



Keck School Dean Carmen A. Puliafito and Parkash Gill attend a Feb. 10 cancer research benefit which helped raise funds for the USC Norris Comprehensive Cancer Center

## HSC luminaries shine with the stars at cancer research gala

By Jane Brust

The Keck School of Medicine's Dean Carmen A. Puliafito and Parkash Gill were among the USC contingent attending a star-studded benefit for cancer research in Beverly Hills Feb. 10.

Actresses Gwyneth Paltrow and Courteney Cox were recognized for their dedication to cancer causes. Cox received the Nat King Cole Award in recognition for her dedication to helping people, especially those near to her, who have battled cancer. The award was presented to Cox by a friend who publicly recognized Gill, an oncologist with the USC Norris Comprehensive Cancer Center and Hospital, who treated her for ovarian cancer.

"This was a terrific event with high praise for the expert, compassionate care provided by Dr. Gill and all our clinical faculty at the USC Norris Comprehensive Cancer Center," Puliafito said. "Additionally, we are grateful for the funding support to enhance our cancer research programs at USC."

Paltrow was honored with the 2009 Courage Award for her unwavering commitment to cancer prevention. Also appearing on stage were event hosts Tom

See **GALA**, page 2

## USC-led alcoholic liver disease center awarded \$8.1 million

By Jon Nalick

The Southern California Research Center for Alcoholic Liver and Pancreatic Diseases and Cirrhosis has renewed a five-year, \$8.1 million federal grant to study how alcohol, genes and environmental factors combine to damage the liver and pancreas.

Center Director Hide Tsukamoto, professor of pathology at the Keck School of Medicine, said the grant, which is funded by the National Institute on Alcohol Abuse and Alcoholism of the National Institutes of Health (NIH) would support ongoing programmatic developments of the center.

He added the grant award reflects the center's prominence in the field and noted that since 2004 center investigators have published 155 articles in highly respected journals such as *Proceedings of the National Academy of Sciences*, *Cell Metabolism*, *Journal of Immunology*, *Journal of Virology*, *Journal of Biological Chemistry*, *Gastroenterology*, and *Hepatology*.

"That attests to the quality of science pursued by center members," Tsukamoto said.

Despite the decline in NIH funding in recent years and the increasingly competitive nature of attracting federal grants, Tsukamoto said the center has steadily increased its federal awards since 1999.

By 2003, besides a \$1.2 million center grant, the center members received about \$3.7 million annually in grant funding—a figure that rose to \$5.6 mil-

lion by 2007, he said, "demonstrating strong productivity by the center investigators."

Founded in 1998, the center is a collaborative effort among the leaders in the study of alcoholic liver and pancreatic diseases (ALPD) and cirrhosis in Southern California, including researchers academically affiliated with

See **LIVER**, page 3

## Study shows alcohol consumption boosts cancer risk for hepatitis C patients

By Meghan Lewit

A new study led by researchers at the Keck School of Medicine found that drinking alcohol greatly increases the chances that a patient infected by the hepatitis C virus (HCV) will develop a common type of liver cancer.

The study appeared earlier this month in the *Proceedings of the National Academy of Sciences*.

The research clarifies the complex molecular events that link alcoholism and HCV to increased risk of hepatocellular carcinoma (HCC), the fifth most common cancer worldwide, said

Keigo Machida, assistant professor of molecular microbiology and immunology at the Keck School.

There is ample evidence that chronic liver damage caused by viral infection, alcohol, metabolic syndrome or these factors in combination can increase the risk for HCC, Machida said.

However, the specific molecular mechanism for the synergy among alcohol, HCV and liver cancer has remained unclear.

"Understanding the molecular link holds great potential for future treat-

See **ALCOHOL**, page 3



**WELCOME ABOARD, NEW TROJANS!**—Zenaida Tan (left) and Annette Sy, both nurses, were among hundreds of soon-to-be USC employees who attended the first week of USC welcome activities for employees of the USC Norris and USC University Hospitals. Some 1,600 offer letters were included in new employees' welcome packets, which also included "New Trojan" t-shirts. USC Vice Provost Mitch Creem, who will become CEO for the two hospitals, mingled with the employees through the week's events.



