

ANIMALACTION

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International Science and Engineering Fair



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The National Anti-Vivisection Society (NAVS) is dedicated to ending the exploitation of animals used in science.

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Gallup Poll: Fewer Americans Support Medical Testing on Animals

For the first time since 2001, when Gallup began polling Americans about the morality of medical testing on animals, the percentage of people who find medical testing on animals morally acceptable dipped below 50%!

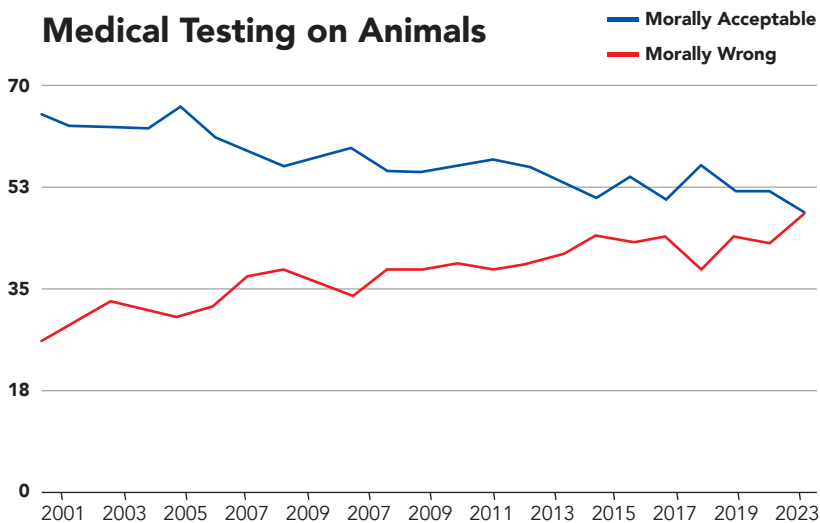
NAVS has been tracking the Gallup poll's annual values and beliefs survey for more than two decades, and we have been cautiously optimistic about the overall shift in public perception that we've seen take place regarding animal experimentation.

The newest poll results show something very promising for animals—many more Americans feel that medical testing on animals is morally wrong today compared to when the poll was first published in 2001. This year, 48% of Americans felt that medical testing on animals is morally wrong compared to just 26% in 2001. This is the greatest level of opposition to medical testing on animals that Americans have shown since Gallup began polling on the issue.

On the flip side, 48% of Americans now view medical testing on animals as “morally acceptable,” down from 65% in 2001. This is the lowest level of support that Americans have shown for medical testing on animals on record for the Gallup poll.

NAVS is very encouraged by this shift in public perception on animal testing, but we cannot become complacent. While we in the animal protection community have made extraordinary progress in calling out the cruelty and waste of animal experiments and supporting the development of human relevant non-animal methods that can replace animal testing, we continue to face the opposition of a multi-billion-dollar animal research industry that has a vested interest in maintaining the status quo.

Therefore, it is critical that we remain as committed as ever in achieving victories for animals and that we continue to advocate for the animals used in research who are unable to speak for themselves. By working together, we can keep this trendline moving in the right direction and build the momentum to end animal experimentation once and for all!



Left photo: Meredith Blanchard, Senior Manager of Advocacy and Policy, (left) and Kim Ayala, Manager of Special Projects at NAVS, outside of the NAVS Health and Wellness Center at Project Chimps; center right: Kim Ayala (left), with Patti Ragan, the founding director of the Center for Great Apes; top right: Kim with Ana Paula Tavares, chief executive officer of Save the Chimps; bottom right: Erika Fleury, Program Director at NAPSAs (left), and Kim Ayala.

NAVS and NAPSAs: Supporting Primate Sanctuaries

In May, NAVS staff had the opportunity to attend the North American Primate Sanctuary Alliance (NAPSAs) Workshop 2023 in Atlanta, Georgia. NAPSAs is a coalition of primate sanctuaries dedicated to the welfare and care of primates. It aims to promote best practices, share resources, and advocate to eliminate primate exploitation. Member sanctuaries provide lifelong care and rehabilitation for primates rescued from research laboratories, the pet trade, and other exploitative situations. Through collaboration and information sharing, NAPSAs members work together to enhance the well-being and quality of life for the primates in their care while exchanging knowledge, discussing challenges and solutions, and striving for continuous improvement in their sanctuary practices.

