# ANIMALACTION

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## BREAKING FREE OF THE *RAT TRAP*:

An interview with Dr. Pandora Pound, the author of *Rat Trap: The Capture of Medicine by Animal Research—and How to Break Free*

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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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# Connecting Teachers Across America to Humane Science

This fall, NAVS crisscrossed the country to connect with science teachers at conferences and introduce them to BioLEAP's humane teaching resources. We had the opportunity to speak to hundreds of teachers, encouraging them to embrace ethical science in their classrooms, and reminding them of the BioLEAP Classroom Grant, which will open for applications in early 2024.

We kicked off our journey close to the NAVS headquarters at the Illinois Science Teacher's Association Conference in Wheaton, Illinois. This small local event gave us the opportunity to speak to teachers at length about our offerings, from the dissection alternatives catalog to the resources we award through the BioLEAP Classroom Grant to our new high school level curriculum, "Animal Use in Science: Exploring the 3Rs."

Next stop: the National Science Teaching Association Conference in Kansas City. As the largest event of the season, NSTA is always a busy week and the best way to expand our reach to as many teachers as possible. Our presence at these large conferences is important because vendors selling preserved specimens also attend in force. It's important that NAVS show up to serve as a counterpoint to those outdated and cruel methods of science education.

We wrapped up conference season by heading to Baltimore for the National Association of Biology Teachers conference.

After another successful round of conferences, we're excited to bring a new batch of educators on board with our mission. These teacher conferences are vital for grassroots engagement, and each year we are met with growing enthusiasm for cruelty free classrooms. Together, we're gaining ground in the fight for humane science education.

# NAVS Connects with Legislators

In August, NAVS was happy to be back at the National Conference of State Legislators (NCSL) in Indianapolis. The event offered an opportunity for Meredith Blanchard, Senior Manager of Advocacy and Policy, and Kim Ayala, Senior Manager of Operations, to engage with state legislators and their staff, advocating for the removal of animals from laboratories and discussing legislation that could significantly impact the lives of lab animals. The event underscored the pivotal role that state legislation plays in shaping animal protection policies and its ripple effect on federal regulations.

NCSL is a nonpartisan trade organization for elected state officials. The annual conference provides the best chance to talk to elected officials from across the country, and NAVS took full advantage of this opportunity. Thanks to an informative booth that drew many attendees, including some who were hesitant to stop and speak with us, we met with legislators from New York, Kentucky, Maryland, New Mexico, and other states to discuss how they can help laboratory animals from their seats of influence.

During the event we highlighted various bills and measures that support NAVS' mission and the animals we serve. We explored options to increase funding for non-animal testing and research methods, reduce the number of dogs and cats being used in toxicity testing, how to get those companion animals into loving homes, and Humane Cosmetics Acts, which have passed in 11 states and greatly reduce the number of animals used in cosmetic testing.

Focusing on state legislation is an important component of our policy initiative because when individual states adopt laws pertaining to animal welfare, it can create a domino effect. Successful bills serve as a model for other states, inspiring them to follow suit and adopt similar measures. As more states act, the impact becomes too significant to ignore, ultimately compelling federal lawmakers to consider the issue at a national level, as exemplified by the recent re-introduction of the federal Humane Cosmetics Act of 2023. The conference served as a platform for networking, sharing experiences, and building alliances with like-minded individuals and organizations. It reinforced the significance of state-level legislation in shaping animal protection policies, and it demonstrated how our actions at this level can pave the way for broader, more impactful change.

We look forward to next year's event in Louisville, Kentucky!

# Good, Better, and Best:

## A Look Back on NAVS' Policy Efforts in 2023

It is no secret that policy change can happen at a glacial pace. Advocates can work for years, sometimes even decades, before victories come to fruition. This reality makes it all the more important to celebrate successes of all sizes. As we come to the end of 2023, NAVS supporters can celebrate victories for animals that exemplify the good, better, and best that our advocacy efforts have to offer.

## Good:

**BOOSTING TRANSPARENCY**

While not a particularly exciting subject, increasing transparency requirements for reporting about animal use in research is an important component for tracking progress toward eliminating animals from research and understanding how and where to target future efforts.

