

Peter Jones receives prestigious AACR award

Peter A. Jones, director of the USC Norris Comprehensive Cancer Center and distinguished professor of urology, biochemistry and molecular biology at the Keck School of Medicine of USC has been awarded the 2009 Prize for Basic Cancer Research from the American Association for Cancer Research (AACR) and the Kirk A. and Dorothy P. Landon Foundation.

He shares the award with Stephen B. Baylin, professor of oncology at Johns Hopkins University.

The Landon-AACR prizes are recognized as among the most prestigious international awards given to cancer researchers by a professional society of their peers. Honorees receive an unrestricted cash prize of \$100,000 per award. The prize was awarded on April 20 at the AACR 100th Annual Meeting 2009, held in Denver, Colorado. Jones presented a special lecture during the meeting.

"It is a great honor to be presented with the Landon-AACR award, and in particular, to be recognized by my peers, for work which was entirely done at USC over a period of 32 years," said Jones.

Keck School Dean Carmen A. Puliafito hailed Jones' honor, saying, "The entire Keck School family extends our hearty congratulations to Dr. Peter Jones on this prestigious award, which recognizes his dedication to discovery throughout his career at USC. Peter is well recognized around the world for his scientific acumen, and this is a

well-deserved honor."

Jones and Baylin were selected for the basic cancer research prize for their work in the emerging field of epigenetics. Researchers have determined that there is a second layer of genetic information not contained in

netic component in cancer causation and malignant cell growth.

"It's very rare in science that you can say the work of individual investigators revolutionizes cancer research, but Peter Jones and Stephen Baylin have achieved that

In fact, a direct beneficiary of Jones' research, Violet Yorke, recently celebrated her 80th birthday at the Judy and Larry Freeman Cancer Day Hospital. More than two years ago, she was diagnosed with acute myelogenous leukemia, an aggressive cancer of the

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— Keck School of Medicine Dean Carmen A. Puliafito



Cancer survivor Violet Yorke (center) celebrates her 80th birthday at the Judy and Larry Freeman Cancer Day Hospital with Peter Jones (left), director of the USC Norris Comprehensive Cancer Center, and Allen Yang, assistant professor of medicine, who treated Yorke. Jones' discovery of the drug azacitidine 30 years ago played a key role in Yorke's cancer remission.

DNA, but rather embedded in the proteins that package or surround DNA. These "epigenomes" control access to genes, allowing each cell type to activate its own genes while blocking most of the rest. The Landon-AACR prize cites Jones and Baylin for their work in establishing that there is a major epige-

kind of paradigm shift," said AACR chief executive officer, Margaret Foti. "Their work has changed the way we view molecular causation from a genetic to an epigenetic focus. The potential impact of this work is enormous, and it is already resulting in significant improvements in cancer diagnosis and therapy."

blood, but her medical condition precluded the use of standard chemotherapy.

However, after Yorke enrolled in a USC clinical trial with the drug azacitidine (Vidaza), she has been in remission. Jones discovered almost 30 years ago the ability of azacitidine to inhibit DNA

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USC researchers identify strong new anti-cancer compound

By Meghan Lewit

USC researchers have identified a new drug compound that appears to target tumor cells and surrounding blood vessels without the negative side effects typically associated with Cox-2 inhibitors.

The compound 2,5-dimethyl-celecoxib (DMC) appears to have a strong anti-tumor effect while also attacking the vasculature that provides the blood supply necessary for tumor growth, according to data presented at the American Association for Cancer Research (AACR) 100th Annual Meeting 2009. The findings were presented at a news conference on April 19.

"If left behind, the blood vessels within the tumor will help the tumor cells to survive and re-grow," said Florence M. Hofman, professor of pathology at the Keck School of Medicine.

"We believe that DMC will be particularly useful for treating brain tumors such as gliomas, which are

highly vascular. It also appears very promising for long-term treatment because it does not have the negative cardiovascular effects associated with Cox-2 inhibitors," she said.

Cox-2 inhibitors are most commonly used as anti-inflammatory drugs and have been shown to be effective in treating certain kinds of cancer. However, long-term use has also been associated with increased risk of heart attack and stroke, Hofman explained. DMC, however, retains anti-tumor activity without inhibition of Cox-2 and the associated increased risk of cardiovascular complications.

Hofman and colleagues from the Keck School of Medicine tested the effectiveness of the DMC compound by isolating endothelial cells—the cells that line the interior surface of blood vessels—from human nonmalignant brain and glioma tissues and treating them with DMC.

