VITALITY
Leonard Davis
School of Gerontology

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TO THE NEXT FOUR DECADES AND BEYOND

As the USC Leonard Davis School of Gerontology celebrates its 40th year in 2015, our community also looks ahead to the challenges and opportunities that await tomorrow’s gerontologists. The Davis School is poised to continue its unparalleled gerontology leadership and shape the future of aging research and education. (Photo by John Skalicky)
Welcome to the Fall 2015 issue of Vitality magazine! The 2015-2016 academic year is underway, and the months ahead promise to bring exciting opportunities for growth and discovery for both our students and faculty members.

This year, as we’ve celebrated the 40th year of the USC Leonard Davis School of Gerontology and the 50th anniversary of the Ethel Percy Andrus Gerontology Center, my thoughts have turned to what the next few decades and beyond hold for the gerontology field. The need to address aging-related issues has come into sharp focus in recent years, and in response the field has been growing and evolving faster than ever.

As the largest school of gerontology in the world—and the home of many of the field’s top minds—the Davis School is poised to make amazing strides in several exciting gerontology frontiers. Our school will provide unparalleled leadership in many important issues, from designing personalized aging support and healthier homes for older adults to anticipating the digital technologies and global trends that will shape aging’s future. Learn more about how we plan to delve into these fascinating topics in this issue’s cover story on the future of aging on page 10.

The Davis School continues to not only conduct groundbreaking research but also make innovative progress in gerontology education. This year, we welcomed our first students in the Master of Science in Nutrition, Healthspan, and Longevity program; this unique master’s program explores the interaction of aging and nutrition and prepares graduates to receive the nationally recognized Registered Dietician Nutritionist (RDN) credential. Hear from Program Director Cary Kreutzer in her column on the Mediterranean Diet on page 24, and meet MSNHL student Victoria Hahn in our student profile on page 26.

In addition to our own educational offerings, we continue to make valuable academic connections with businesses and organizations that are deeply connected to aging issues. This spring, we worked with Bank of America Merrill Lynch to launch the Longevity Training Program, an online gerontology course for financial advisors and benefits and human resources personnel both at Merrill Lynch and within its 35,000 client companies. Through this program and similar cooperative efforts, millions of people around the world benefit from quality gerontology knowledge and more aging-friendly work environments. This program has recently been highlighted in the media after it was hailed during the White House Conference on Aging as a “game changer” in the financial planning world.

As the school pursues these challenging and promising endeavors, I am incredibly grateful for the support of the members of our USC Davis Trojan Family. I hope to see many Davis School alumni and friends at upcoming events, especially the “Swing for Healthy Aging” Rod Dedeaux Memorial Golf Classic on November 23 and the 2016 Vibrant Living Retreat February 26-28. Have a wonderful fall, and Fight On!

PINCHAS COHEN MD
DEAN, USC LEONARD DAVIS SCHOOL OF GERONTOLOGY
EXECUTIVE DIRECTOR, ETHEL PERCY ANDRUS GERONTOLOGY CENTER
HOLDER, WILLIAM AND SYLVIA KUGEL DEAN’S CHAIR IN GERONTOLOGY
Ass ociate Professor Emerita Phoebe Liebig’s decades of service to the University of Southern California were recognized at the 34th Annual USC Academic Honors Convocation at Town and Gown on April 15, 2015. Liebig received one of four Faculty Lifetime Achievement Awards in honor of her service to the USC Leonard Davis School of Gerontology and her numerous and impactful contributions to the wider gerontology and public policy fields.

Her work at USC began in 1971 when she became a grants specialist for the Ethel Percy Andrus Gerontology Center. After completing her PhD in Public Administration at USC in 1983, she joined the Davis School of Gerontology faculty as a research assistant professor. As a faculty member, Liebig has taken on numerous leadership roles, including directing the USC Pacific Geriatric Education Center, directing information outreach for the USC Alzheimer’s Disease Research Center, and being a co-principal investigator of the USC Fall Prevention Center of Excellence. Along with her work at the Davis School and USC, Liebig also spent two years as a senior economics policy analyst for the AARP Public Policy Institute.

Among her many honors, Liebig has received two Fulbright Senior Scholar Awards and is a Fellow of the Gerontological Society of America. She is also a recipient of the Clark Tibbitts Award, Distinguished Teacher Award, and Mildred M. Seltzer Distinguished Service Recognition Award of the Association for Gerontology in Higher Education as well as an AGHE Fellow.

“In many ways I was very surprised by this recognition. I was a “late bloomer” having gotten my PhD when I was 50, so although I was in the field of gerontology for many years before that, I had less time to establish a lengthy academic career,” Liebig said. “My recognition also is a tribute to my parents who expected me to do my best and taught me to be a critical thinker, and to my mentors, Jim Birren and David Peterson. I am also delighted to be one of 14 USC women faculty who have been so honored in the past 34 years.”

Her pre-retirement research largely focused on public policies and their effects on older adults in communities throughout the U.S. and across the world, including Fulbright-supported study in India. Over the years, she has also encouraged her many student mentees to address the effects of public policy in their own research and take an active role in advocating for evidence-based policies in government, especially at the local and state level.

“A major facet of my career has been the professional and personal relationships I have had with my USC students, as well as students and colleagues from other countries,” Liebig said. “The two areas of research that I hope will have the greatest impact are my years of research on state-level policies in aging and shining a spotlight on aging issues in India, particularly for non-Indian audiences.”

Since retiring from USC as an associate professor emerita in 2006, Liebig remains a familiar presence at USC and the Davis School. She has served as president of USC’s Retired Faculty Association from 2011 to 2014 and as a member of the USC Emeriti Center Advisory Committee for several years.

She is also still vibrantly involved with her gerontology work; her recent research has focused on creativity and aging. She has continued to publish journal articles and book chapters as well as present at professional meetings on aging in India, aging in place, nursing home deficiencies, the humanities and aging, and more. She also serves on editorial boards for The Gerontologist and the Journal of Aging & Social Policy as well as several committees within the Gerontological Society of America and Association for Gerontology in Higher Education.

Vice Provost and Senior Advisor to the Provost Martin Levine presents the Faculty Lifetime Achievement Award to USC Davis Associate Professor Emerita Phoebe Liebig.
SUSAN ENGUIDANOS NAMED GSA FELLOW

The Gerontological Society of America (GSA), the oldest and largest interdisciplinary group devoted to the study of aging, has honored USC Leonard Davis School of Gerontology Associate Professor Susan Enguidanos by naming her a Fellow in the organization.

Fellowship in GSA is the group’s highest level of membership and is an “acknowledgment of outstanding and continuing work in the field of gerontology,” according to the society’s website. Enguidanos will be formally inducted as a GSA Fellow during the 2015 GSA Annual Scientific Meeting, which will be held November 18-22, 2015 in Orlando, Fla.

Enguidanos, who also holds a joint appointment in the USC School of Social Work, is a noted expert in palliative care, hospice care, and end-of-life issues. Her groundbreaking work in palliative care—medical care and support that focuses on providing patients with symptom and stress relief during serious, though not necessarily terminal, illnesses—includes developing an innovative home-based palliative care model currently being implemented in several healthcare facilities across the nation. She has also investigated ethnic disparities in the accessibility of hospice care prior to death and transitions in care settings for people with serious illnesses.

“I am passionate about my work because it aims to bring change in the health care system that improves quality of life, reducing pain, symptoms, and emotional distress for those in their last years of life,” she said. “My research makes a real difference to the lives of individuals, not just those with serious illness but for their family members as well.”

Enguidanos said she was “truly humbled” to be recognized by GSA and named a Fellow. “It is an honor to be accepted within an elite group of gerontological leaders, individuals that have served as role models to me throughout my career.”

In becoming a Fellow of the Gerontological Society of America, Susan Enguidanos joins several other Davis School colleagues:

Maria Aranda
Associate Professor of Social Work

Vern Bengtson
Professor Emeritus of Gerontology

James Birren
Founding Dean

Iris Chi
Professor of Social Work

Eileen Crimmins
University Professor
AARP Professor of Gerontology

Kelvin Davies
James E. Birren Chair in Gerontology
Vice Dean
Director, Ethel Percy Andrus Gerontology Center

Caleb Finch
University Professor
ARCO & William F. Kieschnick Professor in the Neurobiology of Aging

Margaret Gatz
Professor of Psychology, Gerontology, and Preventive Medicine

Phoebe Liebig
Associate Professor Emerita of Gerontology

Valter Longo
Edna M. Jones Professor of Gerontology
Professor of Biological Sciences

Mara Mather
Professor of Gerontology and Psychology

Roseann Mulligan
Charles M. Goldstein Professor of Community Dentistry

Jon Pynoos
UPS Foundation Professor of Gerontology, Policy, and Planning

Victor Regnier
Professor of Architecture and Gerontology

Edward Schneider
Professor of Gerontology and Medicine
Emeritus Dean

John Tower
Professor of Biological Sciences

Kathleen Wilber
Mary Pickford Foundation Professor of Gerontology

Elizabeth Zelinski
Rita and Edward Polusky Chair in Education and Aging
Professor of Gerontology and Psychology
The Royal Society of Chemistry (RSC) recently elected USC Leonard Davis School of Gerontology faculty member Kelvin J. A. Davies as a Fellow of the prestigious British scientific organization. Prior to this recognition of his research excellence, Davies was also elected as a Fellow of the Royal Society of Medicine in late 2014 and as a Fellow of the Royal Institution of Great Britain in 2012, earning him the nation’s “Triple Crown” of scientific recognition.

