

Published by the ARVO Animals in Research Committee

Toolkit

for Biomedical
Researchers Using
**Laboratory
Animals**

Toolkit for Biomedical Researchers Using Laboratory Animals

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Resources for Responding to Threats and Attacks

Extreme acts from animal-rights activists have escalated recently to include personal attacks of researchers' homes, property and, in some cases, family members. The activities range from vandalism and harassment to attempted homicide. Detailed records of illegal activities committed in the name of "animal rights" are maintained by the Foundation for Biomedical Research (FBR), accessible on their education Web site's [Illegal Incidents Report](#). The frequency and severity of the acts of terror against scientists underscores the importance of educating the public on the necessity of animal research as well as educating scientists on strategies to prepare for and cope with pressure from an animal-rights group.

Vision scientists have been targeted by animal-rights activists, and it seems probable that attacks on the research performed by members of the Association for Research in Vision and Ophthalmology (ARVO) will only intensify with time. This toolkit has been prepared by the ARVO Animals in Research Committee to suggest proactive and reactive strategies for ARVO members who use animals in their research. This toolkit contains links to information on the following topics:

1. [Protecting yourself against an attack](#)
2. [Responding to questions about your research](#)
3. [What to do if confronted or targeted?](#)
4. [What ARVO can do for you?](#)
5. [Other groups to contact for information and assistance](#)
6. [Educational Materials](#)
7. [Other Resources](#)
8. [ARVO Statement for the Use of Animals in Ophthalmic and Vision Research](#)

ARVO leadership considers the use of animals in research as one of the most important and critical issues facing scientists today. The use of living animals in properly designed vision research experiments is both ethical and obligatory to protect people and animals from visual diseases and defects. Investigators who use animals must assume responsibility for the proper scientific and ethical design of experiments. The members of this Committee urge ARVO members to read this handbook and offer suggestions or additions for the next version. If you are targeted by an animal-rights activist organization, please let ARVO staff know how we can help.

Protecting Yourself Against an Attack

If your research requires the use of animals, you should follow several steps, regardless of whether you think your work may be questioned. **These are proactive measures that will give you initial security and save you stress if you are attacked.** This section presents an overview

of what you need to do to protect yourself. The National Association of Biomedical Research (NABR) has prepared an [Animal Research Crisis Management Guide](#) that contains detailed information.

Make Sure Your Research Complies with Applicable National and Local Regulations

Every ARVO researcher using animals should automatically comply with the following policies, regulations and/or governing organizations and the [ARVO Statement for the Use of Animals in Ophthalmic and Vision Research](#).

Develop and Maintain an Animal Use Research Project File

In addition to the files normally maintained for your research project, you should start and regularly update a file that contains background material that is useful in case there is an inquiry about the use and care of animals used for your research.

Coordinate with Your Institution

Your institution is responsible for being prepared to defend itself – and you – against allegations of animal abuse made by animal-rights activists. Your institution should have an administrative plan of action for responding to such an incident. You should meet with the person responsible for activating the plan and review the procedures.

Establish Security Procedures

At a minimum, every researcher should have a personal and professional security plan and coordinate it with institutional security representatives and local police. Animal-rights activists tend to wax and wane in their attacks, so researchers must always be prepared.

Preemptive Security Measures

ARVO is not able to provide information to members covering institution-specific policies for background checks and security clearances when hiring employees who access animal research facilities. Members should work with their institutions to ensure adequate safety of employees, research animals and prepare an action plan for responding to adverse incidents.

Use Care in Wording Your Research Documents

Remember that non-scientists and others may be reading your manuscripts and grant documents. This applies especially to those sections of grant applications and manuscripts describing experimental procedures involving animals.

Become Involved in Support of Animal Research

It is important to apprise your local and national legislators about the importance of using animals in research. Written statements focusing on the scientific benefits/advances of your research efforts are particularly useful. Get involved in organizations which support science and animal research.