# USC School of Pharmacy hosts key conference on safety-net clinics

By Kukla Vera

The USC School of Pharmacy hosted 90 professionals from pharmacy schools, clinics, government and associations at recent two-day conference on "Developing Partnerships between Schools of Pharmacy and Safety-Net Clinics."

Held on Feb. 12 and 13 in Los Angeles, the conference aimed to provide pharmacy professionals from around the country with real-world expertise on establishing and expanding partnerships and maximizing their impact in their communities. Safety-net clinics, the proposed sites for most of the partnerships, deliver health care services to low income, homeless and other vulnerable populations.

School of Pharmacy Dean R. Pete Vanderveen moderated the conference, which was presented in collaboration with the Department of Health and Human Services Health Resources and Services Administration's (HRSA) Patient Safety & Clinical Pharmacy Services Collaborative.

Dennis Wagner, deputy director of the Center for Quality at HRSA and a speaker at the conference, noted that the conference came at the "perfect time for the work that needs to be done nationwide."

He said that safety-net clinics aligned to schools of pharmacy are typically the highest performing sites. Wagner mentioned the importance of having a pharmacy school dean, like Vanderveen, as a

leader on these partnership projects.

Other HRSA staffers who spoke at the conference included: Jimmy Mitchell, director of the office of pharmacy affairs; Denise Geolot, director of the Center for Quality; Nancy Egbert, a captain with the US Public Health Service and a senior clinical advisor in the office of rural health policy; and Lisa Scholz, senior director of the HRSA pharmacy services support center at the American Pharmacists Association.

USC faculty speaking about the school's experiences in seven local safety-net clinics included Mel Baron, associate professor, who described how USC became involved in safety-net work. Kathleen Johnson, the William A. and Josephine A. Heeres Professor in Community Pharmacy, discussed the nuts and bolts that make an ongoing partnership work for the clinic, the university and the patients in the community. Steven Chen, associate professor, described the clinical experience along with Paul Gregerson, chief medical officer at the JWCH Medical Clinic, where USC has a partnership to provide clinical pharmacy services.

The conference not only provided information on starting and running a clinical pharmacy partnership, but also looked at the practical regulatory and funding aspects.

Sandy Chiang, a program officer at The California Endowment, provided insights on securing that important first



Pharmacy Dean R. Pete Vanderveen (right) with conference speakers Jimmy Mitchell and Captain Nancy Egbert, both from the Department of Health and Human Services.

Kukla Vera

grant and sustainability. Carmen Catizone, the executive director of the National Association of Boards of Pharmacy, discussed the issues that surface in these partnerships from the perspective of state boards of pharmacy.

Rounding out the speaking roster were: Stacy Ramirez, a USC alum who now teaches at Oregon State; Hazel Seaba from University of Iowa; Todd Sorensen from University of Minnesota; Sandra Leal from the El Rio Health Center in Tucson, AZ; John Conry from St. John's University; and Todd Lemke from the Paynesville Area health Care System in Minnesota.

Leading break-out sessions were Kavita Munjal, Keck School of Medicine, and Belinda Teitel, Center for Nonprofit Management.

In addition to the School of Pharmacy, USC Civic and Community Relations supported the program by underwriting the Feb. 12 session held at the USC Galen Center. Other conference supporters included the Merck Company Foundation and the AACP Transformative Community Service Award.

Representatives from more than 30 schools and eight clinical facilities attended the event.



Joy Joseph

**HONORING EXCELLENCE**—Town and Gown, the university's oldest and largest women's organization, hosted a luncheon on Feb. 3 to award 237 scholarships to USC students—of which 18 were from the Keck School of Medicine. From left (with Keck School student scholars marked with an asterisk) Dane McLeod\*, Town and Gown President Yvonne Bogdanovich, Dean of the College of Letters, Arts & Sciences Howard Gillman, emcee Fritz Coleman, Michael Marques\*, Steven Kapp\*, Keck School Dean Carmen A. Puliafito, Maria Bernardo Peralta\* and Town and Gown Program Chair Christine Ofiesh.

