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TREATMENT
OF ANIMALS

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The Honorable Christine Wormuth
Secretary of the U.S. Army
c/o Mark Averill, Administrative Assistant to the Secretary of the U.S. Army
Department of Defense

Via e-mail: mark.averill.civ@army.mil

Dear Secretary Wormuth:

Thank you in advance for your time. I'm writing on behalf of People for the Ethical Treatment of Animals U.S.—PETA entities have more than 9 million members and supporters globally—regarding the disturbing decision by the U.S. Army Medical Research and Development Command (USAMRDC) to ignore past precedent and now explicitly permit laboratory experiments that involve wounding dogs, cats, marine animals, and nonhuman primates with weapons. **Based on the information presented below, we urge the USAMRDC to renew the ban on such activities immediately and no longer permit the wounding of animals for medical research, development, testing, or evaluation.**

Weapon Wounding Tests on Animals Represent a Shocking Reversal of Past Precedent

In 1983, PETA exposed and successfully campaigned to shut down a U.S. Department of Defense "wound lab" in which dogs, goats, and other animals were shot with high-powered weapons to inflict injuries, resulting in former Defense Secretary Caspar Weinberger's establishment of the first-ever permanent ban on the shooting of dogs and cats in wound labs.[1] In 2005, the U.S. Army issued Regulation 40-33, which prohibited the use of dogs, cats, marine animals, and nonhuman primates from "[r]esearch conducted for development of biological, chemical, or nuclear weapons."[2] However, in 2020, the U.S. Army—in the USAMRDC's Policy 84—apparently reversed its position by permitting "[t]he purchase or use of dogs, cats, nonhuman primates, or marine mammals to inflict wounds upon using a weapon for the purpose of conducting medical research, development, testing, or evaluation."[3]

[1]Reprieve from wound tests is ended for pigs and goats. *The New York Times*. January 24, 1984:17. https://www.nytimes.com/1984/01/24/us/reprieve-from-wound-tests-is-ended-for-pigs-and-goats html
[2]U.S. Department of the Army. The care and use of laboratory animals in DOD programs. Army Regulation 40-33. February 16, 2005. Accessed September 28, 2022. https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/r40_33.pdf
[3]U.S. Army Medical Research and Development Command. Summary of change. January 15, 2020. Accessed September 28, 2022. https://mrdc health mil/assets/docs/orp/acuro/MRDC-Policy-84-Wounding.pdf

Entities:
- PETA Asia
- PETA India
- PETA France
- PETA Australia
- PETA Germany
- PETA Switzerland
- PETA Netherlands
- PETA Foundation (U.K.)

USAMRDC Keeps Weapon Wounding Tests on Animals Secret

In March 2022, PETA filed a Freedom of Information Act (FOIA) request for photos, videos, and other documentation of tests approved by the USAMRDC "that involve the use of a weapon … to inflict wounds" on dogs, cats, marine animals, and nonhuman primates. Although the USAMRDC initially stated that it had at least 2,000 responsive records, it later backtracked, claiming to have only one. Instead of embracing transparency, USAMRDC chose secrecy, claiming the responsive record to our request is "classified … in the interest of national defense or foreign policy."[4] We have filed an appeal for the release of a redacted version of the requested information that should have been provided, as PETA believes is legally required.[5] Taxpayers deserve to know what the U.S. Army is hiding by refusing to release details on its shocking weapon wounding experiments on animals.

Biological Differences Between Species Make Translation of Test Data Inaccurate

The decision by the USAMRDC to use live animals in weapon wounding experiments, presumably in an attempt to understand wound biology in humans, is counterproductive due to the "poor translation of preclinical animal trials to human trials."[6] In part, this is because of inherent morphological and environmental pressure disparities between humans and other animals.

The anatomical and physiological differences between humans and other animals lead to disparities in the pathophysiology of acute (or normally healing) wounds, regardless of the wound type. For instance, mice and rats show "fundamentally different wound healing [processes] than those observed in humans … because the major mechanism of wound closure [in rodents] is contraction, whereas in humans it is re-epithelialization and granular tissue formation."[7] As another example, the skin of pigs "is less vascular than human skin, and it has apocrine, not eccrine, sweat glands."[8] The latter are "postulated to be the main sources of epidermal repair in humans."[9] Similarly, bone-healing experiments in sheep are fundamentally flawed because of the species' ruminant gastrointestinal physiology and high bone mineral density. In turn, these characteristics "might negatively affect translation of research findings into clinical practice especially regarding [the effects of orally administered drugs on bone and fracture healing and] implant testing."[10] Finally, in research focused on chronic (or abnormally healing) wounds, the inflammatory states that characterize chronic wounds in humans aren't