Make Sure Your Research Complies with Applicable National and Local Regulations

Regulatory information for members working with animals

USA

- [US Animal Welfare Act and Regulations](#): A document with regulations to improve animal care and use in research, testing, teaching and exhibition.
- [Office of Lab Animal Welfare Public Health Service Policy on Humane Care and Use of Laboratory Animals](#): A tutorial for new animal care and use committee members, institutional administrators, investigators, animal care personnel and veterinarians.
- [ILAR Guide for the Care and Use of Laboratory Animals](#): Primary reference on animal care and use (required if research is conducted with Public Health Service funds).
- [NIH 2008 Guidance for Researchers & Institutions: *Good animal care and good science go hand-in-hand*](#): A list of resources for research that involves NIH grants.
- Institutional Animal Care and Use Committee (IACUC) *within your institution*.
- Other local or state regulations that may be in effect *where your research* is conducted.

Canada

- [Guide to the Care and Use of Experimental Animals by the Canadian Council of Animal Care](#): For research conducted in Canada.

UK and Africa

- [Responsibility in the use of animals in bioscience research: Expectations of the major research council and charitable funding bodies](#): Medical Research Council (MRC) guide for the use of animals for MRC funded researchers in UK and Africa.

European Union

- [EU legislation on the protection of animals used for experimental and other scientific purposes](#): Legislation passed by the European Commission that governs the use of laboratory animals. On May 5, 2010 the European Parliament approved an animal welfare action plan update. [More information](#).

Mexico

- [Seventh Title of the Regulations of the General Law of Health Regarding Health Research](#), in Spanish

Germany

- The German Animal Protection Act. [Tierchutzgesetz \(TschG\)](#), in German.

Develop and Maintain an Animal Use Research Project File

Content Recommendations for Animal Use Research Project File

- **Approved research grant documentation**
- **IACUC-approved protocol and any other related documents**
- **List of awards received by researchers working on the project**
- **Brief description, in non-technical terms, of research project goals and accomplishments.** This statement should be prepared so that it could be given to the press or used in discussions with local groups and should describe the nature of your research, why it is being conducted, why the use of animals is necessary, how the research will benefit humans and animals (directly or in the long run, as applicable) and what official approval agencies have validated your research. Once you have drafted this statement, review it with the person your institution has designated to deal with the press and public. *See the Section: [Coordinate with Your Institution](#).*
- **Representative list of citations for your research publications.** It is not necessary to compile a complete list of citations, but rather to give the range of publications in which citations have appeared, as well as the total number. This list could be crucial in combating typical claims by animal rights activists that the research is trivial, has no impact on scientific progress or is of no use to humans;
- **References that demonstrate your procedures are humane and necessary; Your institution's plan for responding to animal rights activist allegations,** including names and phone numbers of whom to contact in case of an attack or threat of an attack (including media relations, security, local police, physical plant, etc.).

Coordinate with Your Institution

Your institution is responsible for being prepared to defend itself – and you – against allegations of animal abuse made by animal-rights activists. Your institution should have an administrative plan of action for responding to such an incident. Meet with the person responsible for activating the plan and review the procedures.

At a minimum, the plan should contain the following information:

- Names and responsibilities of key people within the institution who should be contacted immediately if an incident occurs, such as security, administrative representative, veterinarian, animal care and use staff.
- Name of the individual who will be the official spokesperson
- Lines of communication
- Security procedures
- Public relations procedures
- Support groups within the community to contact
- Other organizations to contact nationwide.

Ideally, the person designated to be the official spokesperson should not be a scientist who is working on the project, but rather someone who understands both the institution's animal care and use program and is accustomed to talking to the press and other groups.

- Some institutions provide training to scientists on how to deal with the press and answer questions in a non-technical, straightforward manner.
- Encourage your institution to offer you and your colleagues such training.
- American Association for the Advancement of Science (AAAS) and National Science Foundation (NSF) also have resources to help scientists communicate with the public. [Communicating Science](#).

When meeting with the institutional representative, you should review the contents of the Animal Use Research Project File that you are maintaining and inquire if any other documents or letters would be useful. Ask to have your project description reviewed and edited to make it understandable to the general public.

If you find that there is no institutional plan or central office to handle an incident, discuss the necessity of preparing a plan with your department head or the person responsible for overseeing research.

