

DEPARTMENT OF VETERANS AFFAIRS

REPORT TO CONGRESS: FIVE YEAR PLAN TO ELIMINATE OR REDUCE RESEARCH CONDUCTED USING CANINES, FELINES OR NON-HUMAN PRIMATES

Report Language: Section 249(e) Not later than December 31, 2020, the Secretary shall submit to such Committees a plan under which the Secretary will eliminate or reduce the research conducted using canines, felines, or non-human primates by not later than five years after the date of the enactment of this Act. *P.L. 116-94, page 274*

Discussion:

As required by P.L. 116-94, § 249(e), this report outlines the five-year plan of the Department of Veterans Affairs (VA) to eliminate or reduce the use of canines, felines, and non-human primates in VA research. The plan incorporates recommendations from the National Academy of Science, Engineering and Medicine's review of the use of canines in VA research and proposes to coordinate VA efforts with those of other Federal agencies.

Introduction:

- 1) Summary of current use of canines, felines, and non-human primates in VA research and trends over the past 10 years:
 - a. The annual numbers of canines, felines, and non-human primates (NHPs) involved in VA research vary a great deal, and unpredictably, from year to year, depending on the specific research projects funded and on the particular new research questions that need to be answered.
 - b. Over the past decade the numbers have generally fallen by 50-95% from the numbers used 10 years ago, and have averaged fewer than 50 felines, 50 NHPs, and 200 canines per year (see table below).
 - c. The reduction in sensitive species research is primarily due to the gradual development of new models using rodents or agricultural animals that could replace sensitive species in studies, a strategy that VA continues to implement whenever possible (see item 7 below in "Strategies to be employed").

Year	Felines	Canines	NHPs
2009	105	219	86
2010	77	217	72
2011	104	251	49
2012	73	194	42
2013	47	187	40
2014	20	163	70
2015	23	122	28
2016	16	220	18
2017	26	191	17
2018	30	107	60
2019	29	55	4

- 2) Report of the 2020 National Academy of Sciences, Engineering and Medicine (NASEM) on the use of canines in VA research:
 - a. The report was commissioned by the VA under a contract awarded in 2018.
 - b. Findings:
 - i. The VA canine research program is compliant with all legal and regulatory requirements.
 - ii. The VA canine research program has yielded important advances that have improved the health and welfare of Veterans.
 - iii. Current VA research with canines addresses research questions for which the need to use this model is recognized.
 - iv. Use of canines for specific research areas is likely to be required in the future.
 - c. Recommendations relevant to the VA plan -- VA should:
 - i. Partner with veterinary schools to conduct more clinical trials with pets to reduce canine use for research and benefit the canines participating in the research.
 - ii. Actively promote new alternate methodologies that meet the unique needs of VA researchers by funding research into human tissues and organs, including *in vitro* techniques such as organ on a chip and computational approaches.
 - iii. Address, in more detail, the question of why no other species besides canines can be used in the proposed research, in both the application review as well as the local ethics committee review.
 - iv. Better document the animal harm/human benefit assessment and perform a more detailed literature review to verify that canines are needed.
- 3) Programs to reduce the use of canines, felines, and non-human primates in other Federal Agencies:
 - a. Collaboration on microphysiological systems: Defense Advanced Research Projects Agency (DARPA), National Center for Advancing Translational Sciences (NCATS), and U.S. Food and Drug Administration (FDA) participate in a collaborative program for the development of cell culture systems that simulate organs and organisms and could be used to replace animal models in some research and testing.
 - b. Interagency Coordinating Committee on the Validation of Alternative Models: More than 16 Federal agencies including National Institutes of Health (NIH) and FDA are collaborating to develop and promote alternatives to the use of animals in research and testing. Approaches under development include computational toxicology and read across methodologies among others.
- 4) This report is in addition to the semi-annual report required by Section 249(d) of the same legislation, which must report any research involving sensitive animal species being conducted by the Department, along with the justification for their use and the protocols in place to insure the necessity, safety, and efficacy of any such research. The first semi-annual report was submitted to Congress on June 18, 2020.

