Making full use of all sources of information on alternative methods is a key part of preparing research projects in the life sciences using laboratory animals in compliance with the EU legislative requirements. A major challenge to locate relevant high quality information about a proposed field of scientific investigation is the exponential increase of scientific publications in the recent past. Over the last years the electronic resources, originally developed to offer a potential solution to this problem, have shown a similar proliferation. The question arises: how best to search information specifically on the 3Rs (replacement, reduction, refinement of animal use) in the World Wide Web that is heterogenic, constantly changing and growing?

The EURL ECVAM Search Guide provides search procedures and user guidance to facilitate the location of the desired information on 3Rs alternatives in addition to an inventory of relevant resources providing an answer to the question: What can I find where?

The EURL ECVAM Search Guide is aimed at untrained database users and will be most relevant, for example, where comprehensive searches for alternatives are required as part of authorisation processes for animal experiments and where regulatory requirements mandate the application of the 3Rs.
NOTE:
Online resources are constantly updated and modified. Therefore, the information for all resources in the EURL ECVAM Search Guide always includes the exact date of access.
THE EURL ECVAM SEARCH GUIDE

DATA SHEETS
Information Resources

Annett J. Roi, Barbara Grune

Journals
Databases
Meta-Databases
Database Hosts
Open Access Resources
Organisations and their Services
Web Search Engines

EDITED BY
Annett J. Roi, Jon Richmond
The Mission of the Institute for Health and Consumer Protection of the Joint Research Centre is to provide scientific and technical support to the EU policies for the protection of the interests and health of European citizens in the areas of food, consumer products, chemicals and public health.

European Commission
Joint Research Centre
Institute for Health and Consumer Protection

Contact information
Address: Via E.Fermi 2749, TP 281 I-21027 ISPRA (VA) ITALY
E-mail: Annett.J.Roi@jrc.ec.europa.eu
Tel.: +39 0332 785570
Fax.: +39 0332 785845

http://ihcp.jrc.ec.europa.eu/
http://www.jrc.ec.europa.eu/

Legal Notice
Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of this publication. Our goal is to keep this information timely and accurate. The layouts and contents of the EURL ECVAM Search Guide have been prepared very carefully. However, if errors are brought to our attention, we will try to correct them.

Europe Direct is a service to help you find answers to your questions about the European Union

Freephone number (*):
00 800 6 7 8 9 10 11

(*) Certain mobile telephone operators do not allow acces to 00 800 numbers or these calls may be billed.

A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server http://europa.eu/

JRC 58617

Original Title: “The ECVAM Search Guide - GOOD SEARCH PRACTICE on Animal Alternatives”

Re-Edition EUR 24391 EN
ISSN 1018-5593
doi:10.2788/95451

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Printed in Belgium
PRINTED ON RECYCLED PAPER
• The EURL ECVAM Search Guide lists a selection of JOURNALS SPECIALISING in the TOPIC OF THE 3Rs. They are PEER REVIEWED AND INDEXED in acknowledged bibliographic databases such as MEDLINE and BIOSIS.

• It is assumed scientists are generally familiar with or have access to key scientific journals such as Science and Nature that cover all fields of science and technology.

• Journals specialised in the topic of the 3Rs as well as in laboratory animal science should always be INCLUDED IN A SEARCH FOR INFORMATION ON ALTERNATIVE METHODS.
Alternatives to Animal Testing and Experimentation, AATEX

**Corporate body**
Japanese Society for Alternatives to Animal Experiments, JSAAE

**Address of publisher**
Office of JSAAE  
c/o Association for Supporting Academic Societies  
5-3-13 Otuka, Bunkyo-Ku, Tokyo 112-0012, Japan  
Tel: +81-3-5981-6011  
Fax: +81-3-5981-6012  
Email: jsaae@asas.or.jp

**Access**
http://www.asas.or.jp/jsaae/e_index.html

**Language**
English, Japanese

**ISSN**
Print: 1344-0411  
Online: 2185-4726

**Publication date**
1990

**Journal Frequency**
Three times per annum

**Feature for the 3Rs**
AATEX compiles original research articles and reviews about novel developments, methods, techniques, validations and use of alternatives to animal experiments in biomedical research and toxic testing. AATEX emphasizes high-quality work in support of health or safety decisions.

---

Alternatives to Animal Experimentation, ALTEX

**Corporate body**
Center for Alternatives to Animal Testing at the Johns Hopkins University Baltimore (USA), CAAT, European Society for Alternatives to Animal Testing, EUSAAT, transatlantic think tank of toxicology (Baltimore, Utrecht, Konstanz), t4, and the Doerenkamp chairs in Germany, India, The Netherlands, Switzerland and USA

**Address of publisher**
Spektrum Akademischer Verlag  
Springer-Verlag GmbH  
Tiergartenstraße 17  
69121 Heidelberg, Germany  
Postfach 10 52 80  
69042 Heidelberg, Germany  
Tel: +49-6221-487-8041  
Fax: +49-6221-487-8041

**Access**

**Language**
English

**ISSN**
0946-7785

**Publication date**
1984

**Journal Frequency**
Four times per annum plus supplements

**Features for the 3Rs**
ALTEX is devoted to the publication of research on the development and promotion of alternatives to animal experiments according to the 3Rs concept. ALTEX covers the biomedical aspects of animal experimentation as well as bioethics regarding the relationship between humans and animals. Authors who wish to publish in ALTEX are requested to express a basic respect for the dignity of living creatures and a recognition of animals as our partners in their articles. Submitted articles are judged according to stringent scientific standards. ALTEX ethik is a German-speaking supplement to ALTEX.

ALTEX publishes original research articles, short communications, reviews as well as news and comments, meeting reports and book reviews. ALTEX is indexed inter alia in the databases EMBASE, MEDLINE, and SciSearch as well as covered by the meta-databases PubMed, Scopus, and Web of Science.

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**Available from**:
http://www.asas.or.jp/jsaae/e_index.html

**Accessed**:
July 31, 2012

**Available from**:

**Accessed**:
August 1, 2012
Alternatives to Laboratory Animals, ATLA

Corporate body  Fund for the Replacement of Animals in Medical Experiments, FRAME
Address of publisher  ATLA Editorial Office
                       FRAME
                       Russell & Burch House
                       96-98 North Sherwood Street
                       Nottingham
                       NG1 4EE, UK
Tel: +44 - 115 958 4740
Fax: +44 - 115 950 3570
Email: atla@frame.org.uk

Language  English
ISSN  0261-1929
Publication date  1981
Journal Frequency  Six times per annum
Features for the 3Rs  ATLA is intended to cover all aspects of the development, validation, assessment, and use of alternatives to using animals in biomedical research and toxicity testing. ATLA provides original research articles, a news & views section, reports on recent conferences and workshops. The journal also publishes reviews of noteworthy research, legislative or regulatory requirements or animal usage statistics. ATLA is indexed inter alia in the databases EMBASE, MEDLINE, and SciSearch as well as covered by the meta-databases PubMed, Scopus, and Web of Science.

Animal Technology and Welfare, ATW

Corporate body  Institute of Animal Technology and European Federation of Animal Technologists (EFAT)
Address of publisher  Institute of Animal Technology
                       5 South Parade
                       Summertown Oxford OX2 7JL
                       United Kingdom
Tel: + 44 - 800 085 4380
Email: admin@iat.org.uk

Access  http://www.iat.org.uk/media.html
Language  English
ISSN  1742-0385 - 0264-4754
Publication date  2002
Journal Frequency  Three times per annum
Features for the 3Rs  ATW covers all aspects of animal science and technology, management and welfare. The journal compiles original short articles, technical notes and reviews describing refinements in techniques, a reduction in the number of animals that need to be used and alternatives to animal use.

Accessed: August 9, 2012

Available from: http://www.iat.org.uk/media.html
Accessed: September 12, 2012
### Animal Welfare Journal

**Corporate body**
Universities Federation for Animal Welfare, UFAW

**Address of publisher**
The Old School, Brewhouse Hill, Hertfordshire AL4 8AN - United Kingdom
Tel: + 44 - 1582 831818
Fax: + 44 - 1582 831414
Email: ufaw@ufaw.org.uk

**Access**
http://www.ufaw.org.uk/animal.php

**Language**
English

**ISSN**
0962-7286

**Publication date**
1992

**Journal Frequency**
Four times per annum

**Features for the 3Rs**
The Animal Welfare Journal publishes the results of scientific research and technical studies concerning "the welfare of animals kept on farms, in zoos, in laboratories, as companions or living in the wild". There are also reports and comments on current legislation and other issues concerning animal welfare and a book reviews section.

The implications of a study regarding animal welfare have to be discussed by authors as a particular subdivision of the discussion or conclusion.

Animal Welfare Journal is indexed inter alia in the databases CAB Abstracts, EMBASE, SciSearch, and Zoological Record, as well as covered by the meta-databases PubMed and Scopus.

Accessed: September 19, 2012

### ILAR Journal

**Corporate body**
Institute for Laboratory Animal Research

**Address of publisher**
The National Academies
500 Fifth Street, NW
Washington, DC 20001
USA
Tel: +1 - 202 334 2590
Fax: +1 - 202 334 1687
Email: ILARJ@nas.edu

**Access**
http://dels.nas.edu/global/ilar/ilar-journal

**Language**
English

**ISSN**
0018-9960 - 1084-2020

**Publication date**

**Journal Frequency**
Four times per annum

**Features for the 3Rs**
ILAR and the ILAR journal want to tie up high-quality science and humane care and use of research animals based upon the 3Rs principle and high ethical standards.

The ILAR journal chiefly provides reviews on issues related to the scientific, technological, and ethical use of animals, and related biological resources in research, testing, and education.

The ILAR journal is indexed inter alia in the databases AGRICOLA, EMBASE, MEDLINE as well as covered by meta-databases PubMed, Scopus and Web of Science.

Available from: [http://dels.nas.edu/global/ilar/ilar-journal](http://dels.nas.edu/global/ilar/ilar-journal)
Accessed: September 20, 2012
Journal of Animal Science, JAS

Corporate body: American Society of Animal Science, ASAS
Address of publisher: American Society of Animal Science
P.O. Box 7410
Champaign IL 61822
Tel: +1 - 217 356 9050
Fax: +1 - 217 215 0420
Email: asas@asas.org
http://www.journalofanimalscience.org
http://www.asas.org
http://www.asas.org/
Access: www.journalofanimalscience.org
Language: English
ISSN: Print: 0021-8812
Online: 1525-3163
Publication date: 1910
Journal Frequency: Monthly
Features for the 3Rs: The mission of the American Society of Animal Science (ASAS) is to discover, disseminate and apply knowledge for sustainable use of animals for food and other human needs. Articles published in JAS cover a broad range of research topics in animal production and fundamental aspects of genetics, nutrition, physiology, and preparation and utilization of animal products. The journal focuses on research with beef cattle, companion animals, goats, horses, pigs, and sheep. Nevertheless, studies involve other farm animals, aquatic and wildlife species, and laboratory animal species that address fundamental questions related to livestock and companion animal biology. The JAS is indexed inter alia in the databases AGRICOLA, BIOSIS Previews, Cab Abstracts, and MEDLINE as well as covered by the meta-databases PubMed, Scopus and Web of Science.

Journal of Applied Animal Welfare Science, JAAWS

Corporate body: Animals and Society Institute, ASI and the American Society for the Prevention of Cruelty to Animals, ASPCA
Address of publisher: Taylor & Francis Group Ltd
2 Park Square, Milton Park, Abingdon, Oxford, OX14 4RN - United Kingdom
Tel: +44 - 20 7017 6000
Fax: +44 - 20 7017 6699
http://www.taylorandfrancis.com/
Language: English
ISSN: Print: 1088-8705
Online: 1532-7604
Publication date: 1998
Journal Frequency: Four times per annum
Features for the 3Rs: The Journal of Applied Animal Welfare Science covers welfare issues arising in laboratory, farm, companion animal, and wildlife/zoo settings. Besides reports on scientific experiments regarding applied animal welfare science, JAAWS also publishes feature articles, conceptual or theoretical analysis, literature reviews, and conference reports. The authors are encouraged to discuss the animal welfare implications of findings, including ethical issues raised by the implementation of the study and their resolution. The articles are accompanied by invited commentaries that critically discuss the contribution - particularly with regard to its implications for animal welfare. The Journal of Applied Animal Welfare Science is indexed inter alia in the databases BIOSIS Previews, CAB Abstracts, EMBASE, MEDLINE, and SciSearch as well as covered by the meta-databases Scopus and Web of Science.

Available from: http://www.journalofanimalscience.org
Accessed: September 20, 2012

Available from: http://www.animalsandsociety.org/main/
Accessed: September 20, 2012
Lab Animal

Corporate body: Nature Publishing Group (NPG)
Address of publisher: The Macmillan Building, 4 Crinan Street, London N1 9XW, United Kingdom
Tel: + 44 - 20 7833 4000
Fax: + 44 - 20 7843 4640
Email: info@labanimal.com
Language: English
ISSN: Print: 0093-7375
Online: 1548-4475
Publication date: 1982
Journal Frequency: Monthly
Features for the 3Rs: Lab Animal intends to bring its readers the most current and relevant information about humane and efficient care of animals. Lab Animal is a forum for the publication of articles on all aspects of laboratory animal science, including animal care and husbandry, disease diagnosis and treatment; facility planning, design, and management; staff training and education; and updates and information on regulations. The journal compiles original research and technical articles, reviews and product applications. The journal is indexed inter alia in the databases AGRICOLA and MEDLINE as well as covered by the meta-databases PubMed, Scopus, and Web of Science.