The [National Association for Biomedical Research \(NABR\)](#) may be able to provide assistance. Remember: an institutional plan is critical to protecting yourself against attacks. Your institution should be prepared to provide you with organized and effective support if your research is questioned.

Establish Security Procedures

At a minimum, every researcher should have a personal and professional security plan and coordinate it with institutional security representatives and local police.

Animal-rights activists tend to wax and wane in their attacks, so researchers must always be prepared.

For data security, store backup copies of all your data, including computer materials, at a secure facility outside your laboratory.

Secure sensitive documents and other media items (video tapes), so they are protected from theft in the event of a break-in.

Animal-rights activists may focus their attention on the investigator at his or her workplace. However, recent attacks have almost exclusively been in homes in the middle of the night, so investigators should work with institutions to ensure adequate security in both places.

Past attacks have included mail and telephone calls to the homes of researchers and their neighbors, picket events at researchers' homes and attempts to get statements from family members about the appropriateness of the researchers' work.

Talk to your family members about possible ways they could unwittingly become involved and how to handle such situations. Review your home security measures, and contact local police to alert them to potential situations.

Preemptive Security Measures

Animal rights activists have gained access to animal research facilities by applying for animal care positions in research facilities.

ARVO is not able to provide information to members covering institution-specific policies for background checks and security clearances when hiring employees who access animal research facilities.

However, ARVO members should work with their institutions to ensure adequate safety of employees, research animals and prepare an action plan for responding to adverse incidents. Actions members can take include the following:

- Make it clear to employees and students that you are committed to animal welfare and open to discussing any concerns they may have regarding the use of animals.
- Know whom you are hiring and mentoring
- Be certain employees and students understand and are able to properly describe experimental procedures outside the laboratory, and emphasize that no deviation from protocol is allowed without prior IACUC approval.
- Caution lab members against use of morgue humor or insensitive comments that could be misunderstood.
- Invite institutional security and administration to visit your lab and animal care facilities so they will be familiar, not only with the layout of the facility, but also with the type of research that you are doing. Conduct a walk-through annually.

Set up a schedule for monitoring animals (especially post-surgery or anesthesia). Make this a clear responsibility that is not to be taken lightly.

Use Care in Wording Your Research Documents

Remember that non-scientists and others may be reading your manuscripts and grant documents.

When preparing your grant applications, IACUC forms and other related documents, you should always consider the possibility that they might be read and reprinted out of context by animal-rights activists. This applies especially to those sections of grant applications and manuscripts describing experimental procedures involving animals. These sections are often used by animal-rights activist groups to “damn you with your own words.”

You are especially susceptible to being targeted by animal rights activists if you:

- Conduct research on dogs, cats or non-human primates;
- Conduct research funded by the National Institute of Neurological Disorders and Stroke or the National Eye Institute;
- Conduct research that has been accessed through [Freedom of Information Act \(FOIA\)](#).

Remember to coordinate with your institution and IACUC, so you will receive notice when there has been a FOIA request about one of your grants.

Because animal activist groups usually quote passages out of context and leave out vital information (such as the use of general anesthesia), you may not be able to completely prevent misrepresentation. However, if your document contains thorough explanation of procedures used to ensure that the animals experience minimal discomfort, you can help counter claims that surgical and experimental procedures are extreme.

Therefore, you should go beyond the minimal statement required when drafting your manuscripts, applications, or animal use and care forms and carefully consider how inaccurate impressions might be formed when individuals access publicly available documents.

In addition, it is becoming more and more critical to stress and justify the importance, impact and significance of your work.

View a [Sample Research Project Description](#)

The Society for Neuroscience developed a document: [Best Practices for Protecting Researchers and Research](#), which was adapted from the ARVO Handbook for the Use of Animals in 2003.

Become Involved in Supporting Animal Research

Write National and Local Lawmakers Regarding the Importance of Using Animals in Research

It is important to apprise your local and national legislators about the importance of using animals in research. Written statements focusing on the scientific benefits/advances of your research efforts are particularly useful.