Oregon passed HB 2904 to increase transparency at Oregon Health and Science University. OHSU, which housed 5,660 nonhuman primates in 2021, has the worst animal welfare record of the eight national primate research centers. With passage of HB 2904, OHSU will have to publish annual statistics on their website. Posted figures must include nonhuman primates birthed, sold or purchased, injured, killed, used in research, and how the animals are used in research. While basic, this is the first time such figures are required to be posted publicly by a national primate research center.

## Better:

**INCREASED FUNDING FOR ALTERNATIVES**

The National Institutes of Health, the largest funder of biomedical research in the U.S., spends a measly <0.1% of its grant money on projects to develop non-animal research and testing methods. This means that, although non-animal methods are often cheaper and better models of the human condition, very little money is being spent on their development.

Legislation passed in early 2023 created Maryland's Human Relevant Research Fund, which will provide grants and loans for state-funded, human-relevant animal testing alternatives research. Even better? The fund will be financed by research facilities in the state that use animals in research. The annual contribution of each animal-use facility depends on the number of animals the facility used in the prior year.

## Best:

**GETTING ANIMALS OUT OF RESEARCH LABS**

You simply cannot beat the feeling of getting animals out of laboratories.

Illinois passed a first-of-its-kind law banning the use of dogs and cats for toxicity testing – tests that attempt to determine how a substance or chemical may affect human health – unless the test is explicitly deemed necessary by a federal agency. The new law is expected to save numerous dogs and cats from painful testing that almost always ends with their death.

**These examples provide just a glimpse of the successes that we are able to celebrate in 2023. Thank you to all of our supporters who rose to the occasion and contacted their state representatives and senators to help get these bills across the finish line. While the pace of change may be slow, the successes are oh-so-sweet!**



# Panel on Brain Organoids Dives Deep on Use of Human-Relevant Models


Alicia Pate, Ph.D., far left, during the panel presentation

Alicia Pate, Ph.D., far right, with other members of the panel

On October 9, 2023, NAVS Director of Science and Research Programs, Alicia N. Pate, Ph.D., participated in a panel discussion at Saint Louis University's Institute for Translational Neurosciences titled "The Use of Organoids in Neuroscience."

The discussion highlighted the use of brain organoids in biomedical research and provided students and faculty with an opportunity to delve into the specifics of brain spheroids and organoids, as well as animal replacement possibilities and ethical concerns. The panel was well attended with very positive feedback from the audience.

Alicia was joined by researchers Dr. Silviya Zustiak from Saint Louis University's Biomedical Engineering Department and Dr. Corina Anastasaki from Washington University's Neurofibromatosis Center.

The panel discussion began with an opening topic presentation providing a general overview of brain organoids, bringing up the innovative aspects, and how organoids are helping us to understand the physiology of the brain.

The panelists discussed the possibility of these models as a replacement for the use of animals in related biomedical research and briefly addressed ethical concerns related to the use of organoids in scientific research and medicine. There were very positive affirmations about the possibility of replacing certain aspects of animal research and the ability to create these systems into more robust mimics of the human brain, but the panelists were careful to include the current limitations of available in vitro models. Panelists agreed that current regulations do not adequately address many of the ethical concerns related to the use of organoids in scientific research, but they were very positive about the future of the field and the ability to generate more human-relevant data.

Dr. Silviya Zustiak's research focuses on hydrogel biomaterials and tissue engineering. Biomaterial-based models are crucial for bridging the gap between traditional tissue culture and animal models by providing a cellular environment that closely mimics real tissue.

Dr. Corina Anastasaki's research focuses on employing genetically engineered human induced pluripotent stem cells (hiPSCs) to develop preclinical models of low-grade nervous system tumors.

# RAT TRAP

## Author Shares Thoughts on Moving Beyond Animal Research

**Pam Osenkowski, Ph.D., NAVS Science Advisor, had the opportunity to interview Dr. Pandora Pound, Research Director of Safer Medicines Trust, a UK-based patient safety charity and the author of *Rat Trap: The Capture of Medicine by Animal Research — and How to Break Free.***

**In her new book, Dr. Pound provides an insightful overview of how animal research became so ingrained in science. She also makes a compelling argument about why we should reduce reliance on animal models in science and discusses important limitations of animal research that can't simply be improved by better quality studies. Importantly, Dr. Pound discusses exciting human relevant technologies that are available that can reduce reliance on animal models.**