They found that the drug was cytotoxic to tumor-

associated endothelial cells and suppressed cell proliferation and migration without apparent toxic effects to normal tissues. Drug therapy in animal studies also showed smaller tumors and fewer blood vessels in the tumors, with a 35 to 40 percent reduction in blood vessel density.

"While our research focused on brain tumors, we believe this drug may work in a number of different tumors that are dependent on blood vessels," Hofman said. "Further research will help us to understand its full potential."

The research was funded by the L.K. Whittier Foundation through the USC Norris Comprehensive Cancer Center.

Jenilyn J. Virrey, Adel Kardosh, Encouse Golden, Stan Louie, Nicos Petasis, Axel H. Schönthal, Thomas C. Chen, and Florence M. Hofman. "2, 5-Dimethyl-Celecoxib Exerts Antiangiogenic Effects on the Tumor Vasculature."



FIGHTING CHILDHOOD OBESITY—The USC Childhood Obesity Research Center presented a symposium featuring obesity researchers from USC and across the country on April 17. The symposium examined the causes and implications of childhood obesity. Above, Robert Waterland, professor of pediatrics and molecular and human genetics at Baylor College of Medicine, speaks on epigenetic mechanisms in hypothalamic development.

JONES: Garners new awards, grants

Continued from page 1

methylation and determined how to use the drug as an epigenetic therapy for cancer. Yorke was treated by Allen Yang, assistant professor of medicine, who was mentored by Jones.

A past president of the AACR, Jones serves as senior editor of the journal *Cancer Research*. He has received a variety of honors, including the Outstanding Investigator Grant from the National Cancer Institute. He holds the H. Leslie Hoffman and Elaine S. Hoffman Chair in Cancer Research at the Keck School. Jones is the author of more than 250 journal articles and book chapters. He serves on several national and international committees, panels and editorial boards.

In addition to the Landon award, Jones has received a National Institutes of Health (NIH) MERIT award to continue funding of his important work in epigenetics.

The MERIT—Method to Extend Research in Time—awards are among the most selective research grants given by the NIH, and provide long-term support to outstanding, experienced investigators. The awards recognize researchers who have demonstrated superior competence and outstanding productivity in research endeavors of special importance or promise.

MERIT awards provide investigators with an opportunity to extend their current grant for an additional three to five years without having to submit a traditional competing renewal application. Jones' award will extend funding for five years on a grant that was first funded in 1978.

Pharmacy students win \$70,000 in research awards

Three USC School of Pharmacy Ph.D. candidates recently won awards of up to \$50,000 to support their research projects in drug development, while another pharmacy student picked up an award from the American Society of Health-System Pharmacists for student leadership.

Doctoral student **Tino Sanchez** received a two-year, \$50,000 dissertation fellowship from the California HIV/AIDS Research Program. CHRP provides funding to support HIV/AIDS research in California. Sanchez works in the lab of associate professor Nouri Neamati.

Sanchez is working toward the development of drugs for patients with HIV.

The disease works by invading immune cells, using three key enzymes—protease, reverse transcriptase and integrase—for replication. Sanchez's work targets the integrase enzyme as it is key in allowing viral DNA to invade host cells.

Among HIV therapies, there is currently only one integrase inhibitor that is FDA-approved.

Erik Serrao, who also works in Neamati's lab, received a \$19,000 Oakley Fellowship, part of the USC Graduate School Endowed Fellowship Competition.

The competitive Oakley Fellowship is available to Ph.D. candidates in any field university-wide.

Like Sanchez, Serrao's research will also target the integrase enzyme. Serrao's work focuses on the develop-

ment of new compounds that can inhibit HIV integrase from incorporating the virus into chromosomes.

Ben Xu received a \$3,000 Sjögren's Syndrome Foundation student fellowship, which will help support his research project on Sjögren's syndrome, an autoimmune disease that is characterized by tear gland inflammation and dry eye.

Xu is a Ph.D. student in the lab of Sarah Hamm-Alvarez, the Gavin S. Herbert Professor in Pharmaceutical Sciences and chair of the Department of Pharmacology and Pharmaceutical Science.

Third-year Pharm.D. candidate **Paulin Heng** received the American Society of Health-System Pharmacists Student Leadership Award. The award recognizes leadership in students interested in health-system pharmacy practice.

Heng received a \$2,500 cash award and a drug information library valued at over \$1,000.