Davies serves as the James E. Birren Professor, Dean of Faculty and Research and Director of the Ethel Percy Andrus Gerontology Center at the Davis School; Director of the USC Free Radical Institute; and Professor of Molecular and Computational Biology in the Department of Biological Sciences of the Dornsife College of Letters, Arts, and Sciences. He and Distinguished Professor of Chemistry Arieh Warshel are USC’s two RSC Fellows.

Now entitled to add the post-nominal titles FRI, FRSM, and FRSC after his name, Davies said he was “thrilled” to be elected as an RSC Fellow.

“To be honest, I’m really a biochemist more than anything else, and although physical chemistry always made perfect sense to me, I’m afraid that I found organic chemistry to be one of the great mysteries of life!” Davies said.

Kelvin Davies’ research is focused on molecular pathways by which cells, organisms, and people adapt to chemical stresses such as oxidation. Davies coined the term “Adaptive Homeostasis” to explain how our normal range of abilities (the homeostatic range) can be greatly expanded for short periods of time, in order to cope with stresses, by temporarily changing both the types of genes that are being expressed and the amount of their expression. Unfortunately, adaptive homeostasis declines or even fails as we grow older, predisposing us to a multitude of debilitating degenerative diseases. Davies is mapping the mechanism(s) by which this occurs and looking for methods to delay or even prevent the decline.

No stranger to academic success, Davies is already a fellow of seven other national and international societies and academies; the recipient of seven honorary doctorates from universities in Europe, Asia, and the Americas and the winner of numerous medals, prizes, and lectureships. In 2012, he was knighted as a Chevalier de l’Ordre National du Mérite de France (Knight of the National Order of Merit of France) by French President Nicolas Sarkozy for services to science, humanity, and international cooperation.

ABOUT THE ROYAL SOCIETY OF CHEMISTRY

In 1841, 77 scientists—including academics, physicians, manufacturers, and entrepreneurs—formed the Chemical Society of London, with dialysis inventor Thomas Graham as their first president. Seven years later, Queen Victoria granted a Royal Charter to the Society, confirming its purpose of “the general advancement of Chemical Science.” In 1980 the Chemical Society of London, the Society for Analytical Chemistry, the Royal Institute of Chemistry, and the Faraday Society merged to form the Royal Society of Chemistry, which was granted a new Royal Charter in 1980 by Queen Elizabeth II.

Now 170 years old and headquartered in London and Cambridge, the RSC has U.S. offices in New York and Philadelphia, as well as offices in São Paulo, Brazil; Beijing and Shanghai, China; Berlin, Germany; Bangalore, India; and Tokyo, Japan. There are now over 51,000 RSC members across the world (5 percent of which are in the U.S.), and the RSC has a reputation as an influential champion for the chemical sciences. Fewer than 2,000 living members are elected to Fellowship in the RSC at any time.
Tara Gruenewald & Christian Pike Honored for Exemplary Mentorship

The University of Southern California has honored two USC Leonard Davis School of Gerontology faculty members with Mellon Mentoring Awards for their extraordinary dedication to and support of their students.

Professor Christian Pike and Assistant Professor Tara Gruenewald were recognized during a ceremony on April 13, 2015. Pike was awarded for his work with graduate students.

“Mentoring, like parenting, is a partnership with evolving roles. It requires ongoing investment of time and energy,” Pike said. “With any luck, your graduate students mature into true peers and collaborative partners that find success both within and outside the world of science.” Recognition of his mentorship is simply an acknowledgment of his students’ excellence, he added.

“I use the skills Christian taught me every day, whether it be writing, setting up a research study, or mentoring my researchers,” said Emily Rosario, a 2007 PhD in Neuroscience graduate who wrote a letter in support of Pike’s nomination; she is now the director of the Research Institute at Casa Colina Hospital and Centers for Healthcare. “He is a gifted, brilliant individual who has chosen to share his talents in such a way to foster [his mentees’] success. You could not ask for more in a teacher and mentor. I still look to him for advice and feel so fortunate to have his continued mentorship in my life.”

Gruenewald, awarded for mentoring undergraduate students, said she felt honored to be recognized by her students and colleagues as an exemplary mentor.

“Mentorship is a vital resource for thriving in academia, or in any field,” she said. “My achievements and my ability to function effectively in the professional realm are due in no small part to those that have provided concrete assistance and advice, as well as guided by example. I hope that I can compensate in some small way for the many gifts of mentorship I have received by paving the path forward for others.” She said the most important aspects of mentorship are identifying mentees’ goals and helping them devise a plan to capitalize on their strengths and available resources to achieve their goals.

“In my opinion, Dr. Gruenewald represents a mentor that any student would be lucky to have, as she is a person who incessantly works to ensure the academic success of all of her students,” said Shivanti Kariyawasam, BS Human Development and Aging ’15, MS Gerontology ’16. “It is truly a blessing to have someone who cares so much about your future, and having this mentoring relationship with a faculty member was something that I never thought I would experience before coming to USC.”

Several Davis School faculty members have also previously won Mellon Mentoring Awards:

- Assistant Professor Sean Curran (undergraduate mentoring, 2012)
- Vice Dean, Director of the Ethel Percy Andrus Gerontology Center, and James E. Birren Chair in Gerontology Kelvin Davies (graduate mentoring in 2010 and undergraduate mentoring in 2011)
- Associate Professor Susan Enguidanos (graduate mentoring, 2012)
- Merle H. Bensinger Professor of Gerontology Bob Knight (graduate mentoring, 2005)
- Mary Pickford Foundation Professor of Gerontology Kathleen Wilber (graduate mentoring, 2007)
At the 2015 White House Conference on Aging on July 13, Bank of America Merrill Lynch announced the introduction of a groundbreaking longevity training program for human resources (HR) and benefit plan professionals. Developed in partnership with the USC Leonard Davis School of Gerontology, the Bank of America Merrill Lynch Longevity Training Program is designed to drive greater awareness and understanding of the evolving needs of the nation’s aging population and their families.

This first-of-its-kind program offers insights into the latest advances, research, and experiences associated with the sociological, psychological, and physiological aspects of aging and their implications across all generations of the workforce. The program will soon be available to companies for whom Bank of America Merrill Lynch provides retirement and benefit plan services, which represent more than 35,000 companies and more than 5 million employees. Program participants will learn about the importance of and issues associated with longevity and retirement planning through a deeper exploration of seven life priorities: health, home, family, giving, leisure, work, and finances.

“Designing benefits programs and delivering financial guidance to employees today requires a profound appreciation for the longevity revolution and a deeper understanding of issues associated with aging,” said Andy Sieg, head of Global Wealth and Retirement Solutions at Bank of America Merrill Lynch. “Providing HR professionals greater access to this knowledge can help them better connect with employees as they progress through their careers and toward their later years.”

Participants must complete up to five hours of training over the course of four to eight weeks, delivered through a combination of on-demand videos featuring USC professors, online courses and reference materials, and web-based best practice presentations and knowledge-sharing from Bank of America Merrill Lynch, including director of financial gerontology Cyndi Hutchins. Upon completion of the training, participants will receive a Certificate of Completion from USC.

“Increased longevity leads to longer retirements, changing health care choices, more housing transitions, and many other challenges to financial security,” said Pinchas Cohen, dean of the Davis School. “As more people reach retirement age, there needs to be deeper knowledge inside every company regarding the realities of longevity in order to engage in relevant and supportive discussions with employees about their goals and concerns.”

The introduction of this new program follows an initial rollout in April to Merrill Lynch’s more than 14,000 financial advisors to provide them greater knowledge of and appreciation for various aspects of aging and to help clients pursue their goals leading up to and through retirement.
2015 has been a year of celebration for the USC Leonard Davis School of Gerontology. But after marking 40 years of the Davis School of Gerontology and 50 years of the Ethel Percy Andrus Gerontology Center, these milestones also inspire members of the Davis School community to look forward and imagine the possible gerontology challenges and advancements coming within the next few decades. Along with the school’s continuous and trailblazing efforts to understand aging and find new ways to prevent and intervene in aging-related illness, such as Alzheimer’s disease and diabetes, USC Davis faculty members are exploring several incredible new frontiers in all facets of aging research.

Seizing and making the most of upcoming opportunities will take hard work and deep commitment, including recruiting top students and faculty, developing and maintaining state-of-the-art research and educational infrastructure, and encouraging the flow of new ideas between the school, our alumni succeeding out in the field, and our students working to become the next generation of leaders. Check out just a few of the reasons why the future of aging research, education, and service is closely linked to the upcoming discoveries and innovations just waiting to be made here at the USC Davis School.

