

Boston Medical Center, Boston, Massachusetts

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Why A Newsletter?

The quarterly New England Centenarian Study Newsletter as a way to keep you, our participants and family members and colleagues, abreast of study news. We are incredibly grateful for your participation, interest and support and wish to share with you our on-going findings, publications, press reports, and funding sources. We also want to share with you preliminary findings and work before it becomes available to the public and any study-related special events that could be of interest to you. For interim updates and more information, please go to our website at: www.bumc.bu.edu/centenarian

Investigator Highlight: Our Genetics Collaborators at Boston University School of Medicine (BUSM)



Lindsay A. Farrer, Ph.D
Director

[Lindsay A. Farrer, PhD](#), is Chief of the Genetics Program at BUSM. A genetic epidemiologist and an internationally recognized expert in gene mapping and linkage analysis, Dr. Farrer shares with the New England Centenarian Study a keen interest in understanding how centenarians avoid or markedly delay Alzheimer's disease and more generally the genetic underpinnings of longevity. Dr. Farrer's research focuses on the elucidation of genetic mechanisms leading to the development and variable expression of neurological and late-life diseases. In collaboration with other researchers, Dr. Farrer has localized genes causing a variety of rare and common disorders including Alzheimer's disease, Wilson's disease, sensorineural deafness, cataracts and osteoarthritis. Under his leadership, the MIRAGE Project, a multicenter study of Alzheimer's disease funded since 1991 by the National Institute on Aging, has made several important contributions to our understanding of the interactions between genetic and environmental factors for Alzheimer's disease.

Our Latest Major Publication

In issue 1 of our newsletter we let you know about, prior to its publication, the discovery of a region on chromosome 4 that many of the centenarians and their siblings had in common much more than you would expect by chance. In collaboration with Centagenetix, a great deal of progress is being made in honing in on the gene responsible for that finding. We are hopeful that an issue in the relatively near future will tell you all about it!

In the mean time, again with tremendous thanks to the subjects and families enrolled in our studies, we have been publishing our analysis of 444 centenarian pedigrees (family trees). The following is a press release sent out this week by Boston Medical Center.

MEDIA EMBARGOED by the [Proceedings of the National Academy of Sciences](#) until June 10, 2002 5 p.m. Media please contact Vanessa deGier and Gina DiGravio at BMC (617) 638-8491 for more information.

Reaching Very Old Age Runs in Families Study Indicates Siblings of Centenarians have a Dramatic Survival Advantage

Boston, MA – Siblings of centenarians have a higher survival rate throughout their lives than the general population and a greater chance of living to the age of 100 themselves, according to a study published in the June 11, 2002 issue of *Proceedings of the National Academy of Sciences*.

Study data indicated certain families are predisposed to long lives, which could be a major clue in the effort to demystify exceptional longevity. The findings are the latest in a series of reports by the New England Centenarian Study.

The study was led by Thomas Perls, MD, director of the New England Centenarian Study at Boston Medical Center, and [John Wilmoth, PhD](#), Department of Demography at UC Berkeley. Along with researchers from Boston-based [Centagenetix](#),

[Inc.](#), the team analyzed data collected from 444 families that had at least one member living to age 100 or older.

The researchers compared survival data of the more than 2,000 siblings of the centenarians with 1900 birth cohort survival data from the U.S. Social Security Administration. The findings showed the siblings had an average age of death of 76.7 for females and 70.4 for males compared to 58.3 and 51.5 for the general population. Even after researchers accounted for race and education, the net survival advantage of siblings of centenarians was found to be 16-17 years greater than the general population.

According to the analysis, sisters of centenarians had roughly one-half the risk of dying at any given age compared to the national average. Brothers of centenarians had similarly low mortality rates, except during the teenage years and young adulthood. These decreased mortality rates enhanced the odds that siblings of centenarians would become centenarians themselves. Compared to the general population, brothers of centenarians were 17 times more likely to achieve age 100 and sisters were eight times more likely to reach this age.

“These findings suggest a unique opportunity to examine further the genetic and environmental factors influencing exceptional longevity,” said Perls, a geriatrician and researcher in the Geriatrics Section of the Department of Medicine at BMC. “Environmental and socioeconomic factors often change over one’s lifetime, so the stability of the survival advantage displayed by siblings of centenarians over their lifetime suggests important genetic factors are at play.”

RHODE ISLAND AND CONNECTICUT CENTENARIAN CELEBRATIONS

The 25th Annual Rhode Island Centenarian Recognition Brunch was held May 7, 2002. Governor Lincoln Almond celebrated the lives of more than 50 of Rhode Island’s 278 centenarians with music, food, and fun. Dr. Margery Silver, the Associate Director of NECS, spoke about the value of centenarians as pioneers of healthy aging. Connecticut’s Centenarian Luncheon held May 1, 2002. Both gatherings recognized centenarians with certificates of achievement and appreciation.



Rhode Island Centenarian showing her caregiver some appreciation.



Research Associate Jessica Evert and Rhode Island Centenarian, Josephine

Recent Publications (since our last newsletter)

Thomas T. Perls, John Wilmoth, Robin Levenson, Maureen Drinkwater, Melissa Cohen, Hazel Bogan, Erin Joyce, Stephanie Brewster, Louis Kunkel, and Annibale Puca. **Life-long sustained mortality advantage of siblings of centenarians.** [Proc Natl Acad Sci](#) 2002;99:8442-8447.

[Silver MH, Newell K, Brady C, Hedley-White ET, Perls TT.](#) **Distinguishing between neurodegenerative disease and disease-free aging: correlating neuropsychological evaluations and neuropathological studies in centenarians.** *Psychosom Med.* 2002 May-Jun;64(3):493-501.

[Perls T, Kunkel L, Puca AA.](#) **The Genetics of Aging.**

Current Opinion in Genetics and Development, 2002,
12:3:362-

[Perls T.](#) Genetic and environmental influences on exceptional longevity and the AGE nomogram. Ann N Y Acad Sci. 2002 Apr;959:1-13.

In The News....

Dr. Perls will appear on the [Today Show](#), June 7, about 8 am EST to highlight the work being done at Centagenetix.

[Dateline, NBC](#) will highlight Centagenetix, June 7, 2002, 8 pm EST.

Beginning June 11, after 5 pm, we anticipate quite a bit of coverage regarding our publication in PNAS on the survival advantage of the siblings of centenarians. So be on the look out!

Recruitment Opportunities:

➤ We are always looking for participants for our studies. If you know of any centenarians, their siblings or children of centenarians who may be interested please call our study toll-free at **1-888-333-NECS (6327)** or email us. We have also started to recruit spouses of centenarian children who may be interested in participating in our studies.

We are most grateful to the following organizations, institutions and people for their support of the New England Centenarian Study and its investigators:

[Alliance for Aging Research](#), [Alzheimer's Association](#), [American Federation for Aging Research](#), [The Ellison Medical Foundation](#), [Institute for the Study of Aging](#), [National Institute on Aging](#), [The Paul Beeson Physician Faculty Scholars in Aging Research Program](#), [Retirement Research Foundation](#), [Sam Kaplan & U.S. Care](#), Mr. Mike Grossman and Mr. Herbert Lee.

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