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Primary References

In the primary reference material for the Institutional Animal Care and Use Committee, the annotated citations are mostly books and conference proceedings, with the exception of legislation, and cover 1985 to December 1998.

While there has been an attempt to cross-reference citations that can appropriately fit into more than one category, please search related categories for the desired information. For example, a book on rodent surgery may be found in "Rodents and Rabbits" and/or "Surgery". It may also be found in "General Laboratory Animal Care and Use" if a book contains information about several species including a chapter on rodent medicine.

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Agricultural Animals

Alton, G.G. (1990). *Veterinary Diagnostic Bacteriology: A Manual of Laboratory Procedures for Selected Diseases of Livestock*. Food and Agriculture Organization of the United Nations: Rome, 81p.

NAL call number: SF1.F64 no.81

A manual of bacteriology methods for use with agricultural animal epidemiology.

Barrick, R.K. and H.L. Harmon (1988). *Animal Production and Management*. McGraw-Hill Book Company: New York, NY, 402p.

NAL call number: SF61.B35

This book was developed as a textbook to emphasize the management of animals on farms and ranches, not just the production of animals and animal products. It highlights basic production and dwells on management skills and techniques.

Blakely, J. and D. Bade (1994). *The Science of Animal Husbandry*, 6th edition. Prentice Hall Career and Technology: Englewood Cliffs, NJ, 656p.

NAL call number: SF61.B56

This is an introductory textbook for the college student. Provides a condensed, highly illustrated, easy-to-read version of animal science, while keeping in mind the needs of the instructor.

Consortium for Developing a Guide for the Care and Use of Agricultural Animals in Research and Teaching (1998). *Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching*. Federation of Animal Science Societies, 1111 North Dunlap Ave., Savoy, IL 61874, 89p.

NAL call number: QL55.G8

Primary reference developed by and for those using agricultural animals in research and teaching. It is meant to serve as an independent reference for the care and use of agricultural animals. It provides information on the most common agricultural animals under a variety of teaching and research conditions. Referred to for biomedical research involving agricultural animals by the National Institutes of Health, Office of Protection from Research Risks and the Association for the Assessment and Accreditation of Laboratory Animal Care International.

Hannon, J.P. and C.E. Wade (1989). *Normal Physiological Values for Conscious Pigs Used in Biomedical Research*. LAIR, Military Trauma Research: San Francisco, CA, 19p.

NAL call number: SF768.2.S95H3

Reference values for over 100 physiologic or related variables. Included are body composition, fluid volumes, blood gas, hormone levels, hemodynamics, renal function, and more.

Herman, H.A.; J.R. Mitchell; and G.A. Doak (1994). *The Artificial Insemination and Embryo Transfer of Dairy and Beef Cattle (including information pertaining to goats, sheep, horses, swine, and other animals) : A Handbook and Laboratory Manual for Students, Herd Operators, and Persons Involved in Genetic Improvement*, 8th edition. Interstate Printers & Publishers: Danville, IL, 382p.

NAL call number: SF201.5.H45 1994

Methods for artificial insemination and embryo transfer in cattle. Much of the information is applicable to other agricultural species.

Mench, J.A., S.J. Mayer, and L. Krulisch (1992). *The Well-being of Agricultural Animals in Biomedical and Agricultural Research*. Scientists Center for Animal Welfare: Greenbelt, MD, 112p.

NAL call number: HV4704.W38 1990

Conference proceedings which include papers about regulatory perspectives, animal care and management, a summaries of workshops on specific species. Topics include handling and transport, stress, restraint, housing, and husbandry.

Mench, J.A. and W.R. Stricklin, eds. (1993). **An International Conference on Farm Animal Welfare: Ethical, Technological, and Sociopolitical Perspectives.** *Journal of Agricultural and Environmental Ethics* 6(Suppl. 1):1-154. **An International Conference on Farm Animal Welfare: Scientific Perspectives.** *Journal of Agricultural and Environmental Ethics* 6(Suppl. 2):1-116.

NAL call number: BJ52.5.J68

A two-volume set of conference proceedings that discuss agricultural animal welfare from ethical, technological, sociopolitical, and scientific perspectives. A balanced and informative introduction to the concept and applicability of animal welfare as it pertains to farm animals.

Swindle, M.M.; D.C. Moody; and L.D. Phillips, eds. (1992). *Swine as Models in Biomedical Research*. Iowa State University Press: Ames, IA, 312p.

NAL call number: RB125.S79 1992

Proceedings of the Seventh Charles River International Symposium which was held in 1989. Reviews all aspects of swine care and use in biomedical research.

Taylor, R.E. (1995). *Scientific Farm Animal Production: An Introduction to Animal Science*, 5th edition. Prentice Hall: Englewood Cliffs, NJ, 672p.

NAL call number: SF61.B63

An overview of the biological principles applicable to animal science with chapters on reproduction, genetics, nutrition, lactation, end breeding, and management of agricultural animal species. It is designed for the introductory animal

science courses.

Tumbleson, M.E., ed. (1986). *Swine in Biomedical Research*. Plenum Press: New York, NY. 1986.

NAL call number: RB125.C68

This book the proceedings of a 1985 conference on swine in biomedical research and is a three-volume set. Contains comprehensive coverage of swine as models for a variety of biomedical studies, such as alcoholism, diabetes, digestive disorders, organ transplantation, atherosclerosis, gingivitis, hypertension, exercise, hypotension, cancer, osteochondrosis, dermal healing and septic shock. This book was designed as a reference to be used as a data base for future investigations.

Universities Federation for Animal Welfare (1988). *Management and Welfare of Farm Animals*. Bailliere Tindall: London, England, 260p.

NAL call number: SF61.M35

Describes strategies designed to improve the efficiency, standards, housing, and care of farm animals and production. Emphasis is given to the welfare implications of modern husbandry techniques and promotes a humane attitude for those responsible for the care, management and welfare of farm animals.

Alternatives

Alternatives to Laboratory Animals. Available from: Fund for the Replacement of Animals in Medical Experiments (FRAME), Eastgate House, 34 Stoney Street, Nottingham, NG1 1NB, England.

NAL call number: Z7994.L3A5

Quarterly journal covering all aspects of the development, introduction, and use of alternatives in animal research and testing. Includes some highly technical articles but many are comprehensible to the non-scientist. "Book Reviews" and "Selected Titles" sections provide current references for further reading on specific topics.

ALTEX: Alternativen Zu Tierexperimenten. Available from: ALTEX, Postfach 100125, D-78401 Konstanz

E-mail: info@altex.ch

<http://www.altex.ch/>

NAL call number: HV4915.A47 1996

Peer reviewed official journal of the Mitteleuropäischen Gesellschaft für Alternativmethoden zu Tierversuchen (MGAT). Articles are in German with English and German abstracts. Many articles describe new methods of replacement although reduction and refinement are also included.

Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART) (1993).

Alternatives to the Use of Animals in Undergraduate Teaching in Australia and New Zealand. ANZCCART: Glen Osmond, SA [Australia], 27 p.

NAL call number: QL55.A48 1993

A list of bibliographic citations for alternatives to the use of animals in teaching undergraduates.

Balls, M.; J. Bridges, J. Southee (1991). *Animals and Alternatives in Toxicology: Present Status and Future Prospects*. VCH Publishers: New York, N.Y., 390p.

NAL call number: RA1199.4.A54A53 1991

Based on the proceedings of a meeting held on Nov. 12-13, 1990 to discuss the report of the FRAME Toxicity Committee.

Hudson, V. (1997). *Alternatives to the Use of Live Vertebrates in Biomedical Research and Testing: A Bibliography with Abstracts*. No. 2. National Library of Medicine: Bethesda, MD, 145p.

NAL call number: Z7994.L3A483

Literature citations and abstracts from the National Library of Medicine databases. Citations address Reduction, Refinement, and Replacement. They are grouped by study areas including carcinogenesis, cytotoxicity, dermal toxicity, pharmacokinetic and mechanistic studies, and others. Available in hardcopy and electronically from

<http://sis.nlm.nih.gov>

The Johns Hopkins Center for Alternatives to Animal Testing. Available from: Center for Alternatives to Animal Testing, Johns Hopkins School of Public Health, 111 Market Place, Suite 840, Baltimore, MD 21202-6709, tel: (410) 223-1693, fax: (410) 223-1603, E-mail: caat@jhsph.edu

NAL call number: HV4701.J6

A quarterly newsletter that reports new developments in alternative approaches to whole animal studies for evaluating the safety of chemical products, funding opportunities, and meetings.

Johns Hopkins University, School of Hygiene and Public Health (1992). *Animal Care and Use Committees and Alternatives: A Symposium Sponsored by the Johns Hopkins School of Hygiene and Public Health, Office for Research Subjects, June 18, 1992*. Johns Hopkins Center for Alternatives to Animal Testing: Baltimore, MD, 110p.

NAL call number: HV4704.A53 1992

Proceedings from the symposium.

Kapis, M.B. and S.C. Gad, eds. (1993). *Non-Animal Techniques in Biomedical and Behavioral Research and Testing*. CRC Press: Boca Raton, FL, 264p.

NAL call number: R852.N65 1993

Contains chapters on alternatives to whole animal testing, specific in vitro examples in cosmetic and pharmaceutical industries, use of computational models, network models, magnetic resonance, physicochemical techniques, and alternatives in neurosciences, psychiatry, ethology, molecular biology, and genetics.

Kimm, V.J. (1988). *Alternative Methodology for Acute Toxicity Testing*. U.S. Environmental Protection Agency, Office of Pesticides and Toxic Substances: Washington, DC, 10p.

NAL call number: HV4928.U5

Revised policy for acute toxicity testing.

Larson, J.A. (1995). *Directory of Resources on Alternatives and Animal Use in the Life Sciences*, 1st ed. AWIC Resource Series, 1082-9644 ; no. 1. U.S. Dept. of Agriculture, National Agricultural Library, Animal Welfare Information Center, Beltsville, MD, 65p.

NAL call number: aHV4701.A94 no.1

A directory of audiovisuals, journals, newsletters, and other resources for information about alternatives in animal research, teaching, and testing.

Lembeck, F., ed. (1989). *Scientific Alternatives to Animal Experiments*. Ellis Horwood Limited: Chichester, West Sussex, PO19 1EB, England.

NAL call number: QL51.A48

Alternatives in the use of animals for teaching, testing, and research are discussed in 37 chapters. Topics include research in neurochemistry, genetics, immunology, behavior, drug development, and cancer research. Determining appropriate animal numbers, unnecessary duplication of studies, and methodology are also examined.

Mehlman, M.A., ed. (1989). *Benchmarks: Alternative Methods in Toxicology*. Princeton Scientific Publishing Co., Inc.: Princeton, NJ, 219p.

NAL call number: RA1231.T7B45

This volume, the first in a series, is intended to aid in the rapid identification, validation, and implementation of alternative methods in toxicology.

National Association of Biology Teachers (1990). *The Responsible Use of Animals in Biology Classrooms: Including Alternatives to Dissection*. National Association of Biology Teachers: Reston, VA, 146p.

NAL call number: QL55.R48

Discusses the care and use of animals and suggests alternative teaching strategies.

Office of Technology Assessment (1988). *Alternatives to Animal Use in Research, Testing, and Education*. Congress of the United States. M. Dekker: New York.

NAL call number: QL51.2.U6A48

Analysis of the scientific, legal, economic, and ethical issues regarding alternatives to animal use for toxicity testing, biomedical and behavioral research, and education. Advisory panelists represent groups with widely varying interests and opinions such as animal welfare organizations, academic institutions, private industry, government agencies, and the concerned public. A fifty page summary of this book is also available from the Office of Technology Assessment in Washington, DC.

Payne, J.W., ed. (1989). *In Vitro Techniques in Research: Recent Advances*. Open University Press: Philadelphia, PA.
NAL call number: R853.T58I5

Papers in this book formed the greatest part of The Humane Research Trust Conference entitled *Recent advances in the Use of in vitro Techniques*. Discussed are several in vitro techniques using human tissues and cell culture.

Physicians Committee for Responsible Medicine (PCRM) (1988). *Alternatives in Medical Education: Non-animal Methods*. PCRM: Washington, D.C., 16p.

NAL call number: R835.A4

Describes and gives contact information about computer simulations, models, and audiovisuals useful in replacing live animals in some areas of medical education.

Reinhardt, C.A. (1994). *Alternatives to Animal Testing: New Ways in the Biomedical Sciences, Trends, and Progress*. VCH: New York, NY, 182p.

NAL call number: RA1199.4.I5A44 1994

Contains the main presentations made at the symposium Alternatives to Animal Testing, held at the ETH Zurich, Nov. 30, 1992, reviewed and updated to include developments up to fall 1993. Gives international perspectives, discusses particular methods, validation of alternatives, and legislation.

Russell, W.M.S. and R.L. Burch (1992). *The Principles of Humane Experimental Technique*. Universities Federation for Animal Welfare: Wheathampstead, Herts, U.K., 238p.

NAL call number: QL55.R8

This is a reprint of the classic 1959 book that introduced the concepts of replacement, reduction, and refinement as they relate to the use of animals for research, testing, and education.

Salem, H. (1995). *Animal Test Alternatives: Refinement, Reduction, Replacement*. M. Dekker: New York, NY, 349p.

NAL call number: RA1199.A533 1995

Examines alternatives in light of the regulatory climate and evaluates new technologies.

Schuppan, D. and W. Hardegg (1988). *Animal Protection by Alternatives*. [Tierschutz durch Alternativen : Symposium der Medizinischen Gesamtfakultat der Ruprecht-Karls-Universität Heidelberg und des Bundesverbandes der Pharmazeutischen Industrie e.V., 7.-9. September 1986, Heidelberg]. G. Fischer: Stuttgart, Germany and New York, NY, 150p.

NAL call number: HV4913.T53

Papers from a conference held in Heidelberg in 1986. All papers except one are in German.

Universities Federation for Animal Welfare and British Universities Film & Video Council (1988). *Animals in Science Teaching: A Directory of Audio Visual Alternatives*. British Universities Film & Video Council ; Universities Federation for Animal Welfare: Wheathampstead, Herts, UK. 60p.

NAL call number: QL57.A49

A list of 290 audiovisuals for use as alternatives to the use of animals in education and research.

Van Zutphen, L.F.M. and M. Balls (1997). *Animal Alternatives, Welfare and Ethics*. Elsevier: Amsterdam, New York, Oxford, Tokyo, 1260p.

NAL call number: QL1.D48 v.27

The proceedings of the 2nd World Congress on Alternatives and Animal Use in the Life Sciences held in 1996. Includes plenary lectures and papers on national and regional developments, animal welfare and refinement, transgenic animals, scientific procedures and humane endpoints, noninvasive methods, ethics, databases, education, toxicity testing, pharmacology, testing medical devices, antibody and blood products, antibody production techniques, and validation and acceptance of alternatives.

Webber, M., ed. (1988). *In Vitro Models for Cancer Research: Carcinoma of the Prostate and Testis*. CRC Press, Inc.: Boca Raton, FL.

NAL call number: RC267.I48 v.5

This volume describes cell and organ culture systems that provide for the study of normal and neoplastic prostate and testes. The role of trace elements and hormones on the prostate are explored through in vitro techniques. Authors suggest ways in which in vitro testing can be used to study carcinogenesis, tumor prevention, and treatment.

Zinko, U.; N. Jukes, and C. Gericke (1997). *From Guinea Pig to Computer Mouse*. EuroNICHE, 11 Beckingham Rd., Leicester LE2 1HB, UK, 229p.; Tel/Fax +44(0)181 341 9115; E-mail: lynx@gn.apc.org

EuroNICHE (European Network of Individuals and Campaigns for Humane Education) provides this annotated catalog of audiovisuals, computer simulations, videodisks, and models for teaching anatomy, physiology, anesthesia, behavior, surgery, and other subjects taught in high school through graduate levels. Contact information and prices are given.

Zurlo, J., D. Rudacille, and A.M. Goldberg (1994). *Animals and Alternatives in Testing: History, Science, and Ethics*. Mary Ann Liebert, Inc.: New York, NY, 86p.

Covers ethical, legal, and historical issues in the development of alternative methods. Emphasis is on toxicity testing, vaccine development, in vitro methods, and validation. Contains timelines of animal welfare in the U.S. and U.K., tissue culture, in vitro toxicology, and methods of vaccine development.

Anesthesia, Analgesia, and Euthanasia

Andrews, E.J., B.T. Bennett, J.D. Clark, K.A. Houpt, P.J. Pascoe, G.W. Robinson, and J.R. Boyce (1993). **1993 Report of the AVMA panel on euthanasia**. *Journal of the American Veterinary Medical Association* 202(2):229-249.

NAL call number: 41.8 Am3

A comprehensive list of chemical and physical methods of euthanasia, modes of action, special considerations, and the advantages and disadvantages of each.

Close, B., K. Banister, V. Baumans, E. Bernoth, N. Bromage, J. Bunyan, W. Erhardt, P. Flecknell, N. Gregory, H. Hackbarth, D. Morton, and C. Warwick (1997, 1996). **Recommendations for euthanasia of experimental animals: report of a working party**. *Laboratory Animals* 31:1-32, 30:293-316.

NAL call number: QL55.A1L3

This document was prepared in response to European Commission Directive 86/609/EEC. The first two sections are in the 1996 issue and cover euthanasia objectives, signs of pain and distress, recognition of death, personnel training, equipment, carcass disposal, and acceptable and unacceptable methods of euthanasia. It also includes an extensive bibliography covering general euthanasia, fish, amphibians, reptiles, birds, rodents, rabbits, carnivores, large mammals, primates, and exotics. The third section, published in 1997, describes methods of euthanasia for each species group and euthanasia training materials.

Flecknell, P.A. (1996). *Laboratory Animal Anaesthesia: A Practical Introduction for Research Workers and Technicians*. 2nd edition. Academic Press: San Diego, CA, NY, 274p.

NAL call number: SF77.F54 1996

Provides basic information about anesthesia to research technicians who have not received extensive training in this field. Sections emphasize the principles of pre- and post-operative care, anesthetic techniques and equipment, and pain recognition and alleviation.

Grier, R.L., T.L. Colvin, and L.N. Kopecky (1990). *Euthanasia Guide for Animal Shelters*. 3rd edition. Moss Creek Publications: Ames, IA, 47p.

NAL call number: SF914.G74 1990

Handbook for euthanasia of companion animals in animal shelters.

Institute of Laboratory Animal Resources Committee on Pain and Distress in Laboratory Animals (1992). *Recognition and Alleviation of Pain and Distress in Laboratory Animals*. National Academy Press: Washington, DC, 137p.

NAL call number: SF996.5.R43 1992

Covers the biology of pain, stress and distress, recognition, control, euthanasia, and recommendations for specific animals.

Kohn, D.F., et al., eds. (1997). *Anesthesia and Analgesia in Laboratory Animals*. Academic Press: San Diego, CA, 426p.

