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*NOTE TO EDITORS: Briefing at the International Longevity Center-USA,  
60 East 86<sup>th</sup> Street, New York at 8:30 AM, Thursday, July 12. Breakfast will be served*

*Text of report is available as a PDF file on request to [joshuag@ilcusa.org](mailto:joshuag@ilcusa.org).*

*List of panel members is attached*

## **Growing claims of “anti-aging” medicine unprovable, warns new report from International Longevity Center–USA**

*Testing impossible until science finds measures of biological aging*

**Experts praise tantalizing research, urge more activity by NIH, FDA**

New York, July 12 – A panel of 19 leading biomedical researchers and clinical physicians today released a report warning that claims for alleged “anti-aging” medicines like growth hormone injections are unprovable given current scientific knowledge. The panel was organized and the report produced by the International Longevity Center-USA.

“When someone is told something will slow or reverse aging, they should realize there is no assurance whatsoever that this is the case and that it may harm them,” said Dr. Robert N. Butler, the noted gerontologist who is the ILC-USA’s founding President and CEO.

“So-called anti-aging medicine is largely a sham.”

“We simply do not have the equivalent of a blood pressure cuff for testing aging,” he said. Clearly, he added, medicine has “valuable measures of health status and markers of disease that help assess prospects for longevity,” but these are not the same as biological markers of aging, per se.

**Underfunded promise.** The conclusions of the panel were the result of a three-day workshop sponsored by the ILC-USA. The panel’s work was supported by the Ellison Medical Research Foundation, the Kronos Longevity Research Institute, the Institute for the Study of Aging, Inc. and the Canyon Ranch Health Resort, and is part of a series of workshops underwritten by Canyon Ranch. The ILC-USA will announce results of a second workshop on “anti-aging” medicine this fall.

Despite its skepticism, the report strongly supports the biomedical and behavioral research and public health measures which have helped add 30 years to the average American’s life expectancy

since 1900 and increased the "health span" of later life. The report supports the proven methods of promoting health and treating disease that have dramatically improved older lives.

Most important, the report finds promise in the quests for biomarkers of aging that are taking place in areas of science that it says have not been adequately funded.

Said Howard Fillit, MD, a workshop participant who is clinical professor of geriatric medicine at the Mt. Sinai School of Medicine and Executive Director of one co-sponsor of the deliberations, the Institute for the Study of Aging, Inc.: "The International Longevity Center-USA has been a catalyst in bringing together the people best able to assess this field and to give people workable guidelines for both encouraging research and protecting themselves. Additional attention to biomarkers related to cognitive functioning should prove especially rewarding."

**Growth hormone skepticism.** The new report is particularly leery of growth hormone therapy. While acknowledging that hormone replacement trials have yielded "some" positive "short term" results, especially estrogen replacement therapy to prevent osteoporosis in women, it says improperly used hormones also can be dangerous.

"It is interesting that after 50 years of investigation we still do not know estrogen's range of effects or all its risks, such as whether it does or does not promote breast cancer," Butler said.

Though growth hormone levels decline with age, the report cautions against trying to maintain them. It says: "In fact, lower growth hormone levels may be an indicator of health. Research findings on mice that overproduce growth hormones indicate that they live only a short time, suggesting that growth hormone deficiency per se does not cause accelerated aging, but that the opposite may be true."

The report also describes as "mixed" the results of "antioxidant" therapies like vitamin E supplements for reducing heart disease.

The stakes are high. An organization of doctors called the "American Academy of Anti-Aging Medicine" recently reported that over the past 10 years about 2,500 physicians nationwide have established specialty practices in so-called anti-aging medicine. The organization once was quoted as proclaiming, "immortality is within our grasp."

However, the ILC-USA's Butler points out that neither the organization nor "anti-aging" medicine are recognized as a specialty by mainstream medicine, including the American Medical Association, or by many insurers.

**Continuing mystery.** The report candidly describes the inability of current science to penetrate the mystery, at the molecular and cellular level, of "what within our bodies increasingly predisposes us to disease, disability and ultimately death as we grow older." It notes the "failure as yet" to find "validated biomarkers of aging in either rodents or man."

Still, the report finds tantalizing promise in research on restricting calories in the diets of mice and other animals, which then live longer. Since it is hard for humans to accept restrictions on calories, a search is now underway for the mechanisms underlying this phenomenon so scientists can try "mimetics" or substances that mimic the effect.

Another encouraging area in the search for "biomarkers of aging" involves studies of the way chromosomes become shorter each time a human cell divides. The panel says new techniques that

could help understand this and other areas include imaging methods like nuclear magnetic resonance (NMR) and positron emission tomography (PET), and the even newer genetic measurement technologies of DNA-based and protein-based microarrays.

**Calls for NIH and FDA funding.** The report calls for substantial increases in funding for the basic biology of aging: “Hardly more than \$100 million of the almost \$18 billion in the NIH Fiscal Year 2000 budget was devoted to understanding basic processes that are relevant to late life disease, and even less is dedicated to understanding aging itself.”

The report adds that the Food and Drug Administration has “no program for evaluating putative anti-aging interventions.”

The report, titled “Biomarkers of Aging: From Primitive Organisms to Man,” is the latest in a series on critical and often unexplored issues in aging based on workshops that the ILC-USA has convened over the last four years. Copies are available from the ILC-USA website ([www.ilcusa.org](http://www.ilcusa.org)) or its publications program, 60 East 86<sup>th</sup> St., New York, NY 10028.

In less than a decade the International Longevity Center-USA has become a leader in conducting and making known research on the “age boom” – the unprecedented and growing proportions of older people in populations around the world. A not-for-profit, non-partisan applied research and policy center, its mission is to help individuals and societies address longevity and population aging in positive and productive ways. It focuses on encouraging older people to stay productive as well as healthy and on finding humane ways societies can finance and capitalize on human beings’ new extended period of life.