Accessed: September 27, 2012

Laboratory Animals

Corporate body: Laboratory Animals Ltd.
Address of publisher: Royal Society of Medicine Press Ltd, Dulcie Watanabe RSM Press, 1 Wimpole Street, London W1G 0AE, United Kingdom
Tel: +44 - 20 7290 2927
Email: dulcie.watanabe@rsm.ac.uk
Access: http://lan.sagepub.com/
Language: English
ISSN: Print: 0023-6772
Online: 1758-1117
Publication date: 1967
Journal Frequency: Four times per annum
Features for the 3Rs: Laboratory Animals publishes peer-reviewed original papers and reviews on all aspects of the use of animals in biomedical research. Laboratory Animals emphasizes research that reduces the number of animals used or replaces animal models with in vitro alternatives, leading to improvements in the well-being of the animals. Laboratory Animals is indexed inter alia in the databases CAB Abstracts, EMBASE, and MEDLINE as well as covered by the meta-databases PubMed, Scopus, and Web of Science.

Available from: http://lan.sagepub.com/
Accessed: September 27, 2012
Toxicology in Vitro

Corporate body: European Society of Toxicology in Vitro, ESTIV

Address of publisher: Elsevier B.V. Customer Service Department
P.O. Box 211
1000 AE Amsterdam - The Netherlands
Tel: + 31 - 20 485 3757
Fax: + 31 - 20 485 3432
Email: nlinfo-f@elsevier.com


Language: English

ISSN: Print, 0887-2333
Online: 1879-3177

Publication date: 1987

Journal Frequency: Eight times per annum

Features for the 3Rs: Toxicology in Vitro is a resource for original research papers and reviews about in vitro methods for assessing or predicting the toxic effects of substances, e.g. in the areas of food components cosmetics, pharmaceuticals, pesticides, and industrial chemicals. Techniques include cell and tissue models, subcellular fractions and also in silico modelling. Main focus is on investigations that involve the development and validation of new methods.

Toxicology in Vitro is indexed inter alia in the databases BIOSIS Previews, EMBASE, MEDLINE, ScienceDirect, SciSearch as well as covered by the meta-databases PubMed and Scopus.

Accessed: November 6, 2012
• This Section initially provides information on KEY BIBLIOGRAPHIC AND ADDED-VALUE DATABASES in life sciences relevant to the TOPIC OF THE 3Rs.

• Databases are classified according to their content into bibliographic databases and added-value databases.

• BIBLIOGRAPHIC DATABASES contain literature references on articles in professional journals, conference reports, research reports, books, newspaper articles and dissertations, etc. In general, bibliographic information on the title, author, publication year, and the abstract are recorded. A distinctive feature of bibliographic literature databases (e.g. MEDLINE or BIOSIS) is that their records are indexed using terms from a controlled vocabulary, the thesaurus.

• ADDED-VALUE DATABASES (e.g. DB-ALM of EURL ECVAM, AnimALT-ZEBET, and NORINA) provide by experts written, concise summaries of original documents based on systematic and comprehensive literature reviews. A controlled terminology is used for data retrieval procedures. Added-value databases contain ready-to-use information.
**AGRICultural OnLine Access, AGRICOLA**

**Producer**
National Agricultural Library, NAL
U.S. Department of Agriculture, USDA

**Address**
National Agricultural Library, NAL
U.S. Department of Agriculture, USDA
10301 Baltimore Avenue Beltsville,
MD 20705 - USA
Tel: + 1 - 301 504 5755
Fax: + 1 - 301 504 6110

**Access**
http://agricola.nal.usda.gov
AGRICOLA is hosted by ProQuest Dialog™ and STN.

**Type**
Bibliographic database

**Language**
English

**Fees**
Free of charge

**Updates**
Daily

**Subject Coverage**
Agriculture, biotechnology, food and nutrition, microbiology, veterinary medicine, environmental sciences

**Content**
File Size
1970 to the present more than 4.6 million records

**Sources**
Journal articles, conference proceedings, books, book chapters, monographs, theses, patents, computer files, maps, audiovisual materials, technical reports

**Features for the 3Rs**
AGRICOLA indexes publications that address alternatives to animal experiments and other areas of animal welfare, e.g. farm animals. The database covers several 3Rs relevant journals, e.g. ILAR Journal, Journal of Animal Science, and Lab Animals. The NAL Agricultural Thesaurus (NALT) includes 3Rs relevant terms: animal welfare, animal use alternatives, animal use reduction, animal use refinement, and animal use replacement, see section Search Terms and their Use. The NALT (http://agclass.nal.usda.gov/agt/agt.shtml) is used as a supplement to the CAB Thesaurus, which is the original AGRICOLA indexing system.

**Available from:** http://agricola.nal.usda.gov/help/aboutagricola.html
**Accessed:** July 31, 2012

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**International Information System for the Agricultural Sciences and Technology, AGRIS**

**Producer**
Food and Agriculture Organization of the United Nations, FAO

**Address**
Food and Agriculture Organization of the United Nations, FAO
FAO Headquarters
Viale delle Terme di Caracalla
00153 Rome - Italy
Tel: +39 - 06 570 51
Fax: +39 - 06 570 53152
Email: FAO-HQ@fao.org    http://www.fao.org/

**Access**
http://agris.fao.org

**Type**
Bibliographic database

**Language**
English

**Fees**
Free of charge

**Updates**
Monthly

**Subject Coverage**
Agriculture, veterinary medicine, animal welfare, forestry, fisheries, environment, nutrition, food science

**Content**
File Size
1975 to the present more than 3 Million records

**Sources**
Journal articles, books, book chapters, reports, conference proceedings, academic papers

**Features for the 3Rs**
AGRIS is a cooperative international information system in which, currently, 240 national, international and intergovernmental centres participate. AGRIS provides access to a large collection of world literature covering all aspects of agricultural sciences and technology, including “gray literature” which is not available through normal publication and distribution channels. AGROVOC, the multilingual agricultural thesaurus of AGRIS contains the 3Rs relevant term “animal testing alternatives”. However, the term is listed without higher-ranking term relation. The terms animal welfare, laboratory experimentation, laboratory animals, and experimentation are listed in AGROVOC as related terms for non-hierarchical relationships to Animal Testing Alternatives.

**Available from:** http://agris.fao.org
**Accessed:** August 1, 2012
Bibliography on Alternatives to the Use of Live Vertebrates in Biomedical Research and Testing, ALTBIB

**Producer**
Specialized Information Services (SIS) of the National Library of Medicine, NLM

**Address**
Specialized Information Services
Two Democracy Plaza, Suite 510
6707 Democracy Boulevard, MSC 5467
Bethesda, MD 20892-5467
USA
Tel: + 1 - 301 496 1131
Fax: + 1 - 301 480 3537
Email: tehip@teh.nlm.nih.gov

**Access**

**Type**
Bibliographic database

**Language**
English

**Fees**
Free of charge

**Updates**
Updated up to 2000

**Subject Coverage**
Alternatives to animal testing in biomedical research and toxicology testing

**Content**
File Size
1980 to 2000 more than 8,000 records

**Sources**
Journal articles, books, book chapters, technical reports

**Features for the 3Rs**
ALTBIB (up to 2000) can be searched with user-specific search terms or for one of 15 pre-selected topics. Since 2001, the ALTBIB search interface has offered the “ALTBIB Search Strategy Filter” to assist with searches conducted in PubMed. This strategy filter is tailored to retrieve alternatives including the latest citations. Search queries can be limited to yield only documents that are assigned to the MeSH term “animal use alternatives”.

Accessed: August 2, 2012

AnimAlt-ZEBET Database on Alternatives to Animal Experiments

**Producer**
Centre for Documentation and Evaluation of Alternatives to Animal Experiments (ZEBET) of the Federal Institute for Risk Assessment, BfR

**Address**
Federal Institute for Risk Assessment, BfR
Centre for Documentation and Evaluation of Alternatives to Animal Experiments, ZEBET
Max-Dohrn-Straße 8-10
10589 Berlin – Germany
Tel: + 49 - 30 18412 2271
Fax: + 49 - 30 18412 2958
Email: zebet@bfr.bund.de
http://www.bfr.bund.de

**Access**
http://www.bfr.bund.de/en/zebet_database_on_alternatives_to_animal_experiments_on_the_internet__animalt_zebet_-1508.html

**Type**
Added-value database

**Language**
English

**Fees**
Free of charge

**Updates**
Continuously

**Subject Coverage**
Alternatives to animal testing in biomedicine and related fields

**Content**
File Size
2000 to the present 149 records

**Sources**
Journal articles, books, book chapters, conference proceedings, directions, theses, guidelines, laws, pharmacopoea, regulations, recommendations, reports, standards

**Features for the 3Rs**
AnimAlt-ZEBET provides reports on suitable alternative methods. The reports contain a scientifically evaluation of the alternative methods by ZEBET’s experts with regard to their contribution to the 3Rs principle. Only those methods are documented which fulfil at least one of the 3Rs. Moreover, the state of development and the scientific or regulatory acceptance of the respective alternative method is assessed and documented. Each AnimAlt-ZEBET document is characterized by specific index terms which correspond to those of MeSH (see section General Considerations). Thus, each document is indexed using the terms “animal welfare”, “animal experiments”, and “animal testing alternative”, and “replacement”, “reduction”, or “refinement” according to the assessment of the method.

Accessed: August 3, 2012
### BIOSIS Previews®

**Producer**  
Thomson Reuters

**Address**  
Thomson Reuters  
77 Hatton Garden, London EC1N 8JS  
United Kingdom  
Tel: + 44 - 20 7433 4000  
Fax: + 44 - 20 7433 4001  
http://ip-science.thomsonreuters.com/

**Access**  
http://thomsonreuters.com/biosis-previews/  
BIOSIS Previews® is hosted by ProQuest Dialog™, DIMDI, Thomson Web of Knowledge, Ovid, and STN.

**Type**  
Bibliographic database

**Language**  
English

**Fees**  
Fee-based

**Updates**  
Weekly

**Subject Coverage**  
Biology, biochemistry, biotechnology, botany, medicine, pharmacology, toxicology, environmental sciences, zoology, agriculture, veterinary science

**Content**  
File Size  
1926 to the present more than 21,9 million records  
Sources  
Journal articles, serials, proceedings of meetings, conferences, and symposia; reports, books, book chapters, U.S. patents, reviews

**Features for the 3Rs**  
BIOSIS Previews® offers information from many different life science disciplines. The database provides comprehensive access to literature in pre-clinical and experimental research, methods, and animal studies. It allows scientists expansive retrospective literature. BIOSIS Previews® covers several 3Rs relevant journals, e.g. Animal Welfare, Alternativen zu Tierexperimenten (ALTEX), Alternatives to Laboratory Animals (ATLA), ILAR Journal, Laboratory Animals, Journal of Animal Science, Journal of Applied Animal Welfare Science, and Toxicology in vitro.

**Available from:**  
http://thomsonreuters.com/biosis-previews/  
Accessed: August 6, 2012

### CAB Abstracts

**Producer**  
CAB Abstracts

**Address**  
CAB International  
Wallingford Oxon OX10 8DE  
United Kingdom  
Tel: + 44 - 1491 83 21 11  
Fax: + 44 - 1491 83 35 08  
Email: enquiries@cabi.org  
http://www.cabi.org

**Access**  
CAB Abstracts is hosted by ProQuest Dialog™, EBSCO.

**Type**  
Bibliographic database

**Language**  
English

**Fees**  
Fee-based

**Updates**  
Monthly

**Subject Coverage**  
Agriculture, veterinary medicine, environmental sciences, medicine, food and nutrition, leisure and tourism, microbiology and parasitology, plant sciences, forestry science, biotechnology

**Content**  
File Size  
1973 to present more than 6,9 Million records  
Sources  
Journal articles, serials, books, books chapters, conference proceedings and papers, dissertations, reports, patents, specially commissioned reviews, distribution maps, and expert descriptions

**Features for the 3Rs**  
Main branches of CAB Abstracts cover agriculture and veterinary medicine including animal welfare and laboratory animal science. CAB Abstracts provides access to the latest research in these fields. CAB Abstracts is indexing using the CAB Thesaurus (see section General Considerations). In 1990, the term “Animal Testing Alternatives” was added. The term is listed under the term “Experimental Design”. In addition, the records of CAB Abstracts are classified using a scheme of codes (CABICODE) that enables scientists to locate general subject categories for their searches. The category “LL040 Laboratory Animal Science” includes alternatives to the use of animals in laboratory testing and experimentation. CAB Abstracts covers 3Rs relevant journals, e.g. Journal of Animal Science, Journal of Applied Animal Welfare Science, and Laboratory Animals.

