



November 4, 2025

Pradeep K. Khosla, Ph.D.
Chancellor
University of California–San Diego
c/o Rosie Goldberg, Executive Assistant to the Chancellor

Via e-mail: pkhosla@ucsd.edu; chancellor@ucsd.edu; m1goldberg@ucsd.edu

Dear Chancellor Khosla:

Thank you in advance for your time. I'm writing on behalf of People for the Ethical Treatment of Animals—PETA entities have more than 10.4 million members and supporters globally—to follow up on our July 20, 2023, letter regarding the use of animals in decompression sickness/illness (DCS/DCI) and oxygen-toxicity experiments.¹ **Given scientific and ethical concerns regarding these experiments that we previously detailed, and the new information presented below, we urge the University of California–San Diego (UCSD) to prohibit DCS/DCI and oxygen-toxicity experiments on animals, in favor of superior human-relevant research methods.**

Records Confirm Cruel DCS/DCI Experiments on Animals at UCSD

As we previously detailed, the Office of Naval Research gave \$1,009,127 to a UCSD project titled, “Where Is the Gas? A New Method to Study Nitrogen During Diving and Decompression: FY2019-000313-AS,” conducted by Peter Lindholm and funded from August 1, 2020 July 31, 2023 (subsequently extended to July 31, 2024).^{2,3} During these DCS/DCI experiments,⁴ Lindholm forced rats to run on treadmills under threat of electric shock and then confined them in a hyperbaric chamber at pressures up to 700 kPa for up to 45 minutes. Following this, he made the animals inhale various gases, including pure oxygen and radioactive nitrogen, while they were used for imaging.⁵

¹ Letter from Swaminathan S to Khosla PK, President of UCSD, asking to end decompression and oxygen toxicity on animals. July 20, 2023. Accessed cc15, 2025. <https://www.peta.org/wp-content/uploads/2023/07/2022-07-20-letter-to-ucsd-re-navy-decompression-viv.pdf>.

² Defense Technical Information Center. Award Number: N000142012763. Where is the gas? A new method to study nitrogen during diving and decompression: FY2019000313-AS. Accessed October 21, 2025.

https://dtic.dimensions.ai/details/grant/grant.9404495?search_mode=content&search_text=%20Peter%20Lindholm&search_type=kws&search_field=full_search.

³ USASpending. Award Number: N000142012763. Where is the gas? A new method to study nitrogen during diving and decompression: FY2019000313-AS. Accessed October 31, 2025.

https://www.usaspending.gov/award/ASST_NON_N000142012763_097

⁴ U.S. Navy. Responsive Records. UCSD. Accessed October 15, 2025.

<https://www.peta.org/wp-content/uploads/2023/06/peter-lindholm-bumed.pdf>.

⁵ *Ibid.*

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Non-Animal Research Methods are Widely Available

Similar U.S. Navy-funded decompression experiments at other institutions⁶ have been terminated early,^{7,8} and superior non-animal research methods (e.g., analyses of human diver data, in vitro human endothelial models, computational and in-silico tools) are available and already advancing the field.^{9,10,11,12,13,14} Instead of using animals, UCSD could prioritize validation and expansion of existing human diver datasets and risk-prediction models;^{15,16} in-vitro studies using human cells/tissues under simulated dive conditions;^{17,18,19} and, computational modeling,

⁶ UW-Madison Institutional Animal Care and Use Committee Protocol Number V006315. Accessed October 14, 2025. <https://www.peta.org/wp-content/uploads/2023/01/uw-madison-iacuc-V006315.pdf>

⁷ People for the Ethical Treatment of Animals. (n.d.). October 24, 2023. *Victory! PETA pressure squeezes U.S. Navy to scrap gruesome decompression tests on sheep*. PETA. Accessed October 21, 2025. <https://www.peta.org/media/news-releases/victory-peta-pressure-squeezes-u-s-navy-to-scrap-gruesome-decompression-tests-on-sheep/>.

⁸ PETA. (n.d.). October 24, 2023. *Cruel Navy-funded tests on sheep canceled*. PETA. Accessed October 17, 2025. <https://www.peta.org/about-peta/victories/cruel-navy-funded-tests-on-sheep-canceled/>.