## GALA: Helps fund research

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Hanks, Rita Wilson, Kate Capshaw and Steven Spielberg. Musical performer Beyonce was well-received by guests David Arquette, Sheryl Crow, Lisa Kudrow, Jennifer Meyer, Angie Harmon, Tom Arnold, Buzz and Lois Aldrin, Isaiah Washington, Amy Grant, Lisa Rinna and Harry Hamlin.

The annual Saks Fifth Avenue's Unforgettable Evening benefits the Entertainment Industry Foundation's Women's Cancer Research Fund.

The USC Norris Comprehensive Cancer Center is one of the primary beneficiaries of funds raised for innovative cancer research.

Norris Cancer Center Advisory Board members Marion Laurie and Quinn Ezralow are among the founders of the EIF's Women's Cancer Research Fund.



Actor Tom Hanks and Keck School of Medicine Dean Carmen A. Puliafito mingle at the Feb. 10 gala.

Steve Cohn

## Keck School physicians start up Pediatric Rheumatology Core at CHLA

By Jon Nalick

Funded with a \$650,000 grant from Thousand Oaks-based biotechnology firm Amgen, Keck School physicians are creating the Pediatric Rheumatology Core at Childrens Hospital Los Angeles.

Andreas Reiff, head of the division of rheumatology at Childrens Hospital Los Angeles and associate professor of pediatrics at the Keck School, said the core will ensure the best treatment outcomes for children with rheumatic diseases through excellence in clinical care, research and education.

In addition, it will boost access to the highest level of quality comprehensive care in Southern California and underserved neighboring states by combining existing expertise in pediatric rheumatology.

Amgen's donation will fund two full-time pediatric rheumatology fellows for the next five years as part of the core's educational program.

The core will be operational at Childrens Hospital Los Angeles by July 2010.

Pediatric rheumatologists treat both non-inflammatory and inflammatory rheumatic disease, ranging from chronic pain disorders to arthritis, inflammatory muscle disease, systemic lupus erythematosus and other life threatening forms of vasculitis in children.

There are 300,000 children with diagnosed rheumatologic conditions in the United States, not including the multitude of children who are waiting to have a rheumatologic diagnosis excluded.

Unfortunately, the demand for services greatly exceeds the available supply, and there is a well-known shortage of pediatric rheumatologists in the United States.

In fact, there are only about 150 practicing pediatric rheumatologists in American available to meet this need. This means long agonizing waiting times for families who worry about their children's health.

Reiff said several regional hospitals have shown interest in becoming part of the core, including Miller Children's Hospital in Long Beach and the Children's Center for Cancer and Blood Diseases in Las Vegas, Nevada.

## ALCOHOL: Study suggests way to short-circuit cancer origin

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ment of this particular form of liver cancer," Machida said.

"The signaling mechanism gives researchers a new drug therapy target for treating HCC," he added.

Machida and his colleagues focused their research on a viral protein, NS5A, which they had found in earlier experiments stimulated high expression of a receptor for bacterial endotoxins, known as Toll-like receptor 4 (TLR4). Alcohol intake increases the risk of leaking bacterial toxin from the gut, which the researchers believe causes over-activation of endotoxin receptor signaling if patients are also infected by HCV.

This excess antibacterial reaction

then results in an increased risk of tumor growth should the body's natural anti-tumor response weaken as a result of the infection, Machida explained.

Researchers conducted a series of experiments with mice and also examined liver biopsy samples from human patients infected with HCV, and found high levels of the protein NS5A and TLR4.

In the subset of patients who were also alcoholics, the researchers saw signs of increased antibacterial response. The research also identified a specific molecule called Nanog, which acts as a stem cell marker in tumor development when activated by TLR4.

"There were several major findings that resulted from this study," Machida

said. "We established a mouse model, which will enable us to better understand alcohol and hepatitis C virus infection, and we found the signaling that causes tumor development in mice through the receptor TLR4."

"More research is needed, but if we are able to target and suppress these molecules identified in the study, we may be able to stop the cancer's life-line."

