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Steve Cohn

From left at the May 2 groundbreaking ceremony are: USC President C. L. Max Nikias; USC Trustee Harlyne Norris; Lisa Hansen, chair of the board of trustees for the Kenneth T. and Eileen L. Norris Foundation; and Senior Vice President and CEO for USC Health Tom Jackiewicz.

USC breaks ground on Norris Healthcare Consultation Center

By Amy E. Hamaker

It has been five years since Barbara Kral was first diagnosed with advanced myeloid leukemia. Although she is in remission, she continues to receive treatment every four weeks at the USC Norris Comprehensive Cancer Center.

Thanks to a lead gift by the Kenneth T. and Eileen L. Norris Foundation for construction of the Norris Healthcare Consultation Center, patients like Kral will soon have even more options for personalized, compassionate care.

"I've learned on my journey that when a person is facing cancer, the experience and capability of the facility and its staff are of prime importance, and next is the manner in which the patient is treated on a personal basis," said Kral to an audience of donors, administrators and physicians at a groundbreaking ceremony held on May 2. "The loving care I receive at Norris is an extremely important part of my overall treatment."

During the ceremony, Senior Vice President and CEO for USC Health Tom Jackiewicz described the facility, which will include multidisciplinary clinics designed to facilitate interaction among teams, infusion therapy, an ambulatory surgery center and a women's cancer program. The center will also feature patient- and family-centered amenities such as a retail pharmacy and comfortable patient and family waiting areas.

"This new facility will be a model for ambulatory care in the future," Jackiewicz said. "Today we celebrate one more opportunity to truly excel in our mission of quality health care that is personalized, compassionate and innovative."

USC President C. L. Max Nikias thanked the members of the Norris family and the Norris Foundation for their generous support, congratulating them on the foundation's 50th anniversary as he presented renderings of the Norris Healthcare Consultation Center to Harlyne J. Norris, a trustee of USC and the Norris Foundation, and Lisa Hansen, chair of the board of trustees for the Norris Foundation.

"Thanks to the cutting-edge technologies and pioneering therapies that will be available at the Norris Healthcare Consultation Center, we will do an even better job of turning cancer patients into cancer survivors," Nikias said. "We will have a world-class facility to help us provide world-class care to all of our patients, allowing us to reach Kenneth Norris' goal of 'making cancer a disease of the past.'"

During her remarks, Harlyne Norris gave a recap of the foundation's history with USC. "I've enjoyed watching USC Norris grow, and my late

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Cluster hire garners more than 100 faculty, researchers and staff

Laboratory of Neuro Imaging Moves to USC

By Suzanne Wu

USC is about to get even brainier. Already a leading center for research on the neurological basis of emotion, the university announced today a major cluster hire of an institute with 110 faculty, researchers and multidisciplinary staff in the field of brain mapping and neuroimaging—the critical work that allows us to actually see the physical structure and circuitry that generates our mind, behavior and consciousness. Headlining the move are Arthur W. Toga, professor of neurology and co-director of the Division of Brain Mapping in the Neuropsychiatric Institute at UCLA, and Paul Thompson, professor of neurology and psychiatry at UCLA. Toga is director of the Laboratory of Neuro Imaging (LONI), which will come to USC in the fall, bringing with it a full faculty contingent and international research collaborations.

Arthur W. Toga

Paul Thompson

"USC prides itself on recruiting transformative faculty who excel in their own fields of interest and whose affinity for collaboration helps erase the boundaries between disciplines," said USC President C. L. Max Nikias. "This cluster hire will help us move one step closer to understanding the structure and function of the human brain. Professors Toga and Thompson—and their talented team—will enhance the quality of this research at USC and improve the lives of people around the world."

At USC, Toga and Thompson will hold joint appointments at the Keck School of Medicine of USC and the USC Viterbi School of Engineering. They will be joined in their move to USC by a team of faculty, researchers, programmers, data analysts and doctoral students working to detail how diseases—such as Alzheimer's, schizophrenia and depression—are physiologically and chemically reflected in structural changes to the brain.

"The definition of 'catalyst' is an 'agent that

See **NEURO**, page 3

USC honors Humayun for retinal prosthesis

By Josh Grossberg

University officials recently honored Mark Humayun, a professor with joint appointments at the Keck School of Medicine of USC and the USC Viterbi School of Engineering, for his groundbreaking work in a retinal prosthesis that was recently approved by the U.S. Food and Drug Administration.

