RESOURCES AVAILABLE FOR CONDUCTING RESEARCH ON AGING

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National Institute on Aging

The National Institute on Aging (NIA), recognizing that most investigators have neither the facilities nor the fiscal resources needed to develop and maintain colonies of aged animals, has made provision of resources one of its highest priorities. The availability of high quality material for conducting research on aging continues to be a priority area for NIA, with current resources spanning a broad spectrum, including a cell bank, a nematode bank, rodent colonies, and nonhuman primate colonies.

Calorically-restricted rodents

With this notice, the NIA announces the availability of a new resource, a colony of calorically-restricted rodents for the conduct of research on aging. The NIA has had a colony of calorically-restricted rodents for several years; however, these animals were available only to investigators engaged on the Biomarkers Project. Animals are now available to investigators outside of the Biomarker Project. The colony includes three rat genotypes (F344NNia, BN/BiRijNia, and F344 x BNF1Nia) and three mouse genotypes (C57BL6NNia, DBA/2NNia and B6D2F1Nia). These animals are maintained under conditions similar to our other colonies except that they are individually caged, and each calorically-restricted animal has a matching ad libitum-fed control. Distribution of these animals will be as pairs, i.e., caloric-restricted and ad libitum control.

Mice

In addition to this new resource, specific pathogen-free rodent resources currently available from NIA include three rat and eight mouse genotypes that are raised in barrier facilities and range in age from 1 to 42 months. Mouse genotypes currently available are the inbred strains BALB/c, CBA/Ca, C57BL/6 and DBA/2; hybrid stocks of B6C3F1 (C57BL/6 x C3H), B6D2F1 (C57BL/6 x DBA), and CB6F1 (BALB/c x C57BL/6); and an outbred stock of Swiss Webster.

Inbred and hybrid mice in the NIA colony were derived from NIH pedigreed breeding stock in 1974 and for many years were maintained as closed inbred colonies. As mutations occur in both the NIA colony and the NIH breeding colonies, the NIA and NIH genotypes would undoubtedly drift apart. To minimize this potential drift the NIA initiated in 1983 a policy of rederivation from pedigreed stock every six years. Because of limited numbers of breeding pairs from NIH, and recognizing that many investigators use mice from the Jackson Laboratory, the rederivation of NIA mice that occurred in 1989 used breeding stock from the Jackson Laboratory rather than from NIH. Therefore, the mouse genotypes listed above are currently available from either NIH progenitor origin or Jackson Laboratory progenitor origin. The last animals of NIH origin were entered into the NIA colony in March 1993, and when the supply of these mice is exhausted, only mice of Jackson Laboratory origin will be available.

Rats

The rat genotypes currently available are the inbred strains of Fischer 344 (F344NNia) and Brown Norway (BN/BiRijNia) and the hybrid stock F344 x BNF1 (F344NNia x BN/BiRijNia). The F344 is of NIH origin, and the BN of REP Institutes TNO, Rijswijk, The Netherlands origin.

All rodents are regularly monitored for genetic purity and health status. Animals are housed at contractor facilities behind specific

pathogen barriers, maintained at 70x F, plus or minus 2 degrees, and are fed NIH 31 diet (ad libitum). Cage position on cage racks are routinely rotated to prevent retinal degeneration from lighting. Ad libitum access to acidified, chlorinated drinking water is provided. A health monitoring report for the room in which animals are raised accompanies each shipment of animals. These colonies have been developed to facilitate research on aging; therefore, holders of NIA grants always receive priority in access to animals.

Non-human primates

The NIA maintains approximately 300 nonhuman primates (M. mulatta) at four regional primate centers for conducting research on aging. These animals are in an approximate age range of 18 to 35 years. Animals are available for both noninvasive and invasive research studies. Some animals are maintained in group housing while others are individually caged.

For information on any of the above resources contact:

Office of Biological Resource Development
National Institute on Aging
Gateway Building, Suite 2C231
Bethesda, MD 20892

Telephone: (301) 496-0181

Cell cultures

The NIA, under contract, operates the Aging Cell Culture Repository. The purpose of this repository is to acquire, develop and characterize, store, and supply cell cultures for gerontological research. Currently, this repository contains over 900 cell cultures available for research on aging. Included are over 200 skin fibroblast cultures from healthy individuals of various ages who are participating in the Baltimore Longitudinal Study on Aging at the Gerontology Research Center; skin fibroblast cultures from individuals with premature aging syndromes, including Werner, Hutchinson- Guilford (progeria), cultures from clinically documented and at-risk individuals, as well as entire families exhibiting familial Alzheimer disease. Human endothelial cell cultures as well as mammary epithelial cell cultures are also available. Also available are human fibroblasts from female (IMR-90) and male (IMR-91 and MRC-5) fetal lung tissues and WI-38 female diploid lung cells available at early, middle, and late population doubling levels. Cultures of animal origin include skin fibroblasts from a variety of species of nonhuman primates; and many differentiated cell cultures derived from bovine, equine, canine and porcine origin. For additional information about the Repository, including catalog requests, availability and cost of cultures, contact:

Richard Mulivor, Ph.D.

Coriell Institute for Medical Research

401 Haddon Avenue

Camden, NJ 08103

Telephone: 800/752-3805

Nematodes

As a part of an overall NIA strategy to foster quality research through support of quality model resources, the NIA in collaboration with the National Center for Research Resources (NCRR), supports the Caenorhabditis Genetics Center to acquire, store and distribute genetic stocks of Caenorhabditis elegans (a nematode species) and relevant bibliographic and genetic information. This Center receives nematode strains and mutants, reprints of related publications and data (raw and analyzed) relevant to nematode genetics; stores these materials, verifies genetic status and/or scientific accuracy; distributes mutant strain bibliographic and genetic information to individual scientists, and through publications, to the scientific public at large; and distributes mutant strains to interested scientists. For further information on this resource, contact:

Robert K. Herman, Ph.D.

Department of Genetics and Cell Biology

University of Minnesota

St. Paul, MN 55108

Telephone: (612) 624-6203

Except for the Caenorhabditis Genetics Center, which is a multi-Institute supported resource, recipients of NIA grant support receive first priority for use of any of these resources when supplies are limited. When supplies permit resources are made available to other than NIA grantees. To aid graduate students interested in pursuing research on aging, limited numbers of rodents for dissertation research can be obtained free of cost (supply permitting) by application. Limited numbers of rodents are also available at reduced cost for the conduct of pilot research projects. The application process is relatively simple, requiring three to four months for review of proposed studies. To obtain information about these programs and/or an application contact Dr. DeWitt G. Hazzard. Any questions you may have regarding any aspect of the NIA resources program may be directed to:

DeWitt G. Hazzard, Ph.D.

Office of Biological Resources and Resource Development

National Institute on Aging

Gateway Building, Suite 2C231

Bethesda, MD 20892

Telephone: (301) 496-0181

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Office of Extramural
Research (OER)


National Institutes of Health (NIH)
9000 Rockville Pike
Bethesda, Maryland 20892


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