The study was supported by National Institute on Alcohol Abuse and Alcoholism/National Institutes of Health-funded Southern California Research Center for Alcoholic Liver and Pancreatic Diseases and Cirrhosis, headquartered at the Keck School of Medicine.

## European Society of Cardiology honors career of USC Distinguished Professor

The European Society of Cardiology (ESC) will award its highest honor, the Gold Medal, to Shahbudin H. Rahimtoola, USC Distinguished Professor and George C. Griffith Professor of Cardiology, for his outstanding contribution to the development of cardiology.

Rahimtoola has led a distinguished career as a cardiologist and researcher in cardiovascular disease. His research interests include valvular heart disease, coronary artery disease, results of cardiac surgery, and arrhythmias. He is also known for his work in heart failure, cardiomyopathy and congenital heart disease.

The ESC Gold Medal is reserved for individuals who have made a significant contribution to the fight against cardiovascular disease, Nobel laureates, or other prominent figures in the field of cardiovascular medicine.

Rahimtoola will receive the award at the ESC annual congress in Barcelona this summer.



Shahbudin H. Rahimtoola

Carol Matthieu

## LIVER: Center's collaborative efforts span the region—and also the globe

Continued from page 1

UCLA, the Department of Veterans Affairs, Harbor-UCLA Medical Center and UC San Diego.

In addition to the 15 collaborative projects among local members, the center's collaborations increasingly include researchers from across the globe, Tsukamoto said.

For example, the center's Animal Model and Non-Parenchymal Liver Cell Core Laboratories and their sample sharing programs have provided services to 17 investigators from 15 institutions around the world for collaborative research.

Tsukamoto said that superb research productivity by senior investigators Neil Kaplowitz and Shelly Lu—at USC—as well as senior investigators at partner institutions such as Jose Fernandez-Checa, Samuel French, Steve Pandol, Anna Gukovskaya and

David Brenner "continue to be a key driving force for our success."

He also noted that other new leaders, including young scientists, and new programs are making pivotal contributions to the growth of the center. They include:

- Kinji Asahina from the Tokyo Medical and Dental University, who joined USC as assistant professor of research pathology and leads a developmental biology program focused on embryonic liver mesenchymal cells within the center;

- Keigo Machida, assistant professor of molecular immunology and microbiology at the Keck School and co-director for the center's animal core, who recently published a ground-breaking paper in *Proceedings of the National Academy of Sciences* on the obligatory role of the stem cell marker Nanog in liver tumor development caused by hepatitis

virus protein NS5A and alcohol;

- Vijay Kalra, professor of biochemistry and molecular biology at the Keck School and director of the center's education and training program, which runs a wide spectrum of academic enrichment from the undergraduate research fellowship, graduate education, to institutional pre- and postdoctoral training program;

- Tom Valente, professor and director of the Master of Public Health pro-

gram, and Keane Lai, clinical instructor of clinical pathology, who co-direct the center's community outreach and organize, implement, and evaluate community seminars held in collaboration with the LA County Alcohol and Drug Program; and

- The new Global Outreach Program, supported in part by NIH, which has led to the development of annual international symposia on alcoholic liver and pancreatic diseases and cirrhosis.

## In Case of An Emergency...

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.

Call the Emergency Information Phone: 213-740-9233

The emergency telephone system can handle 1,400 simultaneous calls. It also has a back up system on the East Coast.



# Calendar of Events

The HSC Calendar is online at [www.usc.edu/hscalendar](http://www.usc.edu/hscalendar)

## Monday, Mar. 2

**8 A.M.** 2009 Child Health Policy Research Symposium. "Opportunities for Health Policy Change: Using Data Effectively," Various speakers. The California Endowment Ctr. for Healthy Communities. Info: (626) 457-4213