Heng was judged on her health-system pharmacy practice achievement and professional leadership.

In addition to participation and leading various student pharmaceutical organizations, Heng also contributes to educational and screening programs that focus on underserved communities in Los Angeles.

Heng is currently the ASHP co-president of American Pharmacy Student Alliance and serves as the lead intern pharmacist at Olympia Medical Center in Los Angeles.

USC to host patient safety satellite broadcast

The USC School of Pharmacy will host the Southern California site for the Health Resources and Services Administration (HRSA) Patient Safety & Clinical Pharmacy Collaborative Live Satellite Broadcast on May 6.

This program is an opportunity for physicians, pharmacists, nurses, safety-net clinic and hospital clinic administrators and medical directors, elected officials and funders to hear from national leaders—sharing their experi-

ences on the impact of clinical pharmacy services on the health outcomes of underserved populations seen in their clinics. Featured among the presentations is USC Professor Steven Chen who is part of a local HRSA team along with Paul Gregerson, chief medical officer at the JWCH Institute.

The event will be from 8 a.m. to 12:30 p.m. at the Harlyne J. Norris Cancer Research Tower's Aresty Auditorium.

The Weekly

Next Issue: May 1

The Weekly 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.

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Did we say that?

The April 17 issue of *The Weekly* inadvertently omitted the final word of the story, "USC researchers pinpoint gene key to lupus development."

The full text of the sentence should have stated that Chaim O. Jacob, associate professor in the Department of Medicine, and his team have made the Function2Gene software available free of charge to the scientific community so that it may be applied to other complex diseases.

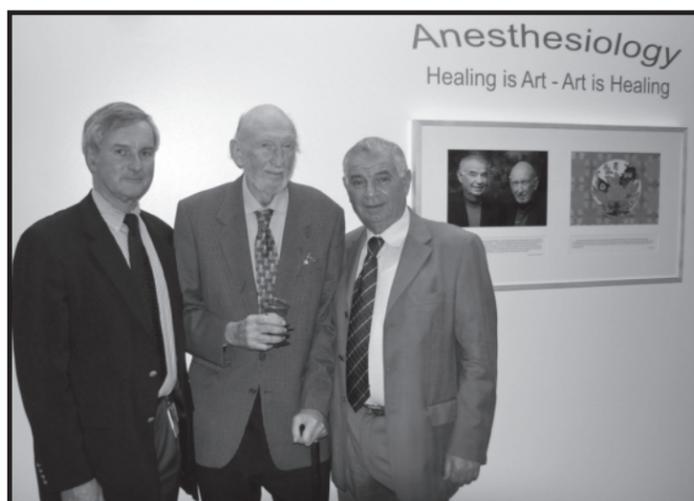
Noted director, USC physician donate art to LAC+USC

A permanent exhibit of 27 photographs by film director and photographer Irvin Kershner was unveiled March 26 at the Department of Anesthesiology at the recently opened LAC+USC Replacement Facility.

The exhibit, titled "Kitchen Illusions," is a joint gift from Kershner and Vladimir Zelman, co-chair of the Department of Anesthesiology at the Keck School of Medicine and director of the division of neuroanesthesia at LAC+USC Medical Center and USC University Hospital.

The plates and fabrics in each photograph in the exhibit were collected from around the world. Through the use of shadowless light, the plates appear flattened.

Real flowers, fruits and vegetables are incorporated as



From left, Philip Lumb, chair of the Department of Anesthesiology at the Keck School, director Irvin Kershner and Vladimir Zelman, co-chair of the Department of Anesthesiology, celebrate the opening of the exhibit of Kershner's photography.

part of the design.

"We are thrilled to be able to include these beautiful works of art by Mr. Kershner in our new, state-of-the-art medical center," Zelman said.

"These photographs reflect what is unusual and uniquely human about our hospital, the LAC+USC Medical Center. They reflect the diversity of our city and remind patients

they are home here. If by establishing the Kershner Gallery we help even one patient or family member on their road to healing and recovery, we can say our mission has been accomplished."

Irvin Kershner has directed more than 15 feature films, including *The Empire Strikes Back*, *Robocop II*, *Never Say Never Again* and *The Eyes of Laura Mars*. He taught at the USC School of Cinema in the 1950s and in the USC Master of Professional Writing Program from 2006 to 2007.

The opening reception was hosted by Philip Lumb, chair of the Department of Anesthesiology at the Keck School of Medicine. Music at the event was provided by classical guitarist, Benjamin Pila, who is pursuing his Doctor of Musical Arts degree at USC.

