Encouraging the development of non-animal alternatives in scientific research is a key component of NAVS’ mission to end the exploitation of animals used in science. To better reach this goal, NAVS and the International Foundation for Ethical Research (IFER) offer fellowships to early career scientists who are developing non-animal methodologies with the potential to replace animal use in biomedical research, product testing and education.

By investing in the research and training of graduate students with an interest in developing alternatives, we hope to seed the scientific field with talented individuals prepared to positively change the course of science and promote the advancement of humane methodologies that can spare animals from suffering.

This year, IFER received a number of innovative grant proposals from graduate students describing research projects using non-animal methodologies to advance science. IFER’s Scientific Advisory Board (SAB) was tasked with reviewing applicant research proposals for both their scientific merit as well as for the likely impact the research would have on the reduction, refinement or replacement of animal use.

After careful consideration, the SAB recommended that six Graduate Fellowships for Alternatives to the Use of Animals in Science receive funding as part of IFER’s 2014-15 grant cycle. The funding will support three new graduate student projects and the renewal of three fellowships awarded in previous years.

2014-2015 IFER GRADUATE FELLOWSHIP RECIPIENTS:

GEORGINA HARRIS
Johns Hopkins Bloomberg School of Public Health
Sponsors: Dr. Lena Smirnova and Dr. Thomas Hartung
“Identification of pathways of developmental neurotoxicity (DNT) of environmental chemicals by -omics technologies”

BRYAN HASSELL
Wyss Institute for Biologically Inspired Engineering at Harvard University
Sponsor: Dr. Donald Ingber
“Human cancer-on-a-chip as a replacement for animal testing”

ERICA SCHLESINGER
University of California, San Francisco
Sponsor: Dr. Tejal Desai
“In vitro 3D flow through system for improved intestinal permeability model”

NICOLE SPARKS
University of California, Riverside
Sponsor: Dr. Nicole l. zur Nieden
“In vitro prediction of skeletal teratogenicity of environmental chemicals”

SUN NEE TAN
University of British Columbia
Sponsor: Dr. Martin McKeown
“Structural and functional neuroplasticity of Parkinson’s disease following a sensori-motor contingent musical walking intervention (Ambulosono)”

DAVID TRAN
University of California, Irvine
Sponsor: Dr. Steven George
“Development of a patient-specific high-throughput cardiac drug-screening platform”

Continued on page 12
Up Front with NAVS

Leave a Legacy of Compassion

Your will is more than just a legal document. It can be a testament of your values and to what you care about. Planned giving offers a way to fulfill your passion to advocate for animals. Organizations such as NAVS, which share your charitable intentions, can be remembered in your estate, ensuring that your commitment to compassion extends for generations to come.

Our brochure, *The Legacy of Compassion*, offers an introduction to the subject. We’ve also included a chapter with a step-by-step plan for making necessary arrangements to protect the security of your companion animals.

See page 15 to order your free copy. Or visit www.navs.org/legacy to download a free digital version.

New Options for Cruelty-Free Shopping

As the demand for cruelty-free personal care increases, the list of companies that do not rely upon animal testing continues to grow. As a member of the Coalition for Consumer Information on Cosmetics’ (CCIC) Leaping Bunny Program, NAVS utilizes the CCIC’s comprehensive standard for identifying cruelty-free cosmetics, personal care items and household products. In recent months, more than thirty companies have been added to NAVS’ Cruelty-Free Shopping Guide, which can be found online at www.navs.org/cruelty-free.

How Will You Create Compassion?

NAVS’ annual Art for Animals contest highlights the cruelty of vivisection and the joy of freedom from cages. For over 25 years, NAVS has sought the talents of amateur and professional artists to creatively express compassion and respect for animals.

This year’s Art for Animals theme is Create Compassion. Whether paying tribute to a companion animal or to those in the wild, your art can give viewers a fresh perspective or educational message about the value of all living beings. 1st, 2nd and 3rd place winners in three age categories, as well as Best in Show, are awarded cash prizes. In addition, your art may be chosen to illustrate a NAVS publication, calendar, stationery or other media.

Whatever your form of artistic expression—drawing, painting, photography, graphic design—we invite you to explore what creating compassion means to you and to use your voice to speak for those who suffer in the name of science.

Enter Art for Animals today. The deadline for submission is May 8, 2015.

For details, visit www.navs.org/art, where you can download an entry form and view a gallery of previous winners. To receive an entry form by mail, call 800-888-NAVS (6287).

Your Opinion Matters!

Your feedback is important to us—that’s why we’d like you to take a brief online survey that should take no more than 5 minutes to complete. Your responses will help us improve our communications and guide us as we enhance our program offerings on behalf of animals.

