HSC News

USC University of Southern California

JANUARY 24 • 2014 PUBLISHED FOR THE USC HEALTH SCIENCES CAMPUS COMMUNITY VOLUME 1 • NUMBER 2

David Agus discusses health rules from new best-selling book

‘[When] people were asked what they wish they would have done differently in taking care of their health, the two top answers were taking better care of their teeth and taking better care of their feet.’

—David Agus, MD, professor of medicine at the Keck School of Medicine of USC

By Amy E. Hamaker

Don’t wear stilettos. Cultivate “om” in the office. Know your grocer. Smile.

These topics aren’t just good advice for living a happier life, but also a healthier one, according to David Agus, MD, professor of medicine at the Keck School of Medicine of USC. Agus and Keck School Dean Carmen A. Puliafito, MD, MBA discussed Agus’ new book *A Short Guide to a Long Life* as part of the Dean’s Distinguished Lecture Series on Jan. 15 in Mayer Auditorium.

The 208-page book groups 65 rules into two chapters titled “What to Do” and “What to Avoid,” followed by a chapter titled “Doctor’s Orders,” which offers advice on how to care for your health in your 20s, 30s, 40s, 50s and beyond. The book recently sold out of its third printing, and is on the *New York Times* best-seller list.

Agus explained the differences between his first book, *The End of Illness*, and his new book. “The End of Illness was really a science book,” noted Agus. “This is more of a how-to book. I wanted to appeal to people who don’t know what to do to prevent disease.”

According to Agus, chapters were written in an easy-to-access style, grounded in common sense and solid science. “For example, take the ‘don’t wear stilettos’ tip,” Agus explained. “In a recent study where people were asked what they wish they would have done differently in taking care of their health, the two top answers were taking better care of their teeth and taking better care of their feet.”

Agus’ advice for movement, eating habits, lifestyle changes are designed to be preventive, drawing on knowledge gained

See **AGUS**, page 4

Jon Nalick

David Agus, professor of medicine at the Keck School of Medicine of USC, and Keck School Dean Carmen A. Puliafito discuss the rules for living a healthy life during a recent lecture in the Dean’s Distinguished Lecturer series.

Keck School to host 2014 Lasker Lectures

The Albert and Mary Lasker Foundation has selected the Keck School of Medicine of USC to host the 2014 Lasker Lectures featuring recipients of the 2013 Lasker Awards.

The Lasker Awards — among the most respected and coveted science prizes in the world — are given each year by the foundation for outstanding basic and clinical medical research discoveries and for lifetime contributions to medical science. The awards, which carry an honorarium of $250,000 in each category, were presented on Sept. 20, 2013, in New York City.

This is the first time in the 68-year history of the foundation that a major academic medical center has hosted lectures delivered by all of the year’s winners of both the basic and clinical medical research awards.

The first lectures at USC will be given by Richard Scheller, PhD, executive vice president, research administration at Genentech, and Thomas Südhof, MD, professor of molecular and cellular physiology at the Stanford University School of Medicine. Südhof won the 2013 Nobel Prize in Physiology or Medicine and shared the Albert Lasker Basic Medical Research Award for discoveries concerning rapid neurotransmitter release. Their work provides insights into how communication occurs in the brain.

They will speak at 4 p.m. on March 4 in Mayer Auditorium.

The next 2014 Lasker Lectures will be given by Graeme M. Clark, MD, Professor Emeritus at the University of Melbourne, Australia, Ingeborg Hochmair, PhD, co-founder and CEO of the cochlear implant company MED-EL, and Blake S. Wilson, co-director of the Duke Hearing Center at Duke University, who shared the Lasker-DeBakey Clinical Medical Research Award for developing the modern cochlear implant, a device that allows the profoundly deaf to hear. It will be held at 4 p.m. on April 10 in Mayer Auditorium.

New linear accelerator helps cancer patients at USC

By Amy E. Hamaker

In the fight to make cancer a disease of the past, Keck Medicine of USC has a new weapon. The Department of Radiation Oncology at the Keck School of Medicine of USC recently received a new Varian TrueBeam STx linear accelerator.