**CREATING HEALTHIER, SAFER HOMES**

As an individual gets older, what kind of home provides the support and safety he or she needs? One of the most immediate challenges that has emerged as the population has skewed older is the stark need for more—and better—housing for older adults.

Prior to the 1970s, older adults in need of a more supportive home had just one option: relocating to a nursing home. But the more than 40 years since then have seen the rapid development of housing options such as assisted living, memory care, residential living with amenities, continuing care retirement communities, and in-home services, providing a greater variety of choices for seniors to live productive, enjoyable lives. Today, long-term care services provide care to approximately 8 million Americans, and the senior housing industry is now bracing for the 78 million baby boomers that are heading their way.

In response to this great need, the Davis School is forming the USC Senior Living Institute, bringing together today’s leaders in the field of long-term care to assist them with research and education programs related to senior housing. This large and diverse group of researchers and educators...
is led by Davis School Dean Emeritus Edward Schneider and brings together experts in architecture, palliative and hospice care, home modification, nutrition, creativity, technology, and more.

One of the new Davis School programs focused on older adult housing is the annual Senior Living Executive Course, offered in partnership with the USC Marshall School of Business. The course provides a unique and hands-on learning experience for current and future senior housing executives, educating them on important gerontological, legal, and business issues, Schneider says.

**PREDICTING AND RESPONDING TO GLOBAL CHANGES**

When it comes to a graying population, the U.S. is far from alone. Nearly every nation has seen its population age dramatically, and the aged now outnumber the young in most regions of the world. This trend will continue for decades before the population stabilizes with an older average age.

The demographics of the world and individual countries can be relatively well-estimated; however, how countries, families, and individuals will adapt to an older world is less well-known. A nation's ability to support its citizens' successful aging depends on many factors, from public policies and programs to economic factors and cultural norms.

The Davis School’s new Center for Global Aging will lead research into how aging can vary from nation to nation and how different policies and practices impact older adults living in various cultures and contexts across the globe. The new center is led by internationally renowned demography expert, USC University Professor, and AARP Professor of Gerontology Eileen Crimmins, and new and continuing global aging research based at USC will examine topics such as physiological aging, health, well-being, caregiving, labor force participation, migration, service usage, family interaction, and social integration.

One of the most important reasons to study aging in other countries is that it helps us better understand the U.S., Crimmins says.

“Countries are almost like a natural experiment in that all the people in a country are subject to the same policies; comparing people in different countries allows you to compare people living with different policies,” she explains. “This helps us understand what is likely to happen if we change policies in the U.S.”

**UNCOVERING EVERY PERSON’S UNIQUE AGING STORY**

The gerontology field has to be prepared to help a population whose diversity—in background, health status, lifestyle factors, genetics, and more—is increasingly recognized as the number of older adults grows.

“There is no ‘one size fits all’ when it comes to growing older,” writes Davis School Dean Pinchas Cohen in a chapter of The Upside of Aging: How Long Life Is Changing the World of Health, Work, Innovation, Policy and Purpose (edited by Davis School Distinguished Scholar in Residence and Chairman of the Milken Institute Center for the Future of Aging Paul Irving). “Our challenge, in fostering the upside for today’s aging world, is to recognize those differences as opportunities for better treatments, solutions, and especially prevention strategies that are specifically tailored to each individual.”

Cohen, who coined the term for and is championing the concept of “personalized aging,” says that the genomics revolution, including the ability to now quickly and cheaply sequence an individual’s genome, will allow experts to provide precise, individualized recommendations to individuals seeking to age as healthfully as possible. The idea recognizes that research shows that many diet and exercise choices, disease treatment options, and other recommendations for well-being—even those coming from health care professionals—can have markedly different effects on different people.

The Davis School’s new push for developments in personalized aging brings together the life and social sciences in a myriad of ways. By combining advances in
biomedical research with demographic data gathered via large population studies on health and aging, USC Davis faculty members can correlating a range of environmental factors—such as diet, physical fitness, and mental stimulation—with genetic variations to understand which lifestyle choices are most beneficial for individuals who have a specific disease risk.

**HARNESSING TECHNOLOGY TO HELP OLDER ADULTS**

With the technology revolution of the last few decades reshaping the way people get information, work, communicate, shop, and more, digital channels and tools are more ubiquitous and powerful than ever. How can these amazing technologies be used to help promote safety, creative fulfillment, and other aspects of healthy aging?

The goal of the Davis School’s Center for Digital Aging is to harness the power of social media and cutting-edge technology to help older adults, caregivers, and related businesses and services as well as empower older adults to use technology and understand its risks. One of the center’s first initiatives started with a 2013 competition among students to create new smartphone applications for the older adult community. Successful apps, including a tool for recognizing and reporting elder abuse, resulted from the competition, and student innovators have reached out to other USC schools, including engineering, public policy, and fine arts, to help turn these and other app concepts into reality.

Recent Center for Digital Aging activities include a joint project with the USC Viterbi School of Engineering on older adult/robot interaction, which explores the effects of older adult and caregiver interactions with a social robot. The center also works with startups and is collaborating with a health games company to examine how playing a fall-prevention exercise game helps older adults have confidence in their ability to avoid falls.

The center is led by Professor of Gerontology and Psychology Elizabeth Zelinski, holder of the Rita and Edward Polusky Chair in Education and Aging and an expert on gerontechnology, neuroscience, and cognition.

“A major stereotype of aging is that older adults are averse to new technologies and are unwilling to try out products that involve computers,” Zelinski says. “The CDA is pioneering research suggesting that older adults, even those in the tenth decade of life, may believe the stereotype but actually are happy to embrace technologies that improves the quality of their lives if the user interface is simple. For example, our research participants in their 80s and 90s report using a smartphone to get information from Google, take photos, send text messages, and check email—but they consider themselves not to be computer-savvy!”
HOW CAN WE MAKE LONGER LIVES HEALTHIER LIVES?

USC Leonard Davis School of Gerontology Dean Pinchas Cohen addressed the potential for the future of aging and the opportunities arising for improving human healthspan during the “Prescription for Wellness: Extending Our Health Span” panel at the Milken Institute Global Conference on April 27, 2015. The panel was moderated by Milken Institute Center for the Future of Aging Chairman and USC Davis Distinguished Scholar in Residence Paul Irving.

“Personalized medicine has completely revolutionized health care, or what really we should call sick care,” Cohen said. “The challenge is to take that into premorbid care, which is what I termed personalized aging, where taking the power of genomics and epigenomics can be turned into a motivational opportunity to prolong aging downfall.”

Cohen highlighted the Personalized Aging Initiative at USC and its efforts to move away from a one-size-fits all model of health care as well as other important challenges facing older adults and communities.

USC DAVIS STUDENTS AND FACULTY HELP INTERNATIONAL SPECIAL OLYMPIANS STAY HEALTHY

As the University of Southern California hosted the 2015 Special Olympics World Games, students, faculty, and staff members from across USC, including the USC Leonard Davis School of Gerontology, volunteered their time to make the games a happy and healthy occasion for the visiting athletes.

Students and faculty members in the Davis School’s Master of Science in Nutrition, Healthspan, and Longevity program took part in the Healthy Athletes program, providing nutrition education, bone density screenings, and other health services to athletes in the Health Promotion component of the program.

“The athletes were given a Personal Health Report upon leaving the tent, summarizing body mass index, bone mineral density, and blood pressure findings,” said Davis School faculty member Cary Kreutzer, Director of the MSNHL program. “Health education materials were available in 10 languages on all topics addressed in the tent, and athletes were asked to share the information on the health report with their doctor when they return home to address health findings that were high or low.”

According to screening data from Healthy Athletes, over 15 percent of adult participants had osteopenia—reduced bone density that can be a sign of future osteoporosis and put individuals at risk for increased fractures. MSNHL team members helped athletes learn about the importance of bone mineral density and good nutrition to keep bones strong, Kreutzer said.

“At the Healthy Eating Station graduate students used food models to talk with the athletes about building a healthy plate for mealtime and the number of servings of foods they should be eating from the different food groups,” she said. “Athletes want to be healthy and enhance their performance in their athletic events. We know that good nutrition supports improved athletic performance, so learning to make healthy food choices is very important to these athletes.”

To watch the full panel, visit tinyurl.com/milken2015.
ALUMNA KATY FIKE NAMED ONE OF FAST COMPANY’S MOST CREATIVE IN BUSINESS

Honoring her for “making aging graceful,” technology, business, and design magazine Fast Company named 2009 USC Davis School PhD graduate Katy Fike number 53 on their 2015 list of the “100 Most Creative People in Business.”

Fike was lauded for her work as co-founder of Aging2.0, a network of innovators using technology to improve the lives of older adults. The Aging 2.0 network sponsors global events, hosts an accelerator program, and connects aging-focused startups with funding opportunities.

An investment banker before she became a gerontologist, Fike has deftly merged her business acumen and creativity with her interest in serving older adults. She was quoted by Fast Company as saying, “I was either going to an aging conference or a tech conference. I realized we needed to make them the same,” regarding the need to marry technological innovation with gerontological advances.

Fike said the recognition by Fast Company was a great honor and a chance to help raise awareness about innovation opportunities related to aging and senior care.