Macular degeneration forum slated for April 29

The California Institute for Regenerative Medicine (CIRM) and the Keck School of Medicine will present an educational forum on April 29 on advances in treatment of macular degeneration.

"Spotlight on Macular Degeneration" will feature speakers including Carmen A. Puliafito, dean of the Keck School of Medicine and member of the Governing Board of the California Institute for Regenerative Medicine. Also scheduled to speak are: David Hinton, professor of pathology at the Keck School of Medicine; Mark Humayun, professor of ophthalmology, Keck School of Medicine; and Sharon A. Hayes, a patient advocate.

The event, part of an all-day CIRM Independent Citizens Oversight Committee meeting, will be from 8:30 to 9:15 a.m. in the Keith Administration Building's Mayer Auditorium.

For more information, call (323) 442-1661.



Photos/Carol Mathieu



WALKING THE WALK... FOR KECK— More than 200 students, staff, faculty and friends accepted a challenge on April 16 to Walk the 5K for Keck to raise money for scholarships for Keck School of Medicine students and medical research. The USC University Hospital Guild sponsored the event, in which the route began in Harry and Celesta Pappas Quad (left), wended through Hazard Park (above) and circled the campus. Keck School student Neda Roostra, who received a scholarship last year, rallied 54 of her peers to participate in the walk. The Class of 2012 raised the most money in a competition between classes and will receive a plaque acknowledging their efforts. In all, the event raised more than \$10,000, organizers said.

The Weekly NEWSMAKERS

Complete listing at: ww.usc.edu/uscnews/usc_in_the_news

An April 20 *Los Angeles Times* article quoted **Diana Chingos**, head of the USC Norris Cancer Center Survivorship Advisory Council, about a recently published book, "Anticancer: A New Way of Life."

An April 18 *Los Angeles Times* article highlighted research by cancer researcher **Myles Cockburn** into pesticides and Parkinson's disease. The article also ran in *Newsday*, the *Chicago Tribune*, the *Orlando Sentinel*, and the *Miami Herald*.

An April 18 widely carried *HealthDay News* article highlighted research led by pathologist **Florence Hofman** that was presented at the American

Association for Cancer Research annual meeting. Hofman's team targeted brain cancer with an inhibitor called dimethyl-celecoxib, the story noted. *Forbes* and Reuters Health also highlighted the research.

An April 16 *The Economist* article quoted and highlighted research by cancer researcher **David Agus** in a story about start-up companies that offer consumers genome analysis.

An April 15 *U.S. News & World Report* article featured a study by Alzheimer's expert **Lon Schneider** showing that newer antipsychotic drugs

promote weight gain and lower levels of HDL cholesterol in Alzheimer's patients. Reuters and *Forbes* also highlighted the research.

An April 14 *New York Times* article quoted urologist **David Penson** about the prostate cancer drug Provenge.

An April 9 *Investor's Business Daily* article quoted pharmacoeconomics expert **Joel Hay** about how a drug company being the first to market a drug in a particular class doesn't guarantee ultimate financial success.

Calendar of Events

This Calendar of events is also online at www.usc.edu/hscalendar for the Health Sciences Campus community

Monday, April 27

Noon. “NEPHSAP: End-stage Renal Disease and Dialysis (2008),” Hosameldin Madkour, USC. GNH 4420. Info: (323) 226-7307

Noon. “Case Presentations,” Shahrooz Bemanian, USC. D & T B3B105. Info: (323) 409-7995

Tuesday, April 28

10 a.m. American Cancer Society National Multicultural Cancer Awareness Week African American Health Forum. “Our Voice, Our Choice: Making Changes for a Healthy Future in the African American Community,” Various speakers. Westin Los Angeles Airport Hotel. Info: 1-800-422-6237

Wednesday, April 29

8:30 a.m. – 9:15 a.m. California Institute for Regenerative Medicine. “Spotlight on Macular Degeneration,” Carmen Puliafito, David Hinton and Mark Humayun, USC. KAM Mayer Aud. Info: (323) 44-2830

Noon. Eric Cohen Student Health Clinic Monthly Wellness Seminar. “Trojans Care 4 Trojans,” Lynette Merriman, USC. NML Conf. Rm. West. Info: (323) 442-5631

Noon. ZNI Seminar Series. “Emergence of Synaptic Specificity in the Mouse Cerebellum,” Peter Sheiffle, Univ. of Basel. ZNI 112. Info: (323) 442-2144