Here are highlights from the interview, which has been edited for length and clarity. The full interview is available at https://www.youtube.com/watch?v=4k0BQTcgaLE&t=24s

**NAVS: It seems that some in the scientific community want the general public to believe that scientific advancement will come to a screeching halt if animal research came to an end. Of course, we at NAVS don't think that would be the case! What impact do you believe breaking free from the traditional reliance on animal models in science could have on both scientific research and the welfare of animals?**

**Dr. Pound:** Well, of course, I think that it will really free science up to allow us to explore some of the new technologies and approaches. We know there's no need to study animals and then extrapolate the findings to humans, because that can lead to so much uncertainty and lack of reliability when interpreting the findings. This is not only due to species differences, but also the inability of animal models to replicate the human context of disease. Also, animal samples, which are very homogenous, are unable to actually represent diverse human populations, so there are lots of reasons why it doesn't make sense to use animals and then try to generalize the findings to humans. And of course, if we study humans or human tissues and cells directly, the findings are going to be directly relevant. And so, breaking free from reliance on animals will also free up resources that can be used to really try and explore the potential of these new approaches. It will benefit animals because they will no longer have to be used in these unnecessary and harmful experiments. I think it would be great thing.

**NAVS: Scientists are trained to make conclusions based on facts. Given the high failure rates of drugs that have passed pre-clinical animal tests, the low number of treatments and cures we have for common diseases, and the meta-analyses that demonstrate the limitations with translatability of animal models, why do so many in the scientific community still support using animal models?**

**Dr. Pound:** I think it's partly because most scientists are very conservative. I'm generalizing here, but their training is very fact based, it's very textbook based. Unlike in other disciplines where people are exposed to a wide variety of different ideas and challenges, but that isn't the case with science. And so, they may simply be more comfortable with the devil they know, even though there are lots of uncertainties involved in that. It's also the case that evidence alone isn't enough; it's a small part of the picture, but it's only a part of the picture that is much wider, so we have to look at society and institutional levels as well, because evidence has to be seen in that context. We know that there are societal and institutional obstacles like regulations, like funding, like the fact that animal research has been embedded in our institutions for decades and there are lots of people whose incomes and livelihoods depend upon it. So, unfortunately, although evidence is vitally important, it is only a part of the whole picture.

**NAVS: What is the best way to encourage those who view non-animal models as complements to animal research to see them as replacements for animal models?**

**Dr. Pound:** I think that they are viewed as complements only by those people who still see animal research as the gold standard, so that's the way they just judge everything else, by this gold standard. I think partly they believe animal research is still the gold standard because they have this strong belief that the whole-body system, whole living organism is very important. Of course, a whole-body system is great, but it's not so great if it's the wrong body. No matter how much we find out about animal bodies, it's human bodies that we need to know about. Today, we've got the option of studying the human body in so many new and exciting ways, using combinations of different approaches, combinations of in vitro approaches combined with [artificial intelligence] or in silico. There are just some amazing new approaches, like digital twins or virtual humans, that are very personalized approaches as well. Scientists are working on modeling whole human systems and solutions are continually emerging and improving.