⁹ Palkovic M, Novomeský F, Zaviacic M, Danihel L, Kovác P, Danisovic L. The use of cell cultures for in vitro decompression sickness simulation. *Soud Lek*. 2007;52(1): 9-16. Accessed October 19, 2025. <https://pubmed.ncbi.nlm.nih.gov/17370505/>.

¹⁰ Jang DH, Owiredu S, Ranganathan A, Eckmann DM. Acute decompression following simulated dive conditions alters mitochondrial respiration and motility. *Am J Physiol Cell Physiol*. 2018;315(5):C699C705. Accessed October 21, 2025. <https://pubmed.ncbi.nlm.nih.gov/30110561/>.

¹¹ Wienke BR. Computer validation and statistical correlations of a modern decompression diving algorithm. *Comput Biol Med*. 2010;40(3):252-260. Accessed October 21, 2025. <https://pubmed.ncbi.nlm.nih.gov/20080233/>.

¹² Germonpré P, Lafère P, Portier W, Germonpré FL, Marroni A, Balestra C. Increased risk of decompression sickness when diving with a right-to-left shunt: Results of a prospective single-blinded observational study (the “Carotid Doppler” study). *Front Physiol*. 2021;12:763408. Accessed October 21, 2025. <https://pubmed.ncbi.nlm.nih.gov/34777020/>.

¹³ Honěk J, Šrámek M, Honěk T, et al. Screening and risk stratification strategy reduced decompression sickness occurrence in divers with patent foramen ovale. *JACC Cardiovasc Imaging*. 2022;15(2):181-189. Accessed October 21, 2025. [doi:10.1016/j.jcmg.2021.06.019](https://doi.org/10.1016/j.jcmg.2021.06.019).

¹⁴ Han KH, Hyun GS, Jee YS, Park JM. Effect of water amount intake before scuba diving on the risk of decompression sickness. *Int J Environ Res Public Health*. 2021;Jul 16; 18(14):7601. Accessed October 21, 2025. [doi:10.3390/ijerph18147601](https://doi.org/10.3390/ijerph18147601).

¹⁵ King AE, Andriano NR, Howle LE. Trinomial decompression sickness model using full, marginal, and non-event outcomes. *Comput Biol Med*. 2020;118:103640. Accessed October 21, 2025. [doi:10.1016/j.combiomed.2020.103640](https://doi.org/10.1016/j.combiomed.2020.103640).

¹⁶ Cialoni D, Pieri M, Balestra C, Marroni A. Dive risk factors, gas bubble formation, and decompression illness in recreational SCUBA diving: Analysis of DAN Europe DSL data base. *Front Psychol*. 2017;8. Accessed October 21, 2025. [doi:10.3389/fpsyg.2017.01587](https://doi.org/10.3389/fpsyg.2017.01587).

¹⁷ Hesthammer R, Eide T, Thorsen E, Svardal AM, Djurhuus R. Decrease of tetrahydrobiopterin and NO generation in endothelial cells exposed to simulated diving. *Undersea Hyperb Med*. 2019;46(2):159-169. Accessed October 19, 2025. <https://pubmed.ncbi.nlm.nih.gov/31051061/>.

¹⁸ Hesthammer R, Eide T, Thorsen E, Svardal AM, Djurhuus R. Hyperoxia and lack of ascorbic acid deplete tetrahydrobiopterin without affecting NO generation in endothelial cells. *Undersea Hyperb Med*. 2019;46(4):509-519. Accessed October 21, 2025. <https://pubmed.ncbi.nlm.nih.gov/31509907/>.

¹⁹ Hesthammer R, Dahle S, Storesund JP, Eide T, Djurhuus R, Svardal AM, Thorsen E. Nitric oxide in exhaled gas and tetrahydrobiopterin in plasma after exposure to hyperoxia. *Undersea Hyperb Med*. 2020;47(2):197-202. Accessed October 21, 2025. <https://pubmed.ncbi.nlm.nih.gov/32574435/>.

machine-learning methods, and dive-computer algorithms.^{20,21}

Federal Agencies are Shifting Away from Animal Testing

Recently, several U.S. agencies announced historic plans to phase out animal testing,²² in alignment with PETA's Research Modernization NOW strategic framework for modernizing research toward human-relevant methods.²³