Used to perform external beam radiation treatments for patients who have cancer, linear accelerators deliver high-energy X-rays to the area of a patient’s tumor, destroying cancer cells while leaving normal cells intact. The new linear accelerator allows Keck Medicine of USC to offer the most cutting-edge intensity-modulated radiotherapy (IMRT), image-guided radiotherapy (IGRT) and stereotactic body radiotherapy (SBRT) techniques available.

The system uses sophisticated imaging and respiration synchronization tools to visualize soft tissue during treatment and make changes accordingly. Its high-definition, multi-leaf collimator narrows the radiation beam with precision and allows physicians to provide larger doses of radiation to smaller places accurately. Treatment times are much faster. SBRT also will allow some patients, who would normally require a standard course of 30 to 40 radiation therapy treatments, to be treated in five or fewer treatments.

Ryan Ball

The new Varian TrueBeam STx linear accelerator uses sophisticated imaging and respiration synchronization tools to visualize soft tissue during treatment and make changes accordingly.

This is the second linear accelerator for the department, which also has a CT simulator, a Varian Trilogy linear accelerator, a CyberKnife, and a Gamma Knife.

Since the recruitment of multiple faculty members, including Eric L. Chang, MD, as chair, Almon Shiu, PhD, vice chair/chief of medical physics, Richard Jennelle, MD, residency program director, radiation oncology at USC has had numerous advancements in clinical, teaching and research arenas.

“Our radiation oncologists are committed to providing patients with state-of-the-art treatments in a compassionate setting,” said John Ferrelli, chief administrative officer of USC Norris Cancer Hospital. “The new linear accelerator will help them in their work to help form the most effective and comprehensive treatment plans for our patients.”

Having the newest linear accelerator available for patients represents the commitment of Keck Medical Center of USC and

See **TRUEBEAM**, page 2

KSOM Department of Surgery awarded $2 million NIH grant

‘Many of the trials are designed to look at things that we, as surgeons, have done for years but have no corresponding data.’

—Michael Bowdish, assistant professor of surgery

By Ryan Ball

The Keck School of Medicine of USC’s Department of Surgery was recently awarded a $2 million grant from the National Institutes of Health (NIH) to join the Cardiothoracic Surgery Trials Network. The consortium of sites throughout the United States and Canada has been charged with the mission to develop, coordinate and conduct collaborative, proof-of-concept studies and interventional protocols to improve cardiovascular disease outcomes.

The grant money will provide infrastructure support over a five-year period as USC operates as one of the core sites in the network. Michael Bowdish, MD, assistant professor of surgery and director of the Keck School’s mechanical circulatory support program, serves as the principal investigator for the USC site. Bowdish will work with the other nine centers’ steering committees to decide which trials will be performed. The centers will then conduct the same four or five trials, working collaboratively from design to analysis of results and the publishing of papers.

“Many of the trials are designed to look at things that we, as surgeons, have done for years but have no corresponding data,” he explained. “Another goal is to do experimental, groundbreaking, small trials that are truly revolutionary — for example, stem-cell and small-molecule therapy.”

Bowdish said one of the major goals has been to increase the amount of federal dollars coming into the department.

He also noted that one of the strengths of the initiative is its multidisciplinary nature. His co-investigators at the Keck School are cardiologist Dave Shavelle, MD, associate professor of clinical medicine and director of the Interventional Cardiology Fellowship and director of the LAC+USC Cardiac Catheterization Laboratory; and Christi Heck, MD, MMM, chief of neurology and director of the USC Comprehensive Epilepsy Program. Neurology is involved because all of the trials are being designed with an interest in how heart surgery affects the brain.

Other network participants include the Cleveland Clinic Foundation, Duke University, Baylor Research Institute, the University of Virginia and the Montreal Heart Institute. NIH’s National Heart, Lung and Blood Institute and National Institute of Neurological Disorders and Stroke, as well as the Canadian Institutes of Health Research sponsor the endeavor.

“This grant helps put USC’s Cardiovascular Thoracic Institute on the same playing field as some of the best cardiovascular programs in the United States and Canada,” Bowdish remarked.