NAVS has collaborated with NAPSAs and its member sanctuaries many times through the years. Most recently, NAVS supported the Chimpanzees in Need fundraiser, which focused on rehoming the remaining chimpanzees at the Wildlife Waystation in California. When Wildlife Waystation unexpectedly closed in 2019, more than 400 animals, including more than 40 chimpanzees (most of whom were formerly used in medical research), were left needing new homes. As of late 2022, all Waystation chimpanzees have been moved to accredited sanctuaries across the U.S., including Chimp Haven, Chimpanzee Sanctuary Northwest, Center for Great Apes, Save the Chimps, and Primarily Primates. At NAVS, we understand that caring for chimpanzees is expensive and these sanctuaries

have committed to decades in care costs when coming to the aid of these chimpanzees. Thanks to your support, NAVS has issued more than \$100,000 in substantial grants to these accredited sanctuaries to assist each one with the costs of caring for the Wildlife Waystation chimpanzees.

NAPSAs Workshop 2023 was a chance for NAVS to strengthen our partnership with NAPSAs, catch up with member sanctuaries we have helped in the past, and meet people from new sanctuaries. The workshop was a comprehensive event aimed at enhancing the knowledge and understanding of primate care, welfare, and sanctuary operations. It was an incredible opportunity for us to talk directly with sanctuary directors and staff about their work and hear the incredible stories of hope and healing of the primates in their care.

The workshop concluded with a sanctuary tour of Project Chimps, a longtime beneficiary of NAVS grants. The tour was a fantastic opportunity to see NAVS' support in action and gain firsthand insights into daily operations at the sanctuary. We were thrilled to see the NAVS Health and Wellness Center, which was made possible due to a grant we issued in 2016. We also had the chance to speak to sanctuary staff about daily operations at the sanctuary, walk the outside perimeter of the resident enclosures, catch a glimpse of some of the residents in their enclosures, and tour the kitchen where staff prepare nutritious meals, snacks, and enrichment activities for all residents.



A Look at Promising Legislative Victories

Victories for animals can happen at all levels of government. For this issue of *Animal Action*, we'd like to celebrate some of the animal-saving legislation that has gained traction this year. While state-specific, these bills will provide information and protections that stretch well beyond state borders.



ILLINOIS Protection of Dogs and Cats from Unnecessary Testing Act

Bill status at press time
Signed into law June 2023.

The gist
Referred to as the Unnecessary Testing Act, this bill will make it unlawful to use dogs or cats in toxicological experiments that are not required by federal law. Those in violation of the act can receive penalties for each day the violation continues.

Potential impact
In 2021, laboratories in Illinois used 2,597 dogs and 736 cats for research and testing. With passage of the Unnecessary Testing Act we hope to see these numbers come down.

Building on progress
Illinois already has a post-research adoption law in place, so healthy dogs and cats that remain in labs will be adopted out once testing is complete, rather than being euthanized out of convenience.



OREGON Primate Testing Accountability Act

Bill status at press time
Signed into law July 2023.

The gist
The Primate Testing Accountability Act will increase transparency and accountability of the Oregon National Primate Research Center (ONPRC) by setting annual public reporting requirements.

Potential impact
Of the seven National Primate Research Centers in the United States, ONPRC has the highest number of Animal Welfare Act violations. Many of the violations include nonhuman primate (NHP) deaths due to negligence. By increasing transparency, we hope to curtail the tragic deaths occurring at ONPRC, which at last count housed more than 5,600 nonhuman primates, and gain insight into how NHPs are used at the facility.

"Reasonable people can disagree on whether using animals for medical research is scientifically valid or ethical," Rep. David Gombert said. "But we have to agree that it's not being done very well here in Oregon. There must be accountability, and if leadership can't fix the problems, there has to be intervention. That is why I sponsored this important legislation. Enough is enough."
— Quote from bill sponsor



MARYLAND Human-Relevant Research Fund

Bill status
Signed into law May 2023.

The gist
Requires animal laboratories to contribute to a research fund that will provide grants to scientists developing non-animal research alternatives. Yearly contributions from animal laboratories will be based on the number of animals used at the lab in the prior year. This novel law is the only one of its kind in the nation.