**Available from:**  
Accessed: August 9, 2012
## DATABASES

### Excerpta Medica Database, EMBASE

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<td></td>
<td>P.O. Box 211</td>
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<td>The Netherlands</td>
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<td></td>
<td>Fax: + 31 - 20 485 3432</td>
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<td></td>
<td>Email: <a href="mailto:nlembaseinfo@elsevier.com">nlembaseinfo@elsevier.com</a></td>
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<tr>
<td>Subject Coverage</td>
<td>Biomedicine, drug research, pharmacology, pharmaceutics, pharmacy, toxicology, medicine, basic biological research, health policy and management, occupational and environmental health, biomedical engineering and instrumentation</td>
</tr>
<tr>
<td>Content</td>
<td>File Size 1947 to the present more than 25,7 Million records</td>
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<tr>
<td>Features for the 3Rs</td>
<td>EMBASE provides users with a broad range of biomedical information with a strong coverage of drug and pharmaceutical research. The database indexes only biomedical articles of peer-reviewed journals. EMBASE covers 3Rs relevant journals like the Animal Welfare, Alternativen zu Tierversuchen (ALTEX), Alternatives to Laboratory Animals (ATLA), ILAR Journal, Laboratory Animals, and Toxicology in vitro. In 2002, the 3Rs relevant terms “animal testing alternatives”, “animal testing reduction”, “animal testing refinement”, and “animal testing replacement” were added to EMTREE, Elsevier’s Life Science thesaurus (see section General Considerations). Searching EMBASE can be combined with EMBASE Classic in one search. EMBASE Classic indexes almost 2 Million bibliographic records from between 1947 and 1973.</td>
</tr>
</tbody>
</table>

### EURL ECVAM DataBase service on ALternative Methods to animal experimentation, DB-ALM

<table>
<thead>
<tr>
<th>Producer</th>
<th>European Commission, Joint Research Centre, Institute for Health and Consumer Protection, EURL ECVAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>European Comission, Joint Research Centre, Institute for Health and Consumer Protection, EURL ECVAM European Union Reference Laboratory on Alternatives to Animal Testing</td>
</tr>
<tr>
<td></td>
<td>Via E.Fermi, 2749 – TP 281</td>
</tr>
<tr>
<td></td>
<td>Italy</td>
</tr>
<tr>
<td></td>
<td>Tel: + 39 - 0332 78 5570</td>
</tr>
<tr>
<td></td>
<td>Fax: + 39 - 0332 78 5845</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:dbalm-contact@jrc.ec.europa.eu">dbalm-contact@jrc.ec.europa.eu</a></td>
</tr>
<tr>
<td></td>
<td><a href="http://ec.europa.eu/dgs/jrc/index.cfm">http://ec.europa.eu/dgs/jrc/index.cfm</a></td>
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<td>Free of charge</td>
</tr>
<tr>
<td>Updates</td>
<td>Continuously</td>
</tr>
<tr>
<td>Subject Coverage</td>
<td>Alternative methods to animal experiments with focus on in vitro techniques for toxicology assessments</td>
</tr>
<tr>
<td>Content</td>
<td>File Size 1999 to the present 5 Topic Summary, 153 method summaries, 138 method protocols, 9231 test results, 80 evaluation and formal validation study summary records, 221 contact details on persons &amp; institutions and 6656 bibliographic references</td>
</tr>
<tr>
<td>Sources</td>
<td>Journal articles, individual contacts with scientists using the methods, congress proceedings, internet sites of International organisations, ECVAM study contracts, ECVAM workshop and task force reports.</td>
</tr>
<tr>
<td>Features for the 3Rs</td>
<td>The DB-ALM database provides ready-to-use information on alternative methods presented as expert written data-sheets. Method summaries thoroughly describe alternative and advanced mainly in vitro test methods of chemical compounds including information on their status of development, validation and/or regulatory acceptance based on extensive literature reviews. DB-ALM protocols provide detailed instructions on how to perform the method in the laboratory. Summary-records of evaluation and formal validation studies on alternative methods are also provided, with study performance according to internationally recognised principles indicated. DB-ALM search options provide user-guided search facilities on all data sectors as well as a free text search option. It is also possible to search for bibliographic citations that were selected for the definition of the data sheets, and for ECVAM workshop and task force reports.</td>
</tr>
</tbody>
</table>


Accessed: November 15, 2012

Available from: http://www.embase.com/info/

Accessed: August 20, 2012
HSVMA's Alternatives in Education Database

Producer: Humane Society Veterinary Medical Association, HSVMA
Address: Humane Society Veterinary Medical Association, HSVMA
2100 L Street, NW
Washington, DC 20037 - USA
Tel: 202-452-1100
Fax: 301-258-3078
Email: info@hsvma.org
http://www.hsvma.org

Access: http://alted.hsvma.org/
Type: Added-value database
Language: English
Fees: Free of charge
Updates: Continuously

Subject Coverage: Alternatives to the harming or killing of animals for educational reasons

Content: File Size
1990 to the present several thousand records

Sources
Film, projection slides, audio cassettes, DVD, cadaver, CD-ROM, computer programs, models

Features for the 3Rs
The HSVMA's Alternatives in Education Database provides information on alternatives to animal use for many levels of education. The search options allow to search for an alternative by species, medium, discipline, educational level or any combination of these categories. Each record includes a description and some information about the source of the product, i.e. manufacturer, supplier, or distributor.

Available from: http://alted.hsvma.org/
Accessed: September 3, 2012

Database on Refinement of Housing and Handling Conditions and Environmental Enrichment for Animals kept in Laboratories – Laboratory Animal Refinement Database, LAD

Producer: Animal Welfare Institute, AWI
Address: Animal Welfare Institute, AWI
900 Pennsylvania Ave., SE
Washington, DC 20003 - USA
Tel: +1 - 202 337 2332
Fax: +1 - 202 446 2131
Email: awi@awionline.org
http://www.awionline.org

Access: https://awionline.org/content/refinement-for-animals-kept-in-labs-database
Type: Bibliographic database
Language: English
Fees: Free of charge
Updates: Last update July 2012

Subject Coverage: Laboratory animal science, animal welfare

Content: File Size
Up to the present more than thousand records

Sources
Journal articles, abstracts, book chapters, books

Features for the 3Rs
LAD provides information on environmental enrichment and refinement of housing and handling condition of rodents, rabbits, cats, dogs, ferrets, farm animals, horses, birds, fishes, amphibians and reptiles.
LAD records are grouped with the help of a specific keyword index for the topic of refinement of animal experiments, e.g. ethical issues, cage size, or aggression reduction. Most records are evaluated by scientists to guarantee relevance to the topic. Records of LAD are combined with records of the Primate Enrichment Database (PED) in the database named "Refinement and Enrichment for All Animals kept in Laboratories", see http://labanimals.awionline.org/SearchResultsSite/enrich.aspx

Available from: https://awionline.org/content/refinement-for-animals-kept-in-labs-database
Medical Literature Analysis and Retrieval System Online, MEDLINE

**Producer**
U.S. National Library of Medicine, NLM of the National Institutes of Health, NIH

**Address**
U.S. National Library of Medicine, NLM 8600 Rockville Pike Bethesda, MD 20894 - USA
Tel: +1 - 301 594 5983
Fax: +1 - 301 402 1384
Email: custserv@nlm.nih.gov

**Access**
MEDLINE is hosted by ProQuest Dialog™, DIMDI, and STN.

**Type**
Bibliographic database

**Language**
English

**Fees**
Free of charge

**Updates**
Daily

**Subject Coverage**
Biomedicine, psychology, environmental and public health, molecular biology, and complementary medicine, bioethics, pharmacology, veterinary medicine

**Content**
File Size
1946 to the present more than 21 Million records

**Sources**
Journal articles

**Features for the 3Rs**
MEDLINE records are indexed with Medical Subject Headings (MeSH®), the U.S. National Library of Medicine’s controlled vocabulary. From 1985 till 2000 the 3Rs relevant term “animal testing alternatives” was used to index publication according to the 3Rs. Since 2000 the term “animal use alternatives” is used by the NLM, see section Search Terms and their Use. In addition, the MeSH includes the term “animal welfare.”
Selection of journals indexed by MEDLINE is based on the evaluation and recommendation of an NIH-chartered advisory committee of external experts. MEDLINE covers 3Rs relevant journals, e.g. alternatives to Tierexperimenten (ALTEx), Alternatives to Laboratory Animals (ATLA), ILAR Journal, Journal of Animal Science, Journal of Applied Animal Welfare Science, Lab Animal, Laboratory Animals, and Toxicology in vitro.

A Norwegian Inventory of Alternatives, NORINA

**Producer**
Norwegian School of Veterinary Science Laboratory Animal Unit, Senior Consultant Karina Smith

**Address**
Norwegian School of Veterinary Science Laboratory Animal Unit P.O. Box 8146 Dep. N-0033 Oslo - Norway
Tel: + 47 - 22 96 45 74/75
Fax: + 47 - 22 96 45 35
E-mail: labanimal@veths.no
http://oslovet.veths.no

**Access**
http://oslovet.veths.no/fag.aspx?fag=57&mnu=databases_1

**Type**
Added-value database

**Language**
English

**Fees**
Free of charge

**Updates**
Weekly

**Subject Coverage**
Alternatives or supplements to the use of animals in teaching and training in biomedicine

**Content**
File Size
1991 to the present more than 3,900 records

**Sources**
Video films, computer programs, computer simulations, books, three-dimensional models, chart, diagrams, web pages, slide series

**Features for the 3Rs**
NORINA contains information on products that may be used as alternatives or supplements to the use of animals in teaching and training, including dissection alternatives, at all levels from junior school to University. NORINA records are organised into more than 30 different types of alternatives in the database, e.g. three-dimensional models or interactive CD-ROMs. Additionally, each product has been assigned to one or more of over 30 subject categories, such as pharmacology or surgery. The records include links to the product suppliers’ websites and - if available - email addresses of the product creators.

The information in NORINA is complemented by the TextBase database. TextBase contains information on more than 1,500 textbooks within the field of laboratory animal science.

Available from:
http://oslovet.veths.no/fag.aspx?fag=57&mnu=databases_1
Accessed: September 10, 2012

Available from:
Accessed: September 6, 2012
### Environmental Enrichment for Primates - Primate Enrichment Database, PED

<table>
<thead>
<tr>
<th>Producer</th>
<th>Animal Welfare Institute, AWI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Animal Welfare Institute, AWI 900 Pennsylvania Ave., SE Washington, DC 20003 USA</td>
</tr>
<tr>
<td>Tel</td>
<td>+1 – 202 337 2332</td>
</tr>
<tr>
<td>Fax</td>
<td>+1 - 202 446 2131</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:awi@awionline.org">awi@awionline.org</a></td>
</tr>
<tr>
<td>URL</td>
<td><a href="http://www.awionline.org">http://www.awionline.org</a></td>
</tr>
<tr>
<td>Access</td>
<td><a href="https://awionline.org/content/primate-enrichment-database">https://awionline.org/content/primate-enrichment-database</a></td>
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<td>Free of charge</td>
</tr>
<tr>
<td>Updates</td>
<td>Last update July 2012</td>
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</tbody>
</table>

**Subject Coverage**
- Laboratory animal science, animal welfare

**File Size**
- Up to the present several hundreds of records

**Sources**
- Journal articles, abstracts, book chapters, books, published photographs, slide sets, videotapes, web sites

**Features for the 3Rs**
- PED provides information on environmental enrichment and refinement of housing and handling condition of nonhuman primates. PED records are grouped with the help of a specific keyword index for the topic of refinement, e.g. ethical issues, abnormal behavior, anesthesia and sedation. Most records are evaluated by scientists to guarantee relevance to the topic. Records of PED are combined with records of the Laboratory Animal Refinement Database, LAD, in the database named “Refinement and Enrichment for All Animals kept in Laboratories”, see http://labanimals.awionline.org/SearchResultsSite/laball.aspx

### ScienceDirect

<table>
<thead>
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<th>Producer</th>
<th>Elsevier B.V.</th>
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</thead>
<tbody>
<tr>
<td>Address</td>
<td>Elsevier B.V. Radarweg 29 1043 NX Amsterdam The Netherlands Tel: +31 20 485 3767 Fax: +31 20 485 3739 <a href="http://www.info.sciverse.com/contact">http://www.info.sciverse.com/contact</a></td>
</tr>
<tr>
<td>Access</td>
<td><a href="http://www.sciencedirect.com/">http://www.sciencedirect.com/</a></td>
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<td>Fee-based</td>
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<td>Updates</td>
<td>Daily</td>
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</table>

**Subject Coverage**
- Physical sciences and engineering, life science including agricultural, biochemistry, biology, medicine, pharmacology, toxicology, pharmaceutical science, health science, social science and humanities

**File Size**
- 1823 to the present more than 10 Million records

**Sources**
- Journal articles, book and books chapters

**Features for the 3Rs**
- ScienceDirect allows broad-based, comprehensive, and multidisciplinary searches. ScienceDirect database covers high-impact factor journals such as THE LANCET and Cell. Elsevier “Articles in Press” are available online shortly after accepted for publication, before appearance in print. ScienceDirect provides full text search capabilities; its web environment presents information based on semantic technologies. ScienceDirect provides access to 3Rs relevant journals, e.g. Toxicology in vitro and 3Rs relevant books including e-books, e.g. Anesthesia and Analgesia in Laboratory Animals (Second Edition), Edited by: Richard E. Fish, Marilyn J. Brown, Peggy J. Danneman and Alicia Z. Karas, 2008, Elsevier Inc. ScienceDirect is part of Elsevier's SciVerse (http://www.SciVerse.com), a platform that integrates ScienceDirect, Scopus, SciTopics and targeted Web content.