This is the second funding received by the Cardiothoracic Surgery Trials Network.

The group’s most recent trial, a study showing roughly equivalent outcomes for patients who had leaky heart valves replaced versus those who had them repaired, was recently presented at the American Heart Association Scientific Sessions, with simultaneous publication in the *New England Journal of Medicine*.

More information on the Cardiothoracic Surgical Trials Network can be found at www.ctsurgerynet.org.

Ostrow School launches division of oral and maxillofacial surgery

The Ostrow School of Dentistry of USC has launched the new division of oral and maxillofacial surgery, which will provide students, residents and faculty of the Ostrow School access to unique educational, clinical and research opportunities in the field.

Announced by Ostrow School Dean Avishai Sadan, DMD, in November 2013, the division will encompass educational activities related to the Ostrow Advanced Program in Oral and Maxillofacial Surgery, located at the Los Angeles County+USC Medical Center, and the Oral Surgery Clinic, located in the Norris Dental Science Center.

This new division will be chaired by Mark Urata, DDS, MD, who joins the Ostrow School of Dentistry as associate professor of clinical dentistry via a joint appointment with the Keck School of Medicine of USC. He is board certified in both oral and maxillofacial surgery and plastic surgery and is currently associate professor of plastic surgery, the Audrey Skirball-Kenis Chair and chief of the division of plastic and reconstructive surgery of the Keck School.

He is also head of the division of plastic and maxillofacial surgery at Children’s Hospital Los Angeles and director of craniomaxillofacial surgery at Cedars Sinai Medical Center.

“This unprecedented alliance between the division of plastic and reconstructive surgery at the Keck School of Medicine and the new division of oral and maxillofacial surgery at the Ostrow School will create a unified initiative of two distinct residencies,” Sadan said.

He added, “The collaboration of research, education, clinical practice and global initiatives will create the most visionary academic enterprise in North America for both disciplines.”

Sadan added that both students and faculty would benefit from a range of opportunities not normally available in traditional oral and maxillofacial surgery programs.

“Dr. Urata will oversee the expansion of both the scope and volume of clinical activities at the Oral Surgery Clinic in the Norris Dental Science Center as well as the range of oral and maxillofacial surgical services offered at our faculty practice in the Engemann Student Health Center,” he said.

USC names Jonathan Samet Distinguished Professor

Jonathan Samet

USC President C. L. Max Nikias has named Jonathan Samet, MD, MS, the Flora L. Thornton Distinguished Chair of Preventive Medicine and chair and professor of preventive medicine at the Keck School of Medicine of USC, and director of the USC Institute for Global Health, as Distinguished Professor.

Samet is a member of the Institute of Medicine and fellow of the American Association for the Advancement of Science. His honors include the Edward Livingston Trudeau Medal of the American Thoracic Society and American Lung Association, the Prince Mahidol Award in Public Health and two U.S. Surgeon General’s Medallions.

An internationally recognized expert on the effects of inhaled pollutants and environmental toxins, Samet leads research that shapes local, regional and national policies on environmental risks. His landmark contributions in the area of active and passive smoking led to the development and advancement of smoke-free policies around the world.

“I am deeply honored to have been named Distinguished Professor,” Samet said. “I have enjoyed my five years at USC and having such superb colleagues and students. I look ahead to more challenges in my field and working with colleagues here to find innovative ways to address them.”

TRUEBEAM: New tool in cancer fight

Continued from Page 1

Norris Cancer Hospital to provide the latest technology available for its physicians to treat their patients.

“USC Norris has long been a destination for patients seeking the most compassionate and innovative cancer care,” said Scott Evans, PharmD, MHA, CEO of USC Norris Cancer Hospital and Keck Hospital of USC. “We are always looking for novel technologies and new opportunities to provide care that is beyond exceptional. With this new technology, we are doing just that — equipping our physicians with a tool that will have tremendous, lasting benefits for our patients.”