Potential impact
In order to move on from animal research, we have to give researchers something to move on to. Human-relevant, non-animal methods are the answer. While non-animal methods are being developed at a rapid pace, their use in laboratories remains minimal. With the Human-Relevant Research Fund in Maryland, we expect to see non-animal methods developed, validated, and implemented in labs at a faster rate.



BIG PICTURE

With a budget of approximately \$40 billion, the National Institutes of Health (NIH) is the largest funder of biomedical research in the United States. Unfortunately, less than 0.1% of its grant funding goes to the development and validation of human relevant, non-animal models. Maryland's Human-Relevant Research Fund will provide much needed financing for scientists developing models that are based off of human biology rather than macaque or marmoset biology, for example.

Thank you to our advocates who have voiced their support of these bills and similar legislation so far in 2023 – none of these successes would be possible without your help!

“A Dereliction of Duty”

NAVS Responds to NASEM Primate Research Committee

In early May, a National Academies of Sciences, Engineering, and Medicine (NASEM) committee released a report titled *Nonhuman Primate Models in Biomedical Research: State of the Science and Future Needs*. The report can be boiled down to one recommendation: the United States needs to expand domestic nonhuman primate (NHP) breeding programs so we have the animals on hand for use in biomedical research. This is just the latest of many attempts by NHP researchers to increase funding for their primate experiments even though Congress and the public are increasingly eager to move on from this highly dubious, unethical approach to biomedical research.

The committee first convened publicly in April 2022 with a directive from Congress to examine the current landscape and future need for NHPs in biomedical research funded by the National Institutes of Health (NIH).

NAVS followed the committee's work closely, attending all public meetings; commenting on our concerns with the committee's composition, ethics considerations, and panelist selection; and reviewing dozens of documents obtained via a records request.

Of paramount concern is the committee's clear bias, which was evidenced by the committee's composition and the “topic experts” chosen to present during two public committee hearings. The 16-member committee included 12 scientists whose careers have been bolstered largely or in part by using NHPs in their research.

The scientific robustness of NHP models has long been called into question, and our growing understanding of the inner lives of NHPs casts significant doubt on the ethical justifications for their use. Simultaneously, technological and methodological advancements appear to be bringing the era of NHP-dominated research to an end. To inadequately review these perspectives in favor of maintaining the status quo does a disservice to the scientific profession and threatens to harm the advancement of human-relevant models that will provide superior insights and treatments for human health.

Ultimately, NAVS hopes that Congress is able to see through this cherry-picked report and acknowledge it for what it is: propaganda to boost a failing research methodology.

Visit navs.org/a-dereliction-of-duty-navs-responds-to-nasem-primate-research-committee/ to read NAVS' full response.

Back to School with BioLEAP: Supporting Compassion in Education

“What did that frog ever do to you!?”

One demand made itself heard over the chorus of middle schoolers as they squealed in disgust and dared each other to touch the frog pinned open on the table in front of them.

“Well actually,” the NAVS representative manning the booth explained, “this frog has never done anything. It’s not real, see?”

The questioning student moved in skeptically and began to examine the SynFrog model, growing bolder once a closer look reassured him that the frog in question was, in fact, fake.



This scene played itself out over and over again at the NAVS booth at the 2023 International Science and Engineering Fair (ISEF) Education Outreach Day. As the student and teacher attendees perused the diverse assembly of humane dissection tools on display, clicking around the model from Complete Anatomy’s digital human suite and flipping through paper models by Getting Nerdy with Mel and Gerdy, their reactions to the SynFrog model were divided into two distinct camps.

Some groups swooped in confidently, poking through the synthetic frog’s vivid organs with ease, but in every new wave of visitors there were always a handful who hung back, eyes wide and brows knitted in consternation. Once they learned that the frog was synthetic, however, they visibly relaxed and joined their peers.

A Matter of Morals

Dissection doesn’t just harm animals, it also harms students who are unable to stomach the idea of sacrificing a life purely for the sake of curiosity. When faced with animal dissection, students are encouraged to put aside their morals and become desensitized, or risk compromising their education (and their grades).