Available from: https://awionline.org/content/primate-enrichment-database
Accessed: September 14, 2012

Available from: http://www.sciencedirect.com/
Accessed: September 12, 2012
SciSearch®

Producer: Thomson Reuters

Address: Thomson Reuters
77 Hatton Garden
London EC1N 8JS - United Kingdom
Tel: + 44 - 20 7433 4000
Fax: + 44 - 20 7433 4001
http://ip-science.thomsonreuters.com/

Access: http://thomsonreuters.com/science-citation-index-expanded/
SciSearch® is available through Web of Science®. SciSearch® is hosted by ProQuest Dialog™, DIMDI, and STN

Type: Bibliographic database

Language: English

Fees: Fee-based

Updates: Weekly

Subject Coverage: Applied sciences and technology, biomedicine, physical science, agriculture, biology, medicine, environmental sciences

Content: File Size
1974 to the present more than 33,4 Million records

Sources
Journal articles

Features for the 3Rs: SciSearch® allows broad-based, comprehensive, and multidisciplinary searches including searching of cited references. SciSearch® contains all records of Science Citation Index Expanded™. Selection of journals is based on evaluation of publishing standards, editorial content, and citation data. SciSearch® covers 3Rs relevant journals, e.g. Animal Welfare Journal, Alternativen zu Tierexperimenten (ALTEX), Alternatives to Laboratory Animals (ATLA), and Journal of Applied Animal Welfare Science.

Available from: http://thomsonreuters.com/science-citation-index-expanded/
Accessed: September 11, 2012
• This Section describes key META-DATABASES in life sciences that COVER 3Rs RELEVANT DATABASES AND JOURNALS.

• Meta-databases COMBINE DIFFERENT COLLECTIONS OF INFORMATION, e.g. bibliographic databases, patent databases, and web pages, on one search platform.

• Due to their heterogeneity records of meta-databases may not be indexed with terms of a single controlled vocabulary or thesaurus. Usually the index terms used in the original databases are preserved.
### PubMed®: MEDLINE® Retrieval on the World Wide Web

<table>
<thead>
<tr>
<th><strong>Producer</strong></th>
<th>National Center for Biotechnology Information (NCBI), at the U.S. National Library of Medicine (NLM), located at the National Institutes of Health (NIH)</th>
</tr>
</thead>
</table>
| **Address** | National Center for Biotechnology Information  
National Library of Medicine  
Building 38A  
Bethesda, MD 20894 - USA  
Tel: + 1 - 301 496 2475  
Email: custserv@nlm.nih.gov |
| **Type** | Meta-Database |
| **Language** | English |
| **Fees** | Free of charge |
| **Updates** | Daily |

**Subject Coverage**: Life sciences, biomedicine, physical sciences

**Content**: File Size up to the present more than 21 million records

**Sources**: MEDLINE citations, OLDMEDLINE citations, life science journals that submit full text to the free digital archive PubMedCentral, physics journals, in-progress citations before it is indexed and added to MEDLINE, citations to author manuscripts of articles published by NIH-funded researchers. However, MeSH indexing is not available for all the PubMed Sources.

**Features for the 3Rs**: PubMed search engine, the ‘Entrez’ retrieval system allows simultaneously searching in citations from MEDLINE and additional life sciences journals, e.g. in progress citation and open access journals. Searching PubMed includes journals relevant to the topic of the 3Rs, e.g. ALTEX, ATLA, Animal Welfare Journal, In vitro Toxicology-Journal of Molecular and Cellular Toxicology, Journal of Animal Science, Journal of Applied Animal Welfare Science, Lab Animal, Laboratory Animals, and Toxicology in vitro. PubMed provides additional services, e.g. access to other molecular biology databases, clinical queries, searching with the MeSH Database and special queries search filters.

Accessed: July 30, 2012

### Scopus

<table>
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<th><strong>Producer</strong></th>
<th>Elsevier B. V.</th>
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| **Address** | Elsevier B. V.  
E-Helpdesk  
P.O. Box 211  
1000 AE Amsterdam The Netherlands  
Tel: + 31 - 20 485 3767  
Fax: +31 20 485 3432  
Email: nlinfo@scopus.com |
| **Access** | http://www.info.sciverse.com/scopus |
| **Type** | Meta-Database |
| **Language** | English, French |
| **Fees** | Fee-based |
| **Updates** | Daily |

**Subject Coverage**: Life sciences, biomedicine, physical sciences, social sciences

**Content**: File Size up to the present more than 47 million records, 355 million scientific web pages, 24 million patents, multiple selected web sources

**Sources**: Peer-reviewed journals, open access journals, conference proceedings, book series, patents, scientific web pages, selected web sources, e.g. digital archives

**Features for the 3Rs**: Searching in Scopus includes scientific, medical, technical and social science literature. Scopus is characterized by a broad global journal coverage including non-English titles as long as English abstracts are provided. Scopus has a 100% overlap with MEDLINE and EMBASE source titles, and a 65% overlap with BIOSIS source titles. 3Rs relevant journals are searched on Scopus search platform, e.g. ALTEX, ATLA, Animal Welfare Journal, In vitro Toxicology-Journal of Molecular and Cellular Toxicology, Journal of Animal Science, Journal of Applied Animal Welfare Science, Lab Animal, Laboratory Animals, and Toxicology in vitro. Scirus, the Web search engine is integrated into the Scopus interface. It offers access to pre-print servers, patents and institutional archives. Scopus is part of Elsevier’s SciVerse (http://www.SciVerse.com), a platform that integrates ScienceDirect, Scopus, SciTopics and targeted Web content.

Available from: http://www.info.sciverse.com/scopus  
Accessed: July 31, 2012
<table>
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<tr>
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<th>Data Sheets</th>
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**Web of Science**

**Producer**  
Thomson Reuters

**Address**  
Thomson Reuters  
77 Hatton Garden, London  
EC1N 8JS - United Kingdom  
Tel: +44 - 20 7433 4000  
Fax: +44 - 20 7433 4001

**Access**  
http://thomsonreuters.com/products_services/science/science_products/a-z/web_of_science/  
Web of Science® is available on ISI Web of Knowledge.  
http://isiwebofknowledge.com

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<td>Updates</td>
<td>Weekly</td>
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**Subject Coverage**  
Life sciences, biomedicine, physical sciences, social sciences, arts, and humanities

**Content**  
File Size  
up to the present more than 46 million records

**Sources**  
Web of Science® provides access to six databases: Science Citation Index Expanded™ (1900-present), Social Sciences Citation Index® (1956-present), Arts & Humanities Citation Index® (1975-present), Conference Proceedings Citation Index™ (1990-present), Index Chemicus® (1993-present), Current Chemical Reactions® (1986-present), and archives from the National Industrial Property Institute (1840 to 1985).

**Features for the 3Rs**  
Web of Science® offers access to current and retrospective multidisciplinary information from high impact research journals with worldwide coverage. Through the service Century of Science users can access multidisciplinary scientific content back to 1900. The two chemistry databases allow locating chemical compounds and reactions.  
Web of Science® searching covers 3Rs relevant journals, e.g. ALTEX, ATLA, ILAR Journal, and Journal of Animal Science.  
Web of Science® is available on ISI Web of Knowledge, the fee-based search platform of Thomson Reuters. ISI Web of Knowledge integrates several databases, e.g. Web of Science, Current Content Connect, BIOSIS Previews, CAB Abstracts®, MEDLINE®, and Journal Citation Reports®.

**Available from:**  
http://thomsonreuters.com/products_services/science/science_products/a-z/web_of_science/  
**Accessed:** August 1, 2012
• This Section provides information on key database hosts in life sciences that cover 3Rs relevant databases.

• Database Hosts provide access to a multitude of databases from different providers.

• "Hosted by" means the place where databases are offered including services, e.g. multi-database searching, search tutorial for new information searchers, and alert services.

• Database Hosts have offered their services for scientists since the early 1970’s. They pre-date the distribution of information via the World Wide Web – which only started in 1993.
German Institute of Medical Documentation and Information, DIMDI

**Producer**
German Institute of Medical Documentation and Information, DIMDI

**Address**
German Institute of Medical Documentation and Information, DIMDI
Waisenhausgasse 36-38a
50676 Cologne
Germany
Tel: + 49 - 221 4724 1
Fax: + 49 - 221 4724 444

**Access**

**Type**
Database Host

**Language**
German, English

**Fees**
Free of charge and fee-based service, which vary by the database being searched, plus search and retrieval costs

**Subject Coverage**
Medicine, pharmacology, toxicology, biotechnology, genetic engineering, medical devices, veterinary medicine, health technology assessment

**Content**
Access to over 60 databases includes free of charge and fee based databases.

**Features for the 3Rs**
DIMDI provides comprehensive access to information on medicine and related fields. DIMDI implements especially information systems concerning health legislation. Information sources searched by DIMDI include 3Rs relevant databases, e.g., AnimAlt-ZEBET, BIOSIS Previews, CAB Abstracts, EMBASE, MEDLINE, and SciSearch.

Accessed: August 6, 2012

Ovid Technologies

**Producer**
Wolters Kluwer

**Address**
Ovid Technologies Inc.
Global Headquarter
333 Seventh Avenue
20th Floor
New York, NY 10001
USA
Tel: +1 - 646 674 6300
Fax: +1 - 646 674 6301
E-mail: sales@ovid.com

**Access**
http://www.ovid.com/site/index.jsp

**Type**
Database Host

**Language**
English

**Fees**
Fee-based service, which varies by the database being searched, plus search and retrieval costs

**Subject Coverage**
Agriculture, biochemistry, biophysics, biology, behavioural chemistry, biomedicine, pharmacology, toxicology, veterinary medicine, zoology, technology, arts and literature

**Content**
Access to over 130 databases including free of charge and fee based databases.

**Features for the 3Rs**
Ovid provides a multidisciplinary coverage of natural sciences, biomedical research, technical information, arts and literature. Information sources searched by Ovid Technologies include 3Rs relevant bibliographic databases, e.g. Agricola, AGRIS, BIOSIS Previews, CAB Abstracts, EMBASE, and MEDLINE.

Available from: http://www.ovid.com/site/index.jsp
Accessed: August 6, 2012
ProQuest Dialog™

Producer: ProQuest Dialog™ is a product of Dialog®, a ProQuest company

Address: Corporate Headquarters
2250 Perimeter Park Drive
Suite 300
Morrisville, North Carolina 27560
USA
Tel: +1 919 804 6400
Fax: +1 919 804 6410

Access: http://www.dialog.com/proquestdialog/

Type: Database Host

Language: English

Fees: Fee-based service, which varies by the database being searched, plus search and retrieval costs

Subject Coverage: Biomedicine, pharmaceuticals, agriculture, chemicals, social science, government and regulations, energy and environment, technology, news and media, business and finance

Content: Access to over 900 databases including free of charge and fee based databases.

Features for the 3Rs: ProQuest Dialog™ provides a multidisciplinary coverage of business, technical and biomedical information. Information sources searched by ProQuest Dialog™ include 3Rs relevant bibliographic databases, e.g. BIOSIS Previews, CAB ABSTRACTS, EMBASE, MEDLINE, and Science Citation Index Expanded.

Available from: http://www.dialog.com/proquestdialog/
Accessed: August 3, 2012

The Scientific & Technical Information Network, STN International

Producer: The Scientific & Technical Information Network, STN International

Address: STN International Europe
Help Desk
Hermann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen
Germany
Tel: +49 7247 808 555
Fax: +49 7247 808 259
E-mail: helpdesk@fiz-karlsruhe.de

Access: http://www.stn-international.com/

Type: Database Host

Language: English

Fees: Fee-based service, which varies by the database being searched, plus search and retrieval costs

Subject Coverage: Chemistry, physics, materials science, mathematics, informatics, geosciences, medicine, nutrition science, biotechnology, agriculture, toxicology, and pharmacology

Content: Access to over 200 databases including free of charge and fee based databases.

Features for the 3Rs: STN International provides a multidisciplinary coverage of natural sciences, medicine, applied sciences, and patent information. The STN AnaVist interface offers a tool to analyze search results from scientific literature and patents. Information sources searched by STN International include 3Rs relevant bibliographic databases, e.g. AGRICOLA, BIOSIS, Previews, CAB Abstracts, EMBASE, MEDLINE, and SciSearch.

Available from: http://www.stn-international.com/
Accessed: August 6, 2012
• This Section provides details of key OA RESOURCES that provide ACCESS TO PUBLICATIONS RELEVANT TO THE TOPIC OF THE 3Rs.

• According to the “Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities” (2003) signed by leading academic organisations OA offers scientific information web-wide WITHOUT ANY FINANCIAL BARRIERS. (67)

• The COUNCIL OF THE EUROPEAN UNION recognises the strategic importance of current OA initiatives for Europe’s scientific development. (68) The European Research Council (ERC) requires that all peer-reviewed publications from ERC-funded research projects are made available through OA within 6 month after publication date. (69)

• The U.S. NATIONAL INSTITUTES OF HEALTH’S (NIH) PUBLIC ACCESS POLICY stipulates that full texts of the articles arising from NIH funds must be submitted to PubMed Central no later than 12 months after publication in a journal. (70)
## BioMed Central

**Producer**  BioMed Central Ltd. (part of Springer Science+Business Media)

**Address**  BioMed Central Ltd  
Floor 6  
236 Gray’s Inn Road  
London WC1X 8HB  
UK  
Tel: + 44 - 20 3192 2009  
Fax: + 44 - 20 3192 2010  
Email: info@biomedcentral.com

**Access**  http://www.biomedcentral.com/

**Subject Coverage**  Biochemistry, bioinformatics, biology, biotechnology, chemistry, ecology, education, ethics, genetics, immunology, medicine, microbiology, molecular biology, nutrition, public health, pharmacology, physiology, veterinary medicine, zoology

**Content**  2000 to the present 243 open access journals

**Features for the 3Rs**  **BioMed Central** has been launched in 2000 as an online publishing house providing free access to peer-reviewed original research articles. All BioMed Central journals are indexed by PubMed, Scopus, PubMed Central, Google, Google Scholar, and Scirus. BioMed Central journals are partially indexed by Web of Science and BIOSIS. BioMed Central also operates online research services, e.g. links to subject area websites, independent publishing platforms, a catalogue of Databases on the Web, and the Biology Image Library.