Visit www.navs.org/survey.

If you do not have access to a computer, please call 800-888-NAVS (6287) to request a survey by mail. THANK YOU!

Acknowledgement: Publication of this edition of NAVS’ Animal Action Report was made possible, in part, through a generous grant from the Helen Brach Foundation.

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NAV'S Urges Congressional Action on Cruelty-Free Cosmetics

NAV'S mailed more than 10,000 petitions to Capitol Hill in November in support of the Humane Cosmetics Act, a bill which was under consideration in the U.S. House of Representatives during the recently-adjourned 113th Congress. The legislation would have ended the use of animals to test the safety of cosmetics, as well as prohibited the sale in the United States of cosmetics developed or manufactured using animal testing.

The Humane Cosmetics Act was introduced by Democratic Representative Jim Moran of Virginia last March, and received bipartisan support with 56 co-sponsors. The petitions, authored by NAV'S and signed by animal advocates in all 50 states and Washington, D.C., urged members of the House to join as co-sponsors of the bill and asked senators to introduce similar legislation.

Many companies in the U.S. have already moved away from animal testing on cosmetics—due not only to ethical concerns, but also to a movement toward less expensive, more predictive non-animal alternatives. Passage of this legislation would have ensured that animals do not once again become subject to such tests in the future. Such protections are already in place in other parts of the world, including the European Union, India, Israel and Norway.

While NAV'S' petition specifically urged Congressional action during the 113th Congress, the legislation did not come to a vote prior to the end of the Congressional term. However, it is expected that Virginia Democrat Don Beyer—who succeeded the retired Moran—will continue to champion the issue on Capitol Hill in the 114th Congress, which convened in January.

NAV'S' Efforts Lead to Federal Accountability and Transparency

Federal guidelines require the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) to release information pertaining to the number of animals being used for research, testing and teaching by USDA licensees across the United States.

Through 2010, APHIS published an Annual Report—in print or on its website—that reflected the total number of research animals currently being used. This information was a valuable tool helping animal advocates—and the public at large—understand trends in the number of animals used for research, testing and teaching. Beginning in 2011, however, APHIS ceased publishing its Annual Report, replacing it with an “interactive search tool” which proved to be complicated, unreliable and unsuitable for information-gathering purposes.

Throughout much of 2014, NAV'S worked closely with APHIS to ensure that it resumed the annual release of this important data. In early December, APHIS made this data—including the “missing” statistics from the past three years—available for the first time since 2010. Cooperation between NAV'S and APHIS helped bring about the resumption of this essential tool.

For NAV'S, securing the release of this data represents the first step in an ongoing effort to bring increased clarity to the current state of the use of animals in research. The picture is still far from complete, however. Current reports lack information about the purpose for which animals are used. Additionally, reports do not include data on mice, rats, birds and cold-blooded animals, which are not covered under the Animal Welfare Act.

NAV'S will continue to insist that the U.S. become much more open and transparent about the use of animals in research in our country, as such information is essential for our efforts to measure the implementation of the 3Rs—reduction, refinement and replacement of animal use—in research, testing and teaching.
85 Years of Animal Victories

On December 17, 1929, a small group of dedicated individuals—appalled by the cruelty inflicted on animals in the name of science—founded the National Anti-Vivisection Society. Inspired by a vision of a world of greater compassion, respect and justice for animals languishing in laboratory cages, NAVS has been dedicated to ending the exploitation of animals used in research while advancing better, more humane science. We’ve made a lot of progress over the past 85 years. Here’s a small sampling:

1929 The National Anti-Vivisection Society (NAVS) is founded in Chicago by George Arliss, Jeanie McCredie Matile and Clarence E. Richard to end the cruelty and waste of vivisection.

1929 Noted English actor and NAVS co-founder George Arliss refuses to portray John D. Rockefeller in a movie because of Rockefeller’s funding of medical research on animals.

1938 NAVS begins a campaign against Army experiments in which live animals are slowly frozen to death.

1940 NAVS runs its first advertisements in the New York Times and several other large papers across the United States. The ads show two dogs with the headline “Are We Next, Mr. Vivisector?”

1947 NAVS runs its first advertisements in the New York Times and several other large papers across the United States. The ads show two dogs with the headline “Are We Next, Mr. Vivisector?”

1948 NAVS launches a campaign in cooperation with other animal organizations to pass federal legislation prohibiting interstate shipment of cats and dogs for vivisection.