- *Food and Drug Administration (FDA)*: The FDA announced on April 10, 2025, a "groundbreaking step to advance public health by replacing animal testing in the development of monoclonal antibody therapies and other drugs with more effective, human-relevant methods," to "improve drug safety and accelerate the evaluation process, while reducing animal experimentation, lowering research and development (R&D) costs, and ultimately, drug prices."²⁴
- *The National Institutes of Health (NIH)*: The NIH, the world's largest public funder for biomedical research²⁵— announced a major new initiative on April 29, 2025, "to expand innovative, human-based science while reducing animal use in research."²⁶ On May 4, 2025, the agency closed its in-house beagle lab, where dogs were used in sepsis and pneumonia experiments.²⁷ On May 23, 2025, the agency also terminated funding for Harvard experiments that involved sewing shut the eyes of baby monkeys and subjecting them to visual deprivation.²⁸ These studies were exposed by PETA in 2022.²⁹ On May 28, 2025, the NIH launched a new autism research funding opportunity that explicitly

²⁰ Hess HW, Hostler D, Clemency BM, St. James E, Johnson BD. Carotid body chemosensitivity is not attenuated during cold water diving. *Am J Physiol Regul Integr Comp Physiol*. 2021;321(2):R197R207. Accessed October 21, 2025. <https://www.google.com/search?q=https://doi.org/10.1152/jappphysiol.00275.2020>.

²¹ Hess HW, Hostler D, Clemency BM, Johnson BD. Carotid body chemosensitivity at 1.6 ATA breathing air versus 100% oxygen. *J. Appl. Physiol*. 2020;129(2):247-256. Accessed October 21, 2025. [doi:10.1152/jappphysiol.00275.2020](https://doi.org/10.1152/jappphysiol.00275.2020).

²² PETA. (n.d.). *The Trump administration's achievements for science and animals*. People for the Ethical Treatment of Animals. Accessed October 17, 2025. <https://www.peta.org/misc/the-trump-administrations-achievements-for-science-and-animals/>.

²³ PETA. (n.d.). Research Modernization NOW. November 2024. Accessed October 18, 2025. <https://www.peta.org/wp-content/uploads/2020/12/peta-2021-research-modernization-deal.pdf>.

²⁴ US FDA. (n.d.). FDA Announces Plan to Phase Out Animal Testing Requirement for Monoclonal Antibodies and Other Drugs. April 10, 2025. Accessed October 17, 2025. <https://www.fda.gov/news-events/press-announcements/fda-announces-plan-phase-out-animal-testing-requirement-monoclonal-antibodies-and-other-drugs>.

²⁵ NIH. (n.d.). January 21, 2025. *Grants & funding*. Accessed October 15, 2025. <https://www.nih.gov/grants-funding>.

²⁶ NIH. (n.d.). NIH to prioritize human-based research technologies. April 29, 2025. Accessed October 20, 2025. <https://www.nih.gov/news-events/news-releases/nih-prioritize-human-based-research-technologies>.

²⁷ Fox News. July 15, 2025. *NIH closes experimentation labs accused of brutally killing thousands of beagles for 40+ years*. Fox News. Accessed October 16, 2025. <https://www.foxnews.com/politics/nih-closes-experimentation-labs-accused-brutally-killing-thousands-beagles-40-years>.

²⁸ NIH [@NIH]. May 29, 2025. [IH has terminated funding at Harvard University for studies that included sewing the eyes of young monkeys shut....] [Post]. X. Accessed October 16, 2025. <https://x.com/NIH/status/1928136701429284991>.