**NOON.** "Osteonecrosis," Charalampos Zalavras, USC. GNH 6441. Info: (323) 442-1946

**3 P.M.** Hoyt Art Gallery Show Opening Reception. KAM basement lobby. Info: (626) 399-8110

**4 P.M.** "Research in Progress," Amer Khan, USC. GNH 4420. Info: (323) 226-7307

## Wednesday, Mar. 4

**7 A.M.** Medicine Grand Rounds. "Hepatitis Lupus," William Wang, USC. IPT C2J104-B. Info: (323) 226-7556

**NOON.** USC Ctr. for Excellence in Teaching. "Net Forward Energy: Instructional Lessons Learned From a National Clinical Practice Change Collaborative," Steven Chen, USC. KAM B21/23. Info: (323) 740-9040

**NOON.** ZNI Seminar. "Unraveling Cortical Circuits with Photostimulation and Rabies Virus," Edward Callaway, Salk Inst. for Biological Studies. ZNI 112. Info: (323) 442-3219

**4 P.M.** USC Ctr. for Excellence in Research. "Competing for Federal Grants in the Social Sciences," Leora Rosen, USC. UPC: CUB 329. Info: (213) 740-6709

## Thursday, Mar 5

**NOON.** "HIV and Women – Current Topics," Various speakers. NOR 1315. Info: (323) 865-0343

**NOON.** Cellular Homeostasis Lecture Series. "Mining the Function of Stress-

inducible Chaperone GRP78/BIP Through the Use of Mouse Models," Amy Lee, USC. MCH 156. Info: (323) 442-3121

**4 P.M.** HSC Faculty Innovator Roundtable Discussion. "Venture Capital & University Interface: Best Practices to Make Maximum Impact," Richard Hull, USC. NOR 1315. Info: (213) 821-6063

## Friday, Mar. 6

**NOON.** Pharmacology and Pharmaceutical Sciences Seminar. "Statin, Exercise and AMPK," John Shyy, UC Riverside. PSC 104. Info: (323) 442-2184

**3 P.M.** "Of Mind, Medicine and Music," Antonio Damasio, USC and composer, Bruce Adolphe. KAM Mayer Aud. Info: 213) 740-1744

## Saturday, Mar. 7

**8:30 A.M.** "Contemporary Stereotactic Radiosurgery of the Central Nervous System: A Primer and Update," Various speakers. Los Angeles Marriott Downtown. Info: (323) 442-2555

## Monday, Mar. 9

**NOON.** "NEPHSAP: Acute Renal Failure (2008)," Mitra Nadim, USC. GNH 4420. Info: (323) 226-7307

**NOON.** "Transplant Pathology Board Review – Part III," Michael Koss, USC. GNH 4420. Info: (323) 226-7307

## Wednesday, Mar. 11

**11:30 A.M.** "Damnably Hard, Agonizingly Protracted, and Utterly Vital: Health Care Reform in the United States," Henry Aaron, Brookings Institution. UPC: Andrus Gerontology Ctr. Info: (213) 740-1354

**NOON.** "Type 2 Diabetes Prevention and Early Treatment," Thomas Buchanan, USC. GNH 4420. Info: (323) 226-7307

**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](mailto: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.

## HSC NEWSMAKERS

Complete listing at: [www.usc.edu/uscnews/usc\\_in\\_the\\_news/](http://www.usc.edu/uscnews/usc_in_the_news/)

A Feb. 11 Associated Press article reported USC's agreement with Tenet Healthcare Corp. to purchase USC University Hospital and the USC Norris Cancer Hospital. The widely carried article ran in the *San Francisco Chronicle*, the *San Diego Union Tribune*, the *Merced Sun-Star*, the *Sacramento Bee*, the *Press-Enterprise Newspaper*, *Modesto Bee*, *Fresno Bee*, *Contra Costa Times*, and the *Monterey County Herald*.