1955 NAVS exposes the fact that dogs were among the animals used at the site of the Nevada A-Bomb tests.

1956 NAVS launches a campaign in cooperation with other animal organizations to pass federal legislation prohibiting interstate shipment of cats and dogs for vivisection.

1957 NAVS polls members of the U.S. Senate on a proposed law to prohibit interstate transportation of cats and dogs for vivisection and finds overwhelming support.

1958 NAVS launches a campaign in cooperation with other animal organizations to pass federal legislation prohibiting interstate shipment of cats and dogs for vivisection.

1959 NAVS exposes the fact that dogs were among the animals used at the site of the Nevada A-Bomb tests.

1960 A coalition including NAVS, the International Conference Against Vivisection and the Humanitarian League of Long Island launches a campaign to repeal the Hatch-Metcalf law of New York State that had mandated pound seizure.

1961 NAVS helps to defeat an Illinois House Bill that would have allowed the use of live animals in public school classroom experiments.

1965 NAVS helps defeat a bill that would have forced Illinois public school children to witness and participate in classroom dissection.

1966 NAVS’ 10-year fight to pass legislation to stop petnapping ends in victory as the Animal Welfare Act is signed by President Johnson.

1967 Westinghouse Electric Company responds to NAVS’ criticism of the Westinghouse Science Talent Search rules by no longer allowing experiments involving animals.

1968 NAVS files suit in U.S. District Court seeking an injunction against the use of 600 beagles for military tests, including the Air Force’s use of puppies to test exposure to highly polluted fumes.

1969 Mr. and Mrs. George Arliss

1970 Mr. and Mrs. George Arliss

1971 NAVS files suit in U.S. District Court seeking an injunction against the use of 600 beagles for military tests, including the Air Force’s use of puppies to test exposure to highly polluted fumes.
1985  Funded primarily by a generous grant from NAVS, the International Foundation for Ethical Research (IFER) is founded to support the development, validation and implementation of vivisection alternatives.

1986  NAVS publishes the first edition of Personal Care with Principle, the most comprehensive consumer guide to cruelty-free shopping.

1987  NAVS launches “Project Chimp,” an educational program aimed at elevating the status of chimpanzees to “endangered” in the U.S. and halting the proposed Chimp Management Plan that would further exploit chimps for research purposes.

1988  NAVS provides a grant to the Animal Legal Defense Fund in support of the launch of a national toll-free Dissection Hotline, which students and educators can call for support and information on alternatives to classroom dissection.

1989  NAVS’ participation in the Summit for the Animals and the March for the Animals in Washington, D.C., includes drafting the “Declaration of the Rights of Animals” in cooperation with noted animal advocates.

1990  NAVS launches the Frog Fund, an initiative that would become the first and largest resource of alternatives to the use of animals in classroom dissection.

1991  NAVS takes over the national Dissection Hotline.


1993  NAVS spearheads a plan to establish a National Chimpanzee Sanctuary by organizing a coalition of animal protection organizations, creating a scientific advisory board and retaining the services of a professional lobbyist. This became the National Chimpanzee Sanctuary Task Force.

1994  NAVS launches the Animal Law Resource Center at www.AnimalLaw.com, providing comprehensive information on laws and legislation pertaining to animals in the U.S.

1995  NAVS awards its first Humane Science Award at the Intel International Science and Engineering Fair.

1996  NAVS supports international efforts to replace animal use in toxicity testing for cosmetics and personal care products.

2000  Through a grant to the Institute for In Vitro Sciences, NAVS coordinates a Scientific Advisory Committee to develop Standards of Care and Maintenance for Chimpanzees in Sanctuaries.

2001  The Chimpanzee Health Improvement, Maintenance and Protection (CHIMP) Act is signed into law after unanimous approval by both Houses of Congress. NAVS coordinates a Scientific Advisory Committee to develop Standards of Care and Maintenance for Chimpanzees in Sanctuaries.

2002  Following extensive testimony and other efforts by NAVS, the NIH announces that it will end most federally-funded research involving chimpanzees.

2007  Navs’ Clare Haggarty and first Intel ISEF winner Megan Hamilton.

2008  BioLEAP (Biology Education Advancement Program) is launched as an expansion and enhancement of NAVS’ Dissection Hotline and Dissection Alternatives Loan Program.

2012  Through a grant to the Institute for In Vitro Sciences, NAVS supports international efforts to replace animal use in toxicity testing for cosmetics and personal care products.

2014  As a result of NAVS’ efforts to ensure federal accountability and transparency, the Animal and Plant Health Inspection Service resumes its annual release of data on the number of animals used in research.