“Creativity is central to my work; I am constantly brainstorming about new solutions to better address the unmet needs of older adults,” she said.

With Aging2.0’s mission of accelerating innovation to help older adults around the world, Fike said the organization is building a global platform to connect, educate, and support innovators focused on aging and senior care, helping bring innovative solutions to the market quickly and effectively.

“It’s a big goal, and we collectively have lots of work to do in order to improve the aging experience, but we believe technology, design, and innovation will play a fundamental role in doing so,” she said.

In the near future, Fike said that she foresees Alzheimer’s disease becoming one of the biggest challenges for an aging population that will require innovation and creative solutions.

“In response to this growing need, I predict that we will see a new wave of technology-enabled tools to help cognitively impaired individuals,” she said. “The solutions will leverage artificial intelligence, sensors, and robotics to augment and optimize the cognitive abilities.”

To read more, visit the full Fast Company Q&A with Fike at tinyurl.com/fc-fike.

Katy Fike PhD ’09
A poster presentation featuring USC Leonard Davis School of Gerontology research on the relationships between advance directives and ethnic groups was named one of the best presentations at the UCLA Research Conference on Aging held July 9, 2015 at the University of California, Los Angeles.

The project, “Exploring Ethnic Differences in Advance Directive Completion and Care Preferences,” was led by USC Davis Gerontology doctoral student Jaclyn Portanova and was recognized as one of the four best posters in the conference’s Social Research, Policy, and Practice category. Portanova’s poster included research she conducted with her advisor and USC Davis Associate Professor Susan Enguidanos, Assistant Professor Jennifer Ailshire, and fellow Gerontology doctoral student Catherine Perez.

The project explored how various ethnic groups have different rates of completing advance directives, a document that details medical care preferences in the event a patient can’t make their own decisions (also known as a “living will”). When accounting for several variables such as income, assets, health conditions, and religious involvement, the study found that whites have a dramatically higher percentage of advance directive completion (52 percent) compared to that of Hispanics and blacks (16 percent).

“Although previous research has identified these variables related to advance directive completion rates, the variables didn’t account for much of the differences between ethnic groups,” Portanova said. “Interestingly, we have found that there is a change among blacks towards increased advance directive completion over time. So, advance directive completion rates for blacks and Hispanics are increasing over time but are still significantly lower than those for whites.”

The project also looked at medical care choices made in the completed advance directives and examined relationships between ethnic groups and living wills that called for more extensive medical care. The study found that blacks were more likely to specify a preference for aggressive interventions in the event that they were unable to make their own care choices, Portanova said.

She added that the choice can come down to the patient’s values and priorities regarding quantity versus quality of life. “When people opt for aggressive care at the end of life, they are choosing to be kept alive as long as possible despite a potential reduction in quality of life,” she said.

Portanova said the next steps for the project will involve finding out more about how cultural factors influence advance directive completion and care preferences as well as how completion rates and preferences change over time within ethnic groups. She stressed the importance of advance directives and the benefits they bring to both the patient and the patient’s loved ones.

“Advance directives allow patients to document the type of care they would like to receive if they are unable to make their own decisions. By completing an advance directive, patients can increase their likelihood of receiving care that is consistent with their wishes. This also takes the burden of decision making off of families and health care providers,” she said. “When there is no advance directive, aggressive care tends to be the default option even when such care is futile. For many patients, autonomy is very important, and the advance directive allows for them to choose what is right for them.”
NEWLY DISCOVERED HORMONE MIMICS THE EFFECTS OF EXERCISE

By Robert Perkins

Scientists at the USC Leonard Davis School of Gerontology have discovered a new hormone that fights the weight gain caused by a high-fat Western diet and normalizes the metabolism—effects commonly associated with exercising.

Hormones are molecules that act as the body’s signals, triggering various physiological responses. The newly discovered hormone, dubbed “MOTS-c,” primarily targets muscle tissue, where it restores insulin sensitivity, counteracting diet-induced and age-dependent insulin resistance.

“This represents a major advance in the identification of new treatments for age-related diseases such as diabetes,” said Pinchas Cohen, dean of the USC Davis School and senior author of a study on the research, which appeared in Cell Metabolism on March 3, 2015.

To test the effects of MOTS-c, the team injected the hormone into mice fed a high-fat diet, which typically causes them to grow obese and develop a resistance to insulin. The injections not only suppressed both effects in mice but also reversed age-dependent insulin-resistance, a condition that precedes diabetes.

“This discovery sheds new light on mitochondria and positions them as active regulators of metabolism,” said Changhan “David” Lee, assistant professor at USC Davis and lead author of the study.

MOTS-c is unique among hormones in that it is encoded in the DNA of mitochondria—the “powerhouses” of cells that convert food into energy. Other hormones are encoded in DNA in the nucleus.

Lee and Cohen collaborated with colleagues from USC as well as the David Geffen School of Medicine at UCLA and the National Institutes of Health.

While all of the experiments on MOTS-c to date have been performed on lab mice, the molecular mechanisms that make it function in mice exist in all mammals, including humans. The MOTS-c intellectual property has been licensed to a biotechnology company, and clinical trials in humans could begin within the next three years, Cohen said.

This research was funded by National Institutes of Health (grants 1R01AG 034430 EUREKA Award, 1R01GM 090311 Transformative RO1, 1R01ES 020812), a Glenn Award, an Ellison Medical Foundation New Scholar Award, and a SC-CTSI grant.
WHY DON’T MEN LIVE AS LONG AS WOMEN?

Across the entire world, women can expect to live longer than men. But why does this occur, and was this always the case?

According to a study led by USC Davis School of Gerontology researchers, significant differences in life expectancies between the sexes first emerged as recently as the turn of the 20th century. As infectious disease prevention, improved diets, and other positive health behaviors were adopted by people born during the 1800s and early 1900s, death rates plummeted, but women began reaping the longevity benefits at a much faster rate.

In the wake of this massive but uneven decrease in mortality, global data points to heart disease as the culprit behind most of the excess deaths documented in adult men, said USC University Professor and AARP Professor of Gerontology Eileen Crimmins.

“We were surprised at how the divergence in mortality between men and women, which originated as early as 1870, was concentrated in the 50 to 70 age range and faded out sharply after age 80,” Crimmins said.

The study was conducted with USC University Professor and ARCO/William F. Kieschnick Professor in the Neurobiology of Aging Caleb Finch and Research Associate Hiram Beltrán-Sánchez of the Center for Demography of Health and Aging at the University of Wisconsin-Madison. It examined the lifespans of people born between 1800 and 1935 in 13 developed nations.

Focusing on mortality in adults over the age of 40, the team found that in individuals born after 1880, female death rates decreased 70 percent faster than those of males. Even when the researchers controlled for smoking-related illnesses, cardiovascular disease appeared to still be the cause of the vast majority of excess deaths in adult men over 40 for the same time period. Surprisingly, smoking accounted for only 30 percent of the difference in mortality between the sexes after 1890, Crimmins said.

The uneven impact of cardiovascular illness-related deaths on men, especially during middle and early older age, raises the question of whether men and women face different heart disease risks due to inherent biological risks and/or protective factors at different points in their lives, Finch said.

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“Further study could include analysis of diet and exercise activity differences between countries, deeper examination of genetics and biological vulnerability between sexes at the cell level, and the relationship of these findings to brain health at later ages,” he said.

The study, “Twentieth century surge of excess adult male mortality,” appeared in the Proceedings of the National Academy of Sciences on July 21, 2015 and was supported by the National Institute on Aging.
Want to lose abdominal fat, get smarter, and live longer? New research led by USC’s Valter Longo shows that periodically adopting a diet that mimics the effects of fasting may yield a wide range of health benefits.

In a recent study, Longo and his colleagues show that cycles of a four-day low-calorie diet that mimics fasting (FMD) cut visceral belly fat and elevated the number of progenitor and stem cells in several organs of old mice—including the brain, where it boosted neural regeneration and improved learning and memory.

The mouse tests were part of a three-tiered study on periodic fasting’s effects—testing yeast, mice, and humans—published by *Cell Metabolism* on June 18, 2015.

Mice, which have relatively short life spans, provided details about fasting’s lifelong effects. Yeast, which are simpler organisms, allowed Longo to uncover the biological mechanisms that fasting triggers at a cellular level. And a pilot study in humans found evidence that the mouse and yeast studies were, indeed, applicable to humans.

Bimonthly cycles that included four days of an FMD that started at middle age extended life spans, reduced the incidence of cancer, boosted immune system function, reduced inflammatory diseases, slowed bone mineral density loss, and improved the cognitive abilities of older mice tracked in the study. The total monthly caloric intake was the same for the FMD and control diet groups, indicating that the effects were not the result of overall dietary restriction.

In a pilot human trial, three cycles of a similar diet given to 19 subjects once a month for five days decreased risk factors and biomarkers for aging, diabetes, cardiovascular disease, and cancer with no major adverse side effects, according to Longo.