HSC News **Next Issue: Feb. 7**

HSC News is published for the faculty, staff, students, volunteers and visitors in the University of Southern California’s Health Sciences campus community. It is written and produced by the Health Sciences Public Relations and Marketing staff. Comments, suggestions and story ideas are welcome. Permission to reprint articles with attribution is freely given.

Associate Vice President, Health Sciences Public Relations and Marketing: Deborah S. Fullerton

Executive Director, Creative Services at Keck Medicine of USC: Tom DeSanto

Editor: Jon Nalick

Contributors: Ryan Ball, Eva Blaauw, Tania Chatila, Amy E. Hamaker, Carol Matthieu, Leslie Ridgeway and Alison Trinidad

Vice President, Public Relations and Marketing: Brenda Maceo

Phone: (323) 442-2830 Fax: (323) 442-2832
Email: hscwkly@usc.edu

CIRM awards USC scientists $19 million to seek macular degeneration cure

By Leslie Ridgeway

New research to slow vision loss for macular degeneration patients has been funded at Keck Medicine of USC as part of the third round of the California Institute of Regenerative Medicine's (CIRM) Disease Team awards.

The nearly $19 million study is led by principal investigators Mark Humayun, MD, PhD, professor of ophthalmology and biomedical engineering and professor of cell and neurobiology at the Keck School of Medicine of USC, and David Hinton, MD, professor of pathology, neurological surgery and ophthalmology at the Keck School. The study is one of six projects approved by the program. Funding from CIRM for all six projects totals $61 million.

Humayun said, "We believe this research will help us restore native photoreceptors so we can slow vision loss and even restore eyesight in people who suffer from advanced dry age-related macular degeneration. CIRM has previously funded the early stages of this research, and with the much-needed funding they provide through this Disease Team grant, we will take our research to the clinical trial stage."

The team proposes to use embryonic stem cells to produce the support cells, or retina pigment epithelium (RPE) cells, needed to replace cells lost in age-related macular degeneration (AMD). Research has shown that the loss of RPE cells, located in a thin sheet at the back of the eye, leads to AMD. To restore the RPE cells, the USC team proposes growing thin sheets of stem cell-derived cells to be surgically implanted into the eye, replacing diseased sheets and restoring the photoreceptors, the light sensitive cells of the retina.

"This research could be a game-changer in AMD," said Keck School Dean Carmen A. Puliafito, MD, MBA, an ophthalmologist specializing in retinal diseases. "Estimates indicate that by 2020, more than 450,000 people in California alone will suffer vision loss or blindness because of this disease, and the innovative approach by Drs. Humayun and Hinton shows distinct promise."

With the CIRM funding, the team will proceed to test the surgically implanted cell sheets in a Phase I clinical trial.

The USC team of researchers also includes scientists from University of California at Santa Barbara and City of Hope.

"The goal of the Disease Team award is to help accelerate the development of new therapies," said Alan Trounson, PhD, president of CIRM. "I think this is the sharp end of the CIRM program – we need to get therapies into clinical trials. The scientists are working together as teams to demonstrate the safety and efficacy of their products that have evolved from discoveries in the laboratory."

The funding was approved by the stem cell agency's governing Board, the Independent Citizen's Oversight Committee, at a two-day meeting in Los Angeles.

Occupational therapy students help ramp up peer's home modification project

By Jen Waters

To many, do-it-yourself renovation projects can be a costly headache waiting to happen. But for occupational therapy student Donna Ozawa, it's a real passion.

Ozawa has two decades of experience in disciplines including sculpture, design and wheelchair engineering. She received an executive certificate in home modification from the USC Davis School of Gerontology in 2012, and has worked with several professional and volunteer organizations to adapt home spaces to better fit residents' needs.

Now a student in USC's occupational therapy master's class of 2015, Ozawa is pursuing a career that will allow her to seamlessly combine her experiences and interests to help people lead healthier, happier lives in their residences.

The purpose of home modification projects — such as placing non-slip backing under floor rugs, installing grab bars for easy shower entry and exit, or retrofitting entire houses to be wheelchair accessible — is to make tasks easier, reduce in-home accidents and support independent living.