²⁹ PETA. (n.d.). May 23, 2025. *Harvard loses infant monkey torture funds*. People for the Ethical Treatment of Animals. Accessed October 15, 2025. <https://www.peta.org/news/harvard-loses-infant-monkey-torture-funds/>.

excludes animal experiments.³⁰ On July 7, 2025, they also announced a major policy change. During a joint webinar with the FDA, NIH leaders stated that the agency will no longer seek proposals exclusively for animal models.³¹ Dr. Nicole Kleinstreuer, the Acting NIH Deputy Director for Program Coordination, Planning, and Strategic Initiatives, and a leader in reliable and human-relevant non-animal testing, emphasized that improving human health, "cannot be fulfilled using outdated animal-based models that fail to translate to human outcomes." Dr. Kleinstreuer also stated that "[w]e are very well placed to move away from animal-based models."^{32,33} On July 9, 2025, the NIH announced the early expiration of a funding opportunity for monkey experiments, which had involved injecting pregnant monkeys with viruses and dissecting their offspring.^{34 35}

- *The Department of Government Efficiency (DOGE)*: On March 4, 2025, DOGE canceled 10 NIH grants for invasive "transgender animal" experiments, which had cost over \$10 million. PETA had previously exposed these studies as wasteful and unethical.³⁶
- *U.S. Navy*: The Secretary of the U.S. Navy, on May 27, 2025, announced a complete ban on Navy-funded experiments on dogs and cats, ending decades of such testing.³⁷
- *The U.S. Coast Guard (USCG)*: The USCG reaffirmed, on June 23, 2025, that it has ended its use of animals in battlefield trauma training, also known as live tissue training, following concerns raised by PETA. The military branch stated it does not and will not conduct such training.³⁸

These decisions reflect a broader national shift toward more effective, ethical and economical animal-free research. The recent grant supporting DCS/DCI/oxygen toxicity research at UCSD has concluded, and we respectfully request that no further applications or extension requests be submitted. This transition presents an opportunity for UCSD to align with cutting-edge research practices and continue leading by example in this evolving domain.

³⁰ NIH. (n.d.). *Autism Data Science Initiative: Funding opportunities*. Division of Program Coordination, Planning, and Strategic Initiatives. Accessed October 16, 2025. <https://dpcpsi.nih.gov/autism-data-science-initiative/funding-opportunities>.

³¹ PETA. (n.d.). *NIH and FDA urged to adopt non-animal toxicology test methods*. PETA. Accessed October 19, 2025. <https://www.peta.org/news/nih-fda-non-animal-toxicology-test-methods/>.

³² *Ibid.*

³³ U.S. Food and Drug Administration. July 10, 2024. *FDA & NIH workshop on reducing animal testing* [Video]. YouTube. Accessed October 19, 2025. <https://www.youtube.com/embed/FUWQ1V8Dl-c?feature=oembed&enablejsapi=1&origin=https%3A%2F%2Fwww.peta.org>.

³⁴ National Institute of Allergy and Infectious Diseases. July 9, 2025. *Notice of early expiration of PAR-23-073, "Mentored Career Development Program for Early Stage Investigators Using Nonhuman Primate Research Models (K01 Independent Clinical Trial Not Allowed)" (NOT-AI-25-040)*. NIH. Accessed October 20, 2025. <https://grants.nih.gov/grants/guide/notice-files/NOT-AI-25-040.html>.

³⁵ NIH. (n.d.). 2023. *PAR-23-225: HIV/AIDS Scholars Using Nonhuman Primate (NHP) Models Program (K01 Independent Clinical Trial Not Allowed)*. U.S. Department of Health and Human Services. Accessed October 20, 2025. <https://grants.nih.gov/grants/guide/pa-files/PAR-23-225.html>.

³⁶ Department of Government Efficiency [@DOGE] [Yesterday, @NIH canceled seven grants for transgender experiment on animals...]. Accessed October 17, 2025. <https://x.com/DOGE/status/1897272661291753928>.

³⁷ Secretary of the Navy [@SECNAV]. May 27, 2025. [Today it gives me great pleasure to terminate all Department of the Navy's testing on cats and dogs, ending these...] [Post]. X. Accessed October 14, 2025. <https://x.com/SECNAV/status/1927500765817393569?s=19>.

³⁸ Letter from Gautier PW to PETA confirming that the USCG does and will not use live tissue training. June 23, 2025. Accessed October 17, 2025. <https://www.peta.org/wp-content/uploads/2025/06/2025-06-24-response-to-letter-to-uscg-commandant-ask-to-end-viv-in-ltt.pdf>.

You can contact me at MaggieW@peta.org. Thank you for your consideration of this important issue, and I look forward to your reply.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Maggie Wisniewska'.

Maggie Wisniewska, Ph.D.
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