Joining the April 22 celebration for Humayun were Keck School Dean Carmen A. Puliafito, Viterbi School Dean Yannis C. Yortsos and USC Provost and Senior Vice President for Academic Affairs Elizabeth Garrett.

Humayun, the Cornelius J. Pings Chair in Biomedical Sciences and professor of ophthalmology, biomedical engineering, cell and neurobiology, was the principal member of a team that developed the Argus II—an implant that can restore sight to some people blinded by retinitis pigmentosa.

Steve Cohn

At the April 22 event honoring Mark Humayun are, from left: Viterbi School Dean Yannis C. Yortsos, USC Provost and Senior Vice President for Academic Affairs Elizabeth Garrett, Humayun and Keck School Dean Carmen A. Puliafito.

Puliafito called Humayun's 25-year effort "audacious" and said few thought such a device would be possible.

"Until this moment, there has never been a way of restoring sight to such profoundly impacted individuals," Puliafito said. "In the long term, we have good reason to believe the Argus will eventually help individuals with age-related macular degeneration, the leading cause of blindness in the industrialized world."

Garrett thanked Humayun for his "brilliant career."

"Your scholarship is transforming lives, and your research has inspired new approaches in the fields of ophthalmology and biomedical engineer-

See **HUMAYUN**, page 2

USC researchers reveal cellular process that thwarts viruses

By Robin Heffler

The human body has the ability to ward off viruses by activating a naturally occurring protein at the cellular level, setting off a chain reaction that disrupts the levels of cholesterol required in cell membranes to enable viruses to enter cells.

The findings, discovered by researchers in molecular microbiology and immunology at the Keck School of Medicine of USC, hold promise for the development of therapies to fight a variety of viral infections.

"Previous studies have shown that our bodies are already equipped to block viruses such as Ebola, influenza, West Nile and SARS," said Jae U. Jung, principal investigator and distinguished professor and chair of the Molecular Microbiology and Immunology Department.

The study, "The antiviral effector IFITM3 disrupts intracellular cholesterol homeostasis to block viral entry," was published in the journal *Cell Host & Microbe* on April 17.

"We showed how this occurs," Jung said. "When a virus tries to enter, the immune system gets stimulated by interferon, which produces almost 300 host proteins, including IFITM3. This protein then disrupts the interaction between two other proteins, which, in turn, significantly increases the level of cholesterol in cells, and thereby blocks the virus."

Jung added that the increase in cholesterol is only within the endosome compartment of cells and has no impact on or effect from the level of cholesterol in the bloodstream.

Scientists long have known that interferon, a protein released by the body's cells and named after its ability to "interfere" with viral replication, can inhibit the spread of viruses, but didn't understand how. The Keck School investigators found that interferon-inducible transmembrane protein 3 (IFITM3) can disrupt the interaction between Vesicle-membrane-associated protein (VAPA) and oxysterol-binding protein (OSBP) that regulates the transport and stability of cholesterol, which are required for many viruses to take hold.

One of the main goals of his lab, Jung said, is to understand how the immune system recognizes viruses and blocks entry. In previous research, he and his colleagues have shown that a specific immune protein recognizes genetic information of the virus and then sets off an alarm signal in the host immune system.

Jung explained that in the most recent investigation, the rise in cholesterol was found to occur in the endosome compartment within the cell membrane. "The membrane is usually very flexible," he said. "With an increase in cholesterol it becomes rigid, and doesn't allow viruses to pass through the endosome compartment into cytosol, the fluid portion inside cells. We were surprised to find that changing the balance of cholesterol concentration affects viral entry."

The next step, he said, "will be to identify a therapeutic molecule that activates the expression and function of the IFITM3 protein, which potentially can be used to create an antiviral therapy. It could target the endosome compartment in order to control, combat, or prevent the spread of viral infection."

Joining Jung in the study were Samad Amini-Bavil-Olyaee, Keck School postdoctoral research associate and first author of the paper, as well as Youn Jung Choi, Keck School graduate student and second author, and researchers from the University of California, Riverside, and Scripps Research Institute. The research was funded by the National Institutes of Health (grants CA082057, CA31363, CA115284, DE019085, AI073099, AI083025, HL110609) and the Fletcher Jones Foundation.

HUMAYUN: Groundbreaking development of Argus II retinal implant honored by USC

Continued from Page 1

ing, among many others," she said.