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## Directory of Open Access Journals, DOAJ

**Producer**  Lund University Libraries, Head Office

**Address**  Lund University Libraries  
Box 134  
SE-22100 Lund  
Sweden  
Tel: +46 46 222 00 00

**Access**  http://www.doaj.org

**Language**  English, Greek, French, Turkish

**Subject Coverage**  Agriculture, veterinary medicine, forestry, nutrition and food sciences, zoology, biology, genetics, microbiology, physiology, biochemistry, biotechnology, chemistry, health sciences, medicine, immunology, pharmacy, public health information science

**Content**  2003 to present over 8,009 journals and more than 871,048 articles respectively

**Features for the 3Rs**  DOAJ was launched in 2003 and is operated by Lund University Libraries (Sweden). DOAJ is a repository that covers free, full text, quality controlled scientific and scholarly journals. It aims to cover all scientific and scholarly subjects, and all languages.

Available from: [http://www.biomedcentral.com/](http://www.biomedcentral.com/)  
Accessed: August 7, 2012

Available from: [http://www.doaj.org](http://www.doaj.org)  
Accessed: August 7, 2012
HighWire Press®

**Producer**
Stanford University Libraries

**Address**
HighWire/Stanford University
1454 Page Mill Road
Palo Alto, CA 94304
USA
Fax: + 1 - 650 725 9335

**Access**
http://highwire.stanford.edu/

**Language**
English

**Subject Coverage**
Biology, agriculture, biochemistry, biophysics, ecology, genetics, immunology, microbiology, pharmacology, physiology, toxicology, veterinary science, humanities, medicine, physical sciences (chemistry, computer science, mathematics, physics), social sciences

**Content**
1995 to present 1,704 journals, reference works, books, and proceedings

**Features for the 3Rs**
HighWire Press® is a division of the Stanford University Libraries. It was launched in 1995. HighWire Press is a repository of free full-text life science articles. It hosts high impact, peer-reviewed journals and full text articles. HighWire Press offers open access literature in mainly English language. The portfolio includes e.g. Journal of Animal Science (all articles 12 months after publication), and Laboratory Animals (all articles 36 months after publication). HighWire Press offers searching in its repository separately as well as a cross-database search including PubMed.

Available from: http://highwire.stanford.edu/
Accessed: August 9, 2012

PubMed Central, PMC

**Producer**
National Center for Biotechnology Information (NCBI), at the U.S. National Library of Medicine (NLM), located at the National Institutes of Health (NIH)

**Address**
National Center for Biotechnology Information
National Library of Medicine
Building 38A
Bethesda, MD 20894
USA
Tel: + 1 - 301 496 2475
Email: pubmedcentral@nih.gov

**Access**
http://www.ncbi.nlm.nih.gov/pmc/

**Language**
English

**Subject Coverage**
Biology, biochemistry, bioinformatics, biotechnology, chemistry, ecology, education, epidemiology, ethics, genetics, immunology, medicine, public health, microbiology, molecular biology, nutrition, pharmacology, physiology, veterinary medicine, zoology

**Content**
2000 to present over 3,000 journals and more than two million articles respectively

**Features for the 3Rs**
PMC is a free digital archive of biomedical and life sciences full-text journal articles of the U.S. National Institutes of Health (NIH). PMC was launched in 2000. It is operated by NIH’s National Center for Biotechnology Information (NCBI). PMC archives, for example, all articles published through BioMed Central. In addition, PMC archives peer-reviewed manuscripts of scientists who received funding from the NIH. PMC currently offers open access literature mainly in English language. Most of the archived articles in PMC have a corresponding entry in PubMed, and PubMed includes links to full text articles of PMC. Nevertheless, since PMC includes materials outside the scope of PubMed, it is recommended by PMC to search PubMed and PMC separately. PMC and PubMed are searched in parallel using the search engine Entrez that is operated by NCBI.

Accessed: August 9, 2012
• This Section provides information on 3Rs ORGANISATIONS that provide website material of special interest to scientists, animal welfare officers, authorities and the public.

• Types of information available include RESEARCH GRANT PROGRAMS, E-LEARNING RESOURCES, SPECIAL ARCHIVES AND DATABASES, EVENTS CALENDARS, AND COMMUNICATION PLATFORMS.

• A large number of organisations devoted to the 3Rs principle provide informative websites to the public. Their websites constitute an INTEGRATED PART OF INFORMATION RESOURCES, which have to be considered to meet the information requirements of animal welfare regulations.
## 3R Research Foundation Switzerland

**Address**  
3R Research Foundation Switzerland  
P.O. Box 1372  
CH-3110 Münsingen  
Switzerland  
Tel: + 41 - 31 722 08 30  
Fax: + 41 - 31 721 70 80  
Email: secretary.3r@bluewin.ch

**Access**  
http://www.forschung3r.ch/

**Type**  
Joint organisation (governmental organisation, non-governmental organisation, academia and industry)

**Year of Foundation**  
1987

**Language**  
English, French, German

**Features for the 3Rs**

- **Research Funding**  
The 3R Foundation supports projects aimed at developing new methods or refining accepted methods according to the 3Rs. Call for grant applications, instructions for applicants, principal areas for financial support, guidelines for awarding research grants, and application forms are published on the 3R Foundation’s website.

- **Newsletter**  
The 3R Info Bulletins informs in English about research projects funded by the 3R Foundation.

**Available from:**  
http://www.forschung3r.ch/

**Accessed:** August 9, 2012

## Akademie für Tierschutz

**Address**  
Deutscher Tierschutzbund - Akademie für Tierschutz  
German Animal Welfare Federation - Animal Welfare Academy  
Spechtstr. 1  
D-85579 Neubiberg  
Germany  
Tel: + 49 - 89 600 291 0  
Fax: + 49 - 89 600 291 15

**Access**  
http://www.tierschutzakademie.de

**Type**  
Non-governmental organisation

**Year of Foundation**  
1986

**Language**  
German

**Features for the 3Rs**

- **Research & Validation**  
One of major working areas of the Animal Welfare Academy is the abolition of animal experiments. The Animal Welfare Academy initiates research projects in cooperation with universities and scientific institutions focused on the development of animal-free methods.

- **Documentation & Information**  
The Animal Welfare Academy publishes scientific articles, position papers, leaflets, statements, and reports in German and English language providing the scientific basics for political lobbying. Publications cover several aspects of animal welfare including animal experiments, alternative methods, documentation of information, animal experiments for cosmetics, primate experimentation, animal welfare legislation, housing of laboratory animals, ethics, and EU Chemicals Policy.

Free access to most of the publications is provided on the website. Scientific articles that are published in journals are compiled as references.

**Available from:**  
http://www.tierschutzakademie.de

**Accessed:** August 10, 2012
### AltTox.org

| Address                           | AltTox.org  
| Webmaster                        | The Humane Society of the United States  
| Webmaster                        | 2100 L Street, NW  
| Washington, DC 20037 USA        | Email: info@alttox.org |
| Type                             | Joint organisation (non-governmental organisation, and industry) |
| Year of Foundation               | 2007 |
| Language                         | English |

**Features for the 3Rs**

- **Documentation & Information**
  - AltTox.org is a website operated by the Humane Society of the United States in cooperation with the Procter & Gamble Company.
  - AltTox.org services are focused on online discussion and information exchange on potential replacements to toxicity testing in animals.
  - The Toxicity Testing Resource Center (TTRC) provides information on in vivo and in vitro approaches in toxicity testing, stakeholder programs and policies, validation and regulatory acceptance of testing methods, and relevant information resources.
  - Content of TTRC is cross-linked to relevant AltTox Forums.
  - Experts are invited to write Way Forward articles on how best to accelerate progress in developing, validating, and achieving regulatory acceptance of non-animal methods.

- **Communication**
  - The AltTox Forums provides interactive communication platforms that are moderated by an expert in the field. The AltTox Forums are grouped into the categories Toxicity Endpoints & Test, Emerging Technologies, Programs & Policies, and Overarching Challenges & Opportunities.

### Alternatives to Animal Testing Web Site, Altweb

| Address                           | The Johns Hopkins Center for Alternatives to Animal Testing, CAAT  
| Webmaster                        | Johns Hopkins University  
| Webmaster                        | Bloomberg School of Public Health  
| Webmaster                        | 615 N. Wolfe Street, W7032  
| Baltimore, MD 21218 USA          | Tel: +1 - 410 614 4990  
| Fax: +1 - 410 614 2871           | Email: altweb@jhsphs.edu |
| Access                           | [http://altweb.jhsphs.edu](http://altweb.jhsphs.edu) |
| Type                             | Academia |
| Year of Foundation               | 1997 |
| Language                         | English, Spanish |

**Features for the 3Rs**

- **Documentation & Information**
  - Altweb serves as a gateway to alternatives news, information, and resources on the Internet. Altweb’s Research Resources for researchers and technicians cover specific topics such as animal health and welfare, monoclonal antibodies, refinement, and transgenics.
  - In addition, Altweb provides access to special databases such as the Analgesia/Anesthesia Database, the Altweb Humane Endpoints Database, and the Altweb Pain Management Database.
  - The Search for Alternatives site assists researchers step-by-step with their literature searches, and introduces relevant databases.
  - 3Rs publications are grouped into journals, books, reports, articles & newsletters, and proceedings.
  - Altweb’s Education Resources site for students and teachers compiles information on and links to organizations, databases, and courses.

- **Newsletter**
  - Altweb News informs about global developments in the fields of alternatives.
### Animal Welfare Information Center, AWIC

**Address**
The Animal Welfare Information Center  
U.S. Department of Agriculture, USDA  
National Agricultural Library, NAL  
10301 Baltimore Avenue, Room 410  
Beltsville, MD 20705  
USA  
Tel: +1 - 301 504 6212  
Fax: +1 - 301 504 7125  
Email: awic@ars.usda.gov

**Access**
http://awic.nal.usda.gov

**Type**
Governmental organisation

**Year of Foundation**
1986

**Language**
English

**Features for the 3Rs**

#### Education
AWIC conducts workshops at the NAL and outside facilities for scientists and information providers on how to meet the information requirements of the Animal Welfare Act of the United States.

#### Documentation & Information
AWIC provides comprehensive information on research animals, government and professional resources, alternative methods, literature searching and databases, pain and distress, humane endpoints and euthanasia, publications, meetings, and organizations. The AWIC services include literature searching assistance.

**Newsletter**
The AWIC–Bulletin informs about the newest AWIC publications, upcoming conferences, legislative developments, and new information technology. It includes articles from animal welfare experts.

### The Johns Hopkins Center for Alternatives to Animal Testing, CAAT

**Address**
The Johns Hopkins Center for Alternatives to Animal Testing (CAAT)  
Bloomberg School of Public Health  
Department of Environmental Health Sciences  
615 N Wolfe Street, W7032  
Baltimore, MD 21205  
USA  
Tel: +1 - 410 614 4990  
Fax: +1 - 410 614 2871  
Email: caat@jhsph.edu

**Access**
http://caat.jhsph.edu

**Type**
Academia

**Year of Foundation**
1981

**Language**
English

**Features for the 3Rs**

#### Research Funding
CAAT's Research Grants Program supports research in the development of in vitro and other alternative techniques according to the 3Rs. Individual and program projects are tendered. A call for proposals, and the reproposal form are published on CAAT's website.

#### Education
CAAT's free online course “Enhancing Humane Science/Improving Animal Research” addresses topics in the practice of humane animal experimentation such as experimental design, humane endpoints, environment enrichment, and pain management. Specific programs and courses at the Johns Hopkins Bloomberg School of Public Health are announced; e.g. the CAAT Scholars Program Translational Toxicology Research and Training is offered for post-doctoral scientists.

#### Documentation & Information
The CAAT website sections “Publications” and “Media Center” offer free access to technical reports, proceedings from CAAT workshops and symposia, resources for middle school students and their teachers (CAAT-TALYST Online), and a variety of printed publications for the general public. CAAT manages the website AltWeb. CAAT-Europe is an affiliate of CAAT.

**Newsletter**
The CAAT Newsletter informs about alternatives, information resources, grant programs, and international news items.