NAL call number: SF996.5.A54 1997

Covers pharmacology, monitoring, paralytic agents, post surgical care, equipment, and many other topics.

Kreger, M.D. (1997). *Animal Euthanasia*. Special Reference Brief 98-01. National Agricultural Library: Beltsville, MD, 48p.

NAL call number: aS21.D27S64

Multidatabase literature search resulting in 223 animal euthanasia citations. Some citations include abstracts. Citations cover methods used for companion, livestock, zoo, and laboratory animals. Many citations deal with grief over pet loss and the veterinarian/client relationship.

Ross, L.G. and B. Ross (1984). *Anaesthetic and Sedative Techniques for Fish*. Institute of Aquaculture, University of Scotland: Sterling, Scotland, 35p.

NAL call number: SH156.9.R6

A guide to anaesthetic and sedative techniques for fish used in laboratory and field research.

UFAW (1989). *Guidelines on the Care of Laboratory Animals and Their Use for Scientific Purposes: II - Pain, Analgesia and Anaesthesia*. Universities Federation for Animal Welfare: Wheathampstead, Herts, U.K., 30p.

NAL call number: SF406.G8 v.2

This document provides recommendations for recognizing laboratory animal pain symptoms, minimization and control by use of analgesic and anesthetic agents, and post-anesthetic care.

UFAW (1986). *Euthanasia of Unwanted, Injured or Diseased Animals or for Educational or Scientific Purposes*. Universities Federation for Animal Welfare: Wheathampstead, Herts, U.K., 51p.

NAL call number: HV4731.E9 1986

Symposium proceedings with papers by many authors. Includes covers companion animals, reptiles and amphibians, and other species.

Animal Care and Use Committees

Animal Welfare Information Center (AWIC). *Animal Welfare Information Center Newsletter*. National Agricultural Library, AWIC, 10301 Baltimore Ave., Beltsville, MD 20705.

NAL call number: AHV4701.A952

This newsletter covers a wide range of topics relevant to the scientific community and the IACUC. Topics include animal welfare regulations, Animal Care and Use Committees, agricultural animal care, alternatives, legislation updates, upcoming meetings, funding sources, new AWIC products and services, and scientific and general articles on animal care and use issues and methods. Subscriptions are free. Back issues are available on the AWIC website:

<http://www.nal.usda.gov/awic>

Berry, D. (1991). *Reference Materials for Members of Animal Care and Use Committees*. National Agricultural Library, Animal Welfare Information Center: Beltsville, MD, 42p.

NAL call number: aHV4701.A95 no.10

Annotated bibliography of books and proceedings about animal care and use committees covering 1977 to 1991.

Canadian Council on Animal Care (1992). *Animal Care Committees: Role and Responsibilities*. Canadian Council on Animal Care: Ottawa, Ontario, Canada, 145p.

NAL call number: HV4708.A55 1992

Proceedings from a workshop sponsored by the Canadian Council on Animal Care (CCAC) in February 1992. Topics

include researcher responsibilities, ethical concerns, psychology protocol reviews, media concerns, CCAC Alternatives Committee, peer review, occupational health and safety, training personnel, monitoring field studies, invertebrates, and workshop reports.

Canadian Federation of Humane Societies (1986). *Guidelines for Lay Members of Animal Care Committees*. Revised 1986. Canadian Federation of Humane Societies: Nepean, Ontario.

NAL call number: HV4735.G8

Describes the functions and activities of animal care committees. Includes sections entitled "Lay committee members: special people with special problems", "How to review protocols", and "Pain".

Council of the Applied Research Ethics National Association (ARENA) (1992). *Institutional Animal Care and Use Committee Guidebook*. National Institutes of Health Publication No. 92-3415, National Institutes of Health: Bethesda, MD, 60p.

NAL call number: HV4764.I58 1992

Excellent overview of Institutional Animal Care and Use Committee composition, function, proposal review, oversight of the animal care and use program, record keeping, sample forms, and special considerations. Useful review of NIH policies and the Animal Welfare Act as they pertain to the committee.

Editorial Committee of Institutional Administrators and Laboratory Animal Specialists for the Henry M. Jackson Foundation for Advancement of Military Medicine, Uniformed Services University of Health Sciences (1988). *Institutional Administrator's Manual for Laboratory Animal Care and Use*. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, 82p. Available from: Office for Protection from Research Risks, National Institutes of Health, 6100 Executive Blvd., Suite B01, Rockville, MD 20892-7507.

NAL call number: SF406.I54

A guide for institutional administrators who supervise laboratory animal care and use programs. The manual addresses questions involving quality care, ethics, and legal requirements for animal care and use programs.

Guttman, H.N.; J.A. Mench; and R.C. Simmonds, eds. (1989). *Science and Animals: Addressing Contemporary Issues*. Scientists Center for Animal Welfare: Greenbelt, MD, 149p.

NAL call number: HV4704.S33

Proceedings from a conference held by the Scientists Center for Animal Welfare in 1988. "Community and Lay Members of Animal Care and Use Committees", "Animal Care and Use Committee Issues", and "Well-Being and Ethics" are three of the six sections contained in this volume. The community and lay member session was developed and presented entirely by active community and lay members of Animal Care and Use Committees.

Johns Hopkins University, School of Hygiene and Public Health (1992). *Animal Care and Use Committees and Alternatives: A Symposium Sponsored by the Johns Hopkins School of Hygiene and Public Health, Office for Research Subjects, June 18, 1992*. Johns Hopkins Center for Alternatives to Animal Testing: Baltimore, MD, 110p.

NAL call number: HV4704.A53 1992

Transcript of lectures about the concept of alternatives, their use in science, information resources, regulatory requirements, and ACUC involvement in pre-college education.

Lab Animal (May 1997). 26:5.

NAL call number: QL55.A1L33

Special issue devoted to IACUCs. Includes *Do pressure and prejudice influence the IACUC?* by J. Silverman, *The SCAW IACUC survey part I: preliminary results* by L. Krulisch and J. Mench, *The SCAW IACUC survey part II: the unaffiliated member* by P. Theran, and *Resource: IACUCs and the World Wide Web* by K. Boschert.

Laboratory Animal Science Association and Universities Federation for Animal Welfare (1990). *Guidelines on the Care of Laboratory Animals and Their Use for Scientific Purposes: IV - Planning and Design of Experiments*. Ennisfield Ltd.: London, England, 20p.

NAL call number: SF406.G8 v.4

Basic recommendations as to the planning, and design of experiments using animals, and how this can effect the outcome of the experiment.

National Institutes of Health and Office of Protection from Research Risks and NIH Office of Animal Care and Use (1989). *Animal Care and Use: Policy Issues in the 1990s*. Office of Animal Care and Use, National Institutes of Health: Bethesda, MD, 79p.

NAL call number: HV4704.A46 1989

Proceedings from NIH OPRR/OACU conference, November 16-17, 1989, Bethesda, Maryland.

National Institutes of Health Animal Research Committee (1994). *Using Animals in Intramural Research: Guidelines for Investigators and Guidelines for Animal Users*. NIH Office of Animal Care and Use: Bethesda, MD.

NAL call number: HV4928.U85 1994

NIH Research Advisory Committee notebook outlining the NIH ACUC program, occupational safety, laws and regulations, ethical and scientific issues, alternatives, pain and distress, and other topics.

Orlans, F.B. (1987). **Research Protocol Review for Animal Welfare**. *Investigative Radiology* 22:253-258.

An overview of protocol review, investigators' concerns about ACUC's, and assessing and minimizing animal pain and distress.

Orlans, F.B. (1988). *Field Research Guidelines: Impact on Animal Care and Use Committees*. Scientists Center for Animal Welfare: Greenbelt, MD, 23p.

NAL call number: HV4704.F5

The proceedings of a workshop entitled "Field Research Standards" held October 8, 1987.

Orlans, F.B.; R.C. Simmonds; and W.J. Dodds, eds. (1987). **Effective Animal Care and Use Committees**. *Laboratory Animal Science*, Special Issue (January 1987), 178p. Scientists Center for Animal Welfare, Golden Triangle Building One, 7833 Walker Dr., Suite 340, Greenbelt, MD 20770, E-mail: info@scaw.com

NAL call number: 410.9 P94

Papers from workshops sponsored by the Scientists Center for Animal Welfare focusing on effective review of biomedical experiments to ensure humane and appropriate use of animals. Includes chapters concerning the objectives and activities of animal care and use committees, protocol review and animal pain, and roles of committee members (including lay members).

Public Responsibility in Medicine and Research (PRIM&R) and Tufts University School of Medicine (1991). *Animal Care and Use Programs: Regulatory Compliance and Education in an Age of Fiscal Constraint*. PRIM&R: Boston, MA, 408p.

NAL call number: HV4913.A54

Educational material for: Animal care and use programs.

Scientists Center for Animal Welfare (SCAW). *SCAW Newsletter*. Golden Triangle Building One, 7833 Walker Dr., Suite 340, Greenbelt, MD 20770, tel: (301) 345-3500, fax: (301) 345-3503, E-mail: info@scaw.com

NAL call number: QL55.N48

Quarterly newsletter that promotes the humane treatment of animals used in research. Articles frequently focus on animal care and use committees.

United States Department of Agriculture (1990). *Directive 635.1, Humane Care and Use*. U.S. Dept. of Agriculture, Agricultural Research Service: Washington, D.C.

NAL call number: aKF3841.D57 1990

Description of requirements for animal care and animal care and use protocols for use by USDA, Agricultural Research Service researchers and veterinary staff.

United States Department of Defense (1995). *Report to the Senate Armed Services Committee and the House of Representatives National Security Committee on Department of Defense Animal Care and Use Programs*. Department of Defense: Washington, D.C.

NAL call number: HV4928.U56 1995

The Fiscal Year 1995 report to Congress on the Department of Defense animal care and use programs in research, education, and training for Defense and extramural projects.

University of Texas Health Science Center at San Antonio (1990). *Responsible Care and Use of Animals in Research and Training: Institutional Animal Care Training Program*. University of Texas Health Science Center at San Antonio: San Antonio, TX, 36p.

NAL call number: HV4933.T4U5

Description of the university's program, relevant legislation, alternatives, organization resources, zoonoses, facilities, and animal health management.

Cats and Dogs

Askew, H.R. (1996). *Treatment of Behavior Problems in Dogs and Cats: A Guide for the Small Animal Veterinarian*. Blackwell Science: Oxford; Cambridge, MA, 350p.

NAL call number: SF433.A85 1996

Covers pet behavior counseling and treatment of dog and cat behavioral problems such as aggression, fear, separation anxiety, and elimination.

August, J.R. (1997). *Consultations in Feline Internal Medicine 3*. W.B. Saunders: Philadelphia, PA, 673p.

NAL call number: SF985.C65 1997

Reviews infectious diseases, disease and treatment of each biological systems, oncology, dermatology, and population medicine.

Bordwell, S. (1994). *The American Animal Hospital Association Encyclopedia of Dog Health and Care*. Hearst Books: New York, 292p.

NAL call number: SF427.B625 1994

Basic care, behavior, vaccinations, and disease recognition and treatment. Also covers conditions specific to puppies, males, females, first aid, emergency procedures, and poison control.

Chandler, E.A. (1991). *Canine Medicine and Therapeutics*. 3rd edition. Blackwell Scientific Publications: St Louis, MO, 876p.

NAL call number: SF767.D6C3 1991

Reviews organ systems, nutrition, behavior, parasites, clinical biochemistry, and clinical pharmacology.

Chandler, E.A., C.J. Gaskell, and M. Rosalind, eds. (1994). *Feline Medicine and Therapeutics*. 2nd edition. Blackwell Scientific: Oxford; Boston, MA, 705p.

NAL call number: SF985.F45 1994

Covers the major organ systems, specific viruses, diagnosis and treatment, pharmacology, poisoning, therapeutics, and behavioral problems.

Crow, S.E. and S.O. Walshaw (1997). *Manual of Clinical Procedures in the Dog, Cat, and Rabbit*. 2nd edition.

Lippincott-Raven: New York, NY, 323p.

NAL call number: SF991.C76 1997

The purpose of this manual is to provide information on the correct use of diagnostic and therapeutic procedures in veterinary practice. It is a useful tool for veterinary technologists, veterinary students, as well as veterinarians and veterinary technicians in small animal practice or laboratory animal care facilities. The text is organized by procedures, with each described in a step-by-step manner.

Donnersberger, A.B.; A.E. Lesak, and M.J. Timmons (1989). *A Laboratory Textbook of Anatomy and Physiology: The Cat*. 4th edition. D.C. Heath: Lexington, MA, 445p.

NAL call number: QL813.C38D6 1989

Dissection manual illustrating cat anatomy and physiology.

Erlewein, D.L. and E.L. Kuhns (1996). *Instructions for Veterinary Clients: Canine and Feline Medical and Surgical Problems*. 3rd edition. Mosby: St. Louis, MO, 477p.

NAL call number: SF991.E75 1996

A notebook of instructions and information sheets veterinarians may provide to clients. Covers system disorders, parasitism, poisoning, nutrition, surgery, and miscellaneous conditions like acupuncture and cryotherapy.

Ettinger, S.J. and E.C. Feldman (1995). *Textbook of Veterinary Internal Medicine: Diseases of the Dog and Cat*. 4th edition. W.B. Saunders: Philadelphia, 2 vol.

NAL call number: SF991.T48 1995

Covers clinical disease, systemic problems, infectious diseases, congenital defects, continuous rate infusion formulas, diagnosis, and treatment.

Hudson, L.C. and W.P. Hamilton, eds. (1993). *Atlas of Feline Anatomy for Veterinarians*. Saunders: Philadelphia, PA, 287p.

NAL call number: SF767.C29H83 1993

Contains chapters on physical examinations and organ systems with illustrations.

Institute of Laboratory Animal Resources Committee on Dogs (1994). *Dogs: Laboratory Animal Management*. National Academy Press: Washington, D.C., 138p.

NAL call number: SF407.D6D64 1994

Chapters cover criteria for experimental animal selection, husbandry, breeding colony management, veterinary care, and special considerations including diseases and gene therapy.

McGinnis, T. (1996). *The Well Cat Book: The Classic Comprehensive Handbook of Cat Care*. Random House, NY, 325p.

NAL call number: SF447.M3455 1996

Reviews anatomy, preventative medicine, diagnostic medicine, home medical care, breeding and reproduction, and the role of the veterinarian. Written for the cat owner.

McGinnis, T. (1996). *The Well Dog Book: The Classic, Comprehensive Handbook of Dog Care*. Random House: NY, 287p.

NAL call number: SF427.M473 1996

Reviews anatomy, preventative medicine, diagnostic medicine, home medical care, breeding and reproduction, and the role of the veterinarian. Written for the dog owner.

Schwartz, S. (1997). *Canine and Feline Behavior Problems: Instructions for Veterinary Clients*. 2nd edition. Mosby, St. Louis, 144p.

NAL call number: SF433.S38 1997

Covers behavioral problems dealing with elimination, aggression, reproduction, ingestion, neuroses and emotional reactions, destructiveness, disease, and miscellaneous topics.

Sussman, L. and A. Dubowy (1994). *The American Animal Hospital Association Encyclopedia of Cat Health and Care*. Hearst Books: New York, 291p.

NAL call number: SF447.S87 1994

Basic care, behavior, vaccinations, and disease recognition and treatment. Covers conditions specific to puppies, males, females, first aid, emergency procedures, and poison control.

Wills, J. and A. Wolf, eds. (1993). *Handbook of Feline Medicine*. 1st edition. Pergamon Press: Oxford; New York, NY, 415p.

NAL call number: SF985.H36 1993

Contains chapters on disorders, symptoms, and treatments.

Diseases and Parasites

Buergelt, C.D. (1997). *Color Atlas of Reproductive Pathology of Domestic Animals*. Mosby: St. Louis, MO, 219p.

NAL call number: SF871 B83 1997

Describes normal and abnormal reproductive pathological conditions in mammals with color and black and white plates.

Carter, G.R. and M.M. Chengappa (1993). *Microbial Diseases: A Veterinarian's Guide to Laboratory Diagnosis*. 1st edition. Iowa State University Press: Ames, IA, 304p.

NAL call number: SF781.C365 1993

Diagnosis, treatment, and control of microbial diseases in farm and companion animal species.

Fraser, C.M., ed. (1991). *The Merck Veterinary Manual*. 7th edition. Merck and Company: Rahway, NJ, 1832p.

NAL call number: SF748.N47

Comprehensive reference of current knowledge related to the diagnosis, treatment, toxicology, and pharmacology of domestic, exotic, and laboratory animals.

Frye, F.L. (1994). *Reptile Clinician's Handbook: A Compact Clinical and Surgical Reference*. Krieger Publishing Co.: Malabar, FL, 276p.

NAL call number: SF997.5.R4F796 1994

Describes diseases and other conditions requiring diagnosis, treatment, and prevention. Includes nutrition, reproduction, restraint and transport, anesthesia, and fluid replacement are some of the subjects covered.

Frye, F.L. and D.L. Williams (1995). *Self-assessment Color Review of Reptiles and Amphibians*. Iowa State University Press: Ames, IA, 192p.

NAL call number: SF997.5 R4F797 1995

Color plates useful in identifying disease conditions in reptiles and amphibians.

Jubb, K.V.F., P.C. Kennedy, and N. Palmer (1993). *Pathology of Domestic Animals*. 3rd edition. Academic Press: San Diego, CA, 3 volumes.

NAL call number: SF769.J82

Coverage of the pathology of diseases that infect tissues and organ systems.

Harkness, J.E. and J.E. Wagner (1995). *The Biology and Medicine of Rabbits and Rodents*. 4th edition. Williams & Wilkens: Baltimore, MD, 372p.

NAL call number: SF996.5.H37 1995

Describes the biology and husbandry of the species, clinical procedures, diagnosis, specific conditions, and case reports.

McEntee, K. (1990). *Reproductive Pathology of Domestic Mammals*. Academic Press: San Diego, 401p.

NAL call number: SF871.M3

Useful to veterinary students, teachers, researchers, veterinarians, and pathologists. Contains comprehensive coverage of normal and abnormal anatomy and pathology of domestic mammalian reproductive systems.

Owen, D.G. (1992). *Parasites of Laboratory Animals*. Royal Society of Medicine Services: London, 170p.

NAL call number: SF996.5.O94 1992

Published for Laboratory Animals, Ltd., this is Laboratory Animal Handbooks; no. 12 which covers parasites typically found in laboratory animals and their treatment.

Sodikoff, C. (1995). *Laboratory Profiles of Small Animal Diseases: A Guide to Laboratory Diagnosis*. 2nd edition. Mosby: St. Louis, MO, 435p.

NAL call number: SF991.S598 1995

Focus is on dog and cat diseases.

Urquhart, G.M., J. Armour, J.L. Duncan, A.M. Dunn and F.W. Jennings (1996). *Veterinary Parasitology*. 2nd edition. Blackwell Scientific: Cambridge, MA, 307p.