The Argus II has been implanted in 30 patients in a clinical trial that began in 2007. Humayun performed many of the surgeries. The system uses a camera mounted on special glasses that send signals to a receiver implanted inside the eye. After traveling through the optic nerve, the signals reach the brain, where they are interpreted visually.

"It's an incredible contribution you've made, one that will enable lives to be lived in such a better way," Puliafito said.

As the Argus II retinal implant is refined, it will be part of the USC Institute of Biomedical Therapeutics. The new interdisciplinary institute will bring together scientists, engineers and clinicians to develop bioelectronic solutions for people impacted by conditions including traumatic brain injury, stroke and debilitating eye diseases.

Jon Nalick

NORRIS AMBASSADORS LEARN ABOUT STEM CELLS— *From left, Stephen Gruber, director of the USC Norris Comprehensive Cancer Center; Andrew McMahon, director of the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC; and Art Ulene, a board-certified obstetrician-gynecologist, author and speaker, addressed attendees at the Norris Ambassadors luncheon on April 18. Norris Ambassadors are a group of supporters of the USC Norris Comprehensive Cancer Center who help promote and share the cancer center's mission with family and friends. McMahon's presentation was titled "Cancer in Regenerative Medicine: The Stem Cell Connection."*

ETC reopens after remodel, expansion

By Josh Grossberg

When the Evaluation and Treatment Clinic (ETC) opened at Keck Hospital of USC in 2009, it proved to be so successful that the need for expansion soon became apparent.

Nearly four years later, the newly remodeled—and much larger—clinic opened for patient care on April 23.

While the clinic formerly had to 'make do' with two small examination rooms, it now boasts five, including a larger room that can better accommodate bariatric patients. The clinic has nearly doubled in size from 562 to 1,028 square feet.

ETC Director Yolee Casagrande said the expanded clinic will better serve hospital patients who have an unexpected need to see a health care professional.

"It's private, beautiful and clean," she said. "It's just what we need."

In addition to the examination rooms, the ETC includes a waiting area, a nursing area and an adjacent admitting space.

The 24-hour clinic on the first floor of the Norris Inpatient Tower is for patients who are already in the care of USC doctors. It discourages walk-ins.

Patients are referred by their USC physician to the ETC. Once there, a critical care nurse evaluates the patient and follows through with the physician's orders. The patient's doctor will see the patient in the ETC. The patient will then be treated, admitted or released. Staff will have access to the patient's medical records. Before the ETC opened, patients were usually advised to visit an emergency room.

The ETC currently sees about 180 patients a month. When ETC first opened, they only saw a few patients per day. With the new exam rooms, patient volume is projected to grow 15-20 percent in the short term, according to hospital administrators.

The ETC is also home to the Rapid Response Team, which provides immediate medical assistance to outpatients and any other visitors who need medical assistance while at the hospital.

The Weekly

Next Issue: May 17

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NEURO: Scientists will form the core of a new neuroinformatics institute at HSC

‘There’s a buzz and excitement at USC that is attractive to anybody that likes to build programs, which we do.’

—Arthur W. Toga, professor of neurology and co-director of the Division of Brain Mapping in the Neuropsychiatric Institute at UCLA

Continued from Page 1

speeds significant change,’” said Keck School Dean Carmen A. Puliafito. “These two pre-eminent scientists fit that description perfectly. Their important advances in neuroimaging will enhance the work we are doing here at the Keck School of Medicine. With Professors Toga and Thompson on our faculty, the Keck School is poised to become a leader in the fields of brain mapping and neuroimaging, untangling the secrets of diseases and conditions including traumatic brain injury, autism and stroke. We are very excited to welcome them here.”

Together, these scientists will form the core of a new neuroinformatics institute housed on the USC Health Sciences campus. The researchers will build on decades of accumulated expertise and collaboration in the development of novel approaches for analysis of visual, genetic and clinical data.

“Arthur Toga is a world leader in brain imaging, an area of great importance to neuroscience and neural engineering. We are thrilled that he is joining USC and the Viterbi School, where significant strength already exists in imaging and neural engineering. With ‘reverse engineering the brain’ being one of the National Academy of Engineering Grand Challenges, Arthur and his team’s addition contributes to our vision for addressing the important issues of our times,” said USC Viterbi School Dean Yannis C. Yortsos.

Several LONI efforts are part of an emerging field known as “connectomics,” which has been compared in scope to the quest to map the human genome. As a prominent part of the Human Connectome Project, the LONI team is working to invent and refine techniques that will allow for atom-level four-dimensional maps of the more than 100 billion neurons and 1,000 trillion connections in the living human brain.