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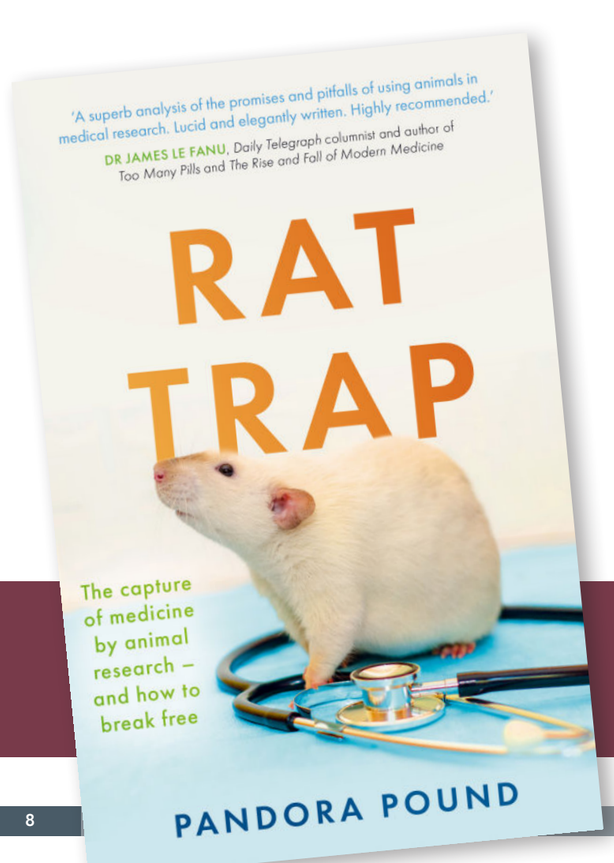
**NAVS: What human-biology based research methods excite you the most as viable replacements for animal models?**
**Dr. Pound:** I think they are all exciting, but what I really like is just a change in the way we think, really. And for me, I really like approaches that are trying to identify the very earliest signs of disease and trying to intervene there. I mean, at the moment, animal models tend to focus on disease when it is very advanced, like cancer models or stroke, and at that point, the disease has already really got its claws into us, and so any interventions are going to be quite invasive. But if we were able to identify the very first footprints of these diseases and intervene then, then those interventions are going to be much less invasive and probably much more successful. I really like approaches that are trying to look at the first signs of Alzheimer's or cancer and trying to intervene there. And at the moment, there is a blood test being trialed in the NHS [National Health Service] here in the UK, which is looking at a way of identifying cancer, very early signs of cancer, with one single blood test. They're screening for about 50 different cancers with one blood test, including those that are very hard to diagnose. You can imagine what a game changer that would be, if it was successful. And that blood test was developed on the basis of human biology-based research carried out by Professor Azra Raza in the United States. For me, it's not just a change in technology, but a change in the way we think, really. That's a real paradigm change, and I think that would be enormously successful.




**NAVS: You've had your finger on the pulse of animal experimentation for some time, and it seems the tides are turning. Here in the US, Gallup polls have been showing less public support for medical testing on animals over the last decade. This year, for the first time, the percent of Americans who find medical testing on animals as morally acceptable was the same as those who find it morally wrong and, if the trend continues, the majority of Americans will view medical testing on animals as morally wrong in the near future. What do you think has caused public perception on animal research to change? And what can we do to keep the trend moving in that direction?**
**Dr. Pound:** I think it's been the combined efforts of organizations such as yours and the efforts of scientists who are exposing the limitations of animal research as well as those who have been developing and publicizing the benefits of new technologies. So, all of these different people combining to play a part. There's also a great concern for the fate of animals used in research. There's more awareness of animal sentience. I think that's important. Maybe less trust in scientists and experts too, so we don't tend to believe everything now that scientists tell us. So, those may have caused some sort of shift in public perception. In terms of trying to keep the trend going in that direction, we still need to reach out to members of the public. I think there's a sizable proportion who still believe that animal research is absolutely vital for human medical progress; that it's a necessary evil. But it's quite difficult to reach some parts of the population and explain the arguments to them. I think that's the real challenge, because once there's sizable public support, it will be very hard to ignore, but it's just reaching out to everyone, and trying to get everyone on board, which is partly why I wrote the book, because I really wanted to get it out of the scientific journals and into the public domain.

**NAVS: What can the general public do to become stronger animal advocates?**
**Dr. Pound:** I think once people understand that it isn't just about animals, that, in fact, of course animal research harms animals and we need to be concerned about that, but it also harms us because it fails to ensure the safety of new medicines, it fails to generate treatments even for our most common diseases. Perhaps when more people realize that it affects them, their families, and their loved ones, then they will be more inclined to take action. When we get ill or people we love get ill, there's often very little that can be done even for really common things, like Alzheimer's, stroke, or many cancers. I think getting that message out is really important, because some people do care more about humans than animals and we need to show that it affects all of us.

**Be sure to pick up your copy of *Rat Trap* on Amazon.com or BarnesandNoble.com.**



# NAVS: Funding the Future Through IFER

**NAVS is a key supporter of the International Foundation for Ethical Research (IFER). That support enables IFER to help fund graduate students who are developing innovative, non-animal alternatives that have the potential to replace animal use in science. IFER recently awarded fellowships to eight graduate students.**

## Please join us in congratulating the 2023-24 awardees:

**DOWLETTE ALAM EL DIN** works with The Johns Hopkins University to develop a cognition-in-a-dish model using human brain organoids to investigate the effects of environmental neurotoxin exposure on neuronal development and function. Similar studies have typically been conducted in animal models. This new approach will provide crucial information on the development of the nervous system when exposed to toxic substances without harming animals.