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[4]Harris AM. Response by Freedom of Information Act Office at the Department of the Army to PETA. May 2, 2022. Accessed September 28, 2022. https://www.peta.org/wp-content/uploads/2022/09/2022-07-15-denied.pdf

[5]Zittkowski C. Appeal of Department of the Army's Decision to Withhold Information in Response to FOIA Request FA-22-0021. September 29. Accessed September 29, 2022. https://www.peta.org/wp-content/uploads/2022/09/2022-09-29-army-foia-appeal.pdf

[6]Darwin E, Tomic-Canic M. Healing chronic wounds: current challenges and potential solutions. *Curr Dermatol Rep*. 2018 Dec;7(4):296-302.

[7]Wilhelm KP, Wilhelm D, Bielfeldt S. Models of wound healing: an emphasis on clinical studies. *Skin Res Technol*. 2017 Feb;23(1):3-12.

[8]Trøstrup H, Thomsen K, Calum H, Høiby N, Moser C. Animal models of chronic wound care: the application of biofilms in clinical research. *CWCMR*. 2016 Nov 1;3:123-132.

[9]Darwin E, et al.

[10]Haffner-Luntzer M, Hankenson KD, Ignatius A, Pfeifer R, Khader BA, Hildebrand F, et al. Review of animal models of comorbidities in fracture-healing research. *J Orthop Res*. 2019 Dec;37(12):2491-2498.

accurately represented by parallel processes in other animals.[11] In fact, the immune response—in wound healing and a range of other pathologies—is generally incomparable between humans and other animals, due to disparities in the anatomy of lymphoid tissue, blood chemistry profiles, or the crosstalk between the adaptive and innate immune systems.[12]

Wound healing experiments on animals "have not historically taken into account additional important variables such as animal age, sex, microbiome,"[13] nutrition,[14] or the degree of social stress.[15] For instance, true wound chronicity—a pathology that is poorly understood, costs approximately $25 billion annually in the U.S. alone, and continues to increase due to the growing rates of type 2 diabetes and obesity—remains a challenge to model accurately in nonhuman animals. In fact, "no known animal model is representative of clinically important [and biologically relevant] comorbidities preceding the formation of chronic wounds in humans" (e.g., prolonged substance exposure or metabolic disturbance).[16,17]

Taken together, the impact of these findings on wound healing is not known,[18] and many experts agree that "human models offer the best opportunity to understand the factors that influence wound healing [and] evaluate the efficacy of treatments applied to wounds.[19,20]

Superior, Non-Animal Wound Research Methods Are Widely Available

Thankfully, modern, animal-free technology allows for research into wound-healing phenomena. For instance, the recruitment of healthy human volunteers in minimally invasive studies has already led to the development of various wound-healing models, ranging from abrasive injuries and blisters to thermal trauma.[21] Furthermore, new generation molecular tools, requiring only small amounts of human skin tissue, "make it possible to study wound healing directly in humans."[22] Molecular-level approaches already help scientists understand the changes in gene expression during wound formation and healing and guide the development of genetic manipulation[23] and diagnostic biomarkers (e.g., quantitative assessment of matrix

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[11]Grada A, Mervis J, Falanga V. Research techniques made simple: animal models of wound healing. *J Invest Dermatol*. 2018 Oct;138(10):2095-2105.
[12]PETA. The research modernization deal. 2021. Accessed September 28, 2022. https://www.peta.org/wp-content/uploads/2020/12/peta-2021-research-modernization-deal.pdf
[13]Darwin E, et al.
[14]Lux CN. Wound healing in animals: a review of physiology and clinical evaluation. *Vet Dermatol*. 2022 Feb;33(1):91-e27.
[15]Archie EA. Wound healing in the wild: stress, sociality and energetic costs affect wound healing in natural populations. *Parasite Immunol*. 2013 Nov;35(11):374–85.
[16]Trøstrup H, et al.
[17]Darwin E, et al.
[18]Trøstrup H, et al.
[19]Wilhelm KP, et al.
[20]Nuutila K, Katayama S, Vuola J, Kankuri E. Human wound-healing research: issues and perspectives for studies using wide-scale analytic platforms. *Adv Wound Care*. 2014 Mar 1;3(3):264-271.
[21]Wilhelm KP, et al.
[22]Nuutila K, et al.
[23]Peters M. AFOSR advances science of wound healing technology. *The Air Force Research Laboratory*. Accessed September 28, 2022. https://www.afrl.af.mil/News/Article-Display/Article/2484560/afosr-advances-science-of-wound-healing-technology/

metalloproteinases) for personalized therapeutic outcomes.[24,25] And finally, researchers at Harvard and Boston universities also recently "developed an *in vitro* system that reveals how human endothelial and stromal cells in a 3D matrix respond during wound healing and granulation tissue formation"—and this model "will allow for precise investigations into the molecular and biomechanical factors that play a role in the regulation and dysregulation of angiogenesis during granulation tissue development."[26]