This, in turn, generates new leads for understanding the basis of neurodegenerative diseases—and creates opportunities to collaborate with specialists in those disease areas to create disease-specific atlases and to develop imaging approaches to track the effects of medication and antipsychotic drugs in the brain.

“There’s a buzz and excitement at USC that is attractive to anybody that likes to build programs, which we do,” said Toga, who has served as associate dean at the David Geffen School of Medicine and associate vice provost of informatics at UCLA, where he has taught since 1987. “And it’s also an opportunity to refresh ourselves, to begin to look at new ways of developing exciting collaborations, programs and projects.”

He continued: “The people that we’ve met so far [at USC] are just plain impressive. You come away from having these deep conversations and you go home and you think, ‘I want to work there.’ To me, that’s an important part of making a life-changing decision like this: You have to have a feeling that working with these colleagues is going to enhance what you do, and that you have an opportunity to contribute to the university at large.”

Moving LONI to USC will be a logistical feat involving a supercomputer, wet labs, a production studio and more than four petabytes of data. The new USC Institute for Neuroimaging and Informatics will continue to serve as a hub for massive multisite data projects such as the ENIGMA Project, led by Thompson, a research collaboration among 125 institutions worldwide and the largest brain-imaging study ever conducted.

“We’ve worked with many USC faculty for years, so it does feel like we’re just meeting old friends and making new ones at the same time,” said Thompson, who cites the Zilkha Neurogenetic Institute at the Keck School and the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC, among many others, as areas for collaboration across the university. “There’s a whole new landscape of discovery in this field. Early brain imaging studies sought to find out what parts of the brain were damaged with certain diseases. What is now coming to the forefront of neuroscience and neuroimaging is examining how different parts of the brain speak to each other, what are the principles of communication and how do these systems change with disease. If you look at work on autism, or even to some extent Alzheimer’s disease, we’re beginning to see a picture where diseases disturb the patterns of connections in the brain. These new technologies are opening a window on these disorders.”

Between them, Toga and Thompson have published well over 1,000 articles, including revolutionary computational and mathematical strategies for mapping how diseases spread in the living brain. “We are both cases-in-point of the value of working at the interface between disciplines,” Toga said. “Aggregating data not only across modalities, across subjects and across institutions—but even across diseases—may afford us the opportunity to discover patterns that haven’t been discovered before. We’re integrationists, very much trying to bring together a whole that is greater than the sum of its parts.”

NORRIS: Building to include multidisciplinary clinics that aid interaction among teams

Continued from Page 1

husband was very proud of his involvement,” she said. “The research held his interest, and he would be amazed how far we have come to answering his goal.”

The Norris Foundation’s relationship with the USC Norris Comprehensive Cancer Center goes back to a lead gift that made possible groundbreaking for the cancer center in 1979.

Hansen cited the most recent gift of $15 million as evidence of the continued commitment of Norris Foundation trustees to the work being done at USC Norris. “It is our privilege to be a part of this latest project,” she said. “As funders, we know this is a sound investment; as people who have been touched by cancer, we know the funds are in good hands.”

The gift will be augmented by additional philanthropic support of $40 million that will be raised as part of the $1.5 billion Keck Medicine Initiative of the Campaign for USC.

The celebration continued at a luncheon, with a program introduced by Keck School of Medicine of USC Dean Carmen A. Puliafito, who thanked the members of the Norris Foundation and introduced USC Norris Comprehensive Cancer Center Director Stephen B. Gruber. “He understands the mission of cancer centers, the integration of research and clinical care, and he’s always thinking about how to advance the fight against cancer at USC,” Puliafito said.

Gruber described the advances being made at USC Norris. “We are already expanding the universe of precision cancer care right here at USC Norris, taking strides to cure cancers that were once thought untreatable and bringing discoveries from research benches to our patients’ bedsides,” he said. “Today, we’re breaking ground on the building that will help turn our goal of making cancer a disease of the past into a reality.”

Los Angeles City Councilmember Tom LaBonge also made a quick visit to express his thanks for USC Norris’ continued service to Los Angeles. “This is a very important place,” he told the audience. “There’s no place in our county that does so much for so many as USC.”

The Weekly NEWSMAKERS

On May 6, Media Bistro reported that **David Agus**, professor of medicine at the Keck School of Medicine, has been named a contributor to CBS News.