**KAIHUA CHEN** works with the University of Rochester to develop an in vitro human neural vascular unit to study the blood-brain barrier. Animal studies are typically conducted to observe the interaction between systemic blood and the brain. This new approach will significantly decrease animal use in the lab and provide human relevant information on this unique interaction.

**JASON EADES** works with Texas A&M University to develop an in vitro model to study Covid-19 induced thrombosis. The human vascular system is unique and complex in its structure, and animal studies do not accurately mimic the formation of blood clots following Covid-19. This model will provide information on the formation of blood clots in humans following exposure to Covid-19.

**ALAN KIM** works with The Johns Hopkins University to develop 3D brain organoids to study developmental neurotoxicity. Current studies to determine the toxicity of substances on nervous system structures are conducted in rats and mice. This model will provide information on the toxicity of substances on the development of the human nervous system.

**YANSONG PENG** works with Cornell University to develop a solid tumor model to study the microenvironment of multiple tumor types. A lot of tumor types are currently studied by mimicking the tumor in an animal model to gather data about the progression and spread of the cancerous cells. This model will provide human-relevant data that will more accurately reflect how these tumors grow in humans.

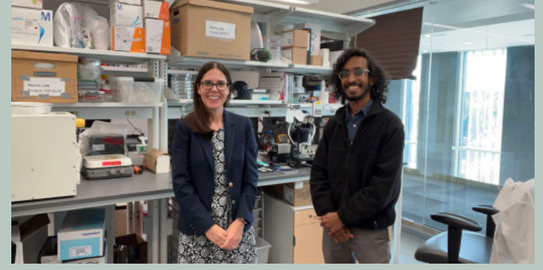
**IAN SMITH** works with the University of Maryland to develop and validate a microfluidic device to identify how cancer cells invade the vascular system and spread to other sites in the body.

**DIVYA SUBRAMANIAN** works with The University of Texas at Dallas to develop an in vitro model of the human cornea to study wound healing. The human cornea is a unique structure that is not easily mimicked in animal models. This in vitro model will provide crucial information on the process of wound healing in a model designed to mimic the structure and function of the human cornea.

**MINGZHI XU** works with Duke University to develop an in vitro model of the human kidney glomerulus to study kidney disease. The human kidney system is unique in its physiology and regulates many aspects of human health. This project will provide a human-specific model of the kidney filtration system to study kidney disease, a prevalent concern for human health.

**Congratulations to each of these IFER Fellowship recipients!**

## A Visit to Michigan-Based IFER Fellowship Recipient Prashant Hariharan



Pam Osenkowski, Ph.D., visited IFER fellowship recipient Prashant Hariharan in his lab at Wayne State University

In 1985, NAVS co-founded the International Foundation for Ethical Research (IFER) to further its commitment to advancing non-animal methods in science. Thanks to your support, NAVS provides IFER with a generous annual grant to help fund graduate students who are developing innovative, non-animal alternatives that have the potential to replace animal use in science.

This September, NAVS had the opportunity to visit Prashant Hariharan, a Ph.D. candidate in the department of biomedical engineering, who is conducting his graduate research at Wayne State University in Detroit, Michigan. Prashant received IFER fellowship grants from 2020-2023, and Pam Osenkowski, Ph.D., NAVS science advisor, visited him as he was wrapping up his third year of funding.

Prashant's research focuses on hydrocephalus, a neurological condition in which cerebrospinal fluid (CSF) abnormally builds up in the cavities within the brain (ventricles), increasing their size, which increases pressure in the skull.

Scientists performing research in the field of hydrocephalus often rely on animal models for their studies, frequently using mice, rats, ferrets, and pigs. But Prashant expressed concerns with that approach. "In addition to the ethical concerns, these [animal] models typically involve performing challenging surgical procedures that are difficult to reproduce, and they generate results that cannot be easily translated to humans," he said. "There is a critical need for a robust, reproducible human-relevant model of the choroid plexus to study the process of CSF secretion, especially in the context of hydrocephalus."

