

USC celebrates \$60 million gift for Division of Hematology

By Jon Weiner and Ina Fried

USC officials yesterday announced a historic \$60 million gift for the Keck School of Medicine's division of hematology and the USC/Norris Comprehensive Cancer Center.

University President Steven B. Sample hailed the gift from the Jane Anne Nohl estate as one of the largest philanthropic donations ever designated to a hematology program and the sixth largest gift to USC.

"This gift will be used to unlock the mysteries of cancer of the blood and other blood disorders," Sample said. "This knowledge will lead to new and better therapies for treating these debilitating diseases."

Peter Jones, director of the USC/Norris Comprehensive Cancer Center, called the gift "one of the most exciting events that's ever happened" for the Cancer Center and for the Keck

School of Medicine.

The gift, which will support research in blood disorders and recruitment of outstanding physician researchers from around the country, was coordinated by Larry Kelly, a long-time friend of Nohl and her estate trustee. Nohl passed away earlier this year.

Nohl chose USC/Norris and the hematology division because of the outstanding care given to Kelly by Don Feinstein, professor of medicine at the Keck School of Medicine.

"When I came to Dr. Feinstein after I became ill, he really did save my life," said Kelly. "He took a look at me and did some tests. Jane knew I wasn't feeling well. She saw me after Dr. Feinstein treated me and was amazed. That's when she decided to direct the majority of her charity to the USC/Norris Comprehensive Cancer Center with

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From left, Keck School of Medicine Dean Carmen Puliafito, USC/Norris patient and Nohl estate trustee Larry Kelly and USC President Steven B. Sample unveil the \$60 million gift that will support the new Jane Anne Nohl Division of Hematology and Center for the Study of Blood Diseases.

Epigenetics may be at the root of some forms of male infertility, USC study says

By Jennifer Chan

USC researchers suggest epigenetics, or the way DNA is processed and expressed, may be the underlying cause of male infertility. The study was pub-

lished in the Dec. 12 issue of *Public Library of Science One*.

"For the majority of cases, the cause of the man's infertility is not well understood. This is the first report from

our knowledge that a broad epigenetic defect is associated with abnormal semen development," said Rebecca Sokol, professor of obstetrics and gynecology at the Keck School of Medicine.

"Based on our data, it is plausible to speculate that male infertility may be added to the growing list of adulthood diseases that have resulted from fetal origins."

In the United States, about 4 million married couples of child-bearing age are infertile and approximately 40 percent of the time, the infertile partner is the man.

In most cases, the cause of the male infertility is not known, but preliminary data suggest that genetics play a role. Changes in chromosomes and the genetic code have been well documented. Attention is now focused on epigenetic changes.

Epigenetic change, which is defined as any process that alters gene activity without changing the DNA sequence. Some of these epigenetic changes are inherited from one generation to the next.

The researchers studied semen samples collected by male members of couples attending an infertility clinic. Using highly specialized molecular biology techniques, the researchers studied the epigenetic state of DNA from each man's sperm.

They found that sperm DNA from men with low sperm counts or abnormal sperm had high levels of methylation, which is one of the ways the body regulates gene expression. However,

See **INFERTILITY**, page 2



THAT'S THE SPIRIT!—The Keck School of