NAL call number: SF810.A3V425 1996

Covers helminthology, entomology, and protozoology of domestic species. Intended for those involved in the diagnosis, treatment and control of parasitic diseases.

Ectotherms (Amphibians, Fish, Reptiles)

DeNardo, D. (1995). **Amphibians as laboratory animals**. *ILAR Journal* 37(4):173-181.

NAL call number: QL55.A1I43

Information on housing, husbandry, water quality, anesthesia, euthanasia, and surgery of amphibians.

DeTolla, L.J., S. Srinivas, B.R. Whitaker, C. Andrews, B. Hecker, A.S. Kane, and R. Reimschuessel (1995). **Guidelines for the Care and Use of Fish in Research**. *ILAR Journal* 37(4):159-173.

NAL call number: QL55.A1I43

Covers husbandry, anesthesia, zoonoses, euthanasia, regulations, and fish use in biomedical research.

Frye, F.L. (1991). *Biomedical and Surgical Aspects of Captive Reptile Husbandry*. 2nd edition. Krieger Publishing Co.: Malabar, FL, 2 vol.

NAL call number: SF997.5.R4F78 1991 Fo

Covers diseases and surgery. Well-illustrated with color plates.

Frye, F.L. (1991). *A Practical Guide for Feeding Captive Reptiles*. Krieger Publishing Co.: Malabar, FL, 171p.

NAL call number: SF515.F79 1991

Diet composition and methods of feeding reptiles.

Frye, F.L. (1991). *Reptile Care: An Atlas of Diseases and Treatments*. T.F.H. Publications: Neptune City, NJ, 2 vol.

NAL call number: SF997.5.R4F795 1991 Fo

Some of the topics covered include husbandry, radiology, ophthalmic conditions, reproductive disorders, bacterial and fungal diseases, surgery, histology, anesthesia, euthanasia and necropsy, use of antibiotics, and hematology.

Messonnier, S.P. (1996). *Common Reptile Diseases and Treatment*. Blackwell Science: Cambridge, MA, 174p.

NAL call number: SF997.5.P4M47 1996

Briefly covers housing, feeding, and starting a reptile practice. More extensive information is provided on clinical procedures, diseases and treatments, and parasites in snakes, turtles, and iguanas. Appendices give specific treatment protocols, list of supplies, and normal blood values.

Schaeffer, D.O., K.M. Kleinow, and L. Krulisch, eds. (1992). *The Care and Use of Amphibians, Reptiles and Fish in Research*. Scientists Center for Animal Welfare: Greenbelt, MD, 196p.

NAL call number: SF406.C5 1992

Conference proceedings covers housing, handling, nutrition, regulations and guidelines, and medicine of reptiles, amphibians, and fish.

Warwick, C., F.L. Frye, and J.B. Murphy, eds. (1995). *Health and Welfare of Captive Reptiles*. Chapman & Hall: London; New York, 299p.

NAL call number: SF515.H43 1995

Chapters cover physiology, anatomy, stress, nutrition, veterinary perspectives, husbandry, housing, immunology, metabolism, reproduction, and welfare of reptiles in zoos, laboratories, and by pet owners.

Formularies

Bishop, Y.M. (1996). *The Veterinary formulary : Handbook of Medicines Used in Veterinary Practice*. 3rd edition.

Rittenhouse: King of Prussia, PA [distributor], 513p.

NAL call number: SF916.5.V47 1996

Contains 1800 formulations of 700 drugs including abamectin, aciclovir, cefquinome, chlamydiosis vaccine, diazinon, doramectin, marbofloxacin, moxidectin, and pigeon pox vaccine. There is a section on prescribing for fish. Also included are drugs used in the treatment and control of parasitic infections.

Borchard, R.E., C.D. Barnes, and L.G.Eltherington (1990). *Drug Dosage in Laboratory Animals: A Handbook*. 3rd edition. Telford Press: Caldwell, NJ, 692p.

NAL call number: RM145.B65 1990

Includes types of anesthesia and analgesia, their advantages and disadvantages, drug dosage tables, hormone maintenance and replacement dosage, and physiological solutions.

Debuf, Y.M. (1994). *The Veterinary Formulary: Handbook of Medicines Used in Veterinary Practice*. 2nd edition. Pharmaceutical Press: London; King of Prussia: Rittenhouse [distributor], PA, 460p.

NAL call number: SF917.V48 1994

Prepared in the Department of Pharmaceutical Sciences of the Royal Pharmaceutical Society of Great Britain. Dosages of drugs for fish, reptiles, domestic and exotic animals, and invertebrates. 1650 drugs and dosages including auranofin, baquilloprim, bisacodyl, carprofen, ceftiofur, diclazuril, enalapril, enrofloxacin, epirubicin, famotidine, fluorometholone, gamolinolenic acid, isotretinoin, lufenuron, meloxicam, mesalazine, midazolam, misoprostol, mitozantrone, nalbuphine, olsalazine, omeprazole, phenylpropanolamine, romifidine and tilmicosin, and other drugs. Mention of proprietary preparations from 164 manufacturers or distributors.

Hawk, C.T. and S.L. Leary (1995). *Formulary for Laboratory Animals*. Iowa State University Press: Ames, IA, 101p.

NAL call number: SF917.H25 1995

A guide sponsored by the American College of Laboratory Animal Medicine provides dosages of analgesics, anesthetics, anti-infective agents, parasiticides and other drugs for 21 groups of laboratory animals. Dosage data is linked to literature references. The appendices summarize bleeding sites, blood volumes, endotracheal tubes, needle sizes and the toxicity of antibiotics for rodents and rabbits.

Knott, T.A. (1997). *Formulary of Equine Medicine*. 3rd edition. Liverpool University Press: Liverpool, U.K., 340p.

NAL call number: SF951.F67 1997

Describes veterinary medicine, disease, and drug dosages in horses.

Lucotte, G. (1993). *Genetic Engineering Formulary. (Formulaire de Genie Genetique)*. Technique et Documentation Lavoisier: Paris; France, 107p.

Data on the biological or physico-chemical characteristics of restriction enzymes, reagents, vectors, Escherichia coli strains, culture media, antibiotics and techniques used in cloning and DNA hybridization.

Marx, K.L. and M.A. Roston (1996). *The Exotic Animal Drug Compendium: An International Formulary*. Veterinary Learning Systems: Trenton, NJ, 393p.

NAL call number: SF917.M37 1996

Contains 740 compounds, including dosage, administration, and references, are given for all groups of vertebrate animals. They include analgesia, anesthesia, antibacterial agents, anticonvulsants. Generic and proprietary names are given.

Tennant, B. (1994). *Small Animal Formulary*. British Small Animal Veterinary Association: Cheltenham, Gloucs, U.K., 218p.

NAL call number: SF917.T46 1994

Lists drugs with indications, forms, interactions, dosages, adverse effects, and contraindications. Useful for animal care staff and students.

General Laboratory Animal Care and Use

Appleby, M. and B.O. Hughes, eds. (1997). *Animal Welfare*. CAB International: Oxon, U.K. and New York, 316p.

NAL call number: HV4711.A587 1997

Reviews issues, problems, and assessments, and solutions in animal welfare from ethical and scientific perspectives. Some of the topics cover include pain and injury; fear and distress; hunger and thirst; health and disease; behavior; physiology; social conditions; human contact; economics; and legislation.

Bennett, B.T., M.J. Brown, and J.C. Schofield, eds. (1994). *Essentials for Animal Research: A Primer for Research Personnel*. 2nd edition. Animal Welfare Information Center, National Agricultural Library: Beltsville, MD and University of Illinois at Chicago: Chicago, IL, 84p.

NAL call number: aQL55.B36 1994

Provides an overview of animal use regulations, alternatives, pain relief, euthanasia, surgery, and the services of the Animal Welfare Information Center.

Claassen, V. (1994). *Neglected Factors in Pharmacology and Neuroscience Research: Biopharmaceutics, Animal Characteristics, Maintenance, Testing Conditions*. Elsevier: Amsterdam, New York, Oxford, 486p.

NAL call number: RM301.25.C56 1994

Seventeen chapters detail drug administration; strain, sex, and age aspects of animals; housing and nutrition; experimental conditions such as feed restriction, fasting, and circadian rhythms; anesthesia; and stress.

Foundation for Biomedical Research (1987). *The Biomedical Investigator's Handbook for Researchers Using Animal Models*. Foundation for Biomedical Research: Washington, DC, 86p.

NAL call number: QL55.B5

The first part of this document describes how to comply with Federal animal care regulations, euthanasia, complicating factors in animal care, biological hazards in the laboratory, good surgical practices, and research oversight. The second part describes how researchers should defend animal research and create good public relations in response to animal rights citizens critical of animal research.

Hitzelberg, R., E. Lundgren, and J. Phillips, eds. (1987). *Laboratory Manual for Basic Biotechnology of Laboratory Animals*. MTM Associates, Inc.: Silver Spring, MD.

NAL call number: SF406.H5 vol.1 and vol.2

The first volume contains information on mice, rats, guinea pigs and rabbits; and the second on dogs, cats and primates. Methods for restraint, injection routes, blood collection, and euthanasia are covered for each species.

Hrapkiewicz, K., L. Medina, and D.D. Holmes (1998). *Clinical Laboratory Animal Medicine*. 2nd edition. Iowa State University Press: Ames, IA, 277p.

NAL call number: SF996.5.H65 1998

Species include mice, rats, gerbils, hamsters, guinea pigs, chinchillas, rabbits, ferrets, and nonhuman primates. Each chapter covers housing, husbandry, diseases, surgical and handling techniques, euthanasia, therapeutic agents, and fluid collection. Also includes chapters on serologic testing and quality control, regulations and policies about animal care and use, organizations in laboratory animal medicine, and appendices with normal values.

National Research Council Committee on Educational Programs in Laboratory Animal Science (1991). *Education and Training in the Care and Use of Laboratory Animals: A Guide for Developing Institutional Programs*. National Academy Press: Washington, D.C., 139p.

NAL call number: SF604.E3

In response to Animal Welfare Act and Health Research Extension Act mandates for institutions to provide training to animal care and use staff, the Institute for Laboratory Animal Resources (ILAR) established a committee to develop this training manual. The manual contains ten course modules, a resources section, and instructions on developing and evaluating educational programs. The modules cover legislation and policies, ethical and scientific issues, alternatives, animal care and use committees, pain and distress, pain relief, surgery, euthanasia, husbandry, and species-specific overviews.

Olfert, E.D., B.M. Cross, and A.A. McWilliam, eds. (1993, 1984). *Guide to the Care and Use of Experimental Animals*. 2 Volumes. Canadian Council on Animal Care: Ontario, Canada. Copies available from: CCAC, 1000-151 Slater Street, Ottawa, Ontario K1P 5H3. Vol. 1, 2nd. edition, 218p. Vol. 2, 208p.

NAL call number Vol. 1: SF406 G85 1993

NAL call number Vol. 2: SF406 C36

A reference guide for the humane care and use of animals used in research, teaching, and testing. Volume 1 includes a discussion of the Canadian oversight committee system, laboratory and farm animal facilities, the environment, animal care, social and behavioral requirements of animals, restraint, occupational health and safety, pain control, euthanasia,

zoonoses and other diseases, drug dosages, and CCAC position statements. Volume 2 contains species-specific care chapters. Traditional laboratory and farm species are covered as are fish, reptiles, amphibians, and wild vertebrates in the field.

Poole, T.B., ed. (1987). *The UFAW Handbook on the Care and Use of Laboratory Animals*. 6th edition (7th edition due 1998). Longman Scientific and Technical: London, UK, Churchill Livingstone, Inc.: New York, NY, 918p.

NAL call number: QL55.U5 1987

Various authors cover housing, husbandry, and experimental techniques for marsupials, bats, armadillos, rodents, rabbits, ferrets, dogs, cats, farm animals, nonhuman primates including shrews, birds, reptiles, amphibians, and fish.

Pratt, P.W. (1997). *Laboratory Procedures for Veterinary Technicians*. 3rd edition. Mosby: St. Louis, MO, 601p.

NAL call number: SF772.6.L32 1997

Covers all aspects of laboratory procedures for laboratory technicians.

Stark, D.M. and M.E. Ostrow, eds. (1989). *AALAS Training Manual Series Volume 1: Assistant Laboratory Animal Technician*. American Association for Laboratory Animal Science: Cordova, TN, 186p.

NAL call number: SF406.A79 1989

Laboratory training manual covers scientific terminology, basic animal anatomy and physiology, and common laboratory instrumentation. Common laboratory procedures, housing requirements, and restraint and handling techniques are discussed for typical laboratory species.

Stark, D.M. and M.E. Ostrow, eds. (1990). *AALAS Training Manual Series Volume 2: Laboratory Animal Technician*. American Association for Laboratory Animal Science: Cordova, TN, 214p.

NAL call number: SF77.L25

This volume covers some of the topics in Volume 1, but in more depth. It includes discussions of standard procedures related to management, health, basic science, and husbandry of many of the less common laboratory animal species, such as the amphibians and reptiles. Equipment related to experimental and surgical procedures is also covered.

Stark, D.M. and M.E. Ostrow, eds. (1991). *AALAS Training Manual Series Volume 3: Laboratory Animal Technologist*. American Association for Laboratory Animal Science: Cordova, TN, 208p.

NAL call number: SF77.L26

Covers management and supervision, diagnostics, laboratory animal diseases, nutrition, equipment, anatomy, physiology, and experimental techniques. The AALAS series is designed to assist laboratory animal technical personnel prepare for certification examinations.

Genetics and Transgenics

Hedrich, H.J. and M. Adams (1990). *Genetic Monitoring of Inbred Strains of Rats: A Manual on Colony Management, Basic Monitoring Techniques, and Genetic Variants of the Laboratory Rat*. Gustav Fischer Verlag: Stuttgart and New York, NY, 539p.

NAL call number: SF407.R38G46

Produced for the International Council for Laboratory Animal Science.

Kriegler, M. (1990). *Gene Transfer and Expression: A Laboratory Manual*. Stockton Press: New York, NY, 242p.

NAL call number: QH442.K73 1990

Covers DNA sequence project management, proteins, similarity and homology, practical aspects, and analysis.

Lucotte, G. (1993). *Genetic Engineering Formulary. (Formulaire de Genie Genetique)*. Technique et Documentation Lavoisier: Paris; France, 107p.

Data on the biological or physico-chemical characteristics of restriction enzymes, reagents, vectors, *Escherichia coli* strains, culture media, antibiotics and techniques used in cloning and DNA hybridization.

Pinkert, C.A. (1994). *Transgenic Animal Technology: A Laboratory Handbook*. Academic Press: San Diego, CA, 364p.

NAL call number: QH442.6.T69 1994

Describes methods used in transgenic research in farm and laboratory animals.

Invertebrates

Abramson, C.I. (1990). *Invertebrate Learning: A Laboratory Manual and Source Book*. American Psychological Association: Washington, D.C., 100p.

NAL call number: QL364.2.A27 1990

Designed for high school and college animal behavior laboratories.

Boyle, P.R. (1991). *The UFAW Handbook on the Care and Management of Cephalopods in the Laboratory*.

Universities Federation for Animal Welfare: Wheathampstead, Herts, U.K., 63p.

NAL call number: SF407.M37B68

Describes taxonomy, anatomy, housing, husbandry, and experimental techniques in squid, octopus, and nautilus.

Ingle, R.W. (1995). *The UFAW Handbook on the Care and Management of Decapod Crustaceans in Captivity*.

Universities Federation for Animal Welfare: Wheathampstead, Herts, U.K., 119p.

NAL call number: SF407.M37I54 1995

Covers the biology, management, rearing, feeding, collecting, handling and restraint, transport, anesthesia, euthanasia, and diseases.

National Research Council. Committee on Marine Invertebrates (1981). *Marine Invertebrates: Laboratory Animal Management*. National Academy Press: Washington, D.C., 382p.

NAL call number: SF407.M37M37

Methods for maintaining and rearing marine invertebrates in the laboratory without immediate access to the sea. Part one contains general information, while part two contains information on specific animals or groups of animals such as sea anemones, mollusks, annelids, crabs, sea urchins. Covers animal care, handling, and food requirements.

Laboratory Animal Housing

Olfert, E.D., B.M. Cross, and A.A. McWilliam, eds. (1993, 1984). *Guide to the Care and Use of Experimental Animals*. 2 Volumes. Canadian Council on Animal Care: Ontario, Canada. Copies available from: CCAC, 1000-151 Slater Street, Ottawa, Ontario K1P 5H3. Vol. 1, 2nd. edition, 218p. Vol. 2, 208p.

NAL call number Vol. 1: SF406.G85 1993

NAL call number Vol. 2: SF406.C36

A reference guide for the humane care and use of animals used in research, teaching, and testing. Volume 1 includes a discussion of the Canadian oversight committee system, laboratory and farm animal facilities, the environment, animal care, social and behavioral requirements of animals, restraint, occupational health and safety, pain control, euthanasia, zoonoses and other diseases, drug dosages, and CCAC position statements. Volume 2 contains species-specific care chapters. Traditional laboratory and farm species are covered as are fish, reptiles, amphibians, and wild vertebrates in the field.

Poole, T.B., ed. (1987). *The UFAW Handbook on the Care and Use of Laboratory Animals*. 6th edition (7th edition due 1998). Longman Scientific and Technical: London, UK, Churchill Livingstone, Inc.: New York, NY, 918p.

NAL call number: QL55.U5 1987

Various authors cover housing, husbandry, and experimental techniques for marsupials, bats, armadillos, rodents, rabbits, ferrets, dogs, cats, farm animals, nonhuman primates including shrews, birds, reptiles, amphibians, and fish.

Reinhardt, V., ed. (1997). *Comfortable Quarters for Laboratory Animals*. 8th edition. Animal Welfare Institute: Washington, DC, 115p.

NAL call number: SF91.A5

Includes guidelines and references for housing, handling, and environmental enrichment for rodents, reptiles and

amphibians, chickens, rabbits, cats, dogs, nonhuman primates, sheep and goats, cattle, and swine.

Legislation, Policies, and Guidelines

- [General References](#)
- [Animal Welfare Act and Amendments](#)
- [National Institutes of Health Legislation, Policies, and Guidelines](#)
- [Other Legislation, Policies, and Guidelines](#)

General References

Abbot, S.G. and L.W. Oring (1997). *Guidelines to the Use of Wild Birds in Research*. Special Publication. Ornithological Council: Washington, DC, 52p.

NAL call number: QL677.5.G75 1997

Professional guidelines for studies of wild birds in field and laboratory research. Covers permits, investigator impact, collecting and trapping, marking, transport, housing, minor manipulative procedures, and major manipulative procedures including surgery and euthanasia.

Animal Welfare Institute (1990). *Animals and Their Legal Rights: A Survey of American Laws from 1641 to 1990*. 4th edition. Animal Welfare Institute: Washington, DC, 441p.