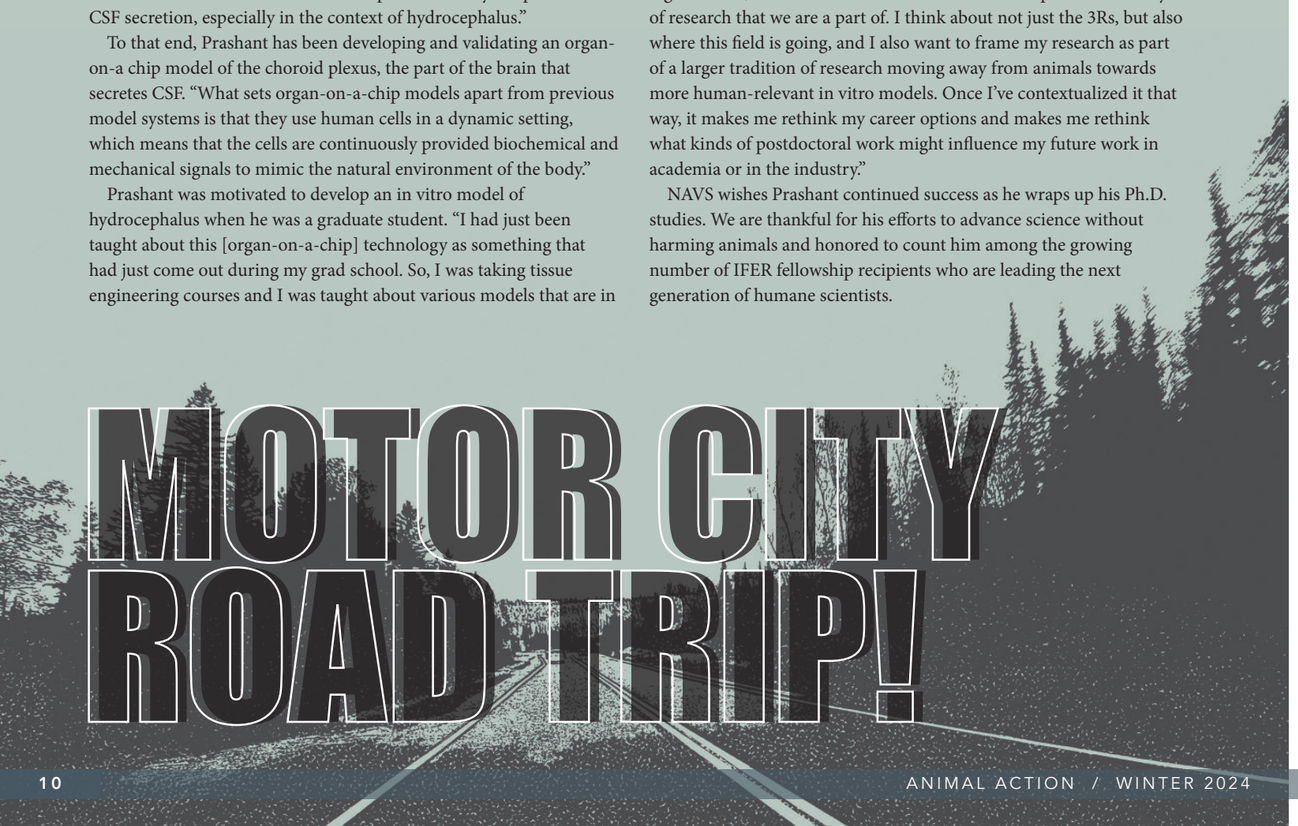
To that end, Prashant has been developing and validating an organ-on-a chip model of the choroid plexus, the part of the brain that secretes CSF. "What sets organ-on-a-chip models apart from previous model systems is that they use human cells in a dynamic setting, which means that the cells are continuously provided biochemical and mechanical signals to mimic the natural environment of the body."

Prashant was motivated to develop an in vitro model of hydrocephalus when he was a graduate student. "I had just been taught about this [organ-on-a-chip] technology as something that had just come out during my grad school. So, I was taking tissue engineering courses and I was taught about various models that are in vitro models, and this one kind of jumped out at me because I'm an engineer and this is a perfect mixture of electronics and 3D printing technology and using electrophysiology and mixing that with growing cells and trying to get these cells to function on the chip in the way they would inside the human body. It brings all of those together."