**A FRIENDLIER FAST**

“Strict fasting is hard for people to stick to, and it can also be dangerous, so we developed a complex diet that triggers the same effects in the body,” said Longo, Edna M. Jones Professor of Biogerontology at the USC Davis School of Gerontology and director of the USC Longevity Institute. Longo has a joint appointment at the USC Dornsife College of Letters, Arts and Sciences. “I’ve personally tried both, and the fasting-mimicking diet is a lot easier and also a lot safer.”

The diet slashed the individual’s caloric intake down to 34 to 54 percent of normal, with a specific composition of proteins, carbohydrates, fats, and micronutrients. It decreased amounts of the hormone IGF-I, which is required during development to grow, but it is a promoter of aging and has been linked to cancer susceptibility. It also increased the amount of the hormone IGFBP-, and reduced biomarkers and risk factors linked to diabetes and cardiovascular disease, including glucose, trunk fat, and C-reactive protein, without negatively affecting muscle and bone mass.

For 25 days a month, study participants went back to their regular eating habits—good or bad—once they finished the
treatment. They were not asked to change their diet and still saw positive changes.

Longo believes that for most normal people, the FMD can be done every three to six months, depending on abdominal circumference and health status. For obese subjects or those with elevated disease risk factors, the FMD could be recommended by the physician as often as once every two weeks. His group is testing the effects in a randomized clinical trial with more than 70 subjects, which will be completed soon.

“If the results remain as positive as the current ones, I believe this FMD will represent the first safe and effective intervention to promote positive changes associated with longevity and health span, which can be recommended by a physician,” Longo said. “We will soon meet with [Food and Drug Administration] officers to pursue several FDA claims for disease prevention and treatment.”

For the study, Longo collaborated with researchers and clinicians from USC as well as from Texas, Italy, and England. The study was funded by the National Institute on Aging.

CANCER CELLS STARVED OUT

Longo has previously shown how fasting can help starve out cancer cells while protecting immune and other cells from chemotherapy toxicity. In addition, two other recent studies led by Longo suggest that a less-toxic class of drugs combined with fasting may kill breast, colorectal, and lung cancer cells as well as chemotherapy. If shown to work in humans, this combination could replace chemotherapy and make fasting a potent component of a long-term strategy to treat cancer, Longo said.

Published on March 30, 2015 by the journal *Oncotarget*, the studies suggest that low-toxicity drugs called kinase inhibitors combined with fasting, or a diet that mimics the effects of fasting, could be an alternative to chemotherapy. The studies are part of a multinational collaboration with the laboratories of Alessio Nencioni at University of Genova and of Lizzia Raffaghello at the G. Gaslini Institute in Italy.

Human clinical trials in the United States and Europe are already studying the effectiveness and safety of Longo’s strategy of cyclic fasting during cancer treatment.

“Like every other cell, cancer cells need energy to survive and keep growing. But cancer cells are fairly inflexible about how they produce that energy, which gives us a way to target them,” Longo said. “It’s about reprogramming the body so it enters a slower aging mode, but also rejuvenating it through stem cell-based regeneration. It’s not a typical diet because it isn’t something you need to stay on.”

CONSULT A DOCTOR

Despite its positive effects, Longo cautioned against water-only fasting and warned even about attempting the fasting mimicking diet without first consulting a doctor and seeking their supervision throughout the process.

“Not everyone is healthy enough to fast for five days, and the health consequences can be severe for a few who do it improperly,” he said. “Water-only fasting should only be done in a specialized clinic. Also, certain types of very low calorie diets, and particularly those with high protein content, can increase the incidence of gallstones in women at risk.”

In contrast, he added, the fasting-mimicking diet tested in the trial can be done anywhere under the supervision of a physician and carefully following the guidelines established in the clinical trials. Longo also cautioned that diabetes subjects should not undergo either fasting or fasting mimicking diets while receiving insulin, metformin, or similar drugs. He also said that subjects with body mass index less than 18 should not undergo the FMD diet. ■
HEALTHY AT 100? FOR SOME AMERICANS, THE ANSWER IS A RESOUNDING ‘YES’

As people live longer and longer lives, are those additional years spent in good health?

A recent study shows that for some Americans who reach 100 years of age, the answer is yes, according to Jennifer Ailshire, assistant professor at the USC Davis School of Gerontology.

“There is such a pervasive mentality that old age is synonymous with disease and disability, and until recently most research would have confirmed that,” Ailshire said. “But with the growing population of exceptional survivors, which includes centenarians, we are now able to identify differences in the aging experience and see that some people maintain health and well-being long into old age.”

Ailshire is first author of “Becoming Centenarians: Disease and Functioning Trajectories of Older U.S. Adults as They Survive to 100.” The article was published in the February 2015 issue of *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*.

Examining data from the Health and Retirement Study in the U.S., Ailshire and senior author Eileen Crimmins, University Professor and USC Davis AARP Professor of Gerontology, found that while some centenarians have poor health and functioning upon reaching age 100, others are able to achieve exceptional longevity in relatively good health and without loss of functioning.

Disease and levels of function in centenarians differed by sex, education level, and marital status, Ailshire said.

“Of the centenarians we studied, 83 percent were women, meaning many more of the men in this cohort died before reaching 100,” she said of one of the differences highlighted by the study. “But the men who survived to 100 were in better health; they were more likely to have escaped disease, disability, and cognitive impairment.”

U.S. centenarians seem to be experiencing both compression and expansion of morbidity—decreases and increases, respectively, in the number of years spent with illness or loss of functioning—showing just how different the aging process can be between individuals. Decisions made today will determine the balance of morbidity compression and expansion in the coming decades, Ailshire said.

“If we can improve our ability, through biomedical and behavioral interventions for instance, to live longer in good health, then we will likely see more compression of morbidity,” she said. “But there’s also a real risk of increasing life span without a similar increase in health span, meaning people may live longer, but in poor health. Our efforts should be focused at least as much on improving quality of life as extending longevity.”

Ailshire said that as more people live to 100 and beyond, new avenues of research on aging and longevity continually arise not only in health outcomes but also in the bigger social impacts of longer lives.

“Although there is much to be learned from examining disease and disability profiles of exceptional survivors, I’m particularly excited about extending our focus to psychosocial factors of aging, including satisfaction with life, happiness, social relationships, and purpose in life,” she said. “In future work I hope to obtain a more nuanced understanding of longevity that incorporates both physical and psychosocial aspects of aging.”
A program linking older adults with elementary students not only provides kids with academic and social support but also gives older volunteers a positive perception of how they help the next generation, according to a groundbreaking study by USC Leonard Davis School of Gerontology Assistant Professor Tara Gruenewald.

“The Baltimore Experience Corps Trial: Enhancing Generativity via Intergenerational Activity Engagement in Later Life” is the first-ever large-scale experiment demonstrating that taking part in an intergenerational civic engagement program helps older adults feel more generative. Generativity is care and concern directed toward others, especially those in younger generations, said Gruenewald.

“In [Erik] Erickson’s life stage theory, the major goal in midlife is generativity, with efforts to promote the continuation of the next generation,” she said. “We all want to create something that outlives us.”

The Experience Corps, started in 1995 and now active in 21 U.S. cities as AARP Experience Corps, is a program that pairs older adults with elementary schools to help kids improve their academic, social, and behavioral well-being. Harnessing the wisdom and time of older volunteers, the program is a mutually beneficial scenario: kids get the help and encouragement they need, and older adults satisfy their need to be generative and see the impact of their work, Gruenewald said.

Baltimore, Maryland was one of the original five Experience Corps locations and has been the site of program evaluation for several years. Gruenewald’s study analyzed data from the Baltimore Experience Corps Trial (BECT), an unprecedented randomized controlled trial testing the benefits of the program for both volunteers and the children they help. Following Experience Corps volunteers and non-volunteer control subjects for two years, Gruenewald and her colleagues periodically assessed whether study participants experienced changes in what they thought about caring for and serving younger members of their community.

It turned out that compared to non-volunteers, participating in Experience Corps helped older adults not only want to be more generative but also have a greater appreciation for the generative things they’ve achieved. Gruenewald said that the randomized controlled design of the trial strongly bolsters the evidence.

“Even the members of our control group were very engaged and increased their volunteer activity; [all study participants] were highly motivated to give,” Gruenewald said. “Experience Corps participation showed benefits that were above and beyond [the control group’s results]. It’s the full package and provides intense doses of cognitive, psychosocial, and physical stimuli.”

Other upcoming BECT analyses will examine the academic, behavioral, and social benefits for children as well as delve further into the psychological and physical benefits for older adult volunteers. Existing research indicates that feelings of generative desire and achievement positively correlate with better health outcomes for seniors, Gruenewald said. She added that she hopes the BECT results lead to further development of intergenerational civic programs as well as more scientific support for such programs.

“To see how motivated elders are to be involved and give back is very affirming. We have a segment of the population that has a lot to give, and failure to tap into that resource is quite concerning,” Gruenewald said. “[A program such as Experience Corps] really is a win-win; we help our communities and help elders in the process.”