PETA's 'Research Modernization Deal' Provides a Solution for Human-Relevant Research

According to the U.S. National Institutes of Health, 95% of all new drugs that test safe and effective in animal experiments fail or cause harm in human clinical trials.[27] Also, more than 90% of results from basic scientific research—much of which involves animal testing—fail to lead to treatments for humans.[28] As a result, PETA scientists have put forward the groundbreaking Research Modernization Deal (RMD),[29] which outlines a roadmap and strategy for optimizing investments in research to cure disease, by ending funding for strategies that don't work (notably, experiments on animals) and investing in research that's relevant to humans.

The National Hispanic Medical Association (NHMA), representing the interests of 50,000 licensed Hispanic physicians in the U.S., established in a position statement that it "does not conduct, fund, commission, or support tests on animals" and that it "strongly supports PETA's 'Research Modernization Deal.'" The NHMA went on to note that "[a]nimals used in laboratory experiments are biologically, physiologically, and anatomically different from human beings, making animal testing a suboptimal and highly error-prone endeavor that costs billions of taxpayer dollars each year …. Everyone will benefit from replacing animal experiments with more effective human-based medical research, and PETA's plan provides a guide for how to achieve this important transition."[30]

The National Medical Association, the oldest and largest national organization for African American physicians, also "does not conduct, fund, or commission tests on animals," and it "strongly supports the vision and plan articulated in PETA's 'Research Modernization Deal' that offers a step-wise guide to eliminate misguided experiments on animals and instead prioritize more effective, ethical and economical non-animal research methods that will better advance human medical research for all."[31]

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[24]Nuutila K, et al.
[25]Darwin E, et al.
[26]Tefft JB, Chen CS, Eyckmans J. Reconstituting the dynamics of endothelial cells and fibroblasts in wound closure. *APL Bioeng*. 2021 Mar;5(1):016102.
[27]National Center for Advancing Translational Sciences. Transforming translational science. Winter 2019. Accessed September 28, 2022. https://ncats nih.gov/files/NCATS_Factsheet_508.pdf
[28]Pound P, Bracken MB. Is animal research sufficiently evidence based to be a cornerstone of biomedical research? *BMJ*. 2014;348.
[29]PETA. The Research Modernization Deal. 2021. Accessed September 28, 2022. https://www.peta.org/wp-content/uploads/2020/12/peta-2021-research-modernization-deal.pdf
[30]National Hispanic Health Foundation. NHMA policy statements. June 24, 2022. Accessed September 28, 2022. https://www.nhmamd.org/nhma-policy-statements
[31]National Medical Association. NMA statement on animal testing. April 5, 2022. Accessed September 28, 2022. https://www.nmanet.org/news/604379/NMA-Statement-on-Animal-Testing htm

On September 16, 2021, in a monumental move for scientific research, motivated largely by the scientific failings of the use of animals in testing, the European Parliament passed a resolution calling on the European Commission to create an action plan to end all experiments on animals.[32] The resolution, proposed by members of the European Parliament (MEP) who reviewed PETA's RMD, calls for accelerating scientific innovation without the use of animals in research, regulatory testing, or education.[33] The MEPs have directed the European Commission to work with scientists, including those from animal protection organizations, to accomplish this goal.

You can contact me at MaggieW@peta.org. Thank you for your consideration of this important issue. We look forward to your prompt response.

Sincerely,

Maggie Wiśniewska, Ph.D.
Science Policy Advisor
International Laboratory Methods Division
Laboratory Investigations Department

cc: Dawn Fitzhugh, Director, Animal Care and Use Review Office, USAMRDC (dawn.c.fitzhugh.mil@mail.mil)

[32]European Parliament. MEPs demand EU action plan to end the use of animals in research and testing. September 16, 2021. Accessed September 28, 2022. https://www.europarl.europa.eu/news/en/press-room/20210910IPR11926/meps-demand-eu-action-plan-to-end-the-use-of-animals-in-research-and-testing

[33]European Parliament. Motion for a resolution B90425/2021. September 16, 2021. Accessed September 28, 2022. https://www.europarl.europa.eu/doceo/document/TA-9-2021-0387_EN.html