Prashant was kind enough to give NAVS a tour of his lab, including the cell culture room, the 3D printing station, and the confocal microscope. He also showed Pam the different iterations of organ chips that he has been developing. It was a great experience to see the lab space in person and have Prashant share more about his time in graduate school as an IFER fellow. Prashant was thankful to IFER for supporting his graduate work.

"On a very nuts and bolts logistics level, I think having IFER funding my work has been wonderful because, of course, I get a lot of freedom to buy my own reagents and my own equipment and explore this area more. And so, that freedom is essential. I think if we are constrained monetarily, our project is constrained, and that makes it very difficult to move forward with work if we are always worrying about that," he noted. "On a higher plane, not just thinking about the logistics of it, it has made me think more about this particular family of research that we are a part of. I think about not just the 3Rs, but also where this field is going, and I also want to frame my research as part of a larger tradition of research moving away from animals towards more human-relevant in vitro models. Once I've contextualized it that way, it makes me rethink my career options and makes me rethink what kinds of postdoctoral work might influence my future work in academia or in the industry."

NAVS wishes Prashant continued success as he wraps up his Ph.D. studies. We are thankful for his efforts to advance science without harming animals and honored to count him among the growing number of IFER fellowship recipients who are leading the next generation of humane scientists.







Kenneth Kandaras, Executive Director; Anna Madsen, Program Manager; Alicia Pate, Ph.D., Director of Science and Research Programs; and Meredith Blanchard, Senior Manager of Policy and Advocacy at the NAVS-IFER booth in the World Congress exhibit hall.

# NAVS Efforts Shine at World Congress

During the last week of August, four NAVS employees packed their bags and headed to Niagara Falls to attend the 12th World Congress on Alternatives and Animal Use in the Life Sciences (WC12). The conference offered a collaborative forum to advance the principles of the 3Rs—replacement, reduction, and refinement—in research, testing and teaching with attendees from around the world.

Alicia Pate, Ph.D., NAVS Director of Science and Research Programs, had the opportunity to present an overview of NAVS' curriculum for introducing the 3Rs to high school students. Our comprehensive curriculum was extremely well received, with many conference attendees interested in accessing and sharing the materials. International attendees expressed interest in seeing the curriculum translated into other languages. Alicia's presentation was a fantastic opportunity to share with others how to facilitate incorporation of the 3Rs into high school curricula and provide science students with a strong foundation in these ethical principles.

In anticipation of the publication of our book, *Three Pillars of Ethical Research with Nonhuman Primates*, ethicists Andrew Fenton, Ph.D., and L. Syd Johnson, Ph.D., who worked with NAVS to develop the manuscript, presented on the work for the first time at WC12. Andrew used the opportunity to drive home the message that there is no such thing as "ethical research with nonhuman primates." He stressed that the very characteristics that apply to humans that render our use in experiments inexcusable are mirrored in nonhuman primates, and that the continued use of nonhuman primates comes down to speciesism — or the assumption of human superiority — and that this justification is no better than racism, sexism, ageism, or any other -ism.

Syd highlighted and explored the three pillars developed when considering the use of nonhuman primates in research: harmonization, replacement, and justice. Regarding harmonization, Syd emphasized that putting humans in one category of protections and nonhuman primates in another is morally arbitrary and a matter of convenience that fails to acknowledge that the same ethical considerations apply to both. When speaking of justice, Syd highlighted that using nonhuman primates because they are more convenient and easier to use than human subjects, and not because they are the best scientific model, violates the principle of justice. Replacement remains a paramount objective — not just for the ethical considerations described above, but because human-relevant science is also better for humans and human health.

The reception to their presentations was fantastic. A highlight came when Peter Singer, considered by many to be a founding father of the modern animal rights movement, referred to Andrew's presentation as "a very powerful ethical case."

The NAVS team attended dozens of sessions ranging from ethics, policies, and regulations to human-centered biomedical research and next-generation education. The information gleaned and connections made will be invaluable to our future work. We are grateful for the opportunity and inspired by the many efforts underway to achieve our goal of eliminating animals from research.