NAL call number: HV4725.U5L4

An excellent review of laws and policies, their histories, and their enforcement. Individually authored chapters include humane slaughter laws, laboratory animal welfare, animals and airlines, dogs, cats, horses, fighting and baiting, trapping and poisoning, marine mammals, birds, nonhuman primates, humane education, international animal protection, and animal protective organizations and law enforcement agencies. Appendices include the text of mentioned laws.

Cooper, M.E. (1987). *An Introduction to Animal Law*. Academic Press, Inc.: Orlando, FL, 213p.

NAL call number: K3620.C58

This book provides guidelines for those who wish to be pointed in the right direction but not to be overwhelmed by the details of law as it relates to animals.

Animal Welfare Act and Amendments

Animal Welfare Act, amendments, and regulations are available from USDA, APHIS, Office of Animal Care, 4700 River Rd., Unit 85, Riverdale, MD 20737-1234 and at <http://www.aphis.usda.gov/ac/>

Animal Welfare Act as Amended (7 U.S.Code, 2131-2156)

The complete Animal Welfare Act including all amendments following the 1966 enactment.

Public Law 89-544 *Act of August 24, 1966*

Referred to as *The Animal Welfare Act* although that title is not mentioned within the law. It authorizes the Secretary of Agriculture to regulate transport, sale, and handling of dogs, cats, nonhuman primates, guinea pigs, hamsters, and rabbits intended to be used in research or "for other purposes". It requires licensing and inspection of dog and cat dealers and humane handling at auction sales.

Public Law 91-579 *Animal Welfare Act of 1970*

Expands the list of animals covered by the Act to include all warm-blooded animals determined by the Secretary of Agriculture as being used or intended for use in experimentation or exhibition except horses not used in research and farm animals used in production-related studies. Exhibitors are incorporated into the act and research facilities are defined. Retail pet stores, state and county fairs, rodeos, purebred dog and cat shows, and agricultural exhibitions are exempt from the act. The Secretary is directed to develop regulations regarding record keeping and humane care and treatment of animals in or during commerce, exhibition, experimentation, and transport. There is also mention of inspections, and appropriate anesthetics, analgesics, and tranquilizers. There are further regulations on dog and cat commerce.

Public Law 94-279 *Animal Welfare Act Amendments of 1976*

Focuses on animal transport and commerce. Health certification prior to transport of sale is required and must be performed by a veterinarian. Licenses, method of payment, and penalties for violations are discussed. This amendment also introduces and defines "animal fighting ventures" to the Act. Animals used in hunting waterfowl, foxes, etc. are exempt. It is illegal to exhibit or transport via interstate or foreign commerce animals used in fighting ventures such as dogs or roosters.

Public Law 99-198 *Food Security Act of 1985, Subtitle F - Animal Welfare*

Also called "The Improved Laboratory Standards Act", this section clarifies what is meant by "humane care" by mentioning specifics such as sanitation, housing, and ventilation. It directs the Secretary of Agriculture to establish regulations to provide exercise for dogs and an adequate physical environment to promote the psychological well-being of nonhuman primates. It specifies that pain and distress must be minimized in experimental procedures and that alternatives to such procedures be considered by the principle investigator. It also defines practices that are considered to be painful. No animal can be used in more than one major operative experiment with recovery (exceptions are listed). The establishment of the Institutional Animal Care and Use Committee (IACUC) is introduced with a description of its roles, composition, and responsibilities to the Animal and Plant Health Inspection Service (APHIS). Also included is the formation of an information service at the National Agricultural Library to assist those regulated by the act in prevention of unintended duplication of research, employee training, searching for ways to reduce or replace animal use, and to provide information on how to decrease pain and distress. The final section explains the penalties for release of trade secrets by regulators and the regulated community.

Public Law 101-624 *Food, Agriculture, Conservation, and Trade Act of 1990, Section 2503 - Protection of Pets*

Establishes a holding period for dogs and cats at shelters and other holding facilities before sale to dealers. It requires dealers to provide written certification regarding each animal's background to the recipient. Specific items included on the certificate are mechanisms of enforcement, injunctions, and penalties for violation.

Code of Federal Regulations, Title 9, Chapter 1, Subchapter A - Animal Welfare

Commonly called "9CFR", the regulations developed by the U.S. Department of Agriculture describe how the Act and Amendments must be implemented. The Definitions section describes exactly what is meant by terms used in the legislation. "Animal", for example, specifically excludes rats of the genus *Rattus* and mice of the genus *Mus* as well as birds used in research. The Regulations section includes subparts for licensing, registration, research facilities, attending veterinarians and adequate veterinary care, stolen animals, records, compliance with standards and holding periods, and miscellaneous topics such as confiscation and destruction of animals and access and inspection of records and property. The bulk of the 9CFR subchapter is the third section which provides standards for specific species or groups of species. Included are sections for cats and dogs, guinea pigs and hamsters, rabbits, nonhuman primates, marine mammals, and the general category of "other warm-blooded animals". Standards include those for facilities and operations, health and husbandry systems, and transportation. The final section sets forth the Rules of Practice applicable to adjudicating administrative proceedings under Section 19 of the Animal Welfare Act. This is the 1994 version of the Code of Federal Regulations.

Federal Register, Vol. 54, No. 168, August 31, 1989, P. 36112-36163. Final Rule: Animal Welfare; Parts 1, 2, and 3.

The final regulations developed to enact the 1985 amendments to the Animal Welfare Act. Extensive commentary is provided to respond to public comments about each of the proposed regulations. Often referred to as the "Preamble" to the Animal Welfare Act amendments of 1985, the explanations of the regulations are used to identify the intent of the

regulations published in *Title 9, Code of Federal Regulations*.

Federal Register, Vol. 55, No. 32, February 15, 1991, P. 6426-6505. *Final Rule: Animal Welfare; Standards; Part 3*. The final regulations developed to enact the 1985 amendments to the Animal Welfare Act concerning exercise in dogs and psychological well-being in nonhuman primates. Extensive commentary is provided to respond to public comments about each of the proposed regulations. Also referred to as the "Preamble" to the Animal Welfare Act amendments of 1985, the explanations of the regulations are used to identify the intent of the regulations published in *9CFR*.

Federal Register, Vol. 58, No. 139, July 22, 1993, P. 39124. *Final Rule: Random Source Dogs and Cats*, and *Federal Register*, Vol. 58, No. 164, August 26, 1993, P. 45040. *Final Rule: Correction, Random Source Dogs and Cats*. The final rules amending the regulations under the Animal Welfare Act requiring pounds and shelters to hold and care for dogs and cats for at least 5 days (including one weekend day) before providing them to a dealer. Dealers must provide valid certification to anyone acquiring random source dogs and cats from them. Public comments and rationale for the regulatory decisions are discussed.

National Institutes of Health Legislation, Policies, and Guidelines

Available from Office for Protection from Research Risks, Division of Animal Welfare, 6100 Executive Blvd., Suite B01, Rockville, MD 20892-7505 and from <http://grants.nih.gov/grants/olaw/olaw.htm>

National Research Council, Institute of Laboratory Animal Resources (1996). *Guide for the Care and Use of Laboratory Animals*. National Academy Press: Washington, D.C., 127p. Also available electronically from http://www.nap.edu/openbook.php?record_id=5140

NAL call number: SF406.G95 1996

Public Health Service grantees and contractors and AAALAC-accredited (Association for Assessment and Accreditation of Laboratory Animal Care International) facilities are required to abide by the Animal Welfare Act and amendments and the recommendations found in the *Guide* and the *PHS Policy*. The *Guide* includes minimum requirements and performance standards for institutional policies, laboratory animal husbandry, veterinary care, physical plant, and special considerations such as farm animals. Unlike the Animal Welfare Act, the guide is used for all animal species.

PL 99-158 *Health Research Extension Act of 1985, Section 495*

Section 495, "Animals in Research", requires the Secretary of the Public Health Service (PHS) to develop and implement regulations for the humane care and use of animals in research by institutions (including Federal facilities) that receive PHS funding. The complete law can be found in *U.S. Code, Title 42*.

Public Health Service (1996). *Public Health Service Policy on Humane Care and Use of Laboratory Animals*. 16p.

NAL call number: QL55.P82 1986

The *Policy* was established in accordance with the Health Research Extension Act of 1985 (PL 99-158). It must be used to supplement the Animal Welfare Act and amendments by PHS grantees and contractors. It includes policy on animal welfare assurance, composition and function of institutional animal care and use committees, information required to apply for PHS funding and review of research, record keeping and reporting requirements, and implementation by PHS.

Office for Protection from Research Risks. *OPRR Reports: "Dear Colleague Letters"*.

Letters that are published in *OPRR Reports* or mailed to PHS-funded institutions about OPRR policies. Topics include sources of antibody production, clarifications of reporting requirements, definitions and problems with expedited reviews, information about prompt reporting of problems, and the new addresses and phone numbers of OPRR personnel.

Editorial Committee of Institutional Administrators and Laboratory Animal Specialists for the Henry M. Jackson Foundation for Advancement of Military Medicine, Uniformed Services University of Health Sciences (1988). *Institutional Administrator's Manual for Laboratory Animal Care and Use*. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, 82p.

NAL call number: SF406.I54

A guide for institutional administrators who supervise laboratory animal care and use programs. The manual addresses questions involving quality care, ethics, and legal requirements for animal care and use programs.

ARENA (Applied Research Ethics National Association)(Updated version, 1994). *Institutional Animal Care and Use Committee Guidebook*. Available from: National Institutes of Health, Council of the Applied Research Ethics National Association (ARENA) (1992). *Institutional Animal Care and Use Committee Guidebook*. National Institutes of Health Publication No. 92-3415, National Institutes of Health: Bethesda, MD, 60p.

NAL call number: HV4764.I58 1992

Excellent overview of Institutional Animal Care and Use Committee composition, function, proposal review, oversight of the animal care and use program, record keeping, sample forms, and special considerations. Useful review of NIH policies and the Animal Welfare Act as they pertain to the committee.

Other Legislation, Policies, and Guidelines

AVMA (American Veterinary Medical Association)(1993). **1993 Report of the AVMA Panel on Euthanasia**. *Journal of the American Veterinary Medical Association* 202:229-249.

NAL call number: 41.8 AM3

Recommendations for humane euthanasia of vertebrates including acceptable methods, mechanisms of action, and special considerations.

Code of Federal Regulations, Title 21, Chapter 1, Part 58, Good Laboratory Practice for Nonclinical Laboratory Studies. Available from: Office of Regulatory Affairs, Food and Drug Administration, 5600 Fisher Lane, Rockville, MD 20857.

Administered by the Food and Drug Administration, these regulations prescribe good laboratory practices for conducting nonclinical laboratory studies that support research or marketing permits for products regulated by the Food and Drug Administration. These including food and color additives, animal food additives, human and animal drugs, medical devices for human use, biological products, and electronic products. Companion regulations for conducting studies relating to health effects, environmental effects, and chemical fate testing are found in *Code of Federal Regulations, Title 40, Chapter 1, Part 792, Good Laboratory Practice Standards* and are administered by the Environmental Protection Agency.

Code of Federal Regulations, Title 40, Chapter 1, Part 792, Good Laboratory Practice Standards. Available from: Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460.

In accordance with Section 4 of the Toxic Substances Control Act, the Environmental Protection Agency issued these regulations describing laboratory practices for conducting studies relating to health effects, environmental effects, and chemical fate testing. Companion regulations for product testing regulated by the Food and Drug Administration are found in *Title 21, Chapter 1, Part 58 - Good Laboratory Practice for Nonclinical Laboratory Studies*.

Federal Register, Volume 59, No. 127, Tuesday, July 5, 1994, P. 34496-34547. *National Institutes of Health: Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines)*.

The NIH Guidelines specify practices for constructing and handling recombinant deoxyribonucleic acid (DNA) molecules and organisms and viruses containing recombinant DNA molecules. Includes topics such as biosafety, gene transfer, and institutional responsibilities.

Federal Register, Volume 54, No. 75, Thursday, April 20, 1989, *Good Laboratory Practice: Minor Amendment*.

Available from: Office of Regulatory Affairs, Food and Drug Administration, 5600 Fisher Lane, Rockville, MD 20857. The final rule discouraging toe clipping for laboratory animal identification is discussed as an amendment to the Food and Drug Administration's *Good Laboratory Practice Standards*.

U.S. Code, Title 18, Public Law 102-346 Animal Enterprise Protection Act of 1992.

Makes "physical disruption" of animal enterprises by property damage, theft, economic damage exceeding \$10,000,

serious bodily injury or death a criminal offense. Resulted in a study conducted by the Attorney General and the Secretary of Agriculture on the extent and effects of terrorism on enterprises using animals for food and fiber production, agriculture, research, or testing and present their findings and recommendations to Congress.

Universities Federation for Animal Welfare (1990). *Guidelines on the Care of Laboratory Animals IV. Planning and Design of Experiments*. Universities Federation for Animal Welfare: Wheathampstead, Herts, U.K., 22p.

Medical and Veterinary Dictionaries

Dorland, W.A.N. (1994). *Dorland's Illustrated Medical Dictionary*. 28th edition. Saunders: Philadelphia, PA, 1940p.
NAL call number: R121.D73 1994

Covers anatomy, genetics, diseases, reference values for laboratory tests, tables of culture media, physiology, biochemistry, and selected abbreviations used in medicine.

Frenay, A.C. and R.M. Mahoney (1989). *Understanding Medical Terminology*. 8th edition. Kendall/Hunt Publishing Co.: Dubuque, IA.

NAL call number: R123.F7

An illustrated guide explaining biomedical terminology.

Ilchmann, G. and T. Blaha (1993). *Dictionary of Veterinary Medicine*. A. Hatier: Berlin, Germany, 414p.

NAL call number SF609.F32 1993

Veterinary terms from parasitology, pathology, pharmacology, epidemiology, animal and food hygiene in German, English, French, and Russian.

Jablonski, S. (1993). *Dictionary of Medical Acronyms and Abbreviations*. 2nd edition. Hanley & Belfus: Philadelphia, PA, 330p.

NAL call number: R123.J24 1993

McBride, D.F. and M.G. Austrin (1996). *Learning Veterinary Terminology*. Mosby: St. Louis, MO, 541p.

NAL call number: SF610.M38 1996

Four sections describe the basic foundation of veterinary language, body structure and systems, and animal industry terms.

Parker, S.P. (1994). *McGraw-Hill Dictionary of Scientific and Technical Terms*. 5th edition. McGraw-Hill: New York, NY, 2194p.

NAL call number: Q193.M15 1994

Parker, S.P. (1994). *McGraw-Hill Concise Encyclopedia of Science & Technology*. 3rd edition. McGraw-Hill: New York, NY, 2241p.

NAL call number: Q121.M29 1994

This volume is condensed from a 15-volume set.

Stanfield, P. and Y.H. Hui (1991). *Essential Medical Terminology*. Jones and Bartlett: Boston, MA, 287p.

NAL call number: R123.S678 1991

Contains comprehensive coverage of over 1,400 medical terms, hundreds of exercises and progress checks with answers, and full-color anatomical art work.

Thomas, C.L., ed. (1990). *Taber's Cyclopedic Medical Dictionary*. 16th edition. F.A. Davis Co.: Philadelphia, PA.

NAL call number: R121.T144

A dictionary of medical terminology.

West, G., ed. (1988). *Black's Veterinary Dictionary*. 16th edition. Barnes & Noble Books: Totowa, NJ.

NAL call number: SF609.M5

An illustrated dictionary containing information on animal anatomy, physiology, diseases, medicine, and research.

Wiesner, E. and Eikmeier, H. (1991). *Concise Dictionary of Veterinary Practice*. G. Fischer: New York: NY.
NAL call number: SF609.H36 1991
A five-volume set covering many facets of veterinary practice. Written in German.

Occupational Safety

Institute of Laboratory Animal Resources (U.S.). Committee on Occupational Safety and Health in Research Animal Facilities (1997). *Occupational Health and Safety in the Care and Use of Research Animals*. National Academy Press: Washington, DC, 154p.
NAL call number: RC965.A6O23 1997

Richmond, J.Y. and R.W. McKinney, eds. (1993). 3rd edition. *Biosafety in Microbiological and Biomedical Laboratories*. HHS Publication No. (CDC) 93-8395. U.S. Government Printing Office: Washington, D.C., 177p.
NAL call number: Q183.B56 1993

This publication is issued by Centers for Disease Control and Prevention and the National Institutes of Health. Includes sections on biosafety principles, level criteria, levels for infectious agents and infected animals, risk assessment, types of agents, appendices, and a list of resources.

Philosophy and Ethics

American Medical Association (1988). *Use of Animals in Biomedical Research: The Challenge and Response*. American Medical Association: Chicago, IL, 36p.
NAL call number: HV4932.U73

An AMA White Paper that presents a concise overview of the pro-animal research perspective including background on the animal rights movement and justification for animal research.

Anderson, D.; M.J. Reiss; and P.N. Campbell, eds. (1993). *Ethical Issues in Biomedical Sciences: Animals in Research and Education*. Institute of Biology: London, UK, 103p.
NAL call number: HV4913.E84 1993

Proceedings of a National conference organized by the Institute of Biology's Biomedical Sciences and Education Divisional Committees in collaboration with the British Toxicology Society held in London, October 1992.

Appleby, M. and B.O. Hughes, eds. (1997). *Animal Welfare*. CAB International: Oxon, U.K. and New York, 316p.
NAL call number: HV4711.A587 1997

Reviews issues, problems, and assessments, and solutions in animal welfare from ethical and scientific perspectives. Some of the topics cover include pain and injury; fear and distress; hunger and thirst; health and disease; behavior; physiology; social conditions; human contact; economics; and legislation.

Baird, R.M. and S.E. Rosenbaum (1991). *Animal Experimentation: The Moral Issues*. Prometheus Books: Buffalo, N.Y., 182p.
NAL call number: HV4915.A64

Beauchamp, T.L. and L. Walters, eds. (1989). *Contemporary Issues in Bioethics*. 3rd edition. Wadsworth Publishing Company: Belmont, CA.
NAL call number: R724.C67

Focuses on moral perplexities in biomedical research. The objective of this book is to make students aware of complex situations in biology and medicine that require moral reflection, judgement, or decision. The essays have been arranged in a debate-like format, with divergent viewpoints placed side-by-side, so that the reader can explore the strengths and weaknesses of alternative positions.

Bekoff, M. and C.A. Meaney, eds. (1998). *Encyclopedia of Animal Rights and Animal Welfare*. Greenwood Press:

Westport, CT.

NAL call number: HV4708.E53 1998

Geared towards the general public and students, this comprehensive encyclopedia briefly covers everything from animals in religion to euthanasia. Each topic is addressed by an expert in that area. Pain, distress, legislation, philosophy, and animal shelters are also covered. An concise introduction to the field.

Blum, D. (1994). *The Monkey Wars*. Oxford University Press: New York, NY, 306p.