Noon. “Renal Biopsy,” Michael Koss and Vito Campese, USC. GNH 4420. Info: (323) 226-7307

1 p.m. “Head & Neck Cancer Awareness,” Tom Labonge, LA Councilmember and Chief Bratton, LA Police Dept. HNRT Level G, Rm. 503. Info: (323) 442-7808

Thursday, April 30

Noon. “Subversion of Innate Immune Activation by Hepatitis C Virus Infection,” Gyongyi Szabo, Univ. of Massachusetts. HMR 100. Info: (323) 442-1283

Friday, May 1

Noon. “Clinical Implications of Recent Discoveries in Liver Immunology,” Gyongyi Szabo, Univ. of Massachusetts. OPT A5C 129. Info: (323) 409-7995

Monday, May 4

Noon. Medical Student Research Forum & Poster Day. KAM Mayer Aud. Info: (323) 442-1763

Wednesday, May 6

8 a.m. The HRSA Patient Safety & Clinical Pharmacy Collaborative (PSPC) Live Satellite Broadcast of Learning Session #3, various speakers. HNRT Aresty Conf. Ctr. Info: (323) 442-1393

Thursday, May 7

Noon. “Clostridium Difficile Colitis: From Basic Research to Bedside,” Harry Pothoulakis, UCLA. HMR 100. Info: (323) 442-1283

Friday, May 8

9 a.m. CORC Team Seminar. “Non-Alcoholic Fatty Liver Disease,” Frank Sinatra, USC. CSC 250. Info: (323) 442-2637

Thursday, May 14

Noon. “Epigenetic Regulation of Hepatic Wound-healing and Fibrosis,” Jelena Mann, Univ. of Washington School of Medicine. MCH 156. Info: (323) 442-3121

Tuesday, May 19

Noon. Cancer Center Grand Rounds and Poster Session. NOR 7409. Info: (323) 865-0801

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 Weekly, KAM 400 or fax to (323) 442-2832, or e-mail to ebalauw@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.



Charles Sappington/Morningstar Productions

CARDIOVASCULAR UPDATE – A presentation about the USC CardioVascular Thoracic Institute (CVTI) was a part of the April 5 program at the annual USC Trustees Conference in LaQuinta. The Keck School of Medicine panel included, from left, Vaughn A. Starnes, founding executive director of CVTI, chair of the Department of Surgery and surgeon-in-chief at USC Norris Cancer Hospital and USC University Hospital; Leslie A. Saxon, professor of medicine and chief of cardiovascular medicine; Ray V. Matthews, professor of clinical medicine and director of interventional cardiology; and Keck School Dean Carmen A. Puliafito.

USC physical therapist and community leaders highlight lack of fresh food in area neighborhood

By Sara Villagran

USC physical therapist Cheryl Resnik joined community and political leaders at an April 3 press conference to call for better access to high quality, fresh food in the underserved Ramona Gardens neighborhood of Boyle Heights.

Ramona Gardens, a community adjacent to the USC Health Sciences Campus, is situated in a “food desert,” characterized by minimal access to healthful, fresh food and produce. With only one local market in walking distance from the community, residents without transportation must walk 45 minutes to the nearest grocery store. This makes it extremely difficult, if not impossible, for some families with small children and elders to purchase high quality goods.

At the press conference, held in front of Murchison Elementary School, Resnik, assistant professor of clinical physical therapy, said, “As a physical therapist, I am very interested in helping people stay healthy through physical activity. This can only be accomplished if activity is paired with a healthy diet.”

She added, “Residents of this neighborhood don’t have the same access to healthy, reasonably priced food as those in more affluent neighborhoods. We’re hoping to change this situation.”

California State Assemblymember Kevin De León (D-Los Angeles), local residents and members of LA Voice—a community organization aimed at improving local quality of life—also spoke at the event to underscore the need for improved access to nutritious, fresh food.

They have been working with Resnik to conduct small community-based studies and health assessments to further understand the root causes of health problems in Ramona Gardens. These studies have concluded that residents lack easy access to high quality and fresh food in the community.

The speakers announced a plan to hold a Community Town Hall meeting in May 2009 to work on concrete solutions to aid local grocers in improving access in the future.



Sara Villagran

Cheryl Resnik displays a Google Earth map of the limited grocery locations within and surrounding the Ramona Gardens neighborhood—an area known as a “food desert” because of the inaccessibility of fresh food.

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