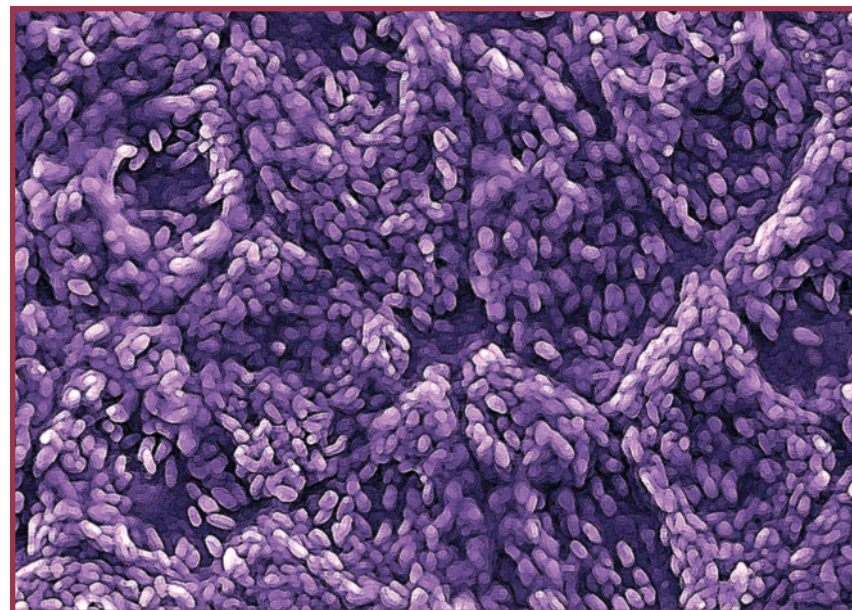
On Feb. 11 and 12, fertility expert **Richard Paulson** appeared on the "Dr. Phil Show" discussing ethical issues related to the birth of octuplets in California.

A Feb. 9 *Los Angeles Times* article quoted Alzheimer's expert **Lon Schneider** about a European study concluding that Zoloft and Lexapro are the most effective antidepressant drugs.

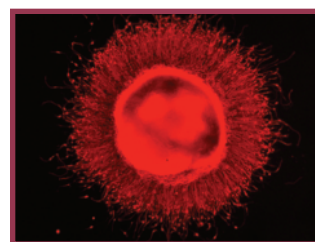
A Feb. 7 *La Opinion* article highlighted a recent community effort by the USC School of Dentistry's mobile clinic. The clinic was also featured in the *Ventura County Star*.

A Feb. 4 *Psychology Today* article quoted pharmacologist **Roger Clemens** about the trend towards healthier snack foods.

A Feb. 3 *Los Angeles Times* article quoted obesity researcher **Jaimie Davis** about how to keep weight off while on vacation.



Ernesto Barron and Dan Hong Zhu



Shelley Hough

**COLORFUL RESEARCH**—The winning images from the first California Institute for Regenerative Medicine stem cell photo contest included two images by members of the Health Sciences Campus. Above is an image of retinal pigment epithelial cells derived from human embryonic stem cells. The image was submitted by the lab of David Hinton, professor of pathology, neurosurgery and ophthalmology. Left is a neurosphere composed of neural precursor cells, an image was submitted by the lab of Martin Pera, professor of cell and neurobiology. These and other winning images are online at: [www.flickr.com/photos/cirm](http://www.flickr.com/photos/cirm).

## USC ophthalmologist wins national honor

The Maryland-based nonprofit Foundation Fighting Blindness recently honored Stephen J. Ryan, the Grace and Emery Beardsley Distinguished Chair of Ophthalmology at the Keck School of Medicine, for his contributions to the vision-impaired community.

The organization, which funds research to prevent, treat and cure blinding diseases and conditions, honored Ryan at its seventh annual "For the Love of Sight" Valentine's Party on Feb. 11 in Washington, D.C.

Ryan, who is also president of the Doheny Eye Institute and founding president of the National Alliance for Eye and Vision Research, received the foundation's Visionary Award for his work in the field of retinal diseases and ocular trauma.

Ryan accepted the award, praising the foundation for "the critical funding they provide to doctors and researchers. Through their continued efforts, I am hopeful that we will be capable of finding a cure for these devastating diseases in the near future."

The Foundation Fighting Blindness is the largest source of non-governmental funding for retinal degenerative disease research in the world. It paved the way for groundbreaking studies of gene therapy that has restored sight in dogs and now, in clinical trials, is restoring sight in humans.

Past "For the Love of Sight" events have raised almost \$2.5 million for the Foundation's mission.



Stephen J. Ryan

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