At NAVS, we believe that students should not be asked to choose between ethics and education. Instead, students deserve an education that allows them to maintain their morals and encourages them to become compassionate and considerate world citizens. That’s why, for the past three years, we’ve been putting humane education at the forefront through the revitalization of BioLEAP, our biology education advancement program.

Building BioLEAP

Three years ago, BioLEAP consisted of a single webpage with a handful of hyperlinks, a hotline, and a few outdated humane dissection tools for an infrequently used teacher loan program. The program faced serious challenges in making an impact in schools. It was time for a complete overhaul.

Inspiration for where to begin struck during the early days of the pandemic, when lockdown and the shift to virtual education meant that classes would be unable to conduct in person dissections, effectively forcing teachers to seek out dissection alternatives. Anticipating that need, NAVS built a tool that would make it easy for first-time humane dissection shoppers to find their perfect match. The result was the BioLEAP alternatives catalog, a one-stop-shop for teachers looking to compare humane solutions. The catalog, a core feature of bioleap.org, contains more than 100 different models, fully searchable by grade level, digital or physical format, and specimen type.

Wish Granted

The next step was to remove the single largest barrier teachers faced when implementing humane dissection tools in the classroom: cost. Although many dissection alternatives are re-usable and ultimately end up being less expensive than animal specimens, which must be ordered year after year, the upfront cost is prohibitive for many tight school budgets. Our solution: the BioLEAP Classroom Grant, an award of up to \$1,000 for teachers looking to purchase dissection alternatives.

Through applications to the grant program, we’ve discovered that students aren’t the only ones who are uncomfortable with dissection. Many teachers object to the practice as well, but they feel restricted by school policy, but they feel restricted by school policy.

“My school expects students to learn through dissection,” high school biology teacher Michelle Ellis shared with us. “Morally, I have an issue with using animals in my classroom.”

Luckily, through the power of the BioLEAP Classroom Grant, Ellis was able to purchase Frog Dissection Manikin models from VetEffects, which met her school’s expectations for dissection.

“They loved it.” Ellis reported back on her humane anatomy lab. “Students got to have the dissection experience, there were no smells, no chemicals and no animals were harmed.”

And the grant program is only set to grow. When we opened applications earlier this year, we received nearly three times as many applicants as we had in the previous cycle. As it turns out, there are many teachers who are eager to adopt new humane methods of education. They only lack the necessary support from their schools, support we are able to provide through BioLEAP.

A Compassionate Curriculum

Ending dissection is just the beginning. Although it is the most visible form of harm, dissection labs are just a single day or two at the end of an entire semester’s worth of lessons that depict animal models as the gold standard in research. Students become so normalized to the idea of using animals in science, that by the time dissection day rolls around, many of them don’t even bat an eye. The NAVS team realized that we need to address the science curriculum as a whole if we truly want to start a humane education paradigm shift.

In our most recent work, we created a high school level curriculum that introduces students to animal welfare concepts while meeting national science standards. Our curriculum features eight lesson plans and six interactive modules that focus on the 3Rs principle of humane experimental technique, which calls for the replacement, reduction, and refinement of animal use in science. Teaching students about the 3Rs helps them learn not only that (really cool!) non-animal research models exist, but also that they should think critically before engaging in animal research themselves.

As we prepare the 3Rs curriculum for its classroom debut, we have received overwhelmingly positive feedback from initial teacher reviewers, even from the skeptics!

“I was prepared not to like the program,” one reviewer reflected, “but as I went through it, I found myself saying ‘My students would like this...and this...and this!’”

A Future Worth Fighting For

Ultimately, NAVS’ goal through BioLEAP is not just to end the exploitation of animals in schools, but to shape a future generation of humane researchers and conscientious citizens who prioritize the well-being of animals throughout their lives. By integrating compassion into the science curriculum, we reinforce students’ natural empathy for animals and equip them with the tools they need to become advocates for change, inspiring a shift towards better and more ethical scientific practices.

As we reflect on BioLEAP and the journey so far, we are excited for what lies ahead. Through ongoing collaborations with teachers and the continuous support of individuals like you, NAVS is at the forefront of transforming science education and making a lasting impact on the lives of animals and students alike. Together, we are creating a brighter, more compassionate future.