“The Baltimore Experience Corps Trial: Enhancing Generativity via Intergenerational Activity Engagement in Later Life” first appeared online in the Journals of Gerontology Series B: Psychological Sciences and Social Sciences on February 25, 2015 and will appear in print later this year. Funding for the BECT was provided by the National Institute on Aging (NIA) grant P01 AG027735, the John A. Hartford Foundation, the Johns Hopkins Older Americans Independence Center under NIA contracts P30-AG02133 and R37-AG19905, and NIA grant K01-AG028582 to Gruenewald.
The USC Leonard Davis School of Gerontology has joined forces with The Hartford, AARP’s endorsed provider of home insurance, to help older homeowners remain in their homes safely as they age.

The new Executive Certified Home Modification Provider (ECHMP) Program was created by the Fall Prevention Center of Excellence, headquartered at USC, in cooperation with gerontologists at The Hartford Center for Mature Market Excellence. The six-week online program teaches contractors how to assess challenges and injury risks to older adults present in the home and how to use universal design principles to modify homes and make them safer for a wide range of ages and levels of functioning.

The program is offered to The Hartford’s affiliated contractors who are members of the Crawford Contractor Connection, a national network of more than 4,800 contractors delivering property-managed repair services to insurance carriers as well as delivering services direct to consumers for repairs, remodeling, and special needs home modifications. In the fall of 2014, 21 contractors completed the inaugural course and provided highly positive feedback regarding the quality and applicability of the program materials, said Julie Overton, training and resource development specialist with the USC Davis School and one of the ECHMP program’s creators.

“I have been personally working with The Hartford and AARP customers for over 10 years. I see a need to help our aging customers and see this class as a great learning opportunity,” one student said in an anonymous course survey.

Following the very successful pilot ECHMP course, the program will be offered twice yearly and potentially up to four times per year, Overton added.

“It’s not just about learning to assess the home and decide which universal design elements to recommend,” she said regarding the program’s breadth and depth. “It’s also about learning to work well with older homeowners and understand their particular needs.”

Lance Malcolm, Chief Operations Officer with Crawford Contractor Connection, agrees. “We pride ourselves on the exceptional service our network contractors deliver to homeowners. We partnered with USC and The Hartford on this program to give our contractors the opportunity to learn key skills and insights about universal design and home modifications. This knowledge directly benefits their clients and gives them a competitive advantage in the marketplace.”

As members of the Baby Boomer generation approach age 70 and beyond, more Americans will face aging-related challenges at home, from difficulty in housework and home maintenance to risks of falls and other accidents. With the majority of older adults wishing to remain at home for as long as they can, smart home modifications can help make home more safe and comfortable for years to come, said USC Davis Professor and Falls Prevention Center of Excellence Co-Director Jon Pynoos.

“As Baby Boomers approach their 70th birthdays, an increasing number of Americans will be at risk of falls,” Pynoos said. “Home modifications can help prevent falls and make it easier to age in place, the overwhelming preference of older persons.”

Executive Director and Gerontologist for The Hartford Center for Mature Market Excellence Jodi Olshevski MSG ’91 said contractors who complete the ECHMP program are uniquely equipped to help older adults who want to remain in their homes for as long as possible.

“The Hartford’s partnership with USC was born out of a joint commitment to promote universal design and home modifications to support aging in place,” Olshevski said. “The ECHMP program created for contractors who work with The Hartford customers is innovative and impactful. When our customers work with an ECHMP-certified contractor, they will receive a distinct experience because opportunities are identified and solutions provided to help them have a ‘home for a lifetime.’”

Of those planning to remodel, here are the room(s) they plan to tackle (respondents could select more than one):
While 40 percent of Boomers expect to remodel their homes sometime in the future, few do so with their own health and aging in mind, according to a recent joint study from The Hartford and the USC Davis School.

When planning to remodel, Boomers indicated they will focus primarily on refreshing "dated" rooms—kitchens and bathrooms top the list—and making their homes more attractive, with only 21 percent considering their own health and aging. But Olshevski advises that people can do both at the same time with universal design—an approach to design that’s easy for everyone to use, regardless of age, size, or ability.

“Often referred to as ‘livable design,’ universal design is visually attractive,” said Olshevski. “If Boomers are willing to incorporate livable design when they remodel, they’ll enjoy immediate benefits—as will small children or older relatives who visit—and find their homes easier to live in as they age.”

In fact, when Boomers were shown photos of livable design features for the kitchen, many respondents agreed they would consider the following:

- Pullout drawers in base cabinets (75%)
- Lighting from multiple sources (61%)
- Level thresholds between kitchen and adjacent rooms (61%)
- D- or U-shaped handles, rather than knobs (59%)
- Countertops at different heights (42%)

Kerrie Kelly, an award-winning interior designer who incorporates livable design into her work, says her clients are starting to express more interest in these types of features.

“Livable design is contemporary and stylish and my clients love the open, flexible living space,” she said. “It works for everybody, and universal design elements are increasingly common in new home construction.”

Olshevski noted that these findings are consistent with previous research from The Hartford and the USC Davis School that studied the impact of universal design education on customer repair decisions following a homeowners’ insurance claim.

“While most of us remain healthy and active as we age, we may still experience changes in strength, flexibility, balance, and reach,” said Olshevski. “Universal design makes it easier to adjust to these changes and live comfortably and safely at home for a lifetime.”

Pynoos knows firsthand about the importance of universal design features; he installed them in his family’s back house when his 80-year-old father-in-law came to live with him and his wife, he said.

“Even though he was frail and at high risk of falls, Harry was able to live independently, joining us for meals and activities,” Pynoos said. “He never fell. More than once, Harry remarked that universally designed features were the best gift we could ever have given him.”

As part of its commitment to helping Boomers make their house a home for a lifetime, The Hartford developed several resources for livable design ideas including a free guide, “Remodeling Today for a Better Tomorrow,” and an interactive home universal design quiz. These resources and more are available at extramile.thehartford.com/remodel.
Heart-healthy, cancer prevention, reduced risk for type 2 diabetes, improved cognitive function, reduced inflammation…and so on. So read the headlines in research and consumer publications praising the benefits of the Mediterranean diet. But is this just another fad diet? What is the Mediterranean diet, and what diet changes are needed to eat like our ancient ancestors and reap the purported health benefits?

Good news: the Mediterranean diet is not just another fad diet. The diet incorporates the basics of healthy eating, relying on fresh and locally grown foods, less red meat, and less saturated fat and more fruits, vegetables, lentils and beans, and mono-saturated fats found in olive oil and nuts. The diet relies on herbs and spices to flavor foods versus salt and sugar and does not include heavily processed foods, which is often high in fats or sugar. In addition, this diet plan promotes a healthy lifestyle, including exercise, stress reduction, and intuitive eating.

Put it together and it looks like a winning combination: home-prepared meals using fresh, non-processed foods; daily physical activity (walking, swimming, tennis, yoga); meditation and intuitive eating practices; regularly scheduled mealtime with family or friends; and savoring the taste, smell, and presentation of food.

**HISTORY AND BENEFITS OF THE MEDITERRANEAN DIET**

The Mediterranean diet is defined by the traditional cooking styles of countries that border the Mediterranean Sea. The diet began centuries ago, with several cultures contributing to the diet we know today as the Mediterranean diet. The benefits of this diet are thought to reach beyond the food itself and reflect the importance of physical activity, family mealtime, and limiting food consumption to mealtime (i.e. no snacking).

Research studies recommending the Mediterranean Diet for disease prevention, longevity, and overall health are too numerous to report. The evidence supporting the health benefits of the diet are so convincing that the 2015 U.S. Dietary Guidelines Scientific Panel suggested revisions to the guidelines, recommending the diet as an eating plan that can help promote health and prevent disease and can be followed by the entire family. In 2015, *U.S. News and World Report* ranked the Mediterranean Diet as the #1 best plant-based diet, #3 for best diet overall and easiest-to-follow diet, and #4 for best heart-healthy diet.

**FOCUS ON VEGETABLES, FRUITS, LENTILS & BEANS, NUTS, AND WHOLE GRAINS**

Moving away from the typical Western diet toward a Mediterranean diet is not difficult; however, to ensure long-term success, the diet is best approached making small changes over time. For example, start by eating less red meat each week, add a handful of nuts to a meal in place of salty chips or French fries, or load up your lunch or dinner plate with color, selecting two or three fruits and vegetables in place of bread or potatoes.

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**THE BASICS AND BENEFITS OF THE MEDITERRANEAN DIET**

By Cary Kreutzer, Assistant Instructional Professor and Director of the USC Davis Master of Science in Nutrition, Healthspan, and Longevity Program
RECIPE:

WALNUT AND LENTIL SALAD

INGREDIENTS:
- 1 cup lentils
- 2 cups water
- 1 diced red, orange, or yellow pepper, no seeds
- 1/2 cup chopped green scallion
- ½ cup chopped walnuts
- ½ cup finely chopped parsley
- 1 teaspoon Dijon mustard
- 2 -3 tablespoons red wine vinegar
- 1/4 cup extra-virgin olive oil
- Fresh-ground black pepper
- 1 ripe tomato or handful of cherry tomatoes

DIRECTIONS:
1. Rinse and sort through the lentils, combine with water, and bring to a boil.
2. Reduce heat and simmer for 20 minutes with lid covering pan tightly.
3. Drain excess water from lentils and place in a bowl to cool while you prepare the dressing.
4. In a separate bowl, mix mustard and vinegar.
5. Gradually beat in the olive oil.
6. Once dressing is prepared, add scallion, red pepper, parsley, and walnuts to the lentils.
7. Pour dressing over lentil mix and stir to mix thoroughly.
8. Add ground pepper to taste.
9. Serve alone or on a bed of dark green lettuce or bitter greens such as arugula, chicory, or dandelion greens.
10. Garnish with slices of tomato or cherry tomatoes.