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**Available from:** http://awic.nal.usda.gov  
**Accessed:** August 10, 2012

**Available from:** http://caat.jhsph.edu  
**Accessed:** August 10, 2012
Centre for Advanced Research & Development on Alternative Methods, CARDAM

**Address**

VITO-BIO
Industriezone Vlasmeer 7
B-2400 Mol
Belgium
Tel. + 32 14 33 51 07
Fax + 32 14 58 26 57

**Access**

http://www.cardam.eu

**Type**

Non-governmental organisation

**Year of Foundation**

2008

**Language**

English

**Features for the 3Rs**

**Research & Validation**

CARDAM is a Centre of Excellence offering expertise in research and development of new alternative methods, validation of alternative method, in vitro contract research and testing services, and consulting and education on alternative approaches. CARDAM focuses its activities on reduction and replacement of animal testing in the area of genotoxicity, ecotoxicology, eye irritation, mucosal tolerance, skin sensitization, skin irritation, respiratory toxicity, neurotoxicity, and teratogenicity testing. The CARDAM website section "Services & activities" provides information on research projects, validation projects, contract testing services, and consulting and education on alternative methods.

**Education**

The CARDAM website section "Consulting & Education" announces courses and training sessions on in vitro techniques, cellular systems, micro-array techniques, and test development.

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European Coalition to End Animal Experiments, ECEAE

**Address**

European Coalition to End Animal Experiments, ECEAE
16a Crane Grove
London, N7 8NN
United Kingdom
Tel: + 44 - 20 7700 4888
Fax: + 44 - 20 7700 0252
Email: info@eceae.org

**Access**

http://www.eceae.org

**Type**

Non-governmental organisation

**Year of Foundation**

1990

**Language**

English

**Features for the 3Rs**

**Documentation & Information**

ECEAE comprises animal protection societies from all over Europe. ECEAE's lobbying and campaigning activities are focused on the EU chemical policy REACH, cosmetics testing, animal experiments, the use of primates, genetic engineering, and alternatives to animal testing.

Free access to ECEAE reports, fact-sheets, and relevant EU documents is offered on the website.

**Newsletter**

Testing Times updates on animal testing issues in the European Union.

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Available from: http://www.cardam.eu
Accessed: August 14, 2012

Available from: http://www.eceae.org
Accessed: August 14, 2012
### European Partnership for Alternative Approaches to Animal Testing, EPAA

**Address**
European Partnership for Alternative Approaches to Animal Testing, EPAA
Avenue Paul Deschanel 36-38
B-1030 Brussels
Belgium
Email: entr-epaa@ec.europa.eu

**Access**
http://ec.europa.eu/enterprise/epaa/index_en.htm
http://www.epaa.eu.com

**Type**
Joint organisation (governmental organisation, industry)

**Year of Foundation**
2005

**Language**
English

**Features for the 3Rs**
- Documentation & Information
  - The EPAA is a joint initiative from the European Commission, European trade associations, and industry. EPAA’s main areas of activity cover:
    - Mapping and dissemination of information about in house methods and research programmes
    - Support to development of new alternative approaches and testing strategies
    - Removing barriers to validation and regulatory acceptance of 3Rs
    - Dialogue with regulators on 3Rs & testing requirements EPAA organises annual conferences and workshops. All EPAA documents, e.g. the action programme, minutes of meetings, workshop reports, proceedings of annual conferences, and progress reports are made accessible online on the EPAA website.

  In 2007, EPAA opened a database of alternative tests carried out by the industry which also includes EU, national and ongoing research projects on alternative approaches. Access to the database is provided on the EPAA website http://www.epaawg1.com; registration is requested.

- Newsletter
  - EPAA News informs about EPAA activities and achievements, meetings and workshops, new documents and publications.

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### European Consensus-Platform for Alternatives, ecopa

**Address**
European Consensus-Platform for Alternatives, ecopa
Av. Paul Deschanel 36-38
B-1030 Brussels
Belgium
Email: info@ecopa.eu

**Access**
http://www.ecopa.eu/

**Type**
Joint organisation (governmental organisation, non-governmental organisation, academia and industry)

**Year of Foundation**
2002

**Language**
English

**Features for the 3Rs**
- Documentation & Information
  - ecopa has been set up as a pan-european platform which links the different national platforms and stimulates the exchange of scientific information, expertise and experience between animal welfare, industry, academia and governmental institutions. ecopa initiates annual workshops and conferences. ecopa’s website provides free online access to the workshop proceedings, reports and articles, links to national membership platforms, legislations, and coming events.

- Newsletter
  - ecopa messenger informs online about the latest ecopa news and activities.

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Available from: http://www.ecopa.eu/
Accessed: August 14, 2012

European Society of Toxicology in Vitro, ESTIV

Address
European Society of Toxicology in Vitro, ESTIV
Dr. Alison Gray
ESTIV Secretary
Thor Personal Care SAS
147 Rue Irène Joliot-Curie
BP 90875 - La croix Saint Ouen
F-60208 Compiègne cedex
France
Email: secretariat@estiv.org
web@estiv.org

Access
http://www.estiv.org/

Type
Non-governmental organisation

Year of Foundation
1993

Language
English

Features for the 3Rs
Documenting & Information
ESTIV is dedicated to promote in vitro toxicology. ESTIV encourages exchange of information on in vitro toxicology and on alternatives to animal experimentation in all countries of Europe. Proceedings of ESTIV congresses (International Congresses on In Vitro Toxicology), are published in Toxicology in Vitro, the official journal of ESTIV. Proceedings of ESTIV meetings, e.g. INVITOX workshops, are published in Toxicology in Vitro, the official journal of ESTIV.

Newsletter
ESTIV Newsletter informs ESTIV members about current activities, research projects, news and meetings at European level in the field of the 3Rs. The electronic version is provided on the “members-only”-section of its website.

Communication
The ESTIV website offers a forum to discuss various aspects of in vitro toxicology. Registration is requested to enter a discussion.

EURO ECVAM-European Union Reference Laboratory for Alternatives to Animal Testing of the European Commission's Joint Research Centre

Address
European Commission, Joint Research Centre, Institute for Health and Consumer Protection, EURL ECVAM
Via E. Fermi, 2749 – TP 580
I-21027 Ispra (VA)
Tel: +39 0332 783820
Fax: +39 0332 786297
Email: JRC-ECVAM-CONTACT@ec.europa.eu

Access
http://ihcp.jrc.europa.eu/our_labs/eurl-ecvam;
http://tsar.jrc.europa.eu;

Type
Governmental organisation European Union

Year of Foundation
1991 (established in 1993)

Language
English (website content)

Features for the 3Rs
Research & Validation
The main objective of the EURL ECVAM is to promote the development and use of alternative methods including the areas of regulatory testing, basic and applied research. It initiates and coordinates test development and validation projects at the European Union level as well as promotes the dissemination of information on alternatives. The EURL ECVAM validates tests for specific purposes addressing the toxicity, efficacy or potency of substances, including chemicals, biologicals (e.g. vaccines, antibodies) and biomaterials. It provides general guidelines for submitting a test method proposal to the EURL ECVAM, for the purpose of evaluating its readiness to enter the EURL ECVAM validation process and a system for tracking progress of a test method submitted to the EURL ECVAM for validation towards its regulatory acceptance (TSAR).

Documentation & Information
The EURL ECVAM DataBase Service on Alternative Methods (DB-ALM) (see section on databases) provides comprehensive expert written descriptions of alternative methods and validation studies. Related information systems are furthermore made available from the EURL ECVAM website, such as the (Q)SAR Model Inventory (http://qsardb.jrc.europa.eu) providing expert evaluated robust summary records. ECVAM Workshops and special symposia that were organised to review the status of alternative tests, their potential use, and to identify the best way forward. All documents including the EURL ECVAM recommendations on methods validity are also made accessible on the ECVAM website.

**Dr Hadwen Trust, DHT**

**Address**
Dr Hadwen Trust  
Suite 8  
Portmill House  
Portmill Lane  
Hitchin  
Hertfordshire  
SG5 1DJ  
United Kingdom

**Tel:** + 44 - 1462 436819  
**Fax:** + 44 - 1462 436844  
**E-mail:** info@drhadwentrust.org

**Access**
http://www.drhadwentrust.org

**Type**
Non-governmental organisation

**Year of Foundation**
1970

**Language**
English

**Features for the 3Rs**
**Research Funding**
The Dr Hadwen Trust funds and promotes the development of techniques and procedures to replace the use of living animals in biomedical research, testing and teaching. Instructions for applicants and guidelines for awarding research grants are published on Dr Hadwen Trust’s website.

**Documentation & Information**
All Dr Hadwen Trust statements and publications are provided online in the sections “Science & education” and “Research & funding”. There you will find publications on new research approaches, research highlights and alternatives in education.

**Newsletter**
The Dr Hadwen Trust Science e-bulletins informs about new, highly advanced non-animal techniques.

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**Fund for the Replacement of Animals in Medical Experiments, FRAME**

**Address**
Fund for the Replacement of Animals in Medical Experiments  
Russell & Burch House  
96-98 North Sherwood Street  
Nottingham NG1 4EE - United Kingdom

**Tel:** + 44 - 115 958 4740  
**Fax:** + 44 - 115 950 3570  
**Email:** frame@frame.org.uk

**Access**
http://www.frame.org.uk

**Type**
Non-governmental organisation

**Year of Foundation**
1969

**Language**
English

**Features for the 3Rs**
**Research & Validation**
FRAME is dedicated to the scientific development, acceptance and the use of alternative methods in medical research and toxicity testing according to the 3Rs. FRAME initiates literature-based scientific studies to investigate why animals are used in research and to determine how the 3Rs can be implemented. FRAME Alternative Laboratory (FAL) conducts research into alternatives at the University of Nottingham Medical School. FAL research programme is focused on validation, toxicology, and modelling human disease.

**Documentation & Information**
FRAME’s series of statements, reports, and E-learning resources are accessible on the website. In addition, FRAME’s comprehensive Information Resources section covers regulations, regulatory organisations, a guide how to search for information, websites, and literature relevant to the 3Rs. FRAME edits the Alternatives to Laboratory Animals Journal (ATLA). ALTLA is an international, peer-reviewed scientific journal, in which articles on the latest research relating to the development, validation, introduction and use of alternatives to laboratory animals are published.

**Newsletter**
FRAME News provides information about research at FRAME, and up to date information that affects animal experimentation.

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**Available from:** http://www.frame.org.uk  
**Accessed:** August 16, 2012

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**Available from:** http://www.drhadwentrust.org  
**Accessed:** August 16, 2012
**The Humane Society of the United States, HSUS**

**Address**
The Humane Society of the United States Headquarters
2100 L Street, NW
Washington, DC 20037
USA
Tel: + 1 - 202 452 1100
Fax: + 1 - 202 778 6132
E-mail: membership@humanesociety.org

**Access**
http://www.humanesociety.org

**Type**
Non-governmental organisation

**Year of Foundation**
1954

**Language**
English

**Features for the 3Rs**

- **Documentation & Information**
  The HSUS is devoted to reduce suffering and to create meaningful social change for all animals. The HSUS website informs on its campaigns and programs as well as federal and state legislation. The web site section "Animals in Laboratories" (see www.humanesociety.org/about/departments/animals_research.html) provides online access to statements, reports, articles, and videos on current topics such as animals in laboratories, biomedical research, chimpanzees used in research, cloning, cosmetic and product testing, dissection, medical training using animals, pain and distress in research animals, pets used in experiments.
  The HSUS supports the AltTox website (http://www.alttox.org) that offers an online discussion platform on potential replacements to toxicity testing in animals. The Humane Society International is an affiliate of the HSUS.

- **Newsletter**
The HSUS publishes All Animals, a bi-monthly membership magazine, and Animal Sheltering, a bi-monthly magazine for animal sheltering professionals.

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**Interagency Coordinating Committee on the Validation of Alternative Methods, ICCVAM**

**Address**
NICEATM
National Institute of Environmental Health Sciences, NIEHS
P.O. Box 12233, Mail Stop K2-16
Research Triangle Park, NC 27709
USA
Tel: + 1 - 919 541 2384
Fax: + 1 - 919 541 0947
Email: niceatm@niehs.nih.gov

**Access**
http://iccvam.niehs.nih.gov/

**Type**
Governmental organisation

**Year of Foundation**
1997

**Language**
English

**Features for the 3Rs**

- **Research & Validation**
  ICCVAM is an interagency evaluation and advisory committee consisting of representatives of 15 U.S. Federal regulatory and research agencies. ICCVAM is assigned to the scientific validation, regulatory acceptance, and national and international harmonization of alternative toxicological test methods. ICCVAM’s activities are administered by NICEATM.
  ICCVAM coordinates and conducts interagency reviews of new and revised toxicological test methods. It prepares recommendations on the scientific validity of new and modified test methods, and forwards them to regulatory agencies for acceptance. Guidelines for the nomination and submission of test methods are published on NICEATM-ICCVAM webpage.

- **Documentation & Information**
The NICEATM-ICCVAM webpage provides online access to the reports on test methods which have been evaluated by ICCVAM, and any other NICEATM-ICCVAM document. Access to relevant U.S. and international testing regulation and guidelines is also provided. In addition, a masks for searching the Federal Register and U.S./international agency guidelines and regulations are offered.
Institute for In Vitro Sciences, Inc., IIVS

Address
Institute for In Vitro Sciences, Inc.
30 West Watkins Mill Road, Suite 100
Gaithersburg, MD 20878 - USA
Tel: +1 - 301 947 6523
Fax: +1 - 301 947 6538

Access
http://www.iivs.org

Type
Non-governmental organisation

Year of Foundation
1997

Language
English

Features for the 3Rs
Research & Validation
IIVS is dedicated to the development and refinement of alternative in vitro test methods. IIVS is a non-profit science-based organization, which provides non-animal laboratory research and testing services for industry, government, trade associations, academia and the general public. The organization is experienced in performing in vitro toxicological tests in compliance with Good Laboratory Practice (GLP). IIVS participates in Government-sponsored validation projects.