NAL call number: HV4915.B58 1994

Written by a journalist, this book carefully examines the viewpoints of researchers who study nonhuman primates and those who strongly oppose such research. The author a historical background, the arguments, and very balanced interviews and discussion of research benefits and flaws.

Committee on the Use of Animals in Research (1991). *Science, Medicine, and Animals*. National Academy Press: Washington, DC, 30p.

NAL call number: HV4915.S35

Prepared for the Councils of the National Academy of Sciences and the Institute of Medicine by the Committee on the Use of Animals in Research, this document seeks to answer the most commonly asked questions about animal research, and to describe some of the ways in which animal research has benefitted, and continues to benefit, human and animal health.

Dawkins, M.S. and M. Gosling (1992). *Ethics in Research on Animal Behaviour: Readings from Animal Behaviour*. Academic Press for the Association for the Study of Animal Behaviour and the Animal Behavior Society: London, England, 64p.

NAL call number: QL55.E84 1992

Includes "Guidelines for the Use of Animals in Research," revised 1991 version.

Deyn, P.P. de; R. D'Hooge; and A. Schafer (1994). *The Ethics of Animal and Human Experimentation*. John Libbey: London, 369p.

NAL call number: HV4915.E84 1994

General reflections and considerations in regard to biomedical science, legislation, European guidelines, and controversies involving human or non-human subjects used in research.

Groves, J.M. (1997). *Hearts and Minds: The Controversy Over Laboratory Animals*. Temple University Press: Philadelphia, PA, 230p.

NAL call number: R853.A53G76 1997

A look at ethics practiced in the everyday lives of animal researchers and animal rights advocates. Why and how people deal with animal issues at sociological and psychological levels are discussed.

Harnack, A. (1996). *Animal Rights: Opposing Viewpoints*. Greenhaven Press: San Diego, CA, 240p.

NAL call number: HV4711.A58 1996

Asks similar questions as the first edition (1989), but uses different, more recent, articles in reply. Pro and con cases are made for animal rights, experimentation, wildlife protection, animals as food, and others.

LaFollette, H. and N. Shanks (1996). *Brute Science: Dilemmas of Animal Experimentation*. Routledge: London, New York, 286p.

NAL call number: HV4915.L34 1996

An analysis of philosophy and morality of animal experimentation.

Orlans, F.B. , T.L. Beauchamp, R. Dresser, D.B. Morton, and J.P. Gluck (1998). *The Human Use of Animals: Case Studies in Ethical Choice*. Oxford University Press: Oxford, New York, 330p.

NAL call number: HV4915.H85 1998

This book covers 16 case studies about ethical issues in human-animal interactions. Topics addressed include biomedical research, cosmetic safety testing, behavioral research, wildlife research, educational teaching, food and farming, companion animals, and religious rites.

- Orlans, F.B. (1993). *In the Name of Science: Issues in Responsible Animal Experimentation*. Oxford University Press: New York, NY, 297p.
NAL call number: HV4915.O75 1993
Addresses attitudes and ethical arguments, alternatives, IACUCs, protocol reviews, pain and suffering, testing, animals in education, and makes recommendations for policy changes.
- Phillips, M.T. and J.A. Sechzer (1989). *Animal Research and Ethical Conflict: An Analysis of the Scientific Literature, 1966-1986*. Springer-Verlag: New York, 251p.
NAL call number: HV4708.P55
A survey of the scientific literature addressing ethical and humane issues of animal research.
- Regan, T. and P. Singer, eds. (1989). *Animal Rights and Human Obligations*. 2nd edition. Prentice Hall: Englewood Cliffs, NJ, 280p.
NAL call number: HV4711.A56 1989
Discusses animal rights, humaneness, morality, and ethical animal use by man.
- Rohr, J., ed. (1989). *Animal Rights: Opposing Viewpoints*. Greenhaven Press, Inc.: San Diego, CA.
NAL call number: HV4711.A53
Geared towards students, this book presents excerpts from articles by well-known philosophers and scientists that present pro- and con- views about whether animals have rights. Opposing viewpoints are expressed on issues including animal experimentation, agriculture, zoos, and hunting.
- Rollin, B.E. (1992). *Animal Rights and Human Morality*. Prometheus Books: Buffalo, N.Y., 248p.
NAL call number: HV4708.R655 1992
Describes theoretical and practical issues related to animals and human morality.
- Rollin, B.E. (1995). *Farm Animal Welfare: Social, Bioethical, and Research Issues*. Iowa State University Press: Ames, IO, 168p.
NAL call number: HV4757.R65 1995
Addresses concepts and issues of farm animals welfare and industry methods of animal production.
- Rollin, B.E. (1995). *The Frankenstein Syndrome: Ethical and Social Issues in the Genetic Engineering of Animals*. Cambridge University Press: New York, NY, 241p.
NAL call number: QH442.6.R65 1995
A philosophically and scientifically informed discussion of the moral and social issues raised by genetically engineering animals and the real problems society must address to manage the technology.
- Rollin, B.E. (1989). *The Unheeded Cry: Animal Consciousness, Animal Pain and Science*. Oxford University Press: New York, NY, 308p.
NAL call number: QL55.R65
Raises questions about the morality of animal use in science and makes recommendations for change. Provides an overview of changing scientific attitudes towards animals.
- Rollin, B.E. and M.L. Kesel (1990). *The Experimental Animal in Biomedical Research*. CRC Press: Boca Raton, FL.
NAL call number: R853.A53E86 1990
Vol. 1. A survey of scientific and ethical issues for investigators.
- Rowan, A.N.; F.M. Loew; and J.C. Weer (1994). *The Animal Research Controversy: Protest, Process & Public Policy: An Analysis of Strategic Issues*. Center for Animals & Public Policy, Tufts University School of Veterinary Medicine: North Grafton, MA, 186p.
NAL call number: HV4708.R68 1994
This report outlines the current status of animal research, animal numbers, philosophical positions, evaluation of research, alternatives, pain and distress, public debate, education, and suggests policy proposals.
- Sapontzis, S.F. (1987). *Morals, Reason, and Animals*. Temple University Press: Philadelphia, PA, 302p.

NAL call number: HV4708.S23

A philosophical look at morals, reason, and man's use of animals. This book argues for animal liberation from human use.

Shapiro, K.J. (1998). *Animal Models of Human Psychology: Critique of Science, Ethics, and Policy*. Hogrefe and Huber: Kirkland, WA, 328p.

NAL call number: BF671.S48 1998

An analysis of psychology's use of animals, pros and cons of animal models, and ethical positions.

Singer, P. (1990). *Animal Liberation*. 2nd edition. Random House: New York, NY, 320p.

NAL call number: HV4708.S56 1990

This book defined and defended arguments against human use of animals. The author is a philosopher who is frequently cited during debates on animal rights. A leading proponent of the animal rights movement, the author equates his view of current human attitudes toward animals with racism and sexism. The book includes a history of moral thought regarding animals and their treatment, and cites numerous instances of the use of stressful and painful procedures by researchers.

Smith, J.A. and K.M. Boyd (1991). *The Ethics of Using Animals in Biomedical Research: The Report of a Working Party of the Institute of Medical Ethics*. Oxford University Press: New York, NY, 352p.

NAL call number: R853.A53E74 1991

Tannenbaum, J. (1995). *Veterinary Ethics: Animal Welfare, Client Relations, Competition, and Collegiality*. Mosby: St. Louis, MO, 615p.

NAL call number: SF756.39.T36 1995

Expression of all views and orientations are provided in the attempt to provide tools that will help veterinary students and practitioners to participate in ethical debates confronting the veterinary profession.

Webster, J. (1995). *Animal Welfare: A Cool Eye Towards Eden*. Blackwell Science: Cambridge, MA, 273p.

NAL call number: HV4708.W43 1995

Describes animal perception and human obligations to pets, wild animals, farm animals, and laboratory animals. Covers mind and suffering, hunger, thirst, and housing.

Wolfensohn, S. and M. Lloyd (1994). *Handbook of Laboratory Animal Management and Welfare*. Oxford University Press: New York, NY, 304p.

NAL call number: SF406.W64 1994

This book is a good introduction to legal, ethical, scientific, and health issues relating to laboratory animal care and use. Contains chapters on pain recognition and alleviation, handling, animal monitoring, surgical techniques, and more.

Primates (Nonhuman)

Bennett, B.T., R.C. Abee, and R. Henrickson (1995). *Nonhuman Primates in Biomedical Research*. Academic Press: San Diego, CA.

Part of the American College of Laboratory Animal Medicine series.

NAL call number: SF407.P7N66 1995

Covers laws, taxonomy, morphology, behavior, environmental enrichment, conservation, genetics, reproduction, housing, nutrition, record keeping, medical management, breeding, and biosafety.

Brans, Y.W. and T.J. Kuehl (1988). *Nonhuman Primates in Perinatal Research*. Wiley: New York, NY, 472p.

NAL call number: RG600.N64 1988

Sections cover pregnancy, the embryo, fetus, and neonate. Anatomy, physiology, endocrinology, and behavior are described in each section.

Kirkwood, J.K. and K. Stathatos (1992). *Biology, Rearing, and Care of Young Primates*. Pergamon Press: Oxford; New

York, NY, 154p.

NAL call number: SF408.6.P74K57 1992

Covers species distribution in the wild, gestation, weaning, energy requirements, growth, and other factors necessary for rearing selected species of nonhuman primates. Species include some prosimians, New World monkeys, Old World monkeys, and gibbons and chimpanzees.

Jones, T.C., U. Mohr, and R.D. Hunt, eds. (1993). *Nonhuman Primates*. Springer-Verlag: New York, NY, 2 vol.

NAL call number: RA1199.5.P74N66 1993

Pathology of nonhuman primates including chapters on immunodeficiency viruses, toxoplasmosis, retroviruses, congenital anomalies, and many others.

Mench, J.A. and L. Krulisch (1990). *Well-being of Nonhuman Primates in Research*. Scientists Center for Animal Welfare: Greenbelt, MD, 86p.

NAL call number: QL737.C22C36

Proceeding from a conference held by the Scientists Center for Animal Welfare. Includes regulatory perspectives, biological perspectives, veterinary perspectives and financial perspectives concerning nonhuman primates.

National Institutes of Health Office of Animal Care and Use (1991). *National Institutes of Health Nonhuman Primate Management Plan*. National Institutes of Health: Bethesda, MD, 49p.

NAL call number: HV4758.N3 1991

The model used for nonhuman primate environmental enrichment programs at the National Institutes of Health. Includes designing, implementing, and evaluating programs as well as species-specific options.

National Research Council (1998). *The Psychological Well-being of Nonhuman Primates*. National Academy Press: Washington, DC, 168p.

NAL call number: QL737.P9P776 1998

A review of the literature and suggested guidelines for meeting the psychological needs of primates as specified in the Animal Welfare Act. Covers essentials of programs, general care, special research conditions, prosimians, New and Old World monkeys, apes, and research needs. Also contains samples of nonhuman primate environmental enhancement plans.

Novak, M.A. and A.J. Petto, eds. (1991). *Through the Looking Glass: Issues of Psychological Wellbeing in Captive Nonhuman Primates*. American Psychological Association: Washington, DC, 285p.

NAL call number: SF407.P7T49 1991

Based on a congress held by the American Psychological Association, this book addresses the issues and concerns of nonhuman primate psychological wellbeing.

Oxnard, C.E., R.H. Crompton, and S.S. Lieverman (1990). *Animal Lifestyles and Anatomies: The Case of the Prosimian Primates*. University of Washington Press: Seattle, WA and London, 174p.

NAL call number: QL737.P9095

A species by species look at prosimian behavior, habitat, and diet in relation to anatomy.

Segal, E.F. (1989). *Housing, Care and Psychological Well being of Captive and Laboratory Primates*. Noyes Publications: Park Ridge, NJ, 544p.

NAL call number: QL737.P9H78

Clearly explores the concepts of environmental enrichment and its connection with proper housing, care, and psychological wellbeing

Rabbits and Rodents

Baumans, V., P.F. Brain, H. Brugere, T. Jeneskog, G. Perretta (1994). **Pain and distress in laboratory rodents and lagomorphs: report of the Federation of European Laboratory Animal Science Associations (FELASA) Working Group on pain and distress accepted by the FELASA Board of Management November 1992.** *Laboratory Animals*

28(2):97-112.

NAL call number: QL55.A1L3

Behrend, K. (1991). *Guinea Pigs: Proper Care and Understanding: Expert Advice for Appropriate Maintenance*. Barron=s: New York, NY, 63p.

NAL call number: SF459.G9B4413 1991

Geared to the pet owner. Covers housing, husbandry, diet, handling, illness, and breeding.

Dongen, J.J. van, ed. (1990). *Manual of Microsurgery on the Laboratory Rat*. Elsevier: Amsterdam and New York, NY.

NAL call number: RD33.6.M265 1990

Illustrated manual of microsurgical techniques performed on the laboratory rat.

Guttman, H.N. (1990). *Guidelines for the Well-being of Rodents in Research*. Scientists Center for Animal Welfare: Greenbelt, MD, 105p.

NAL call number: HV4704.G8

Proceedings from a 1989 conference. Articles discuss nutrition, cage space, toxicology studies, pain studies, recognition and alleviation of distress and stress, surgery, euthanasia, and mutant mice.

Harkness, J.E. and J.E. Wagner (1995). *The Biology and Medicine of Rabbits and Rodents*. 4th edition. Williams & Wilkens: Baltimore, MD, 372p.

NAL call number: SF996.5.H37 1995

Describes the biology and husbandry of the species, clinical procedures, diagnosis, specific conditions, and case reports.

Hedrich, H.J. and M. Adams (1990). *Genetic Monitoring of Inbred Strains of Rats: A Manual on Colony Management, Basic Monitoring Techniques, and Genetic Variants of the Laboratory Rat*. Gustav Fischer Verlag: Stuttgart and New York, NY, 539p. **NAL call number: SF407.R38G46**

Produced for the International Council for Laboratory Animal Science. Describes colony management, basic monitoring techniques, and genetic variants of the laboratory rat.

Hillyer, E.V. and K.E. Quesenberry (1997). *Ferrets, Rabbits and Rodents: Clinical Medicine and Surgery*. W.B. Saunders: Philadelphia, PA, 432p.

NAL call number: SF997.5.F47F47 1997

Covers ferrets, rabbits, guinea pigs, chinchillas, and small rodents. Sections include diagnosis, surgery, basic anatomy and physiology, radiology, orthopedics, anesthesia, analgesia, and sedation.

Hogan, B. (1994). *Manipulating the Mouse Embryo: A Laboratory Manual*. 2nd edition. Cold Spring Harbor Laboratory Press: Plainview, NY, 497p.

NAL call number: QL737.R6M2468 1994

Provides technical guidance for mouse embryo manipulations and gene therapy.

Hrapkiewicz, K., L. Medina, and D.D. Holmes (1998). *Clinical Laboratory Animal Medicine*. 2nd edition. Iowa State University Press: Ames, IA, 277p.

NAL call number: SF996.5.H65 1998

Species include mice, rats, gerbils, hamsters, guinea pigs, chinchillas, rabbits, ferrets, and nonhuman primates. Each chapter covers housing, husbandry, diseases, surgical and handling techniques, euthanasia, therapeutic agents, and fluid collection. Also includes chapters on serologic testing and quality control, regulations and policies about animal care and use, organizations in laboratory animal medicine, and appendices with normal values.

Institute of Laboratory Animal Resources Committee on Infectious Diseases of Mice and Rats (1991). *Companion Guide to Infectious Diseases of Mice and Rats*. National Academy Press: Washington, DC, 95p.

NAL call number: SF996.5.I54 1991a

Contains sections on disease prevention, specific disease agents, and diagnosis and research complications of infectious agents on the animals and research objectives.

Institute of Laboratory Animal Resources Committee on Infectious Diseases of Mice and Rats (1991). *Infectious Diseases of Mice and Rats*. National Academy Press: Washington, D.C., 397p.

NAL call number: SF996.5.I54 1991

The Committee, under the auspices of the National Research Council, examined rodent disease prevention and individual disease agents and their effects on research. Chapters describe health surveillance programs, barrier programs, diseases of various anatomical systems, and diagnosis and research complications of infectious agents.

Institute of Laboratory Animal Resources Committee on Immunologically Compromised Rodents (1989).

***Immunodeficient Rodents: A Guide to Their Immunobiology, Husbandry, and Use*. National Academy Press: Washington, DC, 246p.**

NAL call number: RC606.I45

This National Research Council committee gives comprehensive coverage of hereditary immunodeficiencies, induced immunodeficiencies, maintenance of rodents requiring isolation, mating systems for mutants, genetic mechanisms governing resistance or susceptibility to infectious diseases, and hematopoietic cell-surface antigens.

Institute of Laboratory Animal Resources Committee on Rodents (1996). *Rodents*. National Academy Press: Washington, DC, 167p.

NAL call number: SF407.R6R62 1996

Jackson, R.K. (1997). Unusual laboratory rodent species: research uses, care, and associated biohazards. *ILAR Journal* 38(1):13-21.

NAL call number: QL55.A1I43

Covers nontraditional rodents used in biomedical research including marmots, degus, and cotton rats.

Kraft Convener, V., A.A. Deeny, H.M. Blanchet, R. Boot, A.K. Hansen, A. Hem, H. Van Herck, I. Kunstyr, G. Milite, J.R. Needham, W. Nicklas, A. Perrot, C. Reh binder, Y. Richard, and G. De Vroey (1994).

Recommendations for the health monitoring of mouse, rat, hamster, guinea pig and rabbit breeding colonies: report of the Federation of European Laboratory Animal Science Associations (FELASA) Working Group on pain and distress accepted by the FELASA Board of Management November 1992. *Laboratory Animals* 28(1):1-12.

NAL call number: QL55.A1L3

Describes monitoring frequency; sample size; viral, bacterial, mycoplasma, and fungal infections; parasitology; pathology; and necropsy procedures.

Laber-Laird, K., M.M. Swindle, and P.A. Flecknell (1996). *Handbook of Rodent and Rabbit Medicine*. 1st edition. Pergamon: Oxford; Tarrytown, NY, 278p.

NAL call number: SF997.5.R2H36

Covers anesthesia, analgesia, surgical procedures, and drug dosages for rats, mice, gerbils, hamsters, guinea pigs, chinchillas, and rabbits.

Manning, P.J.; D.H. Ringler; and C.E. Newcomer, eds. (1994). *Biology of the Laboratory Rabbit*. 2nd edition. Academic Press: San Diego, CA, 483p.

NAL call number: SF966.5 B56 1994

Describes rabbit anatomy, physiology, housing, husbandry, genetics, and surgical procedures.

Niemi, S.M.; J.S. Venable; and H.N. Guttman, eds. (1994). *Rodents and Rabbits: Current Research Issues*. Scientists Center for Animal Welfare: Greenbelt, MD, 81p.

NAL call number: SF407.R6R63 1994

Proceedings from a 1993 conference. Articles focus on legislation, stress, environmental enrichment, transgenics, anesthesia and analgesia, aseptic surgery, and adjuvant comparisons.