KEY COMPONENTS OF THE MEDITERRANEAN DIET INCLUDE:
- 6-12 servings per day of antioxidant-rich vegetables and fruits, locally-grown and/or organic if available; begin or end each meal with a salad.
- Eat primarily plant-based foods, including 4-6 servings per day of whole (not processed) grains (couscous, bulgur, rice, polenta, unbleached wheat flour).
- Increase consumption of legumes (lentils, beans, soybeans) with at least one serving daily.
- Include nuts and seeds (flaxseed, tahini, etc.) daily. Because nuts are high in calories, they should not be eaten in large amounts; limit to a handful a day.
- Consume cheese (parmigiana, mozzarella, feta) and yogurt (plain, sweetened with honey) along with dark leafy greens, which help meet daily requirements for calcium.
- Replace butter, shortening, and vegetable oils with extra virgin olive oil.
- Limit red meat (beef, pork, lamb) to no more than a few times a month. When consumed, purchase red meats from grass-fed animals.
- Consume only moderate amounts of fatty fish (with low mercury content), eggs, and poultry.
- Use spices and herbs in place of salt to season foods.
- Drink red wine in moderation (optional), coffee, or antioxidant-rich green tea.
- A small square of dark chocolate with raspberries or blueberries for dessert can provide flavonoids and satisfy your desire for something sweet.
- Food should be savored; avoid rushing mealtime.

SELECTING OLIVE OIL:
Extra virgin olive oil is made by extracting the oil from the olives through mechanical or physical (instead of chemical) processes; the oil is unrefined and unprocessed. Look for the name of the place where the olives were grown and the oil was produced; if not listed, the oil may be combined oils from several countries. The European Union marks extra virgin olive oil with a DOP, or Protected Denomination of Origin, denoting that the oil is produced under stringent regulations. In the U.S. the production date and location is listed on the label. Preferably, oil should be stored in a dark glass bottle in a dark cabinet, avoiding high temperatures and light to preserve freshness.

Recipe from The New Mediterranean Diet Cookbook: A Delicious Alternative for Lifelong Health by Nancy Harmon Jenkins
As one of the very first students in the Master of Science in Nutrition, Healthspan, and Longevity program at the USC Leonard Davis School of Gerontology, Victoria Hahn MSNHL ’17 is excited by the multitude of possibilities that awaits her after graduation.

“I don’t have to say I just want to be a scientist, or a counselor, or an educator,” Hahn says when asked about what her post-graduation plans are. “I could say I want to be a bit of everything; there are so many different things you can do in nutrition.”

From work in a health care or foodservice environment to academic research or policy work, the MSNHL program is designed to provide the scientific foundation and training for becoming a Registered Dietician Nutritionist, which enables numerous career trajectories. For Hahn, who has been fascinated by various aspects of nutrition since she was young, the multifaceted program is a perfect fit.

Growing up in Los Angeles, Calif., her first encounter with in-depth nutrition knowledge was when she worked with a dietician to address her health.

“When I was younger, I was a bit overweight, and I had to focus on and control my diet,” she says. Her dietician not only helped her develop a plan for becoming healthier but also introduced her to the idea of nutrition as a career. Her interest in pursuing nutrition education was later piqued in earnest during her first physiology course at the University of California, Davis.

“I was just so intrigued by how the body works because of its complexity; the interrelationships between parts of the body are astounding,” Hahn says. “Then when I took my first biochemistry course, I knew this was something I really wanted to study. I really enjoyed how logical it all seemed.”

She received her Bachelor of Science in Clinical Nutrition from UC Davis in 2014, after which she began working as the culinary director’s assistant for the Silverado Beach Cities Memory Care Community. The position not only provides her with valuable foodservice management experience, but also the experience of working with older adults facing unique cognitive and physical challenges.

Hahn, who found out about the USC Davis MSNHL program during a dietetic symposium at California State University, Northridge, now knows that nutrition and aging are tightly interwoven in numerous ways.

“Helping someone to have better nutrition is helping someone to live their best life; poor nutrition is an ailment that can affect an individual throughout their entire lifespan,” she says. “Nutrition and aging are like two puzzle pieces that fit so beautifully to me.”

So far, she says the best part of the program has been the challenging nature of the coursework and the leadership provided by MSNHL Program Director Cary Kreutzer.

“Dr. Kreutzer has the ability to be caring yet firm, and she knows exactly where she wants this program to go,” Hahn says. “It’s a blessing to be working with someone so inspirational.”

Hahn doesn’t yet know exactly what she wants to do following her master’s program—she’s interested in several research topics, including inflammation and nutrition and other aspects of diet’s interactions with diseases, and a PhD might be in her future. However, she is sure about one result of her program.

“This program isn’t just about becoming a registered dietician nutritionist,” she says. “It’s also about becoming a leader.”
RICK MATROS: GERONTOLOGY AND BUSINESS LEADERSHIP

USC Leonard Davis School of Gerontology alumnus Rick Matros, a member of the school’s first entering class of 1975, was not only a trailblazer in gerontology education but has also brought his gerontology knowledge to numerous leadership roles throughout his career.

Today, as the chairman, president, and chief executive officer of Sabra Health Care REIT, Inc., he says his gerontology education and experience still deeply influence his business decisions, subsequently touching the lives of older adults throughout the nation.

Matros, who received his Master of Science in Gerontology degree in 1977, first became interested in aging during his undergraduate study at Alfred University in New York.

“My undergraduate morphed from psychology to developmental psychology, so I started to focus more on the aging process,” he says. “My professor at the time got interested in gerontology and convinced the school to allow him to offer a gerontology course. We did a project at a local nursing home, and in that process, I really fell in love with working with the elderly.”

When Matros finished his bachelor’s degree, he began looking at graduate programs in gerontology. At the time, there were just two choices: the University of North Texas and the Davis School. He says the choice was simple.

“I grew up in New York. I wasn’t going to north Texas; I was going to Los Angeles!” he laughs.

During his time at USC, Matros says he quickly bonded with his small group of classmates as well as the instructors. He also grew close to Betty Hartford, the Davis School’s first director.

“She was so dedicated to gerontology that, more than any individual teacher, she had the biggest impact on me as far as cementing my desire and commitment to stay with gerontology post-graduation,” he says.

Matros recalls that being a part of a brand-new program with no real precedent made students take a very active role not only in their own learning but also in the refinement of the master’s program curriculum for future students.

“I think what was kind of exciting about it was that we were really part of this laboratory, with the Davis School trying to figure out what it was and what it wanted to be,” he says. “Because the class was so small, they were really interested in getting our feedback on everything. It was fun just being part of that process and knowing that we were part of something that was probably going to grow pretty dramatically not just at SC but at other campuses around the country as well.”

Following graduation, Matros began work as an activities director at a nursing home, where his gratitude and appreciation for the wisdom and experience of older adults strengthened even more.

“I loved being an activities director,” he says of the experience working directly with residents. “[Older adults] have so much more to offer you than you could offer them.”

Matros’ career eventually saw him focusing more on the business aspects of health care. From 1988 to 1997, he held leadership positions at post-acute care companies Care Enterprises and Regency Health Services, and in 1998 he founded and served as CEO of the Bright Now! Dental clinic network, of which he remained a director until the company’s sale in 2010. He became Chairman and CEO of Sun Healthcare Group, Inc. in 2001 until a transaction in 2010 created Sabra Health Care REIT, Inc., with Matros serving as Sabra chairman, president, and CEO ever since.

“As I moved up in my career and started running companies, those companies had a variety of different health care businesses that still intersected with gerontology,” he says.

When the Sabra team is weighing a health care facility purchase, Matros visits the facility and talks to residents and their families as well as facility employees. His expertise in gerontology gives him a unique understanding of the quality and promise of the facility and its community.

In addition to his busy professional schedule, Matros also takes time to stay involved with Davis School faculty members and their students. He regularly speaks to gerontology students as part of GERO 589, “Case Studies in Leadership and Change Management,” taught by Professor and Dean Emeritus Edward Schneider.

He emphasizes that even though he’s no longer involved in providing direct care for older adults, his gerontology education has given him powerful professional insights that help him make decisions that benefit those being served by facilities owned by Sabra.

“A deep understanding of working with the elderly has helped me in my career,” Matros says. “If you’re involved in anything regarding services for the elderly, what you’re doing has an impact on the individuals being served.”
As society continues to rapidly age, Jon Pynoos wants to make sure that all types of homes and communities can keep up and provide healthy, safe environments for older adults of all abilities.

A USC faculty member since 1978, Pynoos is the UPS Foundation Professor of Gerontology, Policy, and Planning at the USC Leonard Davis School of Gerontology and director of the National Resource Center on Supportive Housing and Home Modification. He is also the co-director of the Fall Prevention Center of Excellence, which is housed at USC and has been funded primarily by the Archstone Foundation.