Education
IIVS education and training programs include Technical Workshops, Hands-On Training Workshops, and Webinars. Technical Workshops focus primarily on the technical aspects of a specific assay or a specific toxicological end point. Hands-On Training Workshops are designed to look more generally at how an in vitro method performs. Webinars address a broad range of training needs. Training announcements are published on IIVS website.

Documentation & Information
The IIVS website section “Resources” offers to search for IIVS Publications as well as Non-IIVS Publications.

Newsletter
The IIVS Update informs about current IIVS projects, national and international research projects, national and international meetings, technical notes on testing approaches, and IIVS training courses.

Available from: http://www.iivs.org
Accessed: August 17, 2012

International Network for Humane Education, InterNICHE

Address
International Network for Humane Education,
InterNICHE
Co-ordinator
Nick Jukes
98 Clarendon Park Road
Leicester LE2 3AE
United Kingdom
Tel: + 44 - 116 2109652
Email: coordinator@interniche.org

Access
http://www.interniche.org

Type
Non-governmental organisation

Year of Foundation
2000

Language
English, and Others

Features for the 3Rs
Education
InterNICHE is an international network focused on animal use and alternatives within biological science, medical and veterinary medical education. InterNICHE works worldwide in partnership with students, teachers, and animal campaigners. InterNICHE offers a free Alternatives Loan System, a library of multimedia CD-ROMs, videos, and models. It covers several fields of education, e.g. anaesthesia, anatomy, biochemistry, clinical skills, surgery, pathology, pharmacology, and physiology. Instructions on how to borrow an item and a Borrower’s Agreement Form are published on InterNICHE website.
The InterNICHE multi-language Alternatives in Education Video can be downloaded from the website. Teachers from a variety of disciplines demonstrate the alternatives they use in their courses.

Documentation & Information
The InterNICHE website offers information and access to InterNICHE news, publications and services. The “Resources” section covers an e-mail discussion list, the alternative book “From Guinea Pig to Computer Mouse”, the alternatives video, the alternatives loan system, a list of relevant publications, and a gallery. Additional information resources are listed in section “Alternatives”.

Available from: http://www.interniche.org
Accessed: August 17, 2012
### In Vitro Testing Industrial Platform, IVTIP

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>IVTIP Secretariat</td>
</tr>
<tr>
<td></td>
<td>P.O. Box 70</td>
</tr>
<tr>
<td></td>
<td>4797 ZH Willemstad NB</td>
</tr>
<tr>
<td></td>
<td>The Netherlands</td>
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<tr>
<td></td>
<td>Tel: + 31 - 6 45 757 261</td>
</tr>
<tr>
<td></td>
<td>E-mail: <a href="mailto:ivtip@planet.nl">ivtip@planet.nl</a></td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td><a href="http://www.ivtip.org">http://www.ivtip.org</a></td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Industry</td>
</tr>
<tr>
<td><strong>Year of Foundation</strong></td>
<td>1993</td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td>English</td>
</tr>
<tr>
<td><strong>Features for the 3Rs</strong></td>
<td>Documentation &amp; Information: IVTIP activities are focused on <em>in vitro</em></td>
</tr>
<tr>
<td></td>
<td><em>testing used in regulatory testing</em>, in compounds discovery and drug development.</td>
</tr>
<tr>
<td></td>
<td>IVTIP supports the principle of the 3Rs.</td>
</tr>
<tr>
<td></td>
<td>The IVTIP website section “News &amp; Info” informs about current IVTIP activities,</td>
</tr>
<tr>
<td></td>
<td>meetings, activities of the European Union and research project for alternative testing.</td>
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<tr>
<td></td>
<td>The IVTIP website section “Publications” offers free online access to position papers on the topics of animal use and assays on the principle of the 3Rs, industrial requirements in <em>in vitro</em> testing, validation of alternative tests, and regulation of testing. The website sections “Interesting Links”, “Tests”, and “Research” provide numerous links to European and international organizations, agencies, services, and project websites.</td>
</tr>
</tbody>
</table>

### Japanese Society for Alternative to Animal Experiments, JSAAE

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address</strong></td>
<td>Office of JSAAE</td>
</tr>
<tr>
<td></td>
<td>Japanese Center for the Validation of Alternative Method (JaCVAM)</td>
</tr>
<tr>
<td></td>
<td>National Institute of Health Sciences (NIHS)</td>
</tr>
<tr>
<td></td>
<td>1-18-1, Kamiyoga, Setagaya-Ku, Tokyo158-8501</td>
</tr>
<tr>
<td></td>
<td>Japan</td>
</tr>
<tr>
<td></td>
<td>Tel: +81-3-3700-9874</td>
</tr>
<tr>
<td></td>
<td>Fax: +81-3-3700-1145</td>
</tr>
<tr>
<td></td>
<td>E-mail: <a href="mailto:jsaae2009@yahoo.co.jp">jsaae2009@yahoo.co.jp</a></td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td><a href="http://www.asas.or.jp/jsaae/e_index.html">http://www.asas.or.jp/jsaae/e_index.html</a></td>
</tr>
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<td><strong>Type</strong></td>
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</tr>
<tr>
<td><strong>Year of Foundation</strong></td>
<td>1987</td>
</tr>
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<td><strong>Language</strong></td>
<td>English, Japanese</td>
</tr>
<tr>
<td><strong>Features for the 3Rs</strong></td>
<td>Research &amp; Validation: JSAAE was established to promote research, development, and education related to animal welfare and alternatives to animal experiments. JSAAE awards research grants for the purpose of the 3Rs. Guidelines for applications are published on its website.</td>
</tr>
<tr>
<td></td>
<td>Documentation &amp; Information: The JSAAE website informs about the annual</td>
</tr>
<tr>
<td></td>
<td>JSAAE meetings. In addition, it points to meetings of the Korean Society for Alternatives to Animal Experiments.</td>
</tr>
<tr>
<td></td>
<td>JSAAE also participates in the advisory board of the Japanese Center for the Validation of Alternative Methods (JaCVAM). JaCVAM was introduced by Hajime Kojima (2008) in AATEX (AATEX 14, Special Issue, 483-485). JaCVAM has not yet published an own website. JSAAE edits the Alternatives to Animal Testing and Experimentation Journal (AATEX).</td>
</tr>
</tbody>
</table>

**Available from:** http://www.ivtip.org

**Accessed:** August 17, 2012
National Centre for the Replacement, Refinement and Reduction of Animals in Research, NC3Rs

Address
National Centre for the Replacement, Refinement and Reduction of Animals in Research, NC3Rs
Gibbs Building, 215 Euston Road
London, NW1 2BE
United Kingdom
Tel: + 44 - 20 7611 2233
Fax: + 44 - 20 7611 2260
Email: enquiries@nc3rs.org.uk

Access
http://www.nc3rs.org.uk/

Type
Governmental organisation

Year of Foundation
2004

Language
English

Features for the 3Rs
Research Funding
The NC3Rs is dedicated to advance and promote the 3Rs in research and testing. The NC3Rs provides funding to specifically advance knowledge in the 3Rs and to promote novel and multi-disciplinary approaches. Guidelines for grant applications are published on NC3Rs website.

Documentation & Information
The NC3Rs website provides access to News and publications, Programmes, Funding schemes, and the Information Portal. The NC3Rs Information Portal provides special thematic pages, e.g. 3Rs databases, anaesthesia, analgesia, biotelemetry, euthanasia, experimental design/statistics, housing and husbandry, humane endpoints, imaging etc. The information portal contains links to online databases, key websites, journal articles, legislation, online documents, events and discussion groups relevant to each page.
The Blood Sampling Microsite provides information on the most appropriate technique for blood sampling from animals.

Newsletter
The NC3Rs e-newsletter informs about current NC3Rs activities, e.g. NC3Rs workshops and symposia, and advances in the 3Rs.

Netherlands Knowledge Centre on Alternatives to Animal use, NKCA
Nationaal Kennis Centrum Alternatieven voor dierproeven, NKCA

Address
Netherlands Knowledge Centre on Alternatives to Animal use, NKCA
Nationaal Kennis Centrum Alternatieven voor dierproeven, NKCA
Rijksinstituut voor Volksgezondheid en Milieu
Antonie van Leeuwenhoeklaan 9
3721 MA Bilthoven
Postadress:
RIVM
Postbus 1
3720 BA Bilthoven
Tel: +31 - 30 - 274 21 95
Email: info@nkca.nl

Access
http://www.nkca.nl

Type
Governmental organisation

Year of Foundation
2010

Language
Dutch/English

Features for the 3Rs
Documentation & Information
The Netherlands Knowledge Centre on Alternatives to Animal use (NKCA) is the result of a cooperation between Utrecht University (and the former Netherlands Centre on Alternatives to animal use; NCA) and the National Institute for Public Health and the Environment (RIVM). The NKCA was established in 2010. The Centre's activities are aimed at the exchange of 3R knowledge between researchers, policy makers, industry and society. The extensive NKCA website acts as a portal to information on 3R research and stakeholders of (3R alternatives to) animal experimentation in the Netherlands. The website is in Dutch, with a small section in English.

Newsletter
The NKCA publishes a free digital newsletter and brings out daily newsflashes through Twitter (@NKCA3V) and Facebook (NKCA3V).

Available from: http://www.nc3rs.org.uk
Accessed: August 17, 2012

Available from: http://www.nkca.nl
Accessed: November 8, 2012
**UCDavis Center for Animal Alternatives Information, UCCAA**

**Address**
UCDavis Center for Animal Alternatives Information, UCCAA
Carlson Health Sciences Library
University of California, Davis
Davis CA 95616 - USA
Tel: + 1 - 530 754 9122
Fax: + 1 - 530 752 4718
Email: mwwood@ucdavis.edu

**Access**
http://www.lib.ucdavis.edu/dept/animalalternatives/

**Type**
Academia

**Year of Foundation**
1991

**Language**
English

**Features for the 3Rs**
**Documentation & Information**
UCCAA has a central mission to support scientists in gaining convenient access to alternative methods. The Center places special emphasis on disseminating information concerning models, computer programs, and other animal alternatives in education.

UCCAA acts as coordinating office for the UCD campus on improved and alternative methods for the use of animals. It provides investigators who use animals with information on the most current methods for improving all aspects of animal care during their work.

The UCCAA website sections “Alternatives Searching Tools & Guides”, “Topic Specific Searches”, “About the Center for Animal Alternatives Information”, and “Animal Welfare & Related Websites” provide comprehensive information on animal research protocols, alternatives in education, laboratory animal welfare and alternatives, search templates and databases, UC research protocols and the 3Rs, organization and resource guides, bibliographic searching tools on disease models, a literature search for alternatives worksheet, and a guide to bibliographic databases for alternatives searching.

**Available from:** http://www.lib.ucdavis.edu/dept/animalalternatives/
**Accessed:** October 9, 2012

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**Universities Federation for Animal Welfare, UFAW**

**Address**
Universities Federation for Animal Welfare
The Old School
Brewhouse Hill
Wheathampstead
Hertfordshire, AL4 8AN
United Kingdom
Tel: +44 - 1582 831818
Fax: +44 - 1582 831414
Email: ufaw@ufaw.org.uk

**Access**
http://www.ufaw.org.uk

**Type**
Non-governmental organisation

**Year of Foundation**
1926

**Language**
English

**Features for the 3Rs**
**Education**
UFAW is a British non-governmental organisation that works to develop and promote improvements in the well-being of animals through scientific and educational activity worldwide. Thus, UFAW provides research and education grants and awards to support projects which address animals’ environmental and psychological needs. The organisation also promotes animal welfare education, particularly at the university and college level, with a focus on the communication of skills and experience in detecting physical and psychological aspects of poor welfare.

**Documentation & Information**
UFAW publishes the quarterly scientific journal *Animal Welfare* and other reports, books and videos. Furthermore, the federation provides information and advice on aspects of biology, management, health, behaviour and ethics relating to the well-being of animals.

**Available from:** http://www.ufaw.org.uk
**Accessed:** August 17, 2012
### Zentralstelle zur Erfassung und Bewertung von Ersatz- und Ergänzungsmethoden zum Tierversuch, ZEBET

**Centre for Documentation and Evaluation of Alternatives to Animal Experiments, ZEBET**

**Address**
Centre for Documentation and Evaluation of Alternatives to Animal Experiments, ZEBET
Federal Institute for Risk Assessment, BfR
Max-Dohrn-Straße 8-10
10589 Berlin
Tel: + 49 - 30 8412 2273
Fax: + 49 - 30 8412 2958
Email: zebet@bfr.bund.de

**Access**
http://www.bfr.bund.de/de/zebet-1433.html

**Type**
Governmental organisation

**Year of Foundation**
1989

**Language**
English, German

**Features for the 3Rs**
- **Research Funding**
  Activities of ZEBET are focused on promoting the development and validation of alternative testing procedures. ZEBET funds projects on the development of alternative methods based on the 3Rs principle. A call for grant applications and instructions for applicants are published on ZEBET's website.