NAVS Roadtrip

NAVS/IFER Staff and Advisors Visit Texas-Based IFER Fellowship Recipients

NAVS co-founded the International Foundation for Ethical Research (IFER) in 1985 as part of its commitment to the advancement of non-animal methods. Thanks to your generous support, NAVS awards a grant every year to IFER to help fund graduate students who are developing innovative, non-animal alternatives that have the potential to replace animal use in science.

This May, we visited two of IFER's Texas-based fellowship recipients, and we were beyond impressed by the work that they are doing to advance human-relevant science without harming animals!

Our first stop was to Texas A&M University in College Station, where we met Jason Eades, a Ph.D. student in biomedical engineering at the College of Engineering. Jason's research focuses on the effects of SARS-CoV2 virus, which causes COVID-19, on human blood vessels using organ chip models. During our visit, Jason gave us a tour of his cutting-edge lab and provided an overview of the research that he has been conducting.

"We know that there are some really significant cardiovascular effects that come from COVID-19, but the mechanisms for those diseases and potential treatments remain unknown," he noted. "This is largely because it's really challenging using existing models, including animal models, to study these mechanisms and understand the role of the virus in these vascular pathologies. So,

we are using in vitro models of the vasculature that incorporate real human cells to get an understanding of how COVID-19 affects the human cardiovascular system."

Jason explained some of the limitations of animal models for these kinds of studies. During our tour of his lab, he also showed us the organ chips that he is working with, how he cultures cells in these devices, and some techniques he uses to ensure devices are working properly. "Ultimately, I hope that [my] study will demonstrate the advantages of non-animal in vitro platforms for studying cardiovascular, and more broadly, all human diseases, and thereby motivate others to reduce or replace the use of animals in their work," he said.

Jason was thankful to IFER for supporting his graduate work. "I am exceedingly grateful to be affiliated with an organization like IFER and its mission to reduce, and ultimately replace, the use of animals in medical research," he said. "I believe that animals do not necessarily represent the most suitable models for human medical research. Instead, many in vitro organ models are being developed that better recapitulate the key aspects of human physiology and disease. My hope is that by developing and implementing these solutions, we can make significant strides both in treating human disease and in motivating others to use advanced, non-animal models for research."



NAVS and IFER staff and advisors visited IFER fellowship recipient Divya Subramanian in her lab at the University of Texas-Dallas

The team also made a trip to the University of Texas at Dallas in Richardson, where we visited the lab of IFER Graduate Fellowship recipient Divya Subramanian. Divya is a Ph.D. candidate in the department of bioengineering in the Erik Jonsson School of Engineering and Computer Science developing novel human cell-based models of the corneal stroma for use in wound healing studies in Dr. David Schmidtke's lab. The cornea is the part of the eye that is exposed to the outer environment and is most likely to become damaged, making corneal wound healing an important medical issue.

Corneal wound healing research currently relies heavily on animal models, particularly rabbits. However, differences between rabbit and human corneas make extrapolation of data across species problematic. To better mimic the native cornea stromal structure, Divya is growing human corneal keratocytes on micropatterns of aligned collagen fibrils, as the geometry and topography of the cell microenvironment influence corneal cell behavior.

"My research focuses on using microfluidics as a platform to pattern align collagen fibrils in order to study corneal cell behavior," she said. "The cornea consists of stacks of collagen lamellae of aligned collagen fibrils with interspersed

corneal keratocytes. The aligned collagen fibrils are really important in corneal transparency as well as guiding corneal cells in the event of a corneal injury."

"The research we do basically involves trying to study the effects of geometric patterns on different cell behaviors. My research focuses on using a microfluidic shear patterning of aligned collagen. Human corneal keratocytes are then cultured on this aligned collagen to study the effect of the topography cues on corneal cell behavior. This is important because geometric patterns or spatial patterning is ubiquitous in biology and using microfluidics gives us a platform to help us study all of these different behaviors using an in vitro approach."

Divya showed us some of the techniques that she uses to create the aligned collagen fibrils, gave us a wonderful tour of her lab and the surrounding labs, and introduced us to several of her colleagues, who are also using non-animal approaches in their research.

We're honored to count both Jason and Divya among the growing number of IFER fellowship recipients who are leading the next generation of humane scientists.