"Two important takeaways from WC12 demonstrate that there has never been a more exciting time for those of us who want to replace animals in research. First, the movement to replace animal testing in research has gone from backwater to main stage. Second, the movement is attacking the structural barriers that stand in the way of further development of new approach methodologies."

**Kenneth Kandaras**
Executive Director

"It was really cool to hear about the data based on alternatives to fetal bovine serum, which is used in most cell cultures. Learning about alternatives and databases for researchers to discover methods to avoid the use of fetal bovine serum was really promising."

**Alicia Pate, Ph.D.**
Director of Science and Research Programs

"The overall gist that I got from numerous presentations over and over again was how non-animal research and testing models are proving more accurate and better at predicting human reactions than the animal models are."

**Anna Madsen**
Program Manager

"The connections we made were invaluable. Even with people I email and Zoom with regularly, something about seeing everyone in person was really energizing. As soon as I got back home coalition work was reignited with people and groups that I had a chance to talk to in person."

**Meredith Blanchard**
Senior Manager of Advocacy and Policy

NAVS Executive Director Kenneth Kandaras and NAVS Director of Science and Research Programs Alicia Pate, Ph.D., with panelists Andrew Fenton, Ph.D., and L. Syd M. Johnson, Ph.D.

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# FACES OF SURVIVAL

## NAVS 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.**

### GRIT & GRACE WILDLIFE REHABILITATION, INC.

Grit & Grace Wildlife Rehabilitation, Inc., in Kentucky works to rescue, rehabilitate, and release wildlife mammals back into the wild. They also educate the public about the important role that wildlife plays in our environment and foster compassion for nature, offering educational programs to community organizations and schools. Recently, they contacted NAVS regarding an emergency rescue they were working on for a 4-month-old cow named Betty. Betty was swept away from her farm in a flash flood and found two weeks later with a large gash in her front left shoulder. She needed immediate care and rehabilitation, including having a prosthetic made to fit her leg and help support her weight as she grows. Due to your generous support, NAVS was able to step in and assist with the medical costs for Betty, helping to ensure that Grit & Grace Wildlife Rehabilitation can provide her with the care that she needs to heal and recover.


BETTY

### CHIMP HAVEN

Chimp Haven, located in Louisiana, is home to more than 300 chimpanzees, many of whom were used in biomedical research. When the Wildlife Waystation in California abruptly closed in 2019, Chimp Haven, working together with the North American Primate Sanctuary Alliance (NAPSA) and qualified sanctuaries across the country, welcomed the final 10 of 40 chimpanzees who were left needing a new home. The 10 chimps, nicknamed the "Treetop Ten," made their way to Chimp Haven in late 2022. The sanctuary team prepared for months to raise funds for their care and arranged two 1,600+ mile chimp road trips to bring them home to Chimp Haven. Thanks to your generous support, NAVS was able to issue generous grants to Chimp Haven throughout the process to assist in their preparations for the new arrivals. Their journey is now complete, and all 10 of the chimpanzees are settling in well at their new home. The Treetop Ten have experienced many firsts and new experiences at Chimp Haven that your support has made possible for them.

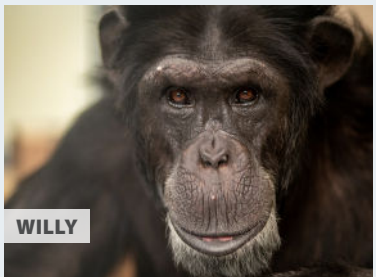

MOUSSE, AMBER & FAMILY

### CHIMPANZEE SANCTUARY NORTHWEST

Chimpanzee Sanctuary Northwest (CSNW), located in Washington, was founded in 2003 and works to provide sanctuary for chimpanzees from the entertainment and biomedical research industries. NAVS issued a generous grant to CSNW to help them with the ongoing care of the chimpanzees they took in when Wildlife Waystation in California abruptly closed. The grant assisted with the continued housing and care costs of the Wildlife Waystation chimpanzees, including medical expenses, food, and enrichment for these new residents. Thanks to your support, NAVS can continue to assist CSNW, and sanctuaries like it, in providing the highest quality of life for those who have suffered in the name of science.


AMBER

To learn more about the Animal Sanctuary Assistance Program and the lifesaving work made possible with your support, please visit **NAVS.org/ASAP.**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