Occupational therapy is a health-care profession that, among other things, modifies the interaction between the physical environment and an individual's everyday activities.

"I wanted to make a connection between building and health care," Ozawa said, about why she chose to attend USC, home to *U.S. News & World Report*'s No. 1 occupational therapy graduate educational program.

Once on campus, Ozawa met fellow occupational therapy student Eun Kyung Bae, a Korean native who earned her undergraduate degree in woodworking and furniture design.

When an early semester assignment tasked students to analyze the impact of built environments on disability accessibility, it seemed only fitting that Ozawa and Bae, who also has a spinal cord injury and uses a power wheelchair, team together.

Courtesy Division of Occupational Science and Occupational Therapy

Occupational therapy student Donna Ozawa runs a circular saw to construct a wheelchair ramp for a classmate.

"Donna has a lot of tools at her house, but there are two steps to enter her house," Bae said. "I sit on a wheelchair, so we decided to make a [wheelchair] ramp."

Ozawa and Bae reviewed standards for accessible design, drafted blueprints for a plywood wheelchair ramp, and then, with the help of a team of USC Occupational Therapy students, built it.

"We made it a potluck, and it was a very social event," said Becca Heymann, who joined the build team. "Everyone was able to contribute to something, and Donna gave us all a tutorial on how to use the tools."

Soon, students who had never used power tools were sawing wood, snapping chalk lines and drilling screws. Bae's expertise in furniture construction was also an asset for the novice classmates.

"Donna really wanted everyone to get involved, so she taught me how to use a power drill and then had me drill in screws for one side of the ramp," said student Stephanie Dote. "She was a fantastic teacher and gave great pointers; once I finished my side, I was actually proud of myself and it made me more interested in carpentry and using tools."

After construction, Bae tested the ramp, and other students simulated the experience using a manually pushed wheelchair loaned from the Division of Occupational Science and Occupational Therapy of the Ostrow School of Dentistry of USC. After a few adjustments the team had their finished ramp. But more importantly, Bae was able to enter her colleague's home.

"It was a great bonding day for everyone who came," said Dote. "Everyone learned something new."

But the project wouldn't be finished without one final Trojan touch: They decorated the wheelchair ramp in USC's signature cardinal and gold.

Emergency Medicine launches Twin Towers inmate services care project

By Kimberly Pluth

The Keck School of Medicine of USC's Department of Emergency Medicine has partnered with the Los Angeles Sheriff's Department and California Department of Healthcare Services to provide care to inmates within the Twin Towers Correctional Facility.

The Inmate Services Care Project includes an onsite urgent care center that is staffed by an emergency physician and physician assistant every day from 6 a.m. to 11 p.m. The staff, made up of Keck School faculty members and USC Verdugo Hills Hospital physicians, is available to treat medical problems in-house without the use of an ambulance, police car or many other county resources.

"If you are incarcerated and you have any medical problems, the likelihood that something bad is going to happen is much greater," said Erick Eiting, MD, MPH, assistant professor of emergency medicine at the Keck School and director of inmate services. "You are taking a patient population that is difficult to manage to begin with and throwing them into a system that relies on the medical center communicating with the Sheriff's Department."

When the jail emergency room at LAC+USC reaches full capacity, it must be closed to new cases and requires sheriff's department resources. Since the urgent care center opened in July, the jail emergency room has reduced its over-capacity hours from more than 400 per month to less than 160.

The Inmate Services Care Project also seeks to reduce inmates' emergency visits after release. The average stay at Twin Towers is 45 days, just long enough for health-care benefits, such as Medi-Cal, to lapse. Many former inmates find themselves without coverage and seek emergency care at LAC+USC. By providing proper health care to inmates while in custody, the program aims to improve health and reduce reliance on high-cost emergency services. Specialty clinics and more medical staff at the Twin Towers will be added in the months to come.

The Twin Towers Correctional Facility, part of the Los Angeles County Jail System, houses as many as 19,000 inmates daily.