- The [Animal Enterprise Protection Act of 1992](#) makes it a federal crime to intentionally cause physical disruption to the functions of an animal enterprise, which is defined as a commercial or academic enterprise that uses animals for a variety of purposes including research or testing. The passage of this act after five years of intensive effort is evidence of the importance of keeping your legislators informed.

Additional laws have been passed in response to recent escalations of animal-rights activist extremism, including the following:

- [Federal Animal Enterprise Terrorism Act of 2006](#): Enhances the ability of the US Department of Justice to prosecute animal-rights extremists who use violence and terroristic threats.
- [Researcher Protection Act of 2008](#): California state law that helps enhance law enforcement's ability to protect academic researchers and their families from acts of violence and intimidation perpetrated by animal-rights extremists.

Recently animal-rights activist groups have successfully used the legal system to challenge federal regulations regarding the care of animals in research.

The more legislators understand about the use of animals in research, the better equipped they will be to make decisions regarding new laws.

Join and Support organizations that support and foster understanding of the importance of Animal Research

Pro-Test For Science Founded at UCLA by Professor J. David Jantsch, who was targeted by animal terrorists, Pro-Test for Science is an organization that enables students, scientists and citizens to stand up against the disinformation disseminated by so-called 'animal rights' groups.

<http://www.ucla-pro-test.org>

Americans for Medical Progress A non-profit charity, AMP seeks to protect society's investment in research by nurturing public understanding and support for the humane, necessary and valuable use of animals in medicine.

<http://www.amprogress.org>

Speaking of Research An advocacy group that provides accurate information about the importance of animal research and animal testing in medical and veterinary science.

<http://speakingofresearch.org>

Basel Declaration: seeks to provide the framework for ethical use of animals in research just as the Declaration of Helsinki did for human subjects research.

www.basel-declaration.org

This list is not intended to be a comprehensive catalog, but is provided for ARVO members as a resource to connect them to the broader community of pro-research/pro-science organizations.

Responding to Questions about Your Research

You cannot always anticipate when an animal-rights activist group will question or attack your research. The methods used to stop or impede your research could range from letters to the local newspapers to destructive laboratory break-ins.

- A group of ARVO members discovered that reprints of several of their publications were included in a package of materials assembled to prove animal cruelty.
- Another ARVO member was targeted in a campus newspaper article and his laboratory phone number distributed for people to call and express their views on his research.
- Whatever the form of attack, you will be in a good position to handle the controversy if you have followed the recommendations listed in [Protecting yourself against an attack](#).

One definite clue that your research is being considered for some type of attack is notification that someone has requested your federally funded grant application and reports under the [Freedom of Information Act \(FOIA\)](#).

- Under the current guidelines, virtually the entire grant application file is available to the requesters. The funding agency will inform you that your grant materials have been

petitioned. You should treat this as an alarm, and prepare yourself and your institution for an attack.

If you believe, for any reason, that your research is being reviewed by an animal-rights activist group, you should take the following steps:

- Review your Animal Use Research Project File and make sure that all the necessary information on the project is documented and updated.
- Inform your IACUC representative of your concerns and discuss which precautions described in the institutional plan should be activated.
- Inform the funding agency program director of your concerns.
- Inform ARVO and other professional societies that are involved in this issue.
- In conjunction with the key people in your institution, consider contacting the local media before the animal-rights activists do. An upbeat, positive press release on the importance of your research and its benefit to humans and animals could serve to diminish the negative impact their campaign is designed to inflict.

If your research comes under any form of attack from an animal-rights activist group, even if it does not appear to be very threatening at first, ARVO recommends these steps:

- **Contact Your Institutional Representative**
- **Contact Your Funding Source**
- **Contact Your Professional Societies**

What to do if Confronted or Targeted by Animal Rights Terrorists

IF YOU ARE BEING HARASSED BY ANIMAL RIGHTS TERRORISTS YOU ARE LIKELY THE VICTIM OF A CRIME.

What to do if confronted or targeted by animal rights terrorists? While individuals may differ as to how they react to the “legal harassment” of animal rights terrorists, here are some suggestions to deal with the initial harassing contact.

1. **Call the police and/or University security.** The police are increasingly prepared for this type of crime and will have a security plan to follow. They understand the trespassing laws in your locale, understand “free speech” rights, and will protect you. Ask for

increased police presence near your home if you or your family members feel physically threatened.