Pass, D. and L. Scott (1993). *Veterinary Care of Birds, Rodents, Rabbits, Ferrets and Guinea Pigs*. Publication no. 93/2. Murdoch University, Foundation for Continuing Veterinary Education: Perth, WA, Australia, 116p.

NAL call number: SF981.V48 1993

Includes management, breeding, biology, anesthesia, reference values, and use of animals in biomedical research.

Suckow, M.A. and F.A. Douglas (1997). *The Laboratory Rabbit*. CRC Press: Boca Raton, FL, 145p.
NAL call number: SF407.R6S83 1997

A volume in *The Laboratory Animal Pocket Reference Series*. Includes sections on biological features, husbandry, management, veterinary care, experimental methodology, and resources. Diagrams show injection, sampling, and catheterization techniques. Drug dosages, antibody production, and safety testing are among the many procedures illustrated.

Van de Weerd, H.A. (1996). *Environmental Enrichment for Laboratory Mice: Preferences and Consequences*. University of Utrecht: The Netherlands, 158p.

Describes strain specific behavioral responses to environmental enrichment, preferences for nesting material and nest boxes, and long term behavioral and physiological effects of enriched and standard housing conditions.

Waynforth, H.B. and P.A. Flecknell (1992). *Experimental and Surgical Technique in the Rat*. Academic Press: London, New York, 382p.

NAL call number: QL737.R666W38 1992

Spiral bound manual with photos and drawings that illustrate administration of substances, methods of obtaining body fluids, anesthesia and postoperative care, surgical technique, specific surgical operations, and miscellaneous techniques such as in vivo perfusions. Vital statistics, drug tradenames and sources, dose rates, identification methods, and other information is provided.

Surgery

Bojrab, M.J.; S.J. Birchard; and J.L. Tomlinson; eds. (1990). *Current Techniques in Small Animal Surgery*. Lea and Febiger: Philadelphia, PA, 950p.

NAL call number: SF991.C87

An extensive illustrated reference guide to general veterinary surgical techniques and some specific conditions. Contains over 50 chapters covering anatomy, physiology, and surgery of organ systems. Dogs, cats, ferrets, birds, and other small vertebrates are covered.

Bojrab, M.J. and M. Tholen (1990). *Small Animal Oral Medicine and Surgery*. Lea and Febiger: Philadelphia, PA, 270p.

NAL call number: SF992.M68563

Guide to veterinary dental medicine and surgery. Chapters oral and periodontal anatomy, pathology, radiology, extraction techniques and management of associated complications, surgical management of oral neoplasms, periodontal and endodontic therapy, restorative dentistry, orthodontics and dental orthopaedics.

Crow, S.E. and S.O. Walshaw (1997). *Manual of Clinical Procedures in the Dog, Cat, and Rabbit*. 2nd edition. Lippincott-Raven: New York, NY, 323p.

NAL call number: SF991.C76 1997

The purpose of this manual is to provide information on the correct use of diagnostic and therapeutic procedures in veterinary practice. It is a useful tool for veterinary technologists, veterinary students, as well as veterinarians and veterinary technicians in small animal practice or laboratory animal care facilities. The text is organized by procedures, with each described in a step-by-step manner.

Flecknell, P. (1996). *Laboratory Animal Anaesthesia*. 2nd edition. Academic Press: New York, NY, 274p.

NAL call number: SF77.F54 1996

This is a practical guide for researchers and technicians that covers pre- and post-operative care, management of anesthesia, special techniques, and regimens for common laboratory species. Also includes appendices with physiological data, equipment needs, manufacturers and suppliers of drugs, and how to calculate dilutions of anesthetic mixtures.

Gelatt, K.N. and J.P. Gelatt (1994). *Handbook of Small Animal Ophthalmic Surgery*. 1st edition. Pergamon: New York, NY.

NAL call number: SF992.E92G45 1994

Illustrated guide to dog and cat ophthalmic surgery.

Gourley, I.M. and C.R. Gregory (1992). *Atlas of Small Animal Surgery*. Gower Medical Publishing: New York, NY, 161p.

NAL call number: SF991.G68 1992

Small animal surgical techniques including soft tissue techniques are covered in color in this atlas.

Institute of Laboratory Animal Resources Committee on Pain and Distress in Laboratory Animals (1992). *Recognition and Alleviation of Pain and Distress in Laboratory Animals*. National Academy Press: Washington, DC, 137p.

NAL call number: SF996.5.R43 1992

Covers the biology of pain, stress and distress, recognition, control, euthanasia, and recommendations for specific animals.

Kertesz, P. (1993). *Colour Atlas of Veterinary Dentistry & Oral Surgery*. Wolfe Publishing: London, UK, 312p. This book brings together 720 color photographs, drawings and radiographs relevant to veterinary dentistry and oral surgery in the dog, cat and horse.

Gelatt, K.N. and J.P. Gelatt (1994). *Handbook of Small Animal Ophthalmic Surgery. Volume 1: Extraocular Procedures*. Pergamon Press: Oxford, UK, 195p.

NAL call number: SF992.E92G45 1994

Contains chapters on ophthalmic instrumentation, surgical and operating room equipment, anaesthesia, ophthalmic surgery, and postoperative care. Cats, dogs, birds, and snakes are discussed.

Harvey, C.E., C.D. Newton, and A. Schwartz, eds. (1990). *Small Animal Surgery*. J.B. Lippincott Company: Philadelphia, PA, 670p.

NAL call number: SF911.S52

An illustrated textbook for practitioners and students. Chapters focus on surgical principles, body systems, and organs.

Lumley, J.S.P.; C.J. Green; P. Lear; and J.E. Angell-James (1990). *Essentials of Experimental Surgery*. Butterworth and Co. Ltd.: Boston, MA.

NAL call number: RD29.E8

Information on the selection and care of laboratory animals, including their housing and husbandry, anaesthesia, tissue surgery, microsurgery, regional surgery, post-operative care and biological measurement techniques.

Noordsy, J.L. (1994). *Food Animal Surgery*. 3rd edition. VLS Books: Trenton, N.J., 302p.

NAL call number: SF911.N65 1994

Describes surgical procedures for swine, cattle, goats, sheep. Useful in animal agriculture and biomedical institutions. Restraint, preoperative and postoperative procedures, anesthesia, and treatment of disease conditions, using fistulas and cannulas, and blood transfusions are discussed.

Orton, E.C., T. McCracken, and J.S. Gaynor (1995). *Small Animal Thoracic Surgery*. Williams & Wilkins: Baltimore, MD, 256p.

NAL call number: SF991.O88 1995

Primarily deals with dog and cat surgery. Includes sections on anesthesia, digestive and cardiopulmonary systems, therapy, instrumentation, techniques, and more.

Pavletic, M.M. (1993). *Atlas of Small Animal Reconstructive Surgery*. J.B. Lippincott Co.: Philadelphia, PA, 340p.

NAL call number: SF991.P38 1993

Describes wound healing, management, and surgery including cosmetic procedures.

Park, C.M., K.E. Clegg, C.J. Harvey-Clark, and M.J. Hollenberg (1992). Improved techniques for successful neonatal rat surgery. *Laboratory Animal Science* 42(5):508-513.

NAL call number: 410.9 P94

This article describes surgery in neonatal rats.

Pratt, P.W., ed. (1985). *Laboratory Procedures for Animal Health Technicians*. American Veterinary Publications, Inc.: Santa Barbara, CA.

NAL call number: SF772.6.L32

Explains the logic behind many laboratory procedures involving animals and describes how they are performed. Covers laboratory tests of blood, urine, organ function, bacteria, and immunity.

Smith, A.C. and M.M. Swindle, eds. (1994). *Research Animal Anesthesia, Analgesia and Surgery*. Scientists Center for Animal Welfare: Greenbelt, MD, 170p.

NAL call number: SF914.R49 1994

Conference proceedings covering pain and distress, anesthesia, analgesia, surgery, post surgical care, laparoscopy, and xenotransplants. Dogs, cats, rodents, rabbits, and farm animals are discussed.

Tuffery, A.A., ed. (1987). *Laboratory Animals: An Introduction for New Experimenters*. John Wiley & Sons Ltd.: New York, NY, 342p.

NAL call number: QL55.L274

A basic reference for many aspects of research animal care and use. Of particular interest are chapters on experimental design, standards of surgery, drug administration, and non-surgical experimental procedures. Other sections include behavior, euthanasia, husbandry, and handling.

Waynforth, H.B. and P.A. Flecknell (1992). *Experimental and Surgical Technique in the Rat*. Academic Press: London, New York, 382p.

NAL call number: QL737.R666W38 1992

Spiral bound manual with photos and drawings that illustrate administration of substances, methods of obtaining body fluids, anesthesia and postoperative care, surgical technique, specific surgical operations, and miscellaneous techniques such as in vivo perfusions. Vital statistics, drug tradenames and sources, dose rates, identification methods, and other information is provided.

Willard, M.D.; H. Tvedten; G.H. Turnwald (1994). *Small Animal Clinical Diagnosis by Laboratory Methods*. W.B. Saunders Company: Philadelphia, PA, 377p.

NAL call number: SF991.S59 1994

Contains chapters on diseases and treatments including reproductive, neurologic, respiratory, and endocrine disorders.

Wild Animals

Abbot, S.G. and L.W. Oring (1997). *Guidelines to the Use of Wild Birds in Research*. Special Publication. Ornithological Council: Washington, DC, 52p.

NAL call number: QL677.5.G75 1997

Professional guidelines for studies of wild birds in field and laboratory research. Covers permits, investigator impact, collecting and trapping, marking, transport, housing, minor manipulative procedures, and major manipulative procedures including surgery and euthanasia.

Bayne, K.A.L. and M.D. Kreger, eds. (1995). *Wildlife Mammals as Research Models: In the Laboratory and Field*. Scientists Center for Animal Welfare: Greenbelt, MD, 60p.

NAL call number: SF406.W55 1995

Papers from this conference proceedings discuss nonhuman primates in research, other nontraditional

mammals, fertility control, methods and ethics of trapping and manipulating wild animals, ethics of maintaining cetaceans in captivity, and use of positive reinforcement to improve animal care and research.

Dierauf, L.A., ed. (1990). *CRC Handbook of Marine Mammal Medicine: Health, Disease, and Rehabilitation*. CRC Press: Boca Raton, FL, 735p.

NAL call number: SF997.5.M35C7

This book addresses the areas of medicine, surgery, pathology, physiology, feeding and housing, husbandry, stranding and rehabilitation, as well as the natural history of cetaceans, pinnipeds, manatees, sea otters, and polar bears. The book is designed to assist professionals involved in marine mammal health care, wildlife biologists who study these animals in their natural environments, and scientists conducting research on captive and wild marine mammals.

Driscoll, J.W., ed. (1989). *Animal Care and Use in Behavioral Research: Regulations, Issues, and Applications*. National Agricultural Library, Animal Welfare Information Center: Beltsville, MD, 120p.

NAL call number: aHv4762.A3A64

Proceedings of a session at the 1988 meeting of the Animal Behavior Society. The three sections include current regulations in the United States and Canada and methods for complying, general regulatory issues, and methods for improving conditions for captive animals.

Fowler, M.E. (1995). *Restraint and Handling of Wild and Domestic Animals*. 2nd edition. Iowa State University Press: Ames, IA, 383p.

NAL call number: QL62.5.F68 1995

Covers methods of restraint and handling of livestock, laboratory animals, wild animals, and companion animals. Chapters also focus on stress, thermoregulation, and medical problems.

Fowler, M.E. (1993). *Zoo and Wild Animal Medicine*. 3rd edition. W.B. Saunders: Philadelphia, PA, 617p.

NAL call number: SF996.Z66 1993

Includes diseases, pathology, histology, symptoms, and treatment of all animal taxa.

Kleiman, D.G., M.E. Allen, K.V. Thompson, and S. Lumpkin, eds. (1996). *Wild Mammals in Captivity: Principles and Techniques*. University of Chicago Press: Chicago, IL, 639p.

NAL call number: SF408.W55 1996

Contains six parts covering basic husbandry, nutrition, exhibitry, population management, behavior, reproduction, research, and several appendices. Contains information about animal housing, veterinary care, drug dosages, euthanasia, and contraception.

Orlans, F.B. (1988). *Field Research Guidelines: Impact on Animal Care and Use Committees*. Scientists Center for Animal Welfare: Greenbelt, MD, 23p.

NAL call number: HV4704.F5

The proceedings of a workshop entitled "Field Research Standards" held October 8, 1987.

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Last updated July 26, 2001

Selected Software Providers

Animal Resource Management (ARM)

8840 Complex Dr., Suite 105, San Diego, CA 92123, phone: (619) 268-4639, fax: (619) 268-1262, e-mail:

joe@armsd.com

<http://www.armsd.com>

Contains modules that automate animal ordering and receiving, tracking, billing, cost accounting, animal care and use protocol design with supporting documents, and drug record maintenance, billing, and inventory.

Artac Seel Company

Post Office Box 296, Basking Ridge, NJ 07920 USA, phone: (973) 425-8997, or 1-888-Just-Asc (U.S. only), fax: (973) 425-0584, e-mail: JustAsc@ArtacSeel.com

<http://www.artacseel.com>

TriPhase

Colony, Toxicology and Pathology Data Management

TriPhase, the only single solution for non-clinical research is the combination of products formerly known as Tiger, TecTox and PathData. One vendor with over 180 information specialists, analysts and engineers with a history of solid information systems performance now supports the system customization, interfaces and maintenance. The following modules are available:

ColonyData and GenicData represent the most advanced complete animal facility management software. These modules offer inventory control, ordering cost accounting, animal service breeding systems, identification and license administration. This product has proven to be an efficient tool with high-quality data for logistics and research purposes.

ToxData and ReproData represent a toxicology and repro-toxicology system to support the total preclinical toxicology requirements including study planning, dynamic test article preparation, in-life and clinical pathology, pairing, caesarian section, breeding and skeletal findings.

PathData is an advanced and comprehensive software package designed by pathologists for accurate and highly efficient entry and evaluation of pathology data resulting from toxicology and carcinogenicity studies. Version 4.1C is enhanced with new features and components such as ImageBase, HistoBase and TissueBase.

Computer Program for Reporting Health Monitoring Results in FELASA Recommended Format

The Federation of European Laboratory Animal Science Associations (FELASA) has produced recommendations for health screening rodents and rabbits, and defined report formats, see *Laboratory Animals* 30: 193-208.

A Microsoft Excel 5.0 program has been written by Karen Davis, of the Department of Laboratory Animal Science, SmithKline Beecham Pharmaceuticals, to produce health monitoring results in the format recommended for breeding colonies (see *Laboratory Animals* (1994) 28: 1-12) and experimental units (see *Laboratory Animals* 30: 193-208). It enables current results to be entered, these are automatically combined with historical data to produce a standard report incorporating the latest and historical data. Any number of rooms/units can be reported. A copy of the program can be

obtained by sending a 3.5 inch disc to: Karen Davis, Department of Laboratory Animal Science, SmithKline Beecham Pharmaceuticals, Third Avenue, Harlow Essex, CM19 5AD, United Kingdom. Further information from the same address, or by email care of the editor of notes and comments commentsla@sbphrd.com

Topaz Technologies

13091 Pond Springs Rd., Suite 300, Austin, TX 78729, phone: (512) 249-8080, (800) 274-2273 (U.S. only), fax: (512) 249-8780, e-mail: sales@topazti.com

Produces Granite 4.0 Animal Resources Management Software with four components: facility management, animal records, cost accounting, and training records. The Facility Management System has accounting, animal orders, husbandry, protocol, and system administration components. The protocol component allows processing, creating, and submitting protocols, submission approval, and data management.

NTM Consulting Services

33625 Bardolph Circle, Fremont, CA 94555, phone: (510) 797-3445, fax: (510) 797-0126 e-mail: sirius@ntmcs.com
<http://www.ntmcs.com/>

Sirius, NTM's flagship product, is the complete integrated information management tool engineered to reflect the life cycle of animal research: Protocol management, animal procurement, cage card generation, animal and cage census, diagnostic lab & pathology, animal records, personnel training tracking, financials.

Sirius, started in 1994, is the result of a process re-engineering effort by NTM and Stanford University.

Vetstream

Vetstream plc, Langford Arch, Sawston, Cambridge CB2 4EG, UK, phone: +44 (0) 1223 500123, fax: +44 (0) 1223 506565, e-mail: enquiries@vetstream.com

<http://www.vetstream.com>

Produces CD-CANIS and CD-Felis, two interactive multimedia CD ROMs that provides clinical information on dog and cat diseases, treatments, symptom descriptions, likely diagnoses, and references. Can be searched by keyword, body system, anatomical area. Training material for veterinarians, graduate students, nursing staff, and others.

Workbooks are also available.

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Organizations

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North, Central, and South America, and The Caribbean Resources

American Association for Laboratory Animal Science (AALAS)

9190 Crestwyn Hills Drive
Memphis, Tennessee 38125
USA

TELEPHONE: (901) 754-8620

FAX: (901) 753-0046

E-MAIL: info@aalas.org

WORLD WIDE WEB: <http://www.aalas.org>

CONTACT: Michael Sondag, Executive Director

TYPE OF INSTITUTION/ORGANIZATION: Non-profit, professional.

RESOURCES/SERVICES: International in scope. Maintains the IACUC Training and Learning Consortium that provides workshops for new and existing IACUC members. Serves as a clearinghouse for collection and exchange of information on all phases of laboratory animal care and management, use and procurement of laboratory animals used in biomedical research. Educational materials, guides, and audiovisuals. Holds annual meetings. Publishes *Contemporary Topics* - a bimonthly journal with an expanded peer reviewed section on topics such as clinical management and husbandry. Also publish *Laboratory Animal* - a monthly, peer reviewed journal covering a diverse array of applied and experimental topics in the laboratory animal sciences.

REQUESTOR: Anyone.

COSTS: Charge for materials (members are charged a lower rate).

American College of Laboratory Animal Medicine

96 Chester Street
Chester, New Hampshire 03036
USA

TELEPHONE: (603) 887-2467

FAX: (603) 887-0096

E-MAIL: mwbaclam@gsinet.net

WORLD WIDE WEB: <http://www.aclam.org>

CONTACT: Dr. Melvin W. Balk, Executive Director

TYPE OF INSTITUTION/ORGANIZATION: Non-profit, professional.

RESOURCES/SERVICES: The American College of Laboratory Animal Medicine (ACLAM) is an organization of board certified veterinary medical specialists who are experts in the humane, proper and safe care and use of laboratory animals. ACLAM establishes standards of education, training, experience and expertise necessary to become qualified as a specialist and recognizes that achievement through board certification. ACLAM actively promotes the advancement of knowledge in this field through professional continuing education activities, the development of educational materials and the conduct of research in laboratory animal medicine and science.

REQUESTOR: Veterinarians and laboratory animal users.