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85 YEARS

1929-2014

Want to know more? Read “85 Years, 85 Milestones” at www.navs.org/85.
THE LONG GOODBYE

As more scientists speak of an end to animal research, we urge the scientific community to press harder toward the final goodbye to the cruelty and waste of vivisection.

"The time has come to plan for a future where the Three Rs (reduction, refinement, replacement) will have served their purpose, animal experimentation will have been consigned to history, and humane biomedical science in research, testing and education will have become the norm, for the benefit of humans and animals alike."

MICHAEL BALLS IN “ANIMAL EXPERIMENTATION AND ALTERNATIVES: TIME TO SAY GOODBYE TO THE THREE RS AND HELLO TO HUMANITY?” ATLA, NOVEMBER 2014

"We believe that our new 3D neural culture model for Alzheimer's disease not only provides a much improved recapitulation of disease pathology but will go a long way toward alleviating the need for costly and time-consuming mouse studies. ... We hope that other diseases might adapt similar models, further lessening reliance on mouse models."

DR. RUDY TANZI, DIRECTOR OF THE GENETICS AND AGING RESEARCH UNIT AT MASSACHUSETTS GENERAL HOSPITAL, REGARDING ALZHEIMER’S DISEASE-IN-A-DISH MODEL

"Disappointment about a mouse not recapitulating human biology is almost like saying, ‘I bought a bike, but it wouldn’t fly.’"


"If our system is approved by the regulators, then it will close down most of the animal-testing laboratories worldwide."

DR. UWE MARX, FOUNDER AND CEO OF THE GERMAN-BASED COMPANY TISSUSE, ON ORGAN-ON-CHIPS TECHNOLOGIES

"It turns out that animals do a poor job predicting human drug-induced liver injury. ... Recent data suggest that the use of humanized systems [vs. animal models] has greater predictive power for adverse events ...”

DR. KIM BROUWER, PROFESSOR AT THE UNIVERSITY OF NORTH CAROLINA ESHELMAN SCHOOL OF PHARMACY

"Combined with considerable public concern over the use of animals in science, and the high ethical costs of doing so, we conclude that preclinical testing of pharmaceuticals in animals cannot currently be justified on scientific or ethical grounds.”

"AN ANALYSIS OF THE USE OF ANIMAL MODELS IN PREDICTING HUMAN TOXICOLOGY AND DRUG SAFETY,” ATLA, JUNE 2014
Dear friends and supporters of NAVS,

The feeling that “this is our time” is picking up steam. Over the past year there has been significant progress made on issues like cosmetics testing, the use of random-sourced animals and, most important, in the development and use of better, more humane alternatives to the use of animals in science.

As you read this 2014 Annual Report, you should know that you helped to write it—every program that NAVS undertakes, the growing opposition to the cruelty and waste of vivisection, and the rescue of each animal saved through the NAVS Sanctuary Fund are made possible by the generosity and sacrifices of caring people like you.

2014 marked the 85th anniversary of NAVS’ founding. And while recognition of this milestone is a source of pride, it is premature as a cause for celebration until no animal is forced to suffer in the name of science. We must never lose sight of the urgency of our actions, as ensuring compassion and justice for animals will continue to need our commitment, talents and energy to meet the challenges of the coming years.

Thanks to our dedicated board of directors, our professional staff, and notably, our science advisors who contribute their time and expertise, we have made important investments in our scientific and legal expertise, in the development of effective programs, and in streamlining administrative and fundraising operations. NAVS has continued its proud tradition of animal advocacy for 85 years, remaining steadfast, knowing that the pursuit of our mission—through victories and setbacks, through progress and challenges—is the right thing to do.

To the millions of animals whose lives were spent in isolation, animals who suffered and died, often without even a name or affection, NAVS rededicates our commitment in their honor, promising to use wisely the resources you have entrusted to us, and to work even harder towards the day we can shut off the lights, lock the door and go home—knowing that the age of animals in cages has come to an end.

Gratefully,

Peggy Cunniff
Executive Director
NAVS takes advantage of every resource available to communicate information about the cruelty, waste and uselessness of animal models in the study of human disease. We use a variety of media—including our website (www.navs.org), social media, direct mail, letters to the editor, specialty publications, conferences and presentations—to promote our message that humane science is better science.

Animal Action Report
NAVS’ newsletter, Animal Action Report, gives readers a comprehensive understanding of issues regarding vivisection—including advances and challenges in humane science and proposed and approved animal protection measures—as well as achievements made possible by NAVS programs. Each issue is available in print and electronic format. NAVS is grateful to the Helen Brach Foundation for its financial support of this important publication.