2. **Call your department chair and/or immediate supervisor.** The dean or upper level administrators and veterinarians should also be alerted.
3. **Immediately contact [OLAW](#)** if the health or well-being of animals is jeopardized or harmed.
4. **Notify the [program official\(s\)](#) of the NIH funding component(s) or your other funding agencies of the incident.**
5. **Go where you feel safe if confronted physically.**
6. **Do NOT erase threatening emails or voice mails.** The police will want this information.
7. **Do NOT debate these people on the phone (just hang up!), the internet, or social networks such as You Tube and Facebook.** This is what they desire.
8. **Be very careful about any contact with the press.** This can backfire and will certainly draw attention to the terrorists, which is what they are seeking.
9. **Remove images of yourself and those of your family on Facebook and university websites.** Increase the level of privatization on these social networking sites or remove your personal data completely.
10. **Although very inconvenient, you may elect to change your home, office and cell phone numbers.** You may have to alter your email address as this will be the primary conduit for the harassment. Request the University IT department provide a mechanism to prevent unwanted electronic and voicemail messages, and to assure that any that reach you are captured by the police.
11. **Discuss all aspects of the threat with your family.** Warn your neighbors to watch for and report any unusual behavior in your neighborhood.
12. **Remember, you are not alone in this, and have done nothing wrong.** Talk to people you trust (including ARVO) to allay your concerns.

Contact Your Institutional Representative

Assuming that your Animal Use Research Project File is in place and up to date, meet immediately with the person your institution has designated to handle this type of incident.

The contacts should be listed in the institution's plan. These key individuals should take the following steps:

- Review the original institutional plan that outlines the procedures to be followed;
- Identify the type of crisis, location (if appropriate), names and numbers of people involved;
- Determine what information still needs to be collected and reviewed;
- Specify what responses should be given to specific allegations, the timing of press releases and confirm who will be the designated spokesperson.

It is important that you not get directly involved with the people questioning your research. The strategy of animal-rights activists is to isolate the investigator, thereby increasing the possibility that the researcher will provide more information than necessary in an attempt to defend their work. By having an institutional spokesperson interact with the animal-rights activist groups and the media, you can keep the confrontation out of the direct personal attack mode.

Contact Your Funding Source

It is important that you contact the project officer from your funding source as soon as possible after any type of activity from an animal-rights activist group.

Your funding source has approved your grant proposal and, consequently, approved the plan for the care and use of laboratory animals needed for the funded research. Therefore, your funding source would want to be informed about any problem.

Your funding source also can provide support, such as letters highlighting the importance of the funded research and documented compliance with federal legislation on the care and use of animals. Federal granting agencies place a high priority on this issue and have worked closely with grantees who have been unjustly accused by animal-rights activist groups.

Contact Professional Societies

Your professional society can provide a variety of resources and support, including written letters and other suggestions. ARVO's support is one of your membership benefits, and you should take advantage of it.

Other associations also have policies and procedures in place to assist researchers who are unjustly attacked by animal-rights activist groups. Examples include the [Society for Neuroscience](#), the [Federation of American Societies for Experimental Biology](#), the [American Physiological Society](#) and the [National Association for Biomedical Research](#).

As researchers have discovered, an attack from an animal-rights activist organization will not be short-lived.

- They will not just “go away.”
- For the most part, they are extremely well organized and have the money and resources to plan and implement a noteworthy campaign against your research.
- Their actions *will* affect your research and your life.
- One ARVO member, who was targeted for more than two years, said “The amount of time we spend defending ourselves and dealing with added layers of paperwork has dramatically increased. We all do less science than before.”

It is just as important to remember that you are not alone if you are attacked by an animal-rights activist group. Your institution, funding source, professional societies and their state and local chapters and colleagues can all offer a great deal of support.

- Do not hesitate to ask for their assistance and to participate actively in the coordination of this support with your institutional representative.

ARVO also recommends the following documents that contain detailed information about actions to take in the event that your research is targeted.

