

CAAT and Altweb: Making 3Rs information and resources available around the world

Carol J. Howard

The Johns Hopkins Center for Alternatives to Animal Testing (CAAT)
111 Market Place, Suite 840, Baltimore, Maryland 21202, USA
choward@jhsp.edu

Abstract

Since 1981, the Johns Hopkins Center for Alternatives to Animal Testing (CAAT) has worked to bring about the creation, development, validation, and implementation of alternative methods in biomedical research, product safety testing, and education.

A key part of the Center's mission is to make reliable information about the 3Rs available to a broad range of audiences around the world. CAAT produces a wide variety of print materials, including journal articles, books, scientific reports, newsletters, brochures, posters, and letters to the editor. We also manage two web sites, our own CAAT site and Altweb, the Alternatives to Animal Testing Website.

Altweb, launched in 1997, was created to serve as a gateway to alternatives information, resources, and news. It is international in scope and freely available to all users. The site is intended to serve diverse audiences, including biomedical researchers, industry, regulatory agencies, the international alternatives community, animal care and use/animal ethics committees, the animal welfare community, veterinarians, lab technicians, educators, students, and the general public.

This paper presents an overview of the resources available through CAAT with a focus on Altweb.

Keywords: alternatives, 3Rs, Altweb, CAAT, search for alternatives

Introduction

For more than 26 years, the Johns Hopkins Center for Alternatives to Animal Testing (CAAT) has been working to promote the creation, development, validation, and use of alternatives to animals in research, product safety testing, and education.

In 1993, CAAT hosted the first World Congress on Alternatives and Animal Use in the Life Sciences, held in Baltimore, USA. Planning for that Congress started in 1990 at CAAT's 7th annual symposium, where 33 leaders in the field from 13 countries shaped the vision that led, 17 years later, to WC6 in Tokyo.

CAAT is proud of its role in helping to initiate the World Congress series. CAAT also is proud of its role in making 3Rs information available around the world – which serves as the focus of this paper.

What is CAAT?

CAAT is an academic, science-based center within the Johns Hopkins Bloomberg School of Public Health. Established in 1981 with a grant from the Cosmetic, Toiletry and Fragrance Association, the Center is dedicated to the proposition that humane science is the best science.

CAAT's mission is to:

- Promote and support research in the development of in vitro and other alternative techniques
- Serve as a forum to foster discussion among diverse groups leading to creative approaches to facilitate acceptance and implementation of alternatives
- Provide reliable information on the science, philosophy, and public policy of alternatives to academia, government, industry, and the general public
- Educate and train in the application of alternatives

CAAT's research grants program serves to provide critical seed money for scientists interested in developing alternative methods. To date, the Center has funded 300-plus grants for a total of more than \$6 million. CAAT grants are available to researchers world-wide.

Since its founding, CAAT has held more than 20 major workshops and symposia, bringing together diverse stakeholders to find common ground and devise ways to make research and testing as effective

and humane as possible. The Center currently is organizing its second conference on developmental neurotoxicity testing (DNT), which will be held November 12-14, 2008 in Baltimore.

CAAT faculty members are involved in teaching about alternatives, both at Hopkins and elsewhere, and have developed a free online course to make this information more broadly available. CAAT recently launched a new program in public policy, education, and outreach. The Center also spearheaded the development of a certificate program in Humane Sciences and Toxicology Policy, offered through the Bloomberg School of Public Health.

CAAT's information program produces a variety of 3Rs-related materials, in both print and electronic media. Print publications include brochures, posters, flyers, reports, editorials, and letters to the editor. CAAT also created and maintains two websites: the CAAT Website (<http://caat.jhsph.edu>) and Altweb, the Alternatives to Animal Testing Website (<http://altweb.jhsph.edu>).

The CAAT site is devoted to the Center's programs, activities, and publications. Resources available on this site include:

- Information about CAAT grants
- Proceedings and technical reports from CAAT workshops and symposia
- Alternatives books and articles by CAAT staff
- Free online course: Enhancing Humane Science / Improving Animal Research
- Information about Hopkins certificate program in Humane Sciences and Toxicology

Altweb, the alternatives to animal testing website Gateway to the 3Rs

Altweb was created to serve as a gateway to alternatives resources, information, and news – on the Web and beyond. The site came about as result of a 1997 ECVAM report (Janusch, et al., 1997) that called for "a central reference point" for alternatives information. CAAT took on that challenge, launching Altweb on October 1, 1997. The site is continually updated and expanded, including a large-scale redesign and reorganization in 2005.