Calendar of Events

Saturday, Jan. 25

7 a.m. – 5:30 p.m. Department of Radiation Oncology, Keck School of Medicine of USC Office of Continuing Medical Education. "Radiation Oncology Breast Cancer Symposium," various speakers. Aresty Auditorium. Info: (323) 442-2555

10:30 a.m. – 4:30 p.m. Women's Health Symposium. Workshops and panel discussions for future health-care providers. Keynote speaker: Ellen Beck, UC San Diego. Mayer Auditorium. RSVP at www.usc.edu/esvp (code: 0125). Info: obgyn.sig.ksom@gmail.com

Monday, Jan. 27

Noon. KSOM Research Seminar Series. "Multidisciplinary and Globally Translational Approaches to Melanoma Prevention," Myles Cockburn, USC. Aresty Auditorium.

3 p.m. – 5 p.m. Southern California Clinical and Translational Science Institute. "Academic Advancement and Promotion," Judy Garner, USC. Aresty Auditorium. RSVP: ecde@sc-ctsi.org

Tuesday, Jan. 28

Noon – 1 p.m. Faculty Development Seminar. "Promoting & Assessing Professionalism," Julie Nyquist, Stephanie Zia, USC. Norris Medical Library West Conference Room. Info: (323) 442-2746, meded@med.usc.edu

Noon. Psychiatry Grand Rounds. "Acceptance and Change in Couple Therapy," Andrew Christensen, UCLA. ZNI Room 112. Info: (323) 442-4065

Noon. Regenerative Medicine and Stem Cell Research Seminar. "Good Neighbors: Niche-derived Signals in Directed Differentiation of Pancreatic Beta Cells," Julie Sneddon, Harvard. Broad CIRM Center Seminar Room. Info: (323) 442-8084

Wednesday, Jan. 29

11:30 a.m. – 2 p.m. USC Health Systems Improvement Collaborative, USC Stevens Center for Innovation, USC/CHLA Medical Innovation Program. "Can We Master Patient Safety? Tools, Trends and Technologies," various speakers, lunch will be provided. Broad CIRM Center Seminar Room. RSVP: https://uscpatientsafety012914.eventbrite.com

Noon – 1 p.m. Faculty Development Seminar. "Teaching in the Clinical Setting," Win May, Tatum Korin, USC. Norris Medical Library West Conference Room. Info: (323) 442-2746, meded@med.usc.edu

Noon – 1 p.m. Inaugural Floyd H. Gilles Lecture in Neuroscience Research. "Development and Adult Connectomics of the Cerebral Cortex," Larry Swanson, USC. CHLA, Saban Research Building Auditorium, 4661 Sunset Blvd., Los Angeles, CA 90027. Info: CHLA.org/gilleslecture, hgill@chla.usc.edu.

Thursday, Jan. 30

Noon – 1 p.m. Faculty Development Seminar. "Lectures Medical Students Will Want to Attend," Mikel Snow, Dixie Fisher, USC. Norris Medical Library West Conference Room. Info: (323) 442-2746, meded@med.usc.edu

Noon – 1 p.m. Cellular Homeostasis Lecture Series. "Metabolic Control of Self-Renewal in Liver Tumor-Initiating Stem Cells," Douglas Feldman, USC. MCH Room 156. Info: (323) 442-3121, asmadera@usc.edu

4 – 5 p.m. Diabetes & Obesity Research Institute Seminar Series. "Diet Affects Brain Development and Behavior: A Potential Role for DNA Methylation," Teresa Reyes, University of Pennsylvania School of Medicine. Harkness Auditorium. Info: (323) 442-2500

Notice: Deadline for calendar submission is 4 p.m. Monday to be considered for that week's issue—although three weeks' advance notice of events is recommended. Please note that timely submission does not guarantee an item will be printed. Send calendar items to *HSC News*, KAM 400 or fax to (323) 442-2832, or email to nalick@usc.edu. Entries must include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, location and a phone number for information.

Valter Longo seeks clues to a long and healthy life

By Cristy Lytal

Valter Longo, PhD, is out to prove that gerontology is a young man's game. The 46-year-old USC professor of gerontology and biological sciences has dedicated his career to slowing the implacable process of aging.