Pictured at Texas A&M University are (l-r): Pam Osenkowski, Ph.D., science advisor for NAVS and IFER; Anna Madsen, NAVS program manager; NAVS Executive Director and IFER President Kenneth Kandaras; Jason Eades; and Alicia Pate, Ph.D., director of science and research for NAVS and IFER.





“ [Our supplement], which is the xeno-free, human blood derived supplement, is a superior alternative to FBS, which is derived from slaughtered cows. This essentially showcases the ability of [our supplement] to be used in in vitro applications to entirely replace FBS when growing stem cells. ”

Vedant Lakkundi

“ Through my project, with building these better cell models, we’re able to better understand how cancer acts and how cancer cell models might lead to the better creation of more advanced chemotherapies and better drugs in the future. ”

Margaret Moe

“ My study proposed a unique approach [to studying traumatic brain injury] in that I used a novel 3D model of the blood brain barrier developed by my lab...My study is a crucial step in developing treatment for traumatic brain injuries as well as other diseases where blood brain barrier modification is the case, as well as Alzheimer’s, Huntington’s, and even addiction. ”

Samantha Milewicz

NAVS Executive Director Kenneth Kandas (left), Science Advisor Pam Osenkowski (second to the left) and Director of Science and Research Programs Alicia Pate (right) presented the NAVS Humane Science Award to this year’s winners at the Regeneron International Science and Engineering Fair.

NAVS Rewards Humane Science at the 2023 Regeneron International Science and Engineering Fair

Every year, NAVS’ staff looks forward to participating in the Regeneron International Science and Engineering Fair (ISEF). Here, at the world’s largest pre-college science fair, we select recipients of NAVS’ Humane Science Award. We are proud to be the only animal advocacy organization that presents a Special Award at ISEF, an award that recognizes students who are advancing science using alternatives to animal experimentation. This marked our 21st year of participating in this event. It is our hope that acknowledging and rewarding a student’s choice to work with non-animal models now will encourage them to continue pursuing non-animal approaches to solving scientific questions in the future.

Before the NAVS team travelled to Dallas, Texas, to participate in the science fair, our five judges had to review nearly 1,300 science fair projects to identify the top 10 finalists for in person interviews — a challenging job, given the number of exceptional projects submitted!

We are thrilled to unveil the winners of NAVS’ prestigious Humane Science Award at 2023 Regeneron-ISEF. These talented students showed remarkable dedication, innovation, and compassion in their scientific endeavors, emphasizing the promotion of humane practices that do not rely on animal models. Their work represents a significant step forward in the advancement of science while fostering kindness and respect for all living beings.



First Place Winner of \$10,000: Vedant Lakkundi, from Bangalore, India

Vedant recognized the ethical and scientific concerns of using fetal bovine serum (FBS) in cell culture. In his project, Vedant developed and characterized a novel, xeno-free alternative to FBS that is derived from human blood and found it to be a superior cell culture supplement over FBS when culturing a particular type of stem cell.



Second Place Winner of \$5,000: Margaret Moe, from Baton Rouge, Louisiana

Margaret, who was one of our Humane Science Awards finalists at ISEF 2022, was back at the science fair this year presenting her work on developing an improved 3D cell model to study breast cancer. Margaret recognized that many kinds of animals are typically used in cancer studies, but the time she spent with her family’s companion animal, a guinea pig named Mel, made her realize that animal research was not for her. “I knew almost immediately that I would never work with animal models,” Margaret said. “I don’t think that it is ethical, and I would never want to work on animals.”



Third Place Winner of \$2,500: Samantha Milewicz, from Armonk, New York

Samantha studied traumatic brain injury (TBI) using a novel 3D cell-based model of the blood brain barrier. NAVS judges were impressed by the cell-based model that Samantha used to study TBI, because animal models are often used to replicate human TBI and explore potential treatments. Her work also caught the attention of the Grand Award judges: Samantha received a Second Grand Award in the category of translational medical science.

Congratulations to this year’s Humane Science Award recipients for their outstanding accomplishments and commitment to making a difference in the field of humane science. Each Humane Science Award recipient has not only demonstrated exceptional scientific expertise but has also showcased empathy and consideration toward animals, setting a shining example for others to follow. NAVS hopes that their inspiring work shapes a more compassionate future for all.