CAAT manages Altweb on behalf of an international project team, which helps provide guidance, direction, and feedback for the site. The Project Team has grown from 10 member organizations in 1997 to 26 in 2007, representing academia, industry, animal welfare, and government regulatory organizations. The site is truly international in scope, drawing visitors from more than 130 countries.

Altweb serves a broad range of audiences, including:

- Biomedical researchers
- Industry
- The international regulatory community
- IACUCs, Ethics Committees, and others who review animal protocols
- Veterinarians, lab technicians, and others who work with laboratory animals
- Educators
- Students
- The animal welfare community
- The international alternatives community
- The general public

Altweb offers a broad array of resources, including:

- Alternatives news
- Meetings calendar
- Journal abstracts (ALTEX, ATLA, In Vitro Animal, Laboratory Animals, Toxicology in Vitro, and more)
- Proceedings
- Technical reports
- Books
- Fact sheets
- Databases
- Regulations information from around the world
- Links to many other relevant resources

The Altweb home page provides the latest in alternatives news, as well as information on upcoming meetings in the field. The Frequently Asked Questions (FAQs) section, available in both English and Spanish, is one of the site's most frequently visited pages. It covers basic introductory information and is particularly useful for students and the general public.

It is easy to navigate the site through "Alternatives A to Z," which gives an alphabetical listing of major topics in the field. Another route is to click on "Research Resources" or on "Education Resources," depending on your particular area of interest.

The "Search" function at the top of the page will search both Altweb and the CAAT website simultaneously.

Special features of Altweb

- Full text of Russell and Burch's classic book, *Principles of Humane Experimental Technique* – the classic book that launched the field of alternatives
- Guide to searching for alternatives
- Alternatives in education: an introduction and overview
- Spanish content (FAQs, glossary, links to other resources en Español)

- Pain management database, providing information about anesthesia and analgesia for most commonly used laboratory animals
- Special section on monoclonal antibodies

The "Search for Alternatives" guide is a particularly valuable resource, providing a step-by-step approach to the search process, with detailed information on relevant databases, policies and regulations in various countries, sample searches, and more. The section on databases describes each database and the topics covered, as well as indicating whether a database is free, proprietary, or government/regulatory, and which may be most useful for research, for teaching, or for testing.

The special section on monoclonal antibodies (MABs) was developed with the goal of organizing and synthesizing information on this complex subject. It consists of introductory text explaining key topics in non-technical language, accompanied by a set of links to relevant databases, websites, books, articles, abstracts, etc. The questions and concepts addressed in the MABs section include:

- What are monoclonal antibodies? Definition, description, uses, history, issues
- Ascites method vs in vitro methods: cost, effectiveness, pain and distress
- MAB production: description of methods
- Policies, regulations, guidelines, recommendations
- Where to get in vitro MABs: academic core centers and commercial facilities
- Reports and proceedings

Coming attractions

Special section on refinement

This section will be available in winter 2008. It is modeled after the Altweb section on monoclonal antibodies and will provide introductory text plus links to key resources on the following concerns:

- What is pain and distress? Definitions, biology, and physiology
- Recognition and assessment of pain and distress
- Alleviation and prevention of pain in animals
- Humane endpoints
- Euthanasia
- Enrichment

CAATalyst

CAAT currently is developing an alternatives website, called CAATalyst, aimed at middle and high school students. CAAT believes it is important for the world's future consumers and scientists to have access to up-to-date information about the 3Rs and to realize that there is a middle ground in the often emotional and contentious debate between animal rights activists and scientists.

References

1. Janusch, A., van der Kamp, M.D.O., Bottrill, K., Grune, B., Anderson, D.C., Ekwall, B., Howald, M., Kolar, R., Kuiper, H.J.D., Larson, J., Loprieno, G., Sauer, U.G., Smith, A.J., and van der Valk, J.B.F. (1997). Current status and future developments of databases on alternative methods. The report and recommendations of ECVAM workshop 25. *ATLA* 25, 411-422.
2. CAAT website <http://caat.jhsph.edu>
3. Altweb <http://altweb.jhsph.edu>