- [Best Practices for Protecting Researchers and Research](#): Document prepared by the Society for Neuroscience that provides recommendations for researchers and the institutions they work for about how to preempt and react to animal-rights activists.
- [Guidelines for Crisis Management](#): Society for Neuroscience guide for responding to a laboratory crisis.
- [Resources from the National Institutes of Health \(NIH\)](#): Provides information on how to report incidents involving NIH-funded animal research.
- [Crisis Management Guide](#): An essential guide to managing laboratory crisis (National Association for Biomedical Research, *members only*).
- [Animal Welfare-Human Rights: Protecting People from Animal Rights Extremists](#): UK paper on the Government’s strategy for handling animal extremism.
- [Prescriptives to Protect Animal Research](#): Americans for Medical Progress one page document with advice for proactive measures to prepare, preempt or respond to animal activist activities.
- [Resources on Animal Rights Extremism](#): Federation of American Societies for Experimental Biology resources and information on animal extremism.

What ARVO Can Do For You

In 1989, ARVO formed the Animals in Research Committee (ARC). Working with the ARVO Trustees, the Committee has developed the following documents, policies and assistance procedures.

ARVO Statement for the Use of Animals in Ophthalmic and Vision Research

In 1990, the original [Statement](#) was rewritten in layman's language to clearly state the Association's basic premise: **the use of living animals in properly designed vision research experiments is both ethical and obligatory to protect people and animals from visual diseases and defects.**

ARVO's Procedure for Defending Members Attacked by Animal-Rights Activists

ARVO's policy is to support its members whose research is unjustly attacked by animal-rights activists.

The Chair of ARVO's Animals in Research Committee speaks with the member to obtain a description of the research, ascertain the nature of the attack and gather the following information:

- The source of funding for the research, and whether the application for support was subjected to peer review
- Whether the animal care and use procedures under attack were reviewed and approved by the institution's IACUC
- Whether the research complies with the [*ARVO Statement for the Use of Animals in Ophthalmic and Vision Research*](#)

The purpose of this inquiry is to ensure that the member is, in fact, in compliance with the parameters set forth in ARVO's animal use statement and information will be provided to the ARVO Board of Trustees for review.

Members will be advised of resources available on the ARVO website and links to other organizations supporting animal researchers. ARVO can offer recommendations for appropriate response. However, any specific action taken by ARVO on behalf of your research will be decided on a case by case basis.

Educational Materials

- The ARVO Animals in Research Committee as developed materials that members can use to assist them in educating their patients, students, colleagues and other people in their community on [The Importance of Animals in Eye and Vision Research](#).
- The Foundation for Biomedical Research (FBR) has a variety of educational materials that can be ordered from their website, including: books, brochures, posters and videos. [FBR Store](#).
- **Annual Meeting Presentations**
Every year, the ARVO Animals-in-Research Committee schedules a workshop at the ARVO Annual Meeting that focuses on an animal in research issue.
- **Networking**
ARVO's membership includes more than 12,600 eye and vision researchers from all over the world.

As animal-rights activists become more prominent and disrupt more research, more ARVO members are directly and indirectly affected.

ARVO can provide official Association support, as well as link members, thereby producing much-needed personal support.

Members are urged to call the ARVO headquarters at +1.240.221.2900 if they have any questions or would like to locate a member who has experience dealing with animal-rights activist groups.

Join the [ARVO Facebook fan page](#) for more opportunities to connect with other ARVO members.

Other Groups To Contact for Information and Assistance

Several organizations have been formed to focus on the importance of the use of animals in research.

With their limited funds they have developed a variety of useful materials and have provided exceptional support and services to researchers using animals.

Many other organizations and academic institutions offer speakers bureaus, publications, educational resources and other resources.