COSTS: Charge for materials, see website.

American Society of Laboratory Animal Practitioners

c/o ASLAP Coordinator
11300 Rockville Pike
Suite 1211
Rockville, Maryland 20852
USA

TELEPHONE: (301) 231-6349

FAX: (301) 231-6071

E-MAIL: aslap@aaalac.org

WORLD WIDE WEB: <http://www.aslap.org>

CONTACT: ASLAP Coordinator

TYPE OF INSTITUTION/ORGANIZATION: Nonprofit, professional society.

RESOURCES/SERVICES: ASLAP provides the following: (1) EDUCATIONAL SESSIONS: Dealing with practical problems, sessions are held during annual AVMA and AALAS meetings. Continuing education seminars are held every two years; (2) ASLAP NEWSLETTER: The official publication of ASLAP, is circulated quarterly to the membership and veterinary school libraries; and (3) DIRECTORY: Hand in hand with continuing education, the Society recognizes the importance of cooperation among members in the distribution of information. A list of members and their areas of interest is maintained and distributed to the membership. In addition, AVMA members are eligible for the **ASLAP Excellence in Laboratory Animal Research Award**.

REQUESTOR: Laboratory animal veterinarians.

COSTS: Dues are \$45.00 if paid on or before March 31st of each year and \$55.00 if paid on or after April 1st of each year. Student membership dues are \$22.50 before April 1st and \$27.50 after.

Animal Care

United States Department of Agriculture
Animal and Plant Health Inspection Service
4700 River Road, Suite 6D02
Riverdale, Maryland 20734-1234
USA

TELEPHONE: (301) 734-4980

FAX: (301) 734-4328

E-MAIL: ace@aphis.usda.gov

WORLD WIDE WEB: http://www.aphis.usda.gov/animal_welfare/index.shtml

CONTACT: Deputy Administrator

TYPE OF INSTITUTION/ORGANIZATION: Federal government.

RESOURCES/SERVICES: Federal regulatory agency with oversight of the Animal Welfare Act and animal welfare regulations. Routinely inspects regulated facilities and provides guidance on animal welfare compliance issues. Can

provide copies of the USDA animal welfare regulations. Web site provides access to electronic Freedom of Information Act (FOIA) documents, full-text versions of the Animal Welfare Act, animal welfare regulations, Animal Care policies, IACUC checklists, Horse Protection Act information, and other information pertaining to the use of animals in non-agricultural commerce.

REQUESTOR: Anyone.

COSTS: Free.

Animal Welfare Information Center (AWIC)

United States Department of Agriculture
Agricultural Research Service
National Agricultural Library
10301 Baltimore Avenue
Beltsville, Maryland 20705
USA

TELEPHONE: (301) 504-6212

FAX: (301) 504-7125

CONTACT Us: <http://awic.nal.usda.gov/contact-us>

WORLD WIDE WEB: <http://awic.nal.usda.gov>

CONTACT: Jean Larson, Coordinator

TYPE OF INSTITUTION/ORGANIZATION: Federal government.

RESOURCES/SERVICES: Vast collection of serials, monographs, and audiovisuals within the National Agricultural Library (NAL). Documents may be borrowed through an interlibrary loan. For more information on document delivery, contact (301) 504-5755. The Center performs brief complimentary searches of AGRICOLA and other relevant databases. The Center can also assist you in formulating your own database searches, provides conference facilities and host training sessions, and can make available speakers and/or a tabletop exhibit for training sessions, conferences, and workshops. The Center produces bibliographies on topics such as stress, analgesia, animal testing alternatives, training materials and other relevant topics to animal welfare. Publishes the *Animal Welfare Information Center Bulletin*.

REQUESTOR: Anyone.

COSTS: All publications are available for free; literature searches on a cost recovery basis; NAL may charge for certain services such as providing photocopies, document delivery, etc.

Animales de Experimentación

La Revista Hispanoamericana
AP27-281 México, D.F. 06761
MEXICO

TELEPHONE: (525) 264-3887

FAX: (525) 574-3225

E-MAIL: ciro@servidor.unam.mx

CONTACT: Dr. Ciro Lomelí, Editor and Director

TYPE OF INSTITUTION/ORGANIZATION: Organization journal.

RESOURCES/SERVICES: The official journal of the Central America, Caribbean and Mexican Association For Laboratory Animal Science (ACCMAL) and the Mexican Association for Laboratory Animal Science (AMCAL, A.C.). A Spanish language journal that is distributed in the United States, Spain, and 20 Latin American countries. The mission is to disseminate scientific and technological advances related to animal production, responsible care and use of animals in scientific experiments, testing, and education. It also serves as a communication venue among Spanish-speaking individuals interested in biomedicine and laboratory animal medicine and science.

REQUESTOR: Anyone.

COSTS: Annual subscription is: Mexico-350 Pesos; U.S. and other countries \$40.00 (US).

Applied Research Ethics National Association (ARENA)

132 Boylston Street, Fourth Floor
Boston, Massachusetts 02116
USA

TELEPHONE: (617) 423-4112

FAX: (617) 423-1185

EMAIL: info@primr.org

WORLD WIDE WEB: <http://www.primr.org/>

TYPE OF INSTITUTION/ORGANIZATION: Non-profit.

RESOURCES/SERVICES: A membership organization for those involved in the day-to-day application of ethical principles, governmental regulations, and other policies regarding research and clinical practice. ARENA's services include: (1) the sponsorship of national and regional meetings to review and shape research policy; (2) the dissemination of current information on research ethics issues, and the provision of opportunities for networking among members through a quarterly newsletter; (3) the distribution of the Animal Care and Use Committee Guidebook, which was published by ARENA/OPRR in cooperation with the National Institutes of Health; (4) assistance with the development of regional networks; (5) providing access to consultants expert in specific bioethical issues and administrative operations; (6) the publication of an annual comprehensive directory of ARENA members; (7) the preparation of commentary on and responses to relevant federal legislative or administrative initiatives; and (8) the ARENA Mailing List which is an electronic mailing list for members of the Applied Research Ethics National Association (ARENA). This is a closed list, available to members of ARENA only. Its purpose is to provide a forum for ARENA members to communicate with each other on matters related to the concerns of institutional review boards (IRBs) and institutional animal care and use committees (IACUCs).

REQUESTOR: Anyone but some activities are restricted to members.

COSTS: Varies.

Association For Assessment and Accreditation of Laboratory Animal Care International (AAALAC International)

11300 Rockville Pike, Suite 1211
Rockville, Maryland 20852-3035
USA

TELEPHONE: (301) 231-5353

FAX: (301) 231-8282

E-MAIL: accredit@aaalac.org

Avenue de Tervueren 402
1150 Brussels
BELGIUM

TELEPHONE: 32 2 761 66 78

FAX: 32 2 761 66 79

E-MAIL: accredit_europe@aaalac.org

WORLD WIDE WEB: <http://www.aaalac.org>

CONTACT: John Miller, D.V.M.

TYPE OF INSTITUTION /ORGANIZATION: Non-profit, professional.

RESOURCES/SERVICES: Like other animal welfare organizations, AAALAC International, the Association for

Assessment and Accreditation of Laboratory Animal Care, supports the use of animals to advance medicine and science when there are no non-animal alternatives, and when it is done in an ethical and humane way. When animals are used, AAALAC works with institutions and researchers to serve as a bridge between progress and animal well-being. This is done through a voluntary accreditation program in which research institutions demonstrate that they are not only meeting the minimums required by law, but are going the extra step to achieve and showcase excellence in animal care and use. Separate from accreditation, AAALAC also offers independent assessments of animal research programs to help institutions continue to improve their animal care and use practices.

REQUESTORS: Laboratory animal professionals.

COSTS: Varies according to services.

Canadian Association for Laboratory Animal Science

L'Association Canadienne Pour La Technologies des Animaux de Laboratoire
c/o CALAS/ACSAL National Office
PO Box 34122 RPO Fort Richmond
Winnipeg, Manitoba R3T 5T5
CANADA

TELEPHONE: (204) 261-7534

FAX: (204) 261-7619

E-MAIL: webmaster@calas-acsal.org

WWW: <http://www.calas-acsal.org/>

CONTACT: Bob Madziak

TYPE OF INSTITUTION/ORGANIZATION: Professional, non-profit.

RESOURCES/SERVICES: Produces educational materials, training videos, and a monthly newsletter (CALAS/ACSAL Newsletter). Hold annual meetings with workshops, seminars, and poster sessions.

REQUESTOR: Laboratory animal professionals.

COSTS: Varies according to materials.

Canadian Council on Animal Care (CCAC)

350 Albert Street, Suite 315
Ottawa, Ontario K1R 1B1
CANADA

TELEPHONE: (613) 238-4031

FAX: (613) 238-2837

E-MAIL: ggriffin@ccac.ca

WORLD WIDE WEB: <http://www.ccac.ca>

CONTACT: Dr. Gilly Griffin, Director of Guidelines Development

TYPE OF INSTITUTION/ORGANIZATION: Private, non-profit.

RESOURCES/SERVICES: Establishment and enforcement of standards and guidelines (in Canada) concerning the use of animals in research, testing and teaching. Maintains active, expert committees on all aspects of animal care and use. The Council's program is based on its major publication *Guide to the Care and Use of Experimental Animals*, Volume 1, 2nd Edition (1993) and Volume 2 (1984). More recent guidelines (available through their website are: *animal use protocol review*, *transgenic animals*, and *choosing an appropriate endpoint in experiments using animals for research, teaching, and testing*. CCAC conducts workshops and training courses on various aspects of the care and use of experimental animals, as well as the training of personnel working with these animals. The Council addresses alternative methods and conducts a course on tissue culture. Semi-annually publishes the newsletter, *Resource*.

REQUESTOR: Anyone.

COSTS: Varies according to materials.

Institute of Laboratory Animal Resources (ILAR)

National Academy of Sciences
2101 Constitution Avenue, N.W.
Washington, DC (District of Columbia) 20418
USA

TELEPHONE: (202) 334-2590

FAX: (202) 334-1687

E-MAIL: ILAR@nas.edu

WORLD WIDE WEB: <http://dels.nas.edu/ilar/>

CONTACT: Ralph Dell

TYPE OF INSTITUTION/ORGANIZATION: ILAR is a unit of the National Research Council's (NRC) Commission on Life Sciences (CLS). The NRC is the working arm of the National Academy of Sciences (NAS), a private, non-governmental, non-profit organization.

RESOURCES/SERVICES: Information on a wide variety of topics related to laboratory animals and emerging adjuncts and alternatives to animal use. Assignments of genetic identification for unique colonies. Guidelines that assist in the implementation of national policies or laws. Information to teachers and students about animals in science and careers in biology. ILAR's information database, which is published as *Animals for Research: A Directory of Sources*. This assists scientists in locating specific animals and models, including non-human primates. Produces *ILAR Journal* - a quarterly journal, available free-of-charge to institutional animal care and use committees, scientists, and veterinarians. Reports specific to non-human primates such as *Laboratory Animal Management: Non-human Primates*. Manages *Animal Models and Genetic Stocks Information Exchange Program*.

REQUESTOR: Anyone.

COSTS: Varies according to materials.

Laboratory Animal Management Association (LAMA)

P.O.Box 877
Killingworth, Connecticut 06419
USA

TELEPHONE: (412) 648-8903

FAX: (412) 648-8449

E-MAIL: portocal+@pitt.edu

WORLD WIDE WEB: <http://www.lama-online.org/>

CONTACT: Sharon Boag, Editor, LAMA Lines

TYPE OF INSTITUTION/ORGANIZATION: Professional.

RESOURCES/SERVICES: LAMA was organized in 1984 to promote the dissemination of ideas, experience, and knowledge, to encourage continued education, and to assist in the training of laboratory animal facility managers. It accomplishes this through: The LAMA Review - a quarterly publication dedicated to providing laboratory animal management information; LAMA Lines - a newsletter published six times a year informing the membership of what is going on in the organization; LAMA Membership Directory - an information resource for those in supervision through "networking" with others dealing with similar issues (member phone numbers, fax, and email addresses); LAMA Mid-year Forum - a day and a half event, seminar, workshop and tour of facilities or manufacturing plants; Annual Educational Program - a full day combination event, seminar, workshop and tour of facilities or manufacturing plants,

REQUESTORS: Members.

COSTS: \$30.00 per year (US currency).

Laboratory Animal Welfare Training Exchange

Washington University School of Medicine
Division of Comparative Medicine
660 S. Euclid Avenue
St. Louis, Missouri 63110
USA

TELEPHONE: (314) 362-4516

FAX: (314) 362-6480

E-MAIL: nicole@dcm.wustl.edu

WORLD WIDE WEB: <http://www.lawte.org>

CONTACT: Nicole Duffee, D.V.M., Ph.D., President

TYPE OF INSTITUTION/ORGANIZATION: Non-profit.

RESOURCES/SERVICES: Holds conferences every two years for trainers to exchange information on their training programs. Past years conference proceedings are available on the LAWTE web site. Audio and video tapes are also available of conference presentations. Also maintains the LAWTE listserv for networking among trainers and training coordinators on issues and methods of training in the laboratory animal field.

REQUESTORS: Anyone; members receive other benefits.

COSTS: Membership dues are \$10.00 annually; audiotapes are \$12.00, videotapes are \$15.00.

Latin American Society of Animal Welfare

Latin American Society on Animal Welfare C. M.
de Alvear 1760 , house 17, Tigre, B1648GGH
State of Buenos Aires
ARGENTINA

TELEPHONE: (+54) 11 4731 2017

E-MAIL: estolanimalwelfare@gmail.com

WORLD WIDE WEB: <http://www.salvador.edu.ar/uaf3-2.htm>

CONTACT: Prof. Dr. Leopoldo Estol; D. on P.H., President

TYPE OF INSTITUTION/RESOURCE: Professional.

RESOURCES: This organization was established in October 1998 to promote the teaching of animal welfare, bioethics, and ethology in university curricula.

National Library of Medicine (NLM)

8600 Rockville Pike
Bethesda, Maryland 20894
USA

TELEPHONE: (301) 496-6095 or 1-800-272-4787

FAX: (301) 402-1384

E-MAIL: custserv@nlm.nih.gov

WORLD WIDE WEB: <http://www.nlm.nih.gov/>

TYPE OF INSTITUTION/ORGANIZATION: Federal government.

RESOURCES/SERVICES: Library - extensive collection of serials, monographs, audiovisuals can be accessed by anyone. Computer based systems of information retrieval include MEDLARS, MEDLINE, CANCERLIT, AVLINE, TOXLINE, and Grateful Med.

REQUESTOR: Anyone.

COSTS: \$7.00 for each filled interlibrary loan.

Office of Laboratory Animal Welfare

National Institutes of Health
RKL1, Suite 1050, MSC 7982
6705 Rockledge Drive

Bethesda, Maryland 20892-7982 (For Express or Hand Delivered Mail, Use Zip Code 20817)
USA

TELEPHONE: (301) 594-2382

FAX: (301) 402-2803

E-MAIL: olaw@od.nih.gov

WORLD WIDE WEB: <http://grants.nih.gov/grants/olaw/olaw.htm>

CONTACT: OLAW

TYPE OF INSTITUTION/ORGANIZATION: Federal government.

RESOURCES/SERVICES: (1) Directs the development, implementation, and compliance oversight activities for the PHS Policy on Humane Care and Use of Laboratory Animals; (2) exercises oversight and negotiates Assurances of Compliance in all areas of laboratory animal research; (3) maintains liaison and coordinates policy implementation with components throughout PHS that conduct or support research involving laboratory animals; and (4) directs the development and implementation of educational and instructional programs and generates resource materials relating to the responsibilities of the research community for the appropriate care and use of laboratory animals. Provides regional workshops for IACUCs and scientists on various topics related to laboratory animals. Can provide guidance to IACUCs on issues involving the use of animals in research and compliance with Public Health Service policy and guidelines. On its website you can find: (1) an interactive tutorial for new animal care and use committee members, institutional administrators, investigators, animal care personnel, veterinarians, or others interested in learning about the PHS Policy on Humane Care and Use of Laboratory Animals; (2) sample annual reports, animal welfare assurances, semiannual review checklist, and semiannual report to the institutional official, to aid institutions in implementing the PHS Policy; and (3) the PHS Policy on Humane Care and Use of Laboratory Animals, policy guidance, articles, OPRR Reports, IACUC Guidebook, and other materials relevant to laboratory animal welfare).

REQUESTOR: Anyone.

COST: Most materials are free of charge except for national animal welfare workshops.

Public Responsibility in Medicine and Research (PRIM & R)

Fourth Floor
132 Boylston Street
Boston, Massachusetts 02116
USA

TELEPHONE: (617) 423-4112

FAX: (617) 423-1185

E-MAIL: info@primr.org

WORLD WIDE WEB: <http://www.primr.org/>

CONTACT: Joan Rachlin, Executive Director

TYPE OF INSTITUTION/ORGANIZATION: Non-profit.

RESOURCES/SERVICES: Through PRIM&R conferences, a wide range of issues regarding research using animals and the operation of IACUC's have been discussed. Extensive workshop manuals are provided to conference attendees. The annual IACUC conference also plays host to IACUC 101, a primer for new IACUC members and those wishing additional training in the workings of these committees.

REQUESTORS: Anyone.

COSTS: Conference proceedings are \$30.00; fees for annual conferences vary.

Scientists Center for Animal Welfare (SCAW)

Golden Triangle Building One
7833 Walker Drive, Suite 340
Greenbelt, Maryland 20770
USA

TELEPHONE: (301) 345-3500

FAX: (301) 345-3503

E-MAIL: info@scaw.com

WORLD WIDE WEB: <http://www.scaw.com>

CONTACT: Lee Krulisch, Executive Director

TYPE OF INSTITUTION/ORGANIZATION: Private, non-profit.

RESOURCES/SERVICES: Publications, including conference proceedings, training manuals, and materials from other organizations. Publications - extensive listing of publications of direct relevance to IACUC activities. Each contains proceedings from conferences sponsored by SCAW. Maintains IACUC-Talk- a moderated listserv for discussion of IACUC issues.

REQUESTOR: Anyone.

COSTS: Some services are free, meeting registration fees vary. Regular Membership \$40.00, Student Membership \$15.00, Foreign Membership \$60.00.

European, Asian, and Australian Resources

Australian and New Zealand Council for the Care of Animals in Research and Teaching, Limited (ANZCCART)

P.O. Box 19
Glen Osmond SA 5064
AUSTRALIA
TELEPHONE: 61-8-8303 7393
FAX: 61-8-8303 7113

E-MAIL: anzccart@adelaide.edu.au

WORLD WIDE WEB: <http://www.adelaide.edu.au/ANZCCART>

P.O. Box 598
5064 Wellington
NEW ZEALAND
TELEPHONE: 64-4-472 7421
FAX: 64-4-473 1841

E-MAIL: anzccart@rsnz.org

WORLD WIDE WEB: <http://www.royalsociety.org.nz/organisation/panels/anzccart/>

CONTACT: R.M. Baker

TYPE OF INSTITUTION/ORGANIZATION: Private, non-profit.

