Science Advancement & Outreach
A DIVISION OF PETA

1536 16th St. N.W., Washington, DC 20036

December 1, 2025

Dear Members of the National Cancer Advisory Board:

I am writing as a cellular biologist and Research Associate with the Science Advancement and Outreach Division at PETA to urge the National Cancer Advisory Board (NCAB) to align its research and training priorities with NIH's April 2025 commitment to prioritize non-animal methods (NAMs).

1. End the use of animals in cancer research

While screening programs have significantly reduced cancer mortality,[1,2] cancer remains the second leading cause of death in the U.S.[3,4] A key driver of this persistent burden is our continued reliance on animal testing to study cancer and develop treatments. Despite massive investment in these experiments, the success rate for oncology drugs remains below 10%.[5] This failure is driven by the profound genetic, molecular, immunological, and cellular differences between humans and mice, which prevent animal experiments from accurately identifying effective cancer therapies.[6]

The methods used to create animal models of cancer—particularly xenografted and genetically engineered animals—present additional scientific limitations.[7,8] In xenografted animals, transplanting human cells disrupts the genetic landscape in ways that do not occur in patients, altering disease progression and drug response.[9] Genetically modified animals offer limited control over gene expression levels and may introduce off-target changes.[10] These models also fail to replicate the sporadic and heterogeneous nature of human tumor development, producing results that do not translate to the clinic.[11]

Human-relevant methods offer powerful, mechanistic insights—often using a patient's own cancer cells—in a physiologically meaningful environment.[12] These approaches include bioprinted tumor models, organ-on-chip systems, and organoids, which can be used to test potential cancer therapeutics,[13,14,15,16,17] predict treatment response,[18,19] identify biomarkers,[20] and study the tumor microenvironment and neo-vasculature.[21,22] Additionally, cancer genomics[23,24,25,26,27] and machine-learning tools[28,29,30,31] are transforming diagnosis and enabling real-time predictions of therapeutic response.

With NIH now investing in NAM-focused infrastructure—including the Standardized Organoid Modeling Center[32] and initiatives to expand funding and training in human-relevant science[33]—NCAB has a pivotal opportunity to lead by example and end its reliance on animal models.

2. Expand infrastructure and incentives for NAM-driven cancer research

Non-animal, human-specific technologies are already reshaping the cancer research landscape, but broader institutional investment is needed to accelerate their adoption and maximize their impact. NCAB can advance this shift by:

- Creating dedicated funding streams specifically for cancer research projects that use NAMs. (i.e. RFAs for cancer NAM development and/ or core funding for human cancer organoid banks or tissue biobanks)
- Building a centralized, openly accessible platform housing validated human-relevant models, datasets, and analytical tools for cancer research to streamline collaboration and reduce duplication of effort.
- Supporting integrated research hubs that bring together experts in human cancer biology, computational modeling, bioengineering, and immunology to fast-track methodological innovation.
- Including researchers with cancer NAM expertise on relevant study sections.

3. Strengthen training pipelines for scientists adopting NAMs

Many cancer researchers were trained primarily using animal models and face significant barriers when adopting new technologies. NCAB can help bridge this gap by:

- Launching specialized training grants and fellowships that equip researchers with hands-on experience using NAMs in cancer research.
- Collaborating with universities and research institutes to create continuing-education and certification programs focused on NAM technologies.
- Providing transition and early-career awards that incentivize investigators to replace experiments on animals with human-based systems and establish NAM-focused research programs.

By implementing these recommendations, NCAB can help ensure that cancer research becomes more predictive, efficient, and human-specific—ultimately accelerating progress toward curing cancer and improving patient outcomes.

Thank you for considering these recommendations.

Sincerely,

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