Pynoos first got into the aging research field by way of his studies in housing and urban planning, completing his bachelor of arts, master of community planning, and doctoral degrees in the subject at Harvard University. Though he initially “knew little about aging,” his interest in using his education to help the elderly was inspired by close relationships with his grandparents as well as his friendship with an older neighbor during graduate school, he says. As he searched for a research project following his doctoral program in 1974, Pynoos began work with Abt Associates, then a small company in Cambridge, Mass. using interdisciplinary social science research to solve social, economic, and technological problems. There, he was introduced to the multifaceted challenges regarding housing and the elderly, which has been a central part of his research and expertise ever since.

Furthering his career in aging science and policy, in 1975 Pynoos became the executive director of Minuteman Home Care/Area Agency on Aging, a non-profit organization outside of Boston, Mass., which aimed to provide services to seniors in the community and help them avoid unnecessary institutionalization. As he networked with colleagues throughout the area, he met Elyse Salend, executive director of the nearby Mystic Valley Home Care/Area Agency on Aging. They began attending meetings together and sharing advice—“and then we got married,” Pynoos says with a chuckle.

Encouraged by USC faculty member Victor Regnier (now ACSA Distinguished Professor of Architecture and Professor of Gerontology), the pair relocated to Los Angeles in 1979, with Pynoos joining the Davis School faculty as an assistant professor and Salend becoming a staff member of the Department of Geriatric Medicine at the University of California, Los Angeles.

Pynoos has spent his career at USC researching and writing about homes and communities for the elderly. He has conducted a large number of applied research projects based on surveys and case studies of housing, aging in place, and long-term care along with teaching courses on social policy and aging. He tries to stay grounded by visiting older persons in their homes, including his mother, who is now 93 and living in a home that Pynoos’ father built. He also contributes his time to organizations such as Menorah Housing Foundation, which builds and runs housing for the elderly. He takes pride in the fact that his three children went to graduate school at USC, two of whom work in aging services and the third in social policy.

Now one of the nation’s foremost experts on home safety for older adults, Pynoos foresees several challenges—and opportunities—as the population continues to skew older.

“We have an aging group of people in communities and housing that are not age friendly. We continue to build housing without supportive features and with hazards—what I have called ‘Peter Pan Housing,’” Pynoos says. “My edict has always been, ‘Think before you do something.’ Even young people should consider how homes and neighborhoods will fit their needs as they age. Universal design and new technology have much to offer.”

Another pressing challenge will be the increased impact of Alzheimer’s disease in an aging population. Modifications to homes and communities of all types will be needed in order to accommodate changes not only in physical abilities but also in cognitive abilities and memory, as well as desire for partners of different abilities to remain living together, he adds.

As the nation and the world prepare to face these challenges, Pynoos says the USC Davis School is the place to be for those who want to address the most pressing issues faced by older adults, their families, and communities.

“This is the best place to be if you’re studying aging,” Pynoos says. “It opens so many opportunities for faculty members. You can meet other academicians from around the world, have great students to teach, and work with terrific colleagues from a variety of disciplines.”
To age successfully is a shared aspiration. We all want to live free of disease and disability, maintain optimal physical and cognitive functioning, and actively engage with our communities and families. Recent medical advances, greater access to quality health care, and successful public health initiatives have improved life expectancy at all ages, and people are spending more time free of disease and disability. These trends in health and longevity give us all reasons to be optimistic about life in old age and have made aging successfully seem less elusive and more tangible. Yet, some aspects of this progress are worrisome because some segments of the older population are not experiencing the same improvements in health and longevity. Stark disparities by race and ethnicity exist, where older racial minorities bear a disproportionate disease burden and have a higher risk for death.

Older blacks, for instance, are particularly disadvantaged with regards to their cardiovascular health. They have higher rates of cardiovascular diseases, experience an earlier onset of disease, have greater disease severity, and face premature death due to cardiovascular diseases. My research with Drs. Eileen Crimmins and Jennifer Ailshire at the USC/UCLA Center on Biodemography and Population Health focuses on health disparities among older adults. Our research shows that older blacks have higher cardiometabolic risk scores than whites or Hispanics. This summary measure of risk is a reflection of the amount of dysregulation across the cardiovascular and metabolic systems of the body, and is associated with subsequent disease and mortality. Our research also shows that older blacks not only start off with the worst cardiometabolic risk scores, their scores also worsen over a strikingly short period of time—four years—whereas risk scores among other groups appear to stay the same or improve.

In a country that is more readily considering itself “colorblind,” these findings are paradoxical and prompt difficult but critical questions: Why, if we are a country that believes in social justice and the equity of all people, do racial disparities in health exist and persist? And why is the health of older blacks disproportionally affected?
As a minority aging and health disparities researcher, these are the questions I address by examining pathways that contribute to health disparities and identifying points of intervention. The pathways involved are numerous and complex and operate at the individual, family, neighborhood, and institutional levels. Our work on race differences in cardiometabolic risk show that the disparity is not fully explained by differences in lifestyle factors, such as smoking, diet, and exercise, or in measures of access to care and treatment, such as insurance status and the use of prescribed medication. Thus, other factors beyond individual behaviors and access to health care are at play in sustaining these disparities.

You might ask: “What factor or constellation of factors is formidable enough to divide health along racial lines?” I and many others contend that racial injustice interlocked with social and economic disadvantage are at the root of the problem. Decades of adversity and marginalization have relegated racial minorities to the lowest rungs of our social ladder and have restricted their access to resources and opportunities that improve life chances. Moreover, older blacks face the stress and burdens of a race-conscious society, which further challenge their health throughout their life course, leading to the striking racial disparities we see in late life.

The image I have depicted of the aging experience of older blacks in particular, and racial minorities in general, may seem grim, and the task of ending racial injustice to achieve health equity may seem insurmountable. However, as a self-proclaimed optimist, I recognize and acknowledge the progress that has been made and believe that more progress will come through want and necessity. But to maintain this momentum, we need a social commitment to end health disparities and fight for health equity, a commitment that avoids a misguided “colorblind” rhetoric that obscures the history of racial injustice and fails to address the specific needs of minority communities. Rather, we need to embrace color-conscious and diversity-affirming social initiatives that strive for and will eventually lead to racial equity in health, well-being, and successful aging.
The USC Leonard Davis School of Gerontology invites you to hit the links in support of healthy aging! This year, the golf tournament honors Board of Councilors member Patricia Will, co-founder and president of Belmont Village LP.

Monday, November 23, 2015
Virginia Country Club
Long Beach, California

9:30 AM  Golf Tournament Registration
Putting Contest
Driving Range Open

11:00 AM  Barbeque Luncheon
Performance by the USC Song Girls

NOON  Tee Off (Shotgun Scramble)

4:00 PM  Cocktails & Silent Auction

5:00 PM  Dinner & Program

For sponsorship details or to register for the tournament, please call the USC Davis School Development Office at (213) 740-0777.

Save the Date
Friday, February 26 - Sunday, February 28, 2016

USC DAVIS SCHOOL OF GERONTOLOGY
2016 VIBRANT LIVING RETREAT
HELD AT THE RANCHO VALENCIA RESORT
RANCHO SANTA FE, CALIF.
FOR QUESTIONS, CONTACT (213) 740-0777
TROJAN FAMILY WEEKEND 2015
Thursday, October 22 – Sunday, October 25
USC University Park Campus

Join thousands of USC students and their families for a weekend full of fun and informative Trojan programming and activities! The Davis School breakfast reception and yoga session, hosted by Dean Pinchas Cohen, will be held 8:30-10:00 AM on Friday, October 23 at the Andrus Gerontology Center (RSVP required).
Trojan Family Weekend registration: sait.usc.edu/parent/tfw
Davis School reception RSVP: (213) 740-5156

GERONTOLOGICAL SOCIETY OF AMERICA ANNUAL SCIENTIFIC MEETING
Wednesday, November 18 – Sunday, November 22
Walt Disney World Swan & Dolphin – Orlando, Fla.

Join more than 4,000 of the brightest minds in the field of aging for the 68th GSA Annual Scientific Meeting! The Davis School will host a reception on Friday, November 20 from 9:00 PM to midnight in the Osprey 2 Room of the Swan Resort.
Meeting registration: geron.org
Davis School reception information: (213) 740-5156

“SWING FOR HEALTHY AGING” ROD DEDEAUX MEMORIAL GOLF CLASSIC
Monday, November 23
Virginia Country Club - Long Beach, Calif.

Hit the links for a shotgun scramble tournament supporting the Davis School! The day also includes a luncheon and dinner, a performance by the USC Song Girls, silent and live auctions, and more.
To register or learn more about sponsorship opportunities: (213) 740-0777

2016 VIBRANT LIVING RETREAT
Friday, February 26 – Sunday, February 28
Rancho Valencia Resort and Spa - Rancho Santa Fe, Calif.

Renew your commitment to a healthy lifestyle during an invigorating and educational weekend with Davis School experts!
To register: (213) 740-0777