Cruelty-Free Shopping Guide
For nearly 30 years, NAVS has been committed to promoting cruelty-free shopping. Today, our online cruelty-free shopping guide is the most current, authoritative listing of companies that do not test on animals and is accessible to more people than ever before.

Online Education
NAVS’ website provides comprehensive, up-to-date information on issues related to animals exploited in biomedical research, product testing and education. Our user-friendly interface offers readers a simple way to navigate through this complex subject matter. NAVS’ home page is frequently updated with information about current campaigns, advances in humane science, legislation that affects animals, and developments regarding vivisection in general. In addition, thousands of animal advocates from around the world follow NAVS on Facebook and Twitter.

Museum Exhibit: “Light in Dark Places”
NAVS provided financial support and educational materials to the National Museum of Animals & Society in Los Angeles for their exhibit, “Light in Dark Places.” The exhibit documented the history of the anti-vivisection movement from Victorian England to the modern day. NAVS also hosted a reception at the museum for local supporters.

Film Screening: Maximum Tolerated Dose
In recognition of World Day for Laboratory Animals on April 24, NAVS, in cooperation with the DePaul Center for Animal Law, sponsored a film screening and program with the director of the film Maximum Tolerated Dose. The film charts the lives of both humans and non-humans who have experienced animal testing firsthand.

Art for Animals 2014
NAVS’ annual art contest received a diverse collection of creative submissions from participants of all ages across the country. The 2014 Best in Show winner is featured in our 2015 Safe Havens calendar, which highlights animals from sanctuaries and shelters that received financial assistance through NAVS’ Sanctuary Fund.

Biology Education Advancement Program (BioLEAP)
This program combines student and teacher counseling with promotion of NAVS’ extensive library of dissection alternatives, including computer programs and interactive models that can be utilized as humane alternatives to animals.

Dissection Survey
NAVS commissioned a nationwide survey on the attitudes of teachers and students towards dissection, as well as their participation in dissection activities in secondary schools. This comprehensive survey was undertaken to measure the progress of replacing the use of animals with non-animal alternatives in the classroom, as well as to identify barriers to ending animal dissection.

Science Fairs
NAVS is the only animal advocacy group offering an award at the Intel International Science and Engineering Fair. This year, NAVS presented high school students with the 13th annual Humane Science Award for projects that advance science without harming animals. NAVS also supported the American Junior Academy of Science’s 2014 meeting of exceptional young science students.
NAVS helps the scientific community and animal advocates understand the scientific evidence that shows how animal experimentation is an inherently flawed methodology. NAVS also continues to invest in the development and validation of alternative methods to the use of animals in product testing, biomedical research and education.

International Foundation for Ethical Research (IFER)

IFER was founded in 1985 by NAVS to support scientists who are developing alternatives to the use of animals in product testing, biomedical research and education, especially projects that replace the use of archaic animal models with methodologies predictive for human health. Due to NAVS’ support, IFER was able to provide grants for the Graduate Fellowship Program and for the dissemination of information on alternatives through conference sponsorships and publications.

Science First

Science First is a weekly e-newsletter providing readers with information on innovations in science that can help reduce, replace and refine the use of animals with better, more humane alternatives.

Science Corner

A regular feature on the NAVS website, Science Corner offers an in-depth presentation and analysis of complicated science issues to make them easily understood by laypersons and professionals alike.

Other Initiatives

NAVS was a proud contributor to the Society for In Vitro Biology’s 2014 World Forum on Biology, in Savannah, GA. We also provided a grant to the Institute for In Vitro Sciences in support of their efforts to validate and implement the use of alternatives to replace the use of animals in product testing internationally.

Science Initiatives

NAVS helps the scientific community and animal advocates understand the scientific evidence that shows how animal experimentation is an inherently flawed methodology. NAVS also continues to invest in the development and validation of alternative methods to the use of animals in product testing, biomedical research and education.

LEGAL/LEGISLATIVE EFFORTS

Working at the local, state and federal levels of government, NAVS focuses on the constructive use of the legal system to advance greater justice for animals. Through articles published on the NAVS website and letters to Congress on behalf of NAVS and our supporters, we use the legal process effectively to promote justice for animals.

Take Action Thursday

This weekly e-newsletter summarizes important federal and state initiatives affecting animals. It asks subscribers to “take action” by contacting their legislators through the NAVS Advocacy Center or by calling or writing their elected officials on a wide variety of topics.

Advocacy Center

NAVS drafts and submits comments on state and federal legislation and on proposed federal agency rulemaking. Many of these letters are available through the advocacy center for advocates to send on their own behalf directly to legislators and to the heads of federal agencies and private companies.