A May 5 article in the ***Imperial Valley News*** cited research led by **Michael Cousineau**, associate professor of preventive medicine at the Keck School of Medicine, which developed a model that may help sustainable health care delivery and primary care resident training. Health Canal also covered the research.

A May 5 story in the ***Los Angeles Daily News*** quoted **Sean Nordt**, assistant professor of clinical emergency medicine at the Keck School of Medicine, about the misuse of nitrous oxide. “Recreational use has been around almost as long: There were ‘laughing gas parties’ at the turn of the last century,” said Nordt.

A May 3 article in McKnight’s ***Long-Term Care News*** mentioned that **Danny Hillis**, professor of research medicine at the Keck School of Medicine and co-founder of Applied Minds, was a presenter at TEDMED 2013.

A May 3 article in ***Family Practice News*** quoted **Ilene Claudius**, visiting assistant professor of clinical pediatrics at the Keck School of Medicine, about developmental issues and teen sport injuries. “Most stress injuries occur in runners, jumpers, and dancers,” said Claudius. “But they can be seen in those who play other sports. The risk is highest in two periods during a young athlete’s career—just as they delve enthusiastically into their sport and when they reach an elite level, during which time physical efforts grow even more demanding.”

On May 3, ***The Wall Street Journal*** reported that **Pat Levitt**, provost professor of neuroscience, psychiatry, psychology and pharmacy at the Keck School of Medicine and USC School of Pharmacy, will serve as inaugural director of the Developmental Neurogenetics program of the newly created Institute for the Developing Mind at The Saban Research Institute of Children’s Hospital Los Angeles.

Calendar of Events

Tuesday, May 14

9 – 11 a.m. Southern California Clinical and Translational Science Institute Mentoring Workshop. "Strategies for Successful Mentoring," Emil Bogenmann, CHLA and Kenneth Yates, USC. NRT Aresty Auditorium. Info: (323) 442-8281

Noon. Cancer Center Grand Rounds. "The Development and Evolution of Vertebrate Morphology," Clifford Tabin, MIT. NRT Aresty Auditorium. Info: (323) 865-0801

2 p.m. – 3:30 p.m. USC Breast Center Forum. "Get Fit After the Fight: What You Need to Know About Exercise After Breast Cancer," Christina Dieli-Conwright and Debu Tripathy, USC. NRT Jennifer Diamond Cancer Resource Library. Info: (323) 442-7808

4 p.m. Women's Cancers Program Research Seminar. "Discovery of an Orally Active Small-molecule Irreversible Inhibitor of Protein Disulfide Isomerase for Ovarian Cancer Treatment," Nouri Neamati, USC. NOR 7409. Info: (323) 865-3520

Wednesday, May 15

8:30 a.m. "High Resolution CAT Scan," Alison Wilcox, USC. IRD 732-734. Info: (323) 226-7923

11:30 a.m. – 2 p.m. "Healthcare in the Age of Disruptive Innovation: How Much Information Do We Need?" Various speakers. BCC 101. Info: (213) 821-6063

4 p.m. Keck School of Medicine M.S., Ph.D., & M.P.H. Commencement Ceremonies. Harry & Celesta Pappas Quad on the Health Sciences campus. Keynote speaker: Jonathan Evan Fielding, director of the Los Angeles County Department of Public Health and health officer for Los Angeles County. A reception will immediately follow at the same location. No tickets required. More Info: (323) 442-1607

Thursday, May 16

Noon. Broad Center for Regenerative Medicine and Stem Cell Research Seminar. "From Nuclear Transplantation to Prospects for Cell Replacement," Nobel Laureate Sir John Gurdon, University of Cambridge. NRT Aresty Auditorium. Info: (323) 442-8084.

Friday, May 17

6:30 a.m. Anesthesiology Grand Rounds. "The Truth about Spinal Anesthesia," Robert Martin, Loma Linda University. MCH 256. Info: (323) 409-6856

8:30 a.m. KSOM Surgical Grand Rounds. The 15th Annual Lyman Brewer, III, MD Visiting Professor Lectureship. "Translational Research in Aortic Disease: Clinical Applications," John Ikonomidis, Univ. of South Carolina. DOH 100. Info: (323) 442-9064

10:45 a.m. Occupational Science and Occupational Therapy Commencement Ceremony. The lawn west of Leavey Library at the University Park campus. Keynote speaker: Captain Mary I. Greenwood (Ret.), U.S. Navy. A reception will immediately follow at the Davidson Conference Center, Embassy Room. No tickets required. Info: (323) 442-2811