- **Research & Validation**
  ZEBET promotes the experimental validation of methods not involving animal experiments in order to secure their inclusion in international directives. ZEBET initiates and coordinates validation studies on the national and international level. ZEBET’s main activity is the reduction of animal tests conducted for regulatory purposes. ZEBET also undertakes own research projects. High priority has been given to replacing animal tests in official notification and marketing authorization procedures, e.g. OECD guidelines and European Pharmacopoeia. ZEBET’s research activities are extended to projects in information sciences.

- **Documentation & Information**
  ZEBET provides information on alternative methods in the ZEBET database AnimAlt-ZEBET. AnimAlt-ZEBET is online accessible without license fees via ZEBET’s website. The database AnimAlt-ZEBET offers evaluated information about alternative methods and their practical use. In addition, ZEBET prepares expert opinions at the request of competent authorities on applications for the authorisation or notification of animal research projects.

**Available from:** http://www.bfr.bund.de/de/zebet-1433.html
**Accessed:** August 17, 2012

### Zentrum für Ersatz- und Ergänzungsmethoden zu Tierversuchen, zet

**Centre for Alternative and Complementary Methods to Animal Testing, zet**

**Address**
Centre for Alternative and Complementary Methods to Animal Testing, zet
Industriezeile 36/VII
A-4020 Linz
Österreich
Tel: + 43 - 732 770325 0
Fax: + 43 - 732 770325 13
Email: office@zet.or.at

**Access**
http://www.zet.or.at

**Type**
Non-governmental organisation

**Year of Foundation**
1996

**Language**
German, English

**Features for the 3Rs**
- **Research & Validation**
  zet is dedicated to the development, validation and acceptance of alternative and complementary methods in accordance with the 3Rs-principle. zet Life Science Laboratory (zet-LSL) started in 2007. It is primarily involved in the development and (pre) validation of in vitro strategies to replace animal experiments.

- **Documentation & Information**
  zet website informs about projects and publications of zet. The web site section “Life Science Laboratory” provides online information on publications and projects, e.g. EpiDerm™ skin irritation study, HET-CAM Test, Alternatives to animal sera in cell culture, and Thrombocyte extracts substitution of fetal sera. zet co-sponsors the ALTEX journal. In cooperation with EUSAAT, the European Society for Alternatives to Animal Testing (http://www.eusaat.org/), zet organises the annual Congress on Alternatives to Animal Testing in Linz. Congress proceedings are published in ALTEX. zet website is linked to EUSAAT website.

**Available from:** http://www.zet.or.at
**Accessed:** August 20, 2012
This Section provides information on KEY WEB SEARCH ENGINES USED BY THE SCIENTIFIC COMMUNITY. These include GENERAL WEB SEARCH ENGINES, SCIENCE-SPECIFIC WEB SEARCH ENGINES, and a Meta-Web search engine. Finally, a SEMANTIC SEARCH ENGINE for alternative methods to animal experiments is detailed.

The World Wide Web is a network of Internet servers offering information (web pages) through the hypertext transfer protocol. WEB SEARCH ENGINES CONSIST OF SEVERAL COMPONENT PARTS: the interface used to enter a query (search terms), an index of information (web pages) that the query is checked against, a software program (also known as web crawler, web spider) that searches the Web to find and index new information, and an algorithm to locate, rank and return the information in response to a query.

Search engines are subject to RAPID AND CONTINUOUS IMPROVEMENT, and it is therefore recommended that readers familiarise themselves on-line using the “help and tips” section of their preferred search engine.
**Ask.com**

**Producer**
IAC Search & Media Limited
IAC/InterActiveCorp.

**Address**
Ask.com
555 12th Street, Suite 500
Oakland, CA 94607
USA
Tel: + 1 - 510 985-7400
Fax: + 1 - 510 985-7412

**Access**
http://www.ask.com

**Search Features**
Ask.com was founded in 1996 as Ask Jeeves and renamed into Ask.com in February 2005. Ask.com web search technology is based on the ExpertRank algorithm. ExpertRank intends to provide relevant search results by identifying the “most authoritative” sites on the Web.

Ask.com supports questions in natural language as well as keyword searching. The Ask.com Web Search assists information searchers in selecting suitable search terms for their queries. Suggestions are offered for search terms and phrases as well as proposals to narrow or to expand the search.

Ask.com operates localized services world-wide, e.g. Ask.com UK, Ask.jp Japan, Ask.com España, Ask.com DeutschlandβETA, Ask.com FranceβETA, Ask.com NederlandβETA, and Ask.com ItaliaβETA.

Ask.com provides diverse web services and search tools, e.g. Web Search, Blog Search, and Dictionary Search. Ask.com offers the AskEraser that enables searchers to delete their search activity from Ask.com servers.

Available from: http://www.ask.com
Accessed: August 21, 2012

**Go3R βETA**

**Producer**
Transinsight GmbH

**Address**
Transinsight GmbH
Tatzberg 47-51
D-01307 Dresden
Germany
Tel: + 49 - 351 796 57 80
http://www.transinsight.com

**Access**
http://www.go3r.org

**Search Features**
As of April 2008, Go3RβETA has been available online free of charge. Go3RβETA is the first knowledge-based web search engine for alternative methods to animal experiments, which builds on the semantic search technology of GoPubMed (www.GoPubMed.com) developed by Transinsight GmbH. Go3RβETA has been developed by Transinsight GmbH, Dresden, Germany, in cooperation with scientists from the Technical University Dresden, the German National Centre for Documentation and Evaluation of Alternatives to Animal Experiments (ZEBET) at the German Federal Institute for Risk Assessment (BfR) in Berlin, and BASF SE, Germany. The Go3R research project is funded by the German Federal Ministry of Education and Research (BMBF).

The technical basis of a semantic search engine is a specific expert knowledge, captured within ontology. An ontology is a network of – also hierarchically – grouped “concepts”, like subject areas, indicative for the respective field of research. Go3RβETA extends search terms to categories, automatically taking into account the interrelation of terms and synonyms.

Go3RβETA provides search results linked to an “intelligent table of contents”. The searcher can use this table of contents to navigate through his query result, and to extract quickly those parts of the search retrieval that are of interest to him. Go3RβETA implements a unique 3Rs specific ontology built with expert knowledge. Currently Go3RβETA searches in PubMed and TOXNET.

Available from: http://www.go3r.org
Accessed: August 21, 2012
**Google search**

**Producer**
Google Inc.

**Address**
Google Inc.
1600 Amphitheatre Parkway
Mountain View, CA 94043
USA
Tel.: +1 - 650 253 0000
Fax: +1 - 650 253 0001

**Access**
http://www.google.com/

**Search Features**
Google Inc. was incorporated in 1998. Google has launched many products and services. The first and most popular service of Google is the Google search engine for webpages. Google search is based on Google's own ranking mechanism Page Rank. PageRank is a link analysis algorithm that ranks search results according to the number of links from other web pages associated with the used search terms.

In addition to Google search, Google has developed several special search services, e.g., Google Books for searching the full text of books, Google Patents BETA for searching U.S. patents, and Google Scholar for searching scholarly papers.

**Google Scholar**

**Producer**
Google Inc.

**Address**
Google Inc.
1600 Amphitheatre Parkway
Mountain View, CA 94043
USA
Tel.: +1 - 650-253-0000
Fax: +1 - 650-253-0001

**Access**
http://scholar.google.com/

**Search Features**
Google Scholar released in beta in 2004. Google Scholar is a freely-accessible web search engine that indexes scholarly literature across many disciplines and sources. Google Scholar sources include peer-reviewed papers, theses, academic books, court opinions and patents, abstracts and articles from academic publishers, professional societies, preprint repositories, universities and other scholarly organizations. A list of scientific journals indexed by Google Scholar is not published.

Abstracts, citations or complete documents are shown depending on individual access authorization. Google Scholar’s Library Links program offers users online access to their library subscriptions.

Advanced Scholar Search provides subject areas for searching: Biology, Life Sciences, and Environmental Science; Business, Administration, Finance, and Economics; Chemistry and Materials Science; Engineering, Computer Science, and Mathematics; Medicine, Pharmacology, and Veterinary Science; Physics, Astronomy, and Planetary Science; Social Sciences, Arts, and Humanities.

In July 2008 Google launched the project Knol in beta (http://knol.google.com). Knol was a free service that hosts units of knowledge (knols) written by everyone about various subjects, including science. Google Knols was closed in April 2012. Google Knols moved to Annotum, an open-access scholarly authoring and publishing platform (http://annotum.org).

Available from: http://www.google.com/
Accessed: August 21, 2012

Available from: http://scholar.google.com
Accessed: August 22, 2012
Ixquick

Producer: Surfboard Holding B.V.
Address: Surfboard Holding B.V.
Postbus 1079
3700 BB Zeist
The Netherlands
Tel: +31 - 30 697 1778
Access: http://ixquick.com

Search Features
- Ixquick search engine was launched in 1998.
- Ixquick is a meta search engine which allows searching of multiple search engines (e.g., Yahoo/Rita Vista, Ask, and Open Directory) simultaneously.
- Ixquick uses a star ranking system to rank its results; the top search results are the ones that have been returned from the most search engines. Ixquick offers an advanced search, a global search and search refinement possibilities. Ixquick translate users’ query into the syntax that each search engine needs. The global search allows to search in any of 18 languages. In each language, Ixquick searches local and international search engines.
- Ixquick commits to provide the highest level of privacy to their users. Ixquick do not record IP addresses. Surfboard Holding B.V. has renewed the EuroPriSe certificate for its meta-search engine Ixquick in February 2011. The European Privacy Seal certifies IT products and IT-based services privacy compliance with European data protection regulations (www.european-privacy-seal.eu).

Available from: http://ixquick.com
Accessed: August 30, 2012

MetaCrawler

Producer: InfoSpace, Inc.
Address: InfoSpace, Inc.
601 108th Avenue NE
Suite 1200
Bellevue, WA 98004
USA
Tel: +1 - 425 201.6100
Fax: +1 - 425 201.6150
Access: http://www.metacrawler.com/

Search Features
- Meta Search Engines MetaCrawler was developed in 1994 at the University of Washington. Since 2000 MetaCrawler has been owned and operated by InfoSpace, Inc.
- MetaCrawler uses metasearch technology to combine the results from a pool of top web search engines, including Google, Yahoo! Search, Ask.com and more.

Available from: http://www.metacrawler.com
Accessed: August 22, 2012
Scirus

Producer
Elsevier B. V.
Address
Elsevier B. V.
Radarweg 29
1043 NX Amsterdam
The Netherlands
Tel: +31 20 485 2222
Fax: +31 20 485 2032
Email: amsterdam@reedelsevier.com

Access
http://www.scirus.com/

Search Features
Scirus is a free Web search engine developed by Elsevier. Scirus is focused on scientific, scholarly, technical and medical data on the Web. It allows researchers to search for journals, scientists’ homepages, courseware, pre-print server material, patents and institutional repository and websites containing scientific content.

Scirus search technology ensures that only scientific content is indexed.

List of Sources indexed by Scirus is publicly available. It covers e.g. BioMed Central, MEDLINE®, and PubMed Central.

Scirus search results are ranked according to relevance. It is also possible to rank results by date.

Available from: http://www.scirus.com/
Accessed: August 28, 2012

Yahoo! Search

Producer
Yahoo! Inc.
Address
Yahoo! Inc.
701 First Avenue
Sunnyvale, CA 94089
USA
Tel: +1 - 408 349 3300
Fax: +1 - 408 349 3301

Access
http://search.yahoo.com/

Search Features
Yahoo! Inc. was incorporated in 1994. Yahoo! was first formed as a web directory of web sites, organized into categories. It became the Yahoo! Directory that is maintained by human editors.

Yahoo! provides a wide range of Internet services, e.g. the web portal (http://www.yahoo.com), the web directory Yahoo! Directory (http://dir.yahoo.com/), and the search engine Yahoo! Search.

Yahoo! Search Technology ranks search results according to their relevance to a particular query by analyzing documents including text, title and description accuracy, source, associated links, and other unique document characteristics.

The Yahoo Search Assist supports information searchers in selecting suitable search terms for their queries. The Yahoo Search Assist offers suggestions for search terms and phrases as well as ways to explore further relevant concepts.

Available from: http://search.yahoo.com/
Accessed: August 30, 2012
How to obtain EU publications

Our priced publications are available from EU Bookshop (http://bookshop.europa.eu), where you can place an order with the sales agent of your choice.

The Publications Office has a worldwide network of sales agents. You can obtain their contact details by sending a fax to +352 29 29-42758.
NOTE:
Online resources are constantly updated and modified. Therefore, the information for all resources in the EURL ECVAM Search Guide always includes the exact date of access.
Making full use of all sources of information on alternative methods is a key part of preparing research projects in the life sciences using laboratory animals in compliance with the EU legislative requirements. A major challenge to locate relevant high quality information about a proposed field of scientific investigation is the exponential increase of scientific publications in the recent past. Over the last years the electronic resources, originally developed to offer a potential solution to this problem, have shown a similar proliferation. The question arises: how best to search information specifically on the 3Rs (replacement, reduction, refinement of animal use) in the World Wide Web that is heterogenic, constantly changing and growing?

The EURL ECVAM Search Guide provides search procedures and user guidance to facilitate the location of the desired information on 3Rs alternatives in addition to an inventory of relevant resources providing an answer to the question: What can I find where?

The EURL ECVAM Search Guide is aimed at untrained database users and will be most relevant, for example, where comprehensive searches for alternatives are required as part of authorisation processes for animal experiments and where regulatory requirements mandate the application of the 3Rs.