Animal Law Resource Center

The Animal Law Resource Center at www.AnimalLaw.com is an online resource that provides relevant laws and legislation for all 50 states and the federal government, along with model laws, case digests and other tools. The website received a full makeover during FY 2014, including more user-friendly search features and new content.

National Research Library for Animal Advocacy

Founded and supported by NAVS in partnership with The John Marshall Law School, the National Research Library for Animal Advocacy continues to be available to law students and professors around the country through the law school’s inter-library loan program.

International Institute for Animal Law (IIAL)

IIAL received a grant from NAVS to promote legal scholarship and advocacy skills in the field of animal law.

SPECIAL INITIATIVES & COOPERATIVE EFFORTS

NAVS is committed to supporting a variety of special initiatives, both within our organization and in cooperation with other animal advocacy groups. These efforts help save animal lives today while paving the way for long-term and positive change for animals.

NAVS Sanctuary Fund Grants

NAVS provides grants for emergency assistance to animal shelters and rescue operations. Emergency funding to provide critical assistance for disaster relief takes priority, but NAVS is also committed to giving grants to those nonprofit organizations that find homes for animals who were victims of research, roadside zoos and hoarding. Over a million dollars has been distributed to hundreds of groups since the inception of the NAVS Sanctuary Fund.

Miscellaneous Small Grants

NAVS continues to support the efforts of like-minded organizations whose purposes reflect our mission.

In 2014, NAVS continued support for the work of the National Council for Animal Protection (NCAP), a professional association of national animal advocacy leaders that supports communication and cooperation among animal advocacy organizations.
Investing in Humane Science for a Cruelty-Free Future

ALL EXPENSES

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PROGRAM AND EDUCATION EXPENSES (2014)

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LIABILITIES AND NET ASSETS (2014)

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These financial statements have been audited by the accounting firm of Selden Fox, Ltd., and in their opinion, present fairly, in all material respects, the financial position of the National Anti-Vivisection Society as of June 30, 2014. A complete audited financial statement can be found on the NAVS website at www.navs.org/financial-information.
IN PURSUIT OF JUSTICE

To learn how you can be an advocate for animals through the legal system, visit www.navs.org and the NAVS-sponsored Animal Law Resource Center at www.AnimalLaw.com.

29,364 advocacy letters were sent to state and federal legislators by supporters like you through the NAVS website in 2014 (excludes hundreds of telephone calls made as well).

IN SUPPORT OF THE HUMANE COSMETICS ACT:

5,963 advocacy letters were sent through NAVS to federal legislators by advocates like you.

AND

10,446 NAVS-authored petitions were signed by advocates like you and sent to Capitol Hill.

“All in all, then, we’re confident that we can take Tommy [the chimpanzee]’s case to the highest level, New York State’s Court of Appeals. That’s where the big decision will be made—a decision that will set a precedent across the whole state.”

STEVE WISE, PRESIDENT OF THE NONHUMAN RIGHTS PROJECT, DECEMBER 4, 2014

lawsuits are working their way through New York State appellate courts attempting to gain recognition for the rights of chimpanzees.

1 orangutan was recognized as having legal rights—personhood—by an Argentine Court of Criminal Appeals in December 2014.

85,325 animals used for research in 2013 suffered pain or stress without receiving any analgesic for pain relief (almost 10% of all animals used—excluding mice, rats and birds).
ANIMAL ACTION REPORT

Continued from page 1

Investing in Science to End Suffering

Meet Our Fellowship Recipients and Their Projects

Georgina Harris received a second year of support for her project, which aims to establish methods for assessing developmental neurotoxicity (DNT) \textit{in vitro} using human cells. Harris will be using a three-dimensional cell model combined with miRNomic, transcriptomic and metabolomic approaches to assess DNT. Ultimately, she seeks to identify and evaluate pathways of toxicity that lead to perturbations in brain development and increase risk of neurodevelopmental disorders. Such work may significantly reduce the use of animals in this area. Her work has caught the attention of researchers worldwide, as she was recently invited to present her research at the 9th World Congress on Alternatives and Animal Use in the Life Sciences in Prague, Czech Republic, (see sidebar on page 13).

“\textit{This is an exciting time for students like myself because we are witnessing a paradigm shift away from traditional long-term animal studies to more mechanistic in vitro (cell-based) studies.}”

\textit{Georgina Harris}

Erica Schlesinger is a new grant recipient. Her project aims to improve upon existing \textit{in vitro} models of intestinal drug absorption. She is working to develop a model in which human intestinal cells are grown on a tubular scaffold to better mimic the microenvironment of the intestine. Using this approach, experimental drugs can be flowed through the system, enabling drug absorption to be assessed. This new model has the potential to reduce the need for more complex animal studies that measure drug absorption and delivery. Schlesinger’s model can also be used as a tool to study intestinal disease.