“It is no longer a question of if we are good enough with the alternatives; it is much more a matter of transitioning from one technology to another. This is like when we changed from horse coaches to cars. This was not done by changing one piece at a time until the horse coach looked like a car, but it was done by having parallel technologies until some point, people saw that their prejudices were not justified, and the new technology was simply better. Then everybody was using cars and not horses.”

Thomas Hartung, director of the Center for Alternatives to Animal Testing at Johns Hopkins University

“There is increasing recognition that in some cases animal models are just not informative for understanding efficacy and safety of new drugs. New alternatives like tissue chips, that reproduce human biology in a much more physiologically complex way, remove this requirement for animal testing data.”

Nicole Kleinstreuer, director of the National Toxicology Program Interagency Center for the Evaluation of Alternative Toxicological Methods at the National Institutes of Health (NIH)

“The barrier of using animals is getting higher as the ethical issues and costs have gone up. Yet, organoids and organs-on-a-chip are demonstrating functionality as we have never seen before. We are at a tipping point.”

Don Ingber, director of the Wyss Institute for Biologically Inspired Engineering at Harvard University

All quotes come from the following article:

Moutinho, S. “Researchers and regulators plan for a future without lab animals,” *Nature Medicine*, June 1, 2023.



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FACES OF SURVIVAL



ANIMAL SANCTUARY ASSISTANCE PROGRAM

The NAVS Animal Sanctuary Assistance Program (ASAP) is a lifeline to sanctuaries, animal rescues, and shelters that care for former research animals. The ASAP also provides support in emergency situations.

PRIMARILY PRIMATES

Primarily Primates, located in San Antonio, Texas, houses, protects, and rehabilitates various primate species, many of whom have come from biomedical research facilities and the pet trade. NAVS has assisted them in their important work many times. In 2019, Primarily Primates stepped in to provide a permanent home to chimpanzees from the Wildlife Waystation in California when it abruptly closed, and NAVS was there to help with a grant to offset some of their expenses. We are happy to report that the chimpanzees are flourishing in the safety and comfort of their new home. Selena, Norma and Mighty Fine enjoy their new life at Primarily Primates.



SELENA, NORMA, MIGHTY FINE

ARTHUR'S ACRES ANIMAL SANCTUARY

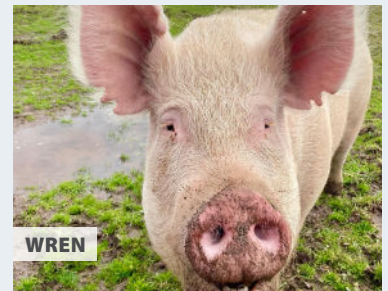
NAVS was contacted by Arthur's Acres Animal Sanctuary in New York to assist them with long-term medical care for six Yorkshire pigs who were formerly used for medical testing. At the time, two of the pigs, Wren and Jane, were suffering from stress fractures in their feet. NAVS was able to issue a generous grant. We are happy to report that Wren has fully recovered and has reintegrated with the herd. She loves to spend time out in the field (see picture). Jane recovered from her two fractures; however, she continues to have issues with her hooves. Arthur's Acres remains committed to providing her with the best care, and she is treated at Cornell University Large Animal Hospital when necessary. Arthur's Acres is building a comprehensive care plan for pigs rescued from research. This care plan, when complete, will be shared with other sanctuaries that take on similar rescues.



SELENA

SAVE THE CHIMPS

Located in Fort Pierce, Florida, Save the Chimps rescues and provides sanctuary for chimpanzees who have been used in biomedical research, the entertainment industry, or the pet trade. They are also long-time friends of NAVS. In 2019, Save the Chimps took in seven chimps from the Wildlife Waystation, now known as the Sunrise Seven. Thanks to your generous donations, NAVS was able to provide grants to assist with their general care, medical expenses, food, and enrichment. Vanilla, Shake, Ernesta, Magic, Jeff, Cayleb, and Jacob are doing well as they adjust to their new home and have plenty of places to nap in the sunshine! For some, including Vanilla, this is their first chance to enjoy the outdoors with open skies above them. Through your support of NAVS, you helped make this magical moment happen.



WREN



VANILLA

To learn more about the Animal Sanctuary Assistance Program and the lifesaving work made possible with your support, please visit [NAVS.org/ASAP](https://navs.org/ASAP).