10:45 a.m. Physician Assistant Program Commencement Ceremony. The lawn southwest of the Allan Hancock Foundation Building at the University Park campus. Keynote speaker: Robert Sachs, president of the Physician Assistant Board. A reception will immediately follow at the same location. No tickets required. More Info: (626) 457-4253

11 a.m. Biokinesiology and Physical Therapy Commencement Ceremony. Bovard Auditorium at the University Park campus. Keynote speaker: Stephania Bell, physical therapist, senior writer and injury analyst for ESPN. No tickets required. More Info: (323) 442-5550

11 a.m. School of Dentistry Commencement Ceremony. McAlister Soccer Field at the University Park campus. Keynote speaker: Jerold Goldberg, dean of the School of Dental Medicine at Case Western Reserve University. A reception will follow at 1:30 p.m. at the same location. No tickets required. More Info: (213) 740-2851

11 a.m. Health Promotion Commencement Ceremony. Town and Gown at the University Park campus. Keynote speaker: Elahe Nezami, director of the Health Promotion and Global Health Programs at the USC Institute for Health Promotion and Disease Prevention Research. A reception will begin at 10:30 a.m. at the same location. Tickets are required for the ceremony, but not for the reception. More Info: (231) 821-1601

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 *The Weekly*, KAM 400 or fax to (323) 442-2832, or email to eblaauw@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.

Jon Nalick

CUTTING-EDGE SURGERY— *The USC Institute of Urology hosted "L.A. Live—International Robotic and Open Live Surgery Symposium," which attracted more than more than 240 physicians to the Aresty Auditorium from May 1-2. A roster of 40 renowned international surgeons served as speakers and moderators for the event, which featured 10 live robot-assisted and open surgeries. The event was designed to help improve robotic skills for all levels of surgeons. "The L.A. Live Robotics symposium brought together leading urologists from all over the world to USC," said Inderbir Gill, founding director of the USC Institute of Urology and chairman and professor of the Department of Urology at the Keck School of Medicine of USC. "Innovations pioneered at the USC Institute of Urology and around the world were presented—cutting-edge robotic and open techniques for kidney, prostate and bladder cancer. The goal of this event was to together chart a course for the future."*

Cinical trial examines natural alternatives to estrogen

By Molly Rugg

Physicians and neuroscientists at USC are enrolling female volunteers into a National Institutes of Health-funded clinical trial studying the effects of soy supplements on menopause-related hot flashes and memory loss. Sponsored by the Keck School of Medicine of USC and USC School of Pharmacy, the clinical trial will examine how healthy peri- and post-menopausal women tolerate a nutritional supplement called phytoSERM.

PhytoSERMs are a food supplement that contain three different phytoestrogens: daidzen, genistein and equol. Phytoestrogens are naturally occurring compounds derived from plants and function like the primary female sex hormone—estrogen.

Lon S. Schneider, director of the USC Alzheimer's Disease Research and Clinical Center at the Keck School of Medicine, is principal investigator of the clinical trial, which seeks to determine whether PhytoSERMs are a potential treatment for hot flashes and whether they may prevent or improve age-related memory loss.

"Extensive pre-clinical research by Roberta Brinton, who holds appointments at USC School of Pharmacy and the Keck School of Medicine, shows that the PhytoSERMs' formulation targets an estrogen receptor sub-type that improves mitochondrial metabolism and memory function in animals," Schneider said.

Hot flashes, or momentary sensations of heat that may be accompanied by flushing or sweating, are a common symptom experienced by women prior to and during the early phases of menopause. Some women may also experience a rapid heart rate or chills. Hormone changes during the aging process and declining levels of estrogen contribute to the symptoms.

The clinical trial is looking for 78 healthy women for a 16-week randomized, double-blind, placebo-controlled study. That means that half of the women in the study will receive the phytoSERM supplement, while the other half will receive a placebo, but neither the participant nor the researcher will know who receives what until the study's conclusion. To be eligible, women should be between 48-58 years of age and have experienced age-related memory loss and hot flashes. They should not be utilizing hormone replacement therapy. Selected volunteers will not receive any compensation for participation in the clinical trial.

The study is being conducted at the Memory and Aging Center of the Keck School. For information or to volunteer, contact Nadine Diaz, at (323) 442-5775 or ndiaz@usc.edu.

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