RESOURCES/SERVICES: Quarterly newsletter, and other publications on euthanasia, animal care and use committees, well-being of research animals, alternatives for undergraduate education, laboratory animal surveys, tumor cell lines available in Australia, humane care and use of animals in research, and animal pain.

REQUESTOR: Anyone.

COSTS: Varies according to materials.

Baltic Laboratory Animal Science Association

53 Krustpils Street

Riga, LV-1057

LATVIA

TELEPHONE: 371 7104547 or 371 7104262

FAX: 371 7139492 or 371 7138683

E-MAIL: bjlanim@grindeks.lv

CONTACT: Guna Jacobson, Executive Director

TYPE OF INSTITUTION/ORGANIZATION: Non-profit, professional society.

RESOURCES/SERVICES: Publishes a quarterly journal (Baltic Journal of Laboratory Animal Science--see web address above), sponsors training courses for scientists and technicians based on FELASA recommendations, and co-sponsors annual meetings with other European laboratory animal science associations.

REQUESTOR: Anyone.

COSTS: The journal subscription price including postage for 1999 for one volume (4 issues) is \$90.00 (US) for European countries and \$100.00 (US) for others. Certain discount is given to subscribers from Baltic and former USSR states. Prices for courses and conferences varies.

European Biomedical Research Association

58 Great Marlborough Street

London W1V 1DD

UNITED KINGDOM

E-MAIL: secretariat@ebra.org

WORLD WIDE WEB: <http://www.ebra.org>

CONTACT: Dr. Mark Matfield, Secretariat Director

TYPE OF INSTITUTION/ORGANIZATION: Non-profit.

RESOURCES/SERVICES: EBRA is an association of individuals and organisations in the scientific, medical and veterinary professions in the countries of the Council of Europe. EBRA was established to promote the public understanding of the importance of animals in medical and veterinary research and safety testing. The main activities of EBRA are: (1) Producing and distributing a European bulletin about the use of animals in medical research and testing, the activities of campaigning groups and relevant legislative matters in individual countries and throughout the European Union; (2) Assisting individual and corporate members across Europe to promote a balanced and accurate representation of animal research in their national press; (3) Ensuring that accurate and relevant information about animal research is available to European politicians and officials; (4) Ensuring that the views of animal researchers are properly represented to European politicians and officials; (5) Ensuring that information about best practice in laboratory animal science and welfare is readily available within the European scientific community and applied throughout Europe; (6) Maintaining an e-mail bulletin service for members of EBRA. The website provides information on European statistics on animal research, regulation of animal research in European countries, and European research news.

REQUESTORS: Anyone.

COSTS: The annual subscription for Individual Membership is currently ECU 15 per annum.

European Society of Laboratory Animal Veterinarians

c/o Philippe J. R. Baneux, DVM
Pfizer Research Center
BP 159
F-37401 Amboise
FRANCE

E-MAIL: Philippe.Baneux@pfizer.com or pnowlan@tcd.ie

WORLD WIDE WEB: <http://www.eslav.org>

CONTACT: Philippe Baneux, President

TYPE OF INSTITUTION/RESOURCE: Non-profit.

RESOURCES/SERVICES: One of the objectives of the Society is to give veterinarians a forum to discuss issues which concern us, in the field of laboratory animal science, in general and in Europe specifically. Veterinarians who work full time or part time, as consultants in this field need to keep themselves updated with regards to e.g. changing and evolving laws and regulations in Europe and in individual nations as well as world wide. Another important objective of this Society is to set the right environment and support to create the European College of Laboratory Animal Medicine. This College is needed to structure the additional training leading to specialization and to certify its members, and to provide assistance in ESLAV's professional continuing education activities. In other words, the College will represent the academic component in our field of laboratory animal medicine. The objectives of ESLAV shall be achieved through: Meetings, lectures, discussions, and publications. These objectives are: (1)The advancement of veterinary knowledge and skills in subjects connected with the breeding, health, welfare, and use of laboratory animals; (2) Collaboration and exchange of information with other societies and allied scientific disciplines; (3) Actively encouraging its members to provide training for veterinarians practicing or wishing to practice in the field of laboratory animals, both at the under and post graduate level. Holds meetings jointly with FELASA and other organizations.

REQUESTORS: Laboratory animal veterinarians

COSTS: Annual membership fees have been set at 250 French Francs.

Federation of European Laboratory Animal Science Associations (FELASA)

BCM Box 2989
London WC1N 3XX
UNITED KINGDOM

CONTACT: P. Hardy, Secretary

WORLD WIDE WEB: <http://www.felasa.eu/>

TYPE OF INSTITUTION/ORGANIZATION: Professional.

RESOURCES/SERVICES: Co-sponsor of *Laboratory Animals: The International Journal of Laboratory Animal Science and Welfare*. Sponsors annual animal welfare symposiums.

REQUESTOR: Laboratory animal users.

COSTS: Varies according to materials.

Fund for the Replacement of Animals in Medical Experiments (FRAME)

Russell & Burch House
96-98 North Sherwood Street
Nottingham NG1 4EE
UNITED KINGDOM

TELEPHONE: +44 (0)115 958 4740

FAX: +44 (0)115 950 3570

E-MAIL: frame@frame.org.uk

WORLD WIDE WEB: <http://www.frame.org.uk/>

CONTACT: Professor Robert Combes, Scientific Director

TYPE OF INSTITUTION/RESOURCE: Non-profit.

RESOURCES/SERVICES: FRAME publishes a scientific journal, *ATLA (Alternatives To Laboratory Animals)* that appears six times a year and contains original scientific papers, reports of ECVAM (European Centre for the Validation of Alternative Methods) workshops, comments and news and views articles. FRAME also publishes an influential newsletter, *FRAME News*, aimed at scientists, politicians, administrators and the informed general public. Subscription is £15 (UK); \$30.00 (US) per year. *Friends of FRAME* is published for FRAME individual supporters. *Selection and use of replacement methods in animal experimentation*, a 32-page booklet produced by FRAME and UFAW, gives a brief overview of alternatives to the use of animals, together with indications of where to find more-detailed information. A copy of the booklet has been sent to all centers licensed for animal experimentation in Britain. Copies are available for purchase from UFAW. FRAME also teaches workshops on The Information Requirements of the Animals (Scientific Procedures) Act, to assist researchers in performing literature searches for alternatives.

REQUESTORS: Anyone.

COSTS: Varies according to materials. Individuals who support the aims of FRAME may join *Friends of FRAME* at an annual subscription of £15 (UK). Members receive *FRAME News* and the *Friends of FRAME* newsletter.

Gesellschaft für Versuchstierkunde

Society for Laboratory Animal Science (GV-SOLAS)

Zentrale Tierlaboratorien

Freie Universität Berlin

Kraemerstrasse 6

D-12207 Berlin

GERMANY

TELEPHONE: +49 30 / 8445 38 33

FAX: +49 30 / 833 93 89

E-MAIL: treiber@uni-duesseldorf.de (will contact Dr. Annemarie Treiber, GV-SOLAS President)

WORLD WIDE WEB: <http://www.gv-solas.de/>

CONTACT: Dr. Hans Hiller, Secretary (via phone or fax only)

TYPE OF INSTITUTION/ORGANIZATION: Professional.

RESOURCES/SERVICES: Co-sponsor of *Laboratory Animals: The International Journal of Laboratory Animal Science and Welfare*. Also sponsors conferences and makes other publications available.

REQUESTOR: Laboratory animal users.

COSTS: Varies according to materials.

Institute of Animal Technology

c/o Registered Offices

5 South Parade

Summertown

Oxford OX2 7JL

UNITED KINGDOM

E-MAIL: Helen@iat.org.uk

WORLD WIDE WEB: <http://www.iat.org.uk/>

CONTACT: Administrator

TYPE OF INSTITUTION/ORGANIZATION: Nonprofit, professional society.

RESOURCES/SERVICES: Publishes the journal *Animal Technology* and the monthly *Bulletin of the Institute of Animal Technology*. *Bulletins* carry the latest news and views on development in animal technology, branch events and employment vacancies. Produces or makes available videos and training manuals on humane care and handling. The

IAT provides an opportunity to promote products and services through its publications, congress, symposia and also through sponsorship.

REQUESTOR: Laboratory animal users.

COSTS: Varies according to material; membership fees vary according to level.

Institut für Labortierkunde der Universität Zürich

Institute of Laboratory Animal Science
University of Zurich
Winterthurerstrasse 190
8057 Zurich
SWITZERLAND

TELEPHONE: + 41 01 / 635 54 50

FAX: +41 1 / 635 57 03

E-MAIL: kbuerki@ltk.unizh.ch

CONTACT: Prof. Dr. Kurt Bürki, Director

WORLD WIDE WEB: <http://www.ltk.unizh.ch/>

TYPE OF INSTITUTION/ORGANIZATION: University.

RESOURCES/SERVICES: Provides classes and training courses for technicians, students and postgraduates. Breeds rats and mice, offers diagnostic services for rodents and rabbits, offers in vitro production of monoclonal antibodies, and operates a consulting service to answer questions relating to the care of laboratory animals. Most information on the Web site is in German.

REQUESTOR: Laboratory animal users.

COSTS: Varies according to material.

Japanese Association for Laboratory Animal Science (JALAS)

2-8-10 Iwamotocho
Chiyoda-ku
Tokyo 101
JAPAN

TELEPHONE / FAX: 03-3865-1475

RESOURCES: Publishes the quarterly journal *Experimental Animals*.

COSTS: Price of one issue is 2,500 yen (\$25.00 US) for non-member individual.

Laboratory Animal Science Association (LASA)

P.O. Box 3993
Tamworth, Staffs B78 3QU
UNITED KINGDOM

TELEPHONE: 01827 260036

FAX: 01827 260036

E-MAIL: LASA@globalnet.co.uk

WORLD WIDE WEB: <http://www.lasa.co.uk/>

CONTACT: B.R. Howard, Honorary Secretary

RESOURCES/SERVICES: Co-sponsor of *Laboratory Animals: The International Journal of Laboratory Animal Science and Welfare*. Other services include: (1) The opportunity to network with other experts in the field and

exchange views and information; (2) Career development through education and training; (3) Strong, influential representation of your opinions and concerns at national and international level; (4) Regular quarterly newsletter with topical news, comment and feature articles about LASA's activities and the world of laboratory animal science (5) Key issues reported in-depth through "Laboratory Animals" - the official journal of LASA, distributed FREE to members. This is also the official journal for some of our sister associations in Europe and of FELASA, the Federation of European Laboratory Animal Science Associations. The journal year runs from January to December during which time four issues are published; and (6) Membership discounts for Association meetings and events.

REQUESTORS: Laboratory animal users.

COSTS: Varies according to materials.

Nederlandse Vereniging voor Proefdierkunde (NVP)

Dutch Association for Laboratory Animal Science
c/o Agricultural University Wageningen
CKP, P.O. Box 8129, 6700 EV
Wageningen
THE NETHERLANDS

CONTACT: F.A.R. van den Brock, Secretary

TYPE OF ORGANIZATION: Professional.

RESOURCES/SERVICES: Co-sponsor of *Laboratory Animals: The International Journal of Laboratory Animal Science and Welfare*.

Scandinavian Federation for Laboratory Animal Science

Enheten för försöksdjursvetenskap och service
Medicinska Forskningsrådet
Box 7151
S-103 88 Stockholm
SWEDEN

TELEPHONE: +46 8 45 44281

FAX: +46 8 45 44303

EMAIL: barbro.salomonsson@vr.se

WORLD WIDE WEB: <http://www.scandlas.org/>

CONTACT: Barbro Salomonsson, Secretariat

TYPE OF INSTITUTION/ORGANIZATION: Professional.

RESOURCES: Scand-LAS actively promotes: (1) the understanding of the need of animals in research, to the advantage of both other animals and man; (2) the welfare of laboratory animals; (3) the education of all personnel involved in the use of laboratory animals; (4) the dissemination of objective information concerned with use of laboratory animals; (5) the accreditation of laboratory animal facilities; (6) the accreditation of laboratory animal courses; and (7) working groups on selected issues. Scand-LAS is a member of the international laboratory animal science organization FELASA (Federation of the European Laboratory Animal Science Associations) and ICLAS (International Council for Laboratory Animals). Scand-LAS has standing working groups on education, health monitoring and pain, stress and discomfort, as well as policy. A meeting is held every Spring in connection with the general assembly. Following a fixed order, Denmark, Norway, Finland and Sweden are the host countries for these meetings. Scand-LAS publishes a quarterly journal, *Scandinavian Journal of Laboratory Animal Science*, with papers on basic and applied laboratory animal science. The Journal also disseminates information and news of particular interest to members. The Journal is free to members of Scand-LAS. The Editorial Office is: Arne Rohmann, Skomagerkrogen 14, DK-4000 Roskilde, Denmark. Tel. +45 4635 3168. Fax +45 6525 3114. Email:

rrcons@get2net.dk

COSTS: Journal subscriptions are priced for individual and library subscriptions. Membership dues are paid annually.

Schweizerische Gesellschaft für Versuchstierkunde (SGV)

Société Suisse pour la Science des Animaux de Laboratoire
Swiss Laboratory Animal Science Association
c/o Novartis Pharma AG
4002 Basel
SWITZERLAND

CONTACT: Dr. Dr. Brunhile Illgen-Wilcke, Secretary

E-MAIL: illgen-wilcke@microbios.ch

WORLD WIDE WEB: <http://www.sgv.org>

RESOURCES/SERVICES: Several commissions support the board in the necessary scientific and educational activities and in the important field of laboratory animal protection. An informal Newsletter is published twice a year; the official journal of the society is *Laboratory Animal*. Every year a scientific meeting is organized, usually as a symposium at the annual meeting of the Swiss Union of Societies for Experimental Biology. A two-day training course or workshop on a selected topic is held in the autumn. Each year the society awards a prize to an outstanding contribution in the field of laboratory animals. Financial support may be granted to young researchers attending training courses or meetings. Eligible as ordinary members are persons who hold appropriate qualifications in biological, veterinary or medical sciences or who, by their experience and attainments, qualify as respected specialists in the field of laboratory animal science. Eligible as institutional members are persons or organizations intending to support the activities of the society.

REQUESTOR: Laboratory animal users.

COSTS: Varies according to material. Currently the membership fees are sfr 50.- for ordinary and sfr 300.- for institutional members.

Sociedad Española para las Ciencias del Animal de Laboratorio

Spanish Society for Laboratory Animal Science
Facultad de Medicina de la U.A.M. (Gabinete Veterinario)
C/ Arzobispo Morcillo
4 - 28029 - Madrid
SPAIN

TELEPHONE: 34+ 913 975 476

FAX: 34+ 913 975 353

E-MAIL: cferiado@uam.es

WORLD WIDE WEB: <http://www.secal.es>

CONTACT: Secretaría

TYPE OF INSTITUTION/ORGANIZATION: Professional.

RESOURCES/SERVICES: Established in 1989 to improve the care of laboratory animals used in human and animal health by bringing together laboratory animal professionals. SECAL holds Congresses and national and regional scientific meetings. SECAL has many publications available including Spanish translations of journal articles, guidelines, and policies.

REQUESTOR: Laboratory animal users.

COSTS: Vary according to materials or specific course.

Universities Federation for Animal Welfare

The Old School
Brewhouse Hill
Wheathampstead
Hertfordshire AL4 8AN
UNITED KINGDOM

TELEPHONE: +44 (0)1582 831818

FAX: +44 (0)1582 831414

E-MAIL: ufaw@ufaw.org.uk

WORLD WIDE WEB: <http://www.ufaw.org.uk>

CONTACT: James K. Kirkwood BVSc PhD CBiol FIBiol MRCVS, Scientific Director

TYPE OF INSTITUTION/ORGANIZATION: Private, charitable.

RESOURCES/SERVICES: Publishes *The UFAW Handbook on the Care and Use of Laboratory Animals*, a comprehensive guide to all laboratory species. Publications, reprints, videos, educational brochures, and advisory services. Publishes a quarterly scientific journal entitled *Animal Welfare*, which brings together scientific information from zoos, laboratories, farms, wildlife and companion animals.

REQUESTOR: Anyone.

COSTS: Varies according to materials. The annual membership fee for students and non-wage earners is £5 and for those in paid employment £10. Annual subscriptions to the journal *Animal Welfare* cost UFAW members £40 / \$80.00 (US); individuals £50 / \$100.00 (US); or libraries £70 / \$140.00 (US).

Zentralstelle Zur Erfassung Und Bewertung von Ersatz Und Ergänzungsmethoden Zum Tierversuch (Zebet)

Center for Documentation and Evaluation of Alternative Methods to Animal Experiments
Diedersdorfer Weg 1.
D-12277 Berlin
GERMANY

TELEPHONE: + 49 30 8412 2271

FAX: + 49 30 8412 2958

E-MAIL: ZEBET@bgvv.de

CONTACT: Dr. Horst Spielmann or Dr. Barbara Grune

TYPE OF INSTITUTION/ORGANIZATION: Federal government.

RESOURCES/SERVICES: Producer of the *ZEBET DATABANK AND INFORMATION SERVICE ON ALTERNATIVE METHODS TO ANIMAL EXPERIMENTS*. The ZEBET data bank contains documents on alternatives to the use of experimental animals, as presented in the international scientific literature. Each record contains a short description of a method in its most important details, i.e. aim, principle, and the stage of development or validation of the method and bibliographic references. An evaluation by ZEBET staff indicates whether the method results in the replacement, reduction or refinement of animal use according to the "3R's." Information is available on over 300 methods from the following subjects: pharmacology, toxicology, bacteriology, virology, food hygiene, parasitology, immunology, neurology, cancer research and animal production. The database contains a total of 4300 bibliographical references. Lists of methods, keywords and sources of literature are available. ZEBET is a part of the Federal Institute for Health Protection of Consumers and Veterinary Medicine, Berlin. ZEBET is responsible for the documentation of alternative methods and also for validation and acceptance of alternative methods at the national and international level, e.g. by the EU and OECD. At present, requests for information have to be in the form of enquiries to ZEBET staff. ZEBET's staff are trained in the biomedical sciences, as well as in searching strategies for open access databank. An online connection to DIMDI, the German Institut for Medical Documentation and Information, provides direct access to all important national and international biomedical databases. The available information on a particular problem in the field of alternative methods is evaluated by ZEBET's staff and given to the user, including printouts from the ZEBET databank, and references of the search in external databases. In controversial cases, ZEBET makes an official statement to the regional authorities which may be used in a court case. In addition, ZEBET handles more general queries on alternatives from all sectors of society.

REQUESTOR: Federal departments, federal authorities, local committees, animal welfare officers, scientists, research institutions, universities, manufacturing industry, animal welfare organizations, the interested public, and journalists.
COSTS: Contact the Center.

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