Growing up in Genoa, Italy, Longo spent countless hours emulating the guitar stylings of rock legends Jimi Hendrix and Mark Knopfler from Dire Straits. At age 16, he moved to Chicago to take jazz guitar lessons before heading to the University of North Texas to continue his studies.

During his second year of college as a music major, Longo was tapped to direct the marching band. As his music sensibilities were deeply rooted in rock, he refused, and the music department told him to find a different major. "Without hesitation, I said, 'I want to learn about aging,'" he said.

Dietmar Quistorf

Valter Longo

After receiving his PhD in biochemistry at UCLA, Longo decided to take a molecular approach to aging, so he joined the UCLA labs of chemist Joan S. Valentine, PhD, and geneticist Edith B. Gralla, PhD.

Looking at yeast, a simple unicellular organism, he discovered a group of genes, also present in humans, that promote the aging process in response to glucose. By knocking out these genes, he could mimic a calorie- and glucose-restricted diet and extend the yeast's lifespan.

First as a postdoctoral fellow, and then as a faculty member and director of the Longevity Institute at USC, Longo has continued his research into the genes that control aging.

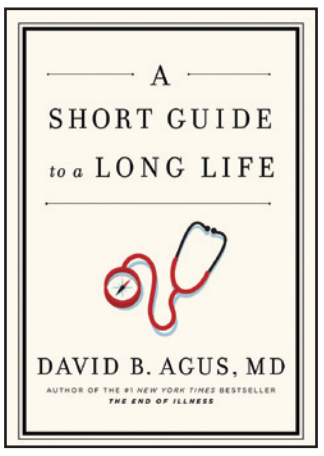
In 2001, he discovered another group of yeast genes that control both aging and overall growth in response to amino acids. He later found a human population in Ecuador that had a mutation in the equivalent genes. As a result, they lacked a growth-hormone receptor, and this made them both small in stature and long-lived, with very little diabetes or cancer susceptibility.

By inhibiting these same groups of genes either by mutations or starvation, Longo found evidence that healthy cells might receive protection not only from the aging stress, but also from chemotherapy effects, and that cancer cells might become more sensitive to chemotherapy. Clinical trials are currently underway at the USC Norris Comprehensive Cancer Center, Mayo Clinic and elsewhere to explore whether fasting can improve outcomes in patients receiving chemotherapy for lymphoma as well as breast, prostate and colorectal cancers.

"When you take away a lot of nutrients, the cancer struggles," said Longo. "And then if you take away the nutrients and you give chemo, it struggles even more."

Longo is currently collaborating with Gregor Adams, PhD, assistant professor at the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC, to publish a study on diets that can reduce immunosuppression in the elderly or chemotherapy patients. He's also conducting a clinical trial exploring whether a five-day fast can stimulate stem cell-based regeneration of multiple organ systems.

AGUS: Book aims to spur good habits



Continued from Page 1

from well-controlled clinical trials with results gained over time. "There's a lot of wrong information out there about health, and not enough good leadership," he said, citing the importance of doing your own health assessment. "In today's world, you get just a few minutes with the doctor; you need to know your own body so that, you know what to talk about," he said. "Keep a log, and you'll start to see correlations. With enough data, error goes away."

"Dr. Agus is a clinician-scientist, and there is no question of his commitment to health and fighting cancer," added Puliafito. "As an oncologist, scientist and teacher, he has demonstrated a willingness to look beyond conventional wisdom to help his patients and others find health answers that work for them. It's an honor to have him among our distinguished faculty."

USC Health Sciences
Public Relations and Marketing
1975 Zonal Ave. KAM 400
Los Angeles, CA 90033

Non-Profit Organization
U.S. POSTAGE PAID
University of Southern California

In case of an emergency...

Call the Emergency Information Phone: (213) 740-9233 The emergency telephone system can handle 1,400 simultaneous calls. It also has a backup system on the East Coast.

Visit the USC Web: http://emergency.usc.edu This page will be activated in case of an emergency. Backup Web servers on the East Coast will function if the USC servers are incapacitated.