National/International Organizations

[Association for Assessment and Accreditation of Laboratory Animal Care International \(AAALAC\)](#)

[American Association for Laboratory Animal Science \(AALAS\)](#)

[American Veterinary Medical Association \(AVMA\)](#)

[Americans for Medical Progress](#)

[Association of American Medical Colleges \(AAMC\)](#)

[Canadians for Health Research \(CHR\)](#)

[Coalition for Animals and Animal Research \(CFAAR\)](#)

[Foundation for Biomedical Research \(FBR\)](#)

[Institute for Laboratory Animal Research \(ILAR\)](#)

[National Association for Biomedical Research \(NABR\)](#)

[Partners in Research](#)

[Scientists Center for Animal Welfare \(SCAW\)](#)

U.S. Government Agencies

[Animal Welfare Information Center, USDA](#)

[Office of Laboratory Animal Welfare](#)

[Office for Protection from Research Risks, NIH](#)

State Organizations

Many state organizations govern animal research. ARVO compiled this basic list, but please contact your institution's IACUC for further information.

ARVO is a member of the National Association for Biomedical research (NABR). NABR maintains information about laws governing the use of animals. [NABR Animal Law Section.](#)

Multi-State Society

[States United for Biomedical Research \(SUBR\)](#)

Arizona

[Coalition for Animals and Animal Research \(CFAAR\)](#)

California

[California Biomedical Research Association \(CBRA\)](#)

Connecticut

[Connecticut United for Research Excellence, Inc. \(CURE\)](#)

Massachusetts

[Massachusetts Society for Medical Research, Inc. \(MSMR\)](#)

Michigan

[Michigan Society for Medical Research \(MISMR\)](#)

[Northwest Association for Biomedical Research \(NWABR\)](#)

New Jersey

[New Jersey Association Biomedical Research \(NJABR\)](#)

North Carolina

[North Carolina Association for Biomedical Research \(NCABR\)](#)

Ohio

[Ohio Scientific Education and Research Association \(OSERA\)](#)

Pennsylvania

[The Pennsylvania Society for Biomedical Research \(PSBR\)](#)

Texas

[Texas Society for Biomedical Research \(TSBR\)](#)

Wisconsin

[Wisconsin Association for Biomedical Research and Education](#)

Other Resources

1. [AAALAC Resources](#): Contains a listing of international regulations and resources by country
2. [The Guide for the Care and Use of Laboratory Animals \(NRC1996\)](#): Main resource used by Association for Assessment and Accreditation of Laboratory Animal Care's (AAALAC's) Council on Accreditation
3. [FASS Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching](#)
4. [Guide to the Care and Use of Experimental Animals](#): A list of guidelines from the Canadian Council on Animal Care
5. [Institutional Animal Care and Use Committee Guidebook](#)
6. [NABR, Animal Law Section](#): Focuses on the potentially disruptive and rapidly growing area of animal law

7. [NIH Anesthesia/Analgesia Formulary](#): Table of commonly used drugs at the National Institutes of Health (NIH) for pre-anesthesia, anesthesia, analgesia, sedation, tranquilization and restraint of animal species
8. [NIH Medical Research with Animals Web site](#): Information for researchers and institutions, as well as the general public, including a fact sheet on the benefits of biomedical research and a Frequently Asked Questions section
9. [NIH Model Organisms for Biomedical Research](#)
10. [NIH Grants Policy Statement \(2003\)](#)
11. [NIH iEdison](#): Helps government grantees and contractors comply with laws and regulations
12. [Public Health Service \(PHS\) Policy on Humane Care and Use of Laboratory Animals](#)
13. [Understanding Animal Research](#): Understanding Animal Research is the new organization formed by the Research Defence Society and Coalition for Medical Progress. [Animal Research Information](#): Provides reliable information from scientists worldwide about the contribution of animal research to medical advances. Their [blog](#) provides informal commentary on animal-rights activities, scientific advances and policy developments as they happen.
14. [Questions People Ask About Animals in Research](#): With answers from the American Physiological Society
15. [USDA, Animal Welfare Act and Regulations](#)
16. [Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research, National Academies Press](#)
17. [IACUC](#)

Sample Research Project Description

The Society for Neuroscience has a document: [Best Practices for Protecting Researchers and Research](#), which was adapted from the ARVO Handbook for the Use of Animals in 2003. Below is a sample research project description used with permission from the document.

Research Goals

We want to understand the development of the human visual system. This knowledge will help in the prevention and treatment of certain vision problems in children. Further, the rules that guide development in the visual system can be applied to other systems within the brain. Our work, therefore, has wide application to other developmental disorders affecting the nervous system.