Strategies to be employed:

- 1) Establish a Sensitive Species Executive Committee as a subcommittee of the National Research Advisory Committee (NRAC) to include at least two members of the NRAC Committee, the Chief Research and Development Officer, the Director of the Biomedical Laboratory R&D Service, the Director of the Rehabilitation R&D Service, the VA Chief Veterinarian, and at least two senior VA researchers from the field by December 31, 2020, to guide overall plan development and implementation.
- 2) Establish a Sensitive Species Working Group comprised of Scientific Program Managers from the Biomedical Laboratory and Rehabilitation R&D Services, at least two representative VA researchers from the field, and staff from the Office of the Chief Veterinarian to develop plan details, revise as additional information is obtained, and coordinate implementation.
- 3) Establish an education program for VA researchers to familiarize them with program goals and methods and educate and mentor them on strategies and methods to reduce the use of canines, felines and, NHPs in their research (to address NASEM ii, above).
- 4) Enhance the review processes for research projects involving canines, felines, and NHPs to require stronger evidence addressing why no other species can be used in the proposed research, more detailed and independent literature reviews, independent statistical review, and more rigorous assessment of animal harms versus human benefits of the research (to address NASEM iii and iv, above).
- 5) Establish a memorandum of understanding with NCATS to promote the use of new tissue on a chip technology to replace the use of animals in VA research (to address NASEM ii, above).
- 6) Join the Interagency Coordinating Committee on the Validation of Alternative Models in order to learn from other agencies and reduce duplication of effort (to address NASEM ii, above).
- 7) Evaluate and test different approaches to reducing or eliminating the use of canines, felines, and NHPs in VA research, including but not limited to:
 - a. Develop mechanisms to allow VA facilities to establish affiliation agreements with the Department of Defense, veterinary schools, and other qualified entities to support transitioning research studies to companion animals with spontaneous or accidental Veteran-relevant conditions (to address NASEM i, above).
 - b. Fund studies of the use of tissue culture, organoids, and other related approaches, to replace the use of canines, felines, and NHPs in research (to address NASEM ii, above).
 - c. Fund studies of the use of computer simulations and related approaches to replace the use of canines, felines, and NHPs in research (to address NASEM ii, above).

- d. Fund studies to transition research involving canines, felines, and NHPs into human subjects when ethical and feasible (to address NASEM ii, above).
- e. Provide education and mentoring to investigators on the use of alternatives to the use of canines, felines, and NHPs (to address NASEM ii, above).

Timeline and specific actions:

Year 1:

- 1) Establish the Executive Committee and Working Group.
- 2) Develop an education and mentoring plan for VA investigators.
- 3) Plan changes to review processes as outlined in Strategy 4 (above).
- 4) Develop a plan to evaluate and test different Strategies 7a. through 7e. (above).
- 5) Establish connections with other Federal agencies to allow coordination of efforts to eliminate or reduce the use of canines, felines, and NHPs, across all agencies (Strategies 5 and 6, above).
- 6) Contract with an independent organization to evaluate the program and provide a final report to the Secretary.

Years 2-4:

- 1) Implement education and mentoring plan.
- 2) Implement changes in review processes as outlined in Strategy 4 (above).
- 3) Begin implementation of candidate strategies for reducing or eliminating the use of canines, felines, and NHPs, Strategy 7a. through 7e.
- 4) Evaluate the outcomes of different strategies tested annually.
- 5) Work with other Federal Agencies to coordinate efforts and reduce the use of canines, felines, and NHPs.
- 6) Identify additional potential strategies for evaluation.

Year 5: ORD conducts a review of the program and its outcomes, and provides a report to the Secretary of VA.

Conclusion:

Described is a five-year plan designed to eliminate or reduce the use of canines, felines, and NHPs in VA research. The strategies proposed are based on NASEM recommendations and include enhanced review of potential projects, increased support for the development of alternatives to the use of sensitive animal species in VA research, and support of investigators in the use of alternatives to sensitive animal species in their research.

Department of Veterans Affairs

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