptiste Piggini and Christian Schneider, “Germany Halts Plan to Shoot Live Pigs for Paramedic Training,” *Stars and Stripes* 2 Oct. 2012; “Training Israel Medical Personnel to Treat Casualties of Nuclear, Biological and Chemical Warfare.” *The Israel Medical Association Journal*, 4 (2002).

¹⁴ 7 U.S.C. § 2131 *et seq.* See also, U.S. Departments of the Army, Navy, Air Force, Defense Advance Projects Agency, and the Uniformed Services University of the Health Sciences. Army Regulation 40-33. The Care and Use of Laboratory Animals in DOD Programs. Paragraph 6b (16 February 2005); see also Melanie L. Vanderau, Comment, *Science At Any Cost: The Ineffectiveness and Under Enforcement of the Animal Welfare Act*, 14 Penn St. Envtl. L. Rev. 721 (2006), citing, 7 U.S.C. § 2142, § 2131.

¹⁵ 7 U.S.C. § 2143 (a)(1) (AWA standards require that the Secretary promulgate standards that govern the “humane handling, care, treatment, and transportation of animals by dealers, research facilities, and exhibitors.” With respect to animals in research facilities, the standards further provide requirements “for animal care, treatment, and practices in experimental procedures to ensure that animal pain and distress are minimized,” and that “the principal investigator considers alternatives to any procedure likely to produce pain to or distress in an experimental animal.”) 7 U.S.C. §§ 2143 (a)(3)(A); (B). See 7 U.S.C. § 2143(3)(D)(i) (AWA standards require that “no animal is used in more than one major operative experiment from which it is allowed to recover except in cases of (i) scientific necessity, or (ii) other special circumstances as determined by the Secretary. These exceptions to the

The importance of this proposed legislation is highlighted by the conflict between the Joint Regulation of the Department of Defense and the actual practices of the Department of Defense with respect to the use of animals in combat trauma training courses. Military regulations specify that “alternative methods to the use of animals must be considered and used if such alternatives produce scientifically valid or equivalent results to attain the research, education, training, and testing objectives.”¹⁶

Moreover, Department of Defense’s Directive Number 3216.1 includes a prohibition on the use of dogs, cats, non-human primates and marine mammals for 1) research conducted for developing biological, chemical, or nuclear weapons; 2) inflicting wounds with any type of weapon(s) to conduct training in surgical or other medical treatment procedures; 3) advanced trauma life-support (ATLS) training¹⁷ and specifically requires that “[m]ethods other than animal use and alternatives to animal use (i.e., methods to refine, reduce, or replace the use of animals) shall be considered and used whenever possible to attain the objectives of RDT&E or training if such alternative methods produce scientifically or educationally valid or equivalent results.”¹⁸

Although superior non-animal training methods exist, the Department of Defense has continued to use animals in combat trauma training¹⁹ and has failed to develop a specific strategy or timeline to transition to using human-based training methods.²⁰ Effective January 1, 2015, the Department of Defense replaced animal use in six areas of military medical training, however this restriction on the use of live animals in military medical trainings does not apply to the use of animals in combat trauma training.²¹ Accordingly the proposed legislation is necessary to

standards may be made only when specified by research protocol and that any such exception must be detailed and explained in a report outlined under paragraph (7) and filed with the Institutional Animal Committee. 7 U.S.C. § 2143 (3) (E). The standards further require that “the withholding of tranquilizers, anesthesia, analgesia, or euthanasia when scientifically necessary shall continue for only the necessary period of time.” 7 U.S.C § 2143 (3) (C) (v). The terms “scientific necessity,” “necessary” and “research protocols” are not defined.

¹⁶ U.S. Departments of the Army, Navy, Air Force, Defense Advanced Research Projects Agency, and the Uniformed Services University of the Health Sciences, Army Regulation 40-33. *The Care and Use of Laboratory Animals in DOD Programs*. Section 5(b) (February 16, 2005).

¹⁷ Department of Defense Instruction No. 3216.01, September 13, 2010, <http://www.dtic.mil/whs/directives/corres/pdf/321601p.pdf>.

¹⁸ *Id.*

¹⁹ *Department of Defense Animal Care and Use Programs: Fiscal Years 2004-2005*, Section 1.2.

²⁰ *Report to Congress on the Strategy to Transition to Use of Human-Based Methods for Certain Medical Training*, U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, April 2013, <https://www.navs.org/document.doc?id=62&erid=264222>.

²¹ See proposed legislation at Sec. 2(12); Department of Defense, Memorandum from Jonathan Woodson, M.D., Assistant Secretary of Defense for Health Affairs entitled the *Determination for the use of Animals in Medical Education and Training*, May 15, 2014. Dr. Woodson concludes that there are sufficient simulation models in the following programs: a) Advance Trauma Life support; b) Neonatal Resuscitation Training of Family Medicine Residents and Pediatric Residents, Pediatric Nurses, and Pediatric staff; c) Obstetrics/Gynecology Residency; d) Registered Nurse Anesthetist Residents and Staff; e) Programs established solely to maintain staff currency where no residency program occurs; f) The development and maintenance of surgical and critical care skills for field operational surgery and field assessment and skills tests for international students offered at the Defense Institute of Medical Operations (Course # FWH20120007).

ensure a complete phase-in of human-based training methods in place of the current use of live animals for training members of the Armed Forces in the treatment of severe combat trauma injuries.

CONCLUSION

For the aforementioned reasons, the New York City Bar Association's Animal Law Committee supports the proposed legislation.

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