



## Press Release

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### **New KLRI Report Shows Longevity Science Moving Beyond Studying the Obvious to the “Downward Spiral” Paradigm in the Aging Process**

*Slowing down the interrelated effects of biomarkers; Most promising way to help older adults live long, vigorous lives*

PHOENIX, Ariz. (June 11, 2008)—The Kronos Longevity Research Institute (KLRI) has released the *2008 State of the Science*, which examines “the vicious triad” of the aging process: oxidative stress, hormonal changes, and nutrition and its effects on age-related deteriorations and diseases. Longevity scientists across the country are studying how the inter-related, degenerative processes of aging contribute to the downward spiral in health and aging.

“Once we identify the relationships of the contributors to aging and age-related deterioration and diseases, we can begin to develop ways to slow down or even reverse the aging process,” says KLRI Director and President S. Mitchell Harman, MD, PhD. “Rather than investing only in cures, we should invest more in prevention. This is the smart approach to help the growing numbers of older adults in this country stay independent, healthy and active for as long as possible.”

Oxidative stress accounts for much of the wear and tear in the body. KLRI and KLRI-affiliated researchers have developed methods to accurately measure oxidative stress biomarkers in the urine and blood.

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Now, using a unique process that safely creates oxidative stress in healthy humans, they are working to establish a reference range for people ages 20 to 85 to determine what is “normal” in different age groups.

Animal studies have found that dramatically reducing food intake, or caloric restriction, can significantly increase longevity. A major initiative in longevity science is trying to identify compounds that produce the same biochemical effects without limiting the amount of food.

Along with oxidation and caloric restriction, the impact of hormones is a key focus in longevity science. KLRI researchers have launched a national, multi-center study to evaluate the effects of estrogen therapy in women just before and after menopause to clarify some of the highly publicized but oversimplified research findings of the Women’s Health Initiative (WHI).

Researchers from KLRI have also launched a national study to evaluate the risks and benefits of testosterone therapy in older men. A third area of KLRI hormone research focuses on the effects of increased levels of human growth hormone on markers of aging.

Finally, KLRI researchers are beginning to tease out the impact of diet on aging-related conditions such as insulin resistance, which is thought to contribute to a variety of diseases common in older people. The first study evaluated the anti-inflammatory effects of high levels of omega-3 fatty acids, “healthy” fats found primarily in fatty fish like salmon and tuna and in some seeds.

Through these and other studies, researchers at KLRI and around the world are working to create a new understanding of aging and a new paradigm of “old age.” KLRI’s annual State of the Science report fulfills KLRI’s education mission: to help a rapidly aging population understand the biology of aging to support the science that will help longer-living seniors remain energetic and productive members of society.

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The cooperation provided by NRTA: AARP's Educator Community has been particularly valuable in bringing the report to the public. As a national organization, NRTA: AARP's Educator Community is a part of AARP with programs and information designed just for educators. NRTA members share a commitment to learning, voluntary service and civic participation. The NRTA publishes Live & Learn, which is an online publication that provides a unique perspective on education and learning after 50.

Please read or download KLRI's *2008 State of the Science* report on the [AARP](#) website and participate in the online discussion about the report and the science of aging. You can also view the report at [http://www.kronosinstitute.org/publications/reports/sos\\_2008.cfm](http://www.kronosinstitute.org/publications/reports/sos_2008.cfm).

#### **About the Kronos Longevity Research Institute (KLRI)**

KLRI, a not-for-profit 501©(3) organization, is a leader in developing new modes of prevention and treatment to enhance human longevity. KLRI is the only independent research institute devoted exclusively to translating basic discoveries in the process of aging into useful tools, improved medical care and healthier lives. KLRI's research is conducted by its own highly regarded scientists and through collaborations with some of the nation's leading medical research centers. Because KLRI conducts pioneering research in an area of science that is poorly understood, KLRI offers the potential to make seminal contributions that benefit not only the growing population of older Americans, but people everywhere and generations to follow.

#### **About NRTA: AARP's Educator Community – [www.aarp.org/nrta](http://www.aarp.org/nrta)**

Founded in 1947 by retired educator Dr. Ethel Percy Andrus, NRTA: AARP's Educator Community, is a division of AARP. NRTA members share a commitment to learning, voluntary service, and civic participation. NRTA is the largest national organization that represents the interests of 50+ educators, with a membership of more than one million active and retired higher-ed and K-12 educators and school personnel at the local, state and national level. The NRTA Network includes a national office in Washington, DC, 52 state and city associations, and more than 2,700 local associations. NRTA members are dedicated to continuous educational opportunity, advocacy, and service as a means of safeguarding the economic security, work opportunities, and future well being of all generations.

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