Dr. Pam Osenkowski

NAVS manuscript on dissection and alternatives accepted for publication in American Biology Teacher

In the Fall 2014 Animal Action Report, we shared with you that NAVS conducted a nationwide survey of biology teachers and students, in cooperation with the Humane Research Council, to better understand the current usage of—and attitudes toward—animal dissection and alternatives in pre-college education.

We are pleased to announce that our manuscript, titled, “Evaluation of Educator and Student Usage of and Attitudes Toward Dissection and Dissection Alternatives,” has been accepted for publication as a feature article in the May 2015 issue of the National Association of Biology Teacher’s journal, \textit{American Biology Teacher (ABT)}. The manuscript summarizes survey results and offers suggestions for ways in which educators can reduce or replace animal use in education.

\textit{ABT} is a peer-reviewed journal designed to support the teaching of K-16 biology and life science. Publishing our manuscript in this journal ensures that our message about how to replace animal use in education will be received by the appropriate target audience—biology educators who have the ability to directly effect change in this area.

Bryan Hassell has received a new fellowship for his project, which seeks to develop an organ-on-a-chip platform to study lung cancer. Using human cells to generate this model, he will recreate the microenvironments of both primary and metastatic lung cancer lesions to determine how lung cancer cells respond to chemotherapy, depending on their organ-specific location. Hassell’s physics and engineering background, in combination with the extensive biological training he receives in the Ingber lab, will allow him to take a multidisciplinary approach toward developing an innovative model with the potential to replace the use of animals in cancer research.

“I am dedicating my PhD research to developing a human lung cancer-on-a-chip model to facilitate drug discovery and eliminate animal testing.”

\textit{Bryan Hassell}
Nicole Sparks has been awarded a third year of funding. Her project aims to generate a model to assess the toxicity of compounds that can cause skeletal abnormalities during development. She has been working with different types of human stem cells to determine which can be used in a developmental toxicity screening assay. The creation of a human-relevant in vitro test for developmental toxicity may reduce animal use in this area while generating a more reliable screen that eliminates variability between species.

Sun Nee Tan, a new fellowship recipient, will be using non-invasive, state-of-the-art brain imaging techniques on human subjects. Her study will determine the effectiveness of a music-contingent walking exercise program as an intervention for Parkinson's disease subjects. This will allow her to examine the relationship between structural and functional connections in the brain, providing insight into the pathophysiology of Parkinson's disease. Neuroscience studies traditionally rely heavily on animal models, despite their limited translatability to human populations; therefore the use of imaging techniques on human subjects to study neuroplasticity may replace conventional research which uses animals for this purpose.

David Tran has received a second year of support for his project. It involves developing a model of human heart tissue that can be used to predict cardiac drug toxicity. He has spent the past year improving his in vitro model, making changes that allow for better characterization of drug effects on heart function. Development of such a model is critical, as this technology could both improve the success rate of drugs passing human clinical trials and reduce the use of animals in research.

“These improvements may accelerate the drug development process and prevent unnecessary animal and human deaths due to unknown drug toxicity.”

David Tran

Hear our fellowship recipients talk about their projects in their own words at www.navs.org/funded-research.
For more than 15 years, the NAVS Sanctuary Fund has provided a lifeline between compassionate individuals and reputable shelters and sanctuaries across the U.S. Through the NAVS Sanctuary Fund, over a million dollars has been awarded to animal sanctuaries to help rebuild shelters destroyed in hurricanes, tornadoes, floods and other disasters; rescue animals from abusive and hoarding situations; transport animals “retired” from biomedical research; conduct wildlife rehabilitation efforts; and support innovative spay/neuter programs. Here are a few recent success stories made possible because of your generosity.

See Who Thanks You

For the Love of Pets (FLP) in Streator, IL, works passionately to provide low-income families with financial assistance for pet food and veterinary needs. FLP is dedicated to keeping pets with their loving families, out of shelters and outside the threat of euthanasia. A recent NAVS Sanctuary Fund grant was awarded to supplement their Foreclosure Assistance Program, providing much-needed funds to help their client keep her home as well as her two cats and four dogs (Angel, Rocky and Scooter shown here).