We do not rely solely on animal experiments. We can obtain answers to some of the questions we pose from computer models designed to simulate various aspects of visual development. In addition, information about some of the mechanisms and molecules that might be operating in development comes from experiments on brain cells cultured in a dish. We utilize this knowledge in planning our experiments to yield the greatest amount of new information. However, our most important goal is to discover new information about the anatomy and physiology of visual pathways in the developing brain. The careful use of living animals in experiments is the only means by which we can obtain this particular information.

A major focus of our work is the pathway that leads from the two eyes to the visual centers of the brain, including the cerebral cortex. Another area of study is the pathway that links visual areas located in the two sides of the brain. In each case, our initial work is performed using normal adult animals, usually rats. Data we obtain from these adult animals are then compared with data from young, developing animals or from older animals that had abnormal visual experience early in life.

Our goal is first to understand the normal arrangement of neural connections and then to assess how genetic and environmental factors guide the formation of these connections during development. The more we learn about development of the visual system, the more we realize the importance of events that occur at the very earliest stages in the formation of the central nervous system. For this reason, much of our work involves studies of animals at, or even before, the time of birth.

The Value of Our Research

Our experiments result in a better understanding of the biological rules that govern basic aspects of brain development in all mammals, including humans. One of our most important discoveries is that a brief critical period exists shortly after birth when visual experience permanently modifies the properties of the visual system. We could not have predicted this finding from computer models or from experiments on nerve cells cultured in a dish. This discovery helps us to understand some disorders of the human visual system such as amblyopia, also called lazy eye, a currently untreatable severe loss of vision in one eye. Amblyopia occurs when humans are exposed to abnormal visual experience early in life, during the critical period, because of disruption of any one of the delicate systems that control the focus or the movement of our eyes. Conditions that commonly produce these disruptions include an uncorrected refractive error, as in myopia or nearsightedness; a cloudy lens or cataract that is not removed; a misalignment of the eyes, such as a squint or cross-eye, that is not corrected; and irregular eye movements or nystagmus. These clinical disorders are found in over 10 percent of all children. A clearer understanding of normal brain development is a necessary step toward preventing problems like amblyopia and toward rehabilitating children who are already afflicted.

Animals Used in Experiments

Prior to the use of any animal, all of our proposed procedures are reviewed by a committee of scientists, veterinarians, animal care technicians, and members of the local community to

ensure that they conform to all institutional, local, state, and federal animal welfare laws, regulations and policies. This committee has the power to ask us to modify our procedures or to halt our work if there are unresolved problems. After our use of animals has been approved, our proposed experiments are reviewed for scientific merit by a national committee of experts in this field, in competition with proposals from other investigators. For the past 15 years, our experiments have been judged to be excellent and have received funding from various agencies, including the National Institutes of Health.

Our experiments are performed on fully anesthetized animals so that the experiments do not cause pain or distress. Veterinary staff members examine our animals daily to monitor their health and welfare. Staff members have the authority to remove from experimental use any unhealthy animal. The animal care facility in which our animals are housed is fully accredited and subject to inspection by the accrediting agency. All our technical staff and research trainees have received formal instruction in our approved techniques.

In some of our experiments we use rats that we either breed ourselves or obtain from licensed commercial suppliers. We use rats because of their short gestation period, the relatively immature state of their brain at birth and the rapid rate at which they mature after birth. They are ideal studies of mammalian brain development.

In addition, we use various mutant strains of rodents, such as those naturally born without eyes or with abnormal brain pathways, to study the effects of prenatal problems in one part of the visual pathway on the development of visual connections elsewhere. None of these mutants shows any signs of pain or distress as a result of their developmental abnormalities.

We conduct some of our experiments using mixed-breed domestic cats purchased from licensed commercial suppliers. We use cats because, like humans, they have forward-facing eyes and keen visual acuity. Indeed, there are no significant differences between the visual pathways of cats and humans. Thus, our findings on the mechanisms of brain development in cats will also apply to humans.

Scientists Who Can Offer Assessments of Our Research: For assessments of our research, please contact the following:

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