Mystic Farm Wildlife Rescue (MFWR) in Sagle, IN, provides support, rehabilitation and return to the wild for injured or orphaned wildlife. In addition, MFWR educates the public about what to do if injured wildlife is found. Due to expanding developments on adjacent properties, MFWR was forced to relocate to a larger, more remote area. A NAVS Sanctuary Fund grant provided funds to clear a portion of the land and transport portable buildings.

Voice for Horses (VFH) in Toledo, OH, provides shelter and veterinary care to horses who are sick, injured, abandoned, abused, neglected or bound for slaughter. VFH is committed to helping any equine in need through intervention and community awareness, while educating the public about the causes of equine suffering. A NAVS Sanctuary Fund grant paid for surgery to geld a donkey named Big Guy and a mini stallion named Diego. Together, NAVS and VFH gave these animals a second chance at life.

Stray Central, founded in 1983 in Springdale, AR, has been a refuge for hundreds of stray, unwanted, abused and neglected animals waiting for their forever homes. Stray Central makes every effort to place cats in loving homes while providing lifetime care for cats with serious medical, emotional or behavioral problems. Recent NAVS Sanctuary Fund grants provided medical care for kittens taken in from a feral colony and funded an expansion of Stray Central’s intake/holding capacity so that more cats can find their happy endings.

The Hermitage Cat Shelter (HCS) in Tucson, AZ, is dedicated to the shelter, protection and care of homeless cats. HCS actively seeks permanent, loving homes for their adoptable cats, while providing lifelong care for cats unable to be re-homed due to behavioral or health issues. The residents at HCS are able to roam free within 8,000 square feet of outdoor/indoor living space. A NAVS Sanctuary Fund grant was awarded to repair their roof which was damaged during the 2014 hurricane season.

White Bison Association (WBA) in Bend, OR, provides care for a herd of 25 white bison, who are considered an endangered species. WBA provides a permanent sanctuary while promoting healthy white bison population growth. With the help of a NAVS Sanctuary Fund grant, WBA transported the entire herd of buffalo to a new location just outside of Redmond, OR.

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Donate to NAVS

Our life-saving work depends on the generosity of people like you. By making a tax-deductible donation to NAVS, you’ll help us continue our proud 85-year tradition of standing up against the cruelty and waste of vivisection. Thank you for helping us make a difference.

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☐ I would like to make a special donation to the NAVS Sanctuary Fund in the amount of $_______. (NPS10)

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Please make checks payable to NAVS and return with this form in the envelope provided. Please do not send cash.

Or mail to: National Anti-Vivisection Society (NAVS)
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800-888-NAVS (6287)

All donations are tax-deductible to the fullest extent of the law.
PREGNANT MARE RESCUE (PMR) in Aptos, CA, advocates for the humane treatment of horses through public education about threats to equine safety and well-being. They also provide assistance to horse owners in their community. Since PMR was established in 2006, they have rescued, rehabilitated and re-homed more than 130 horses, while providing a safe haven for the horses in residence. A NAVS Sanctuary Fund grant was used to purchase hay when the California drought caused hay prices to skyrocket.

HORSE SHOE EQUINE RESCUE (HSER) in Terre Haute, IN, rehabilitates physically and emotionally damaged horses in order to place them in permanent homes so they may be protected, cared for and surrounded by love and companionship. A recent NAVS Sanctuary Fund grant helped HSER purchase hay when they received unexpected horses from county rescues that required quantities of feed/hay beyond HSER’s budget.

COMPASSIONATE ANIMAL RESCUE FOR MEDICAL AID in Mission Viejo, CA, was founded by veterinary professionals dedicated to rescuing sick or injured animals, providing them with necessary medical care, and placing them into caring homes whenever possible. A recent NAVS Sanctuary Fund grant was awarded to help pay for surgical costs to care for a dog (Stanley, pictured here fully recovered) who had been hit by a car.

KITTY DEVORE RESCUE NETWORK (KDRN) in San Pedro, CA, is composed of volunteers throughout California—as well as areas of Arizona, Washington and Utah—dedicated to the rescue, rehabilitation and re-homing of cats and kittens pulled from a high-kill shelter located in San Bernardino, CA. A NAVS Sanctuary Fund grant allowed KDRN to spay/neuter cats previously slated for euthanasia.

ROCKFISH WILDLIFE SANCTUARY in Charlottesville, VA, provides care for orphaned and injured wildlife in central Virginia while they are prepared for release back into their natural habitat. In addition, they educate the public about the habits and needs of native wildlife and what to do when an injured or orphaned animal is found. A NAVS Sanctuary Fund grant was awarded to help build a quarantine shed for new arrivals.

Ways to donate:
• Visit www.navs.org/donate
• Call 800-888-NAVS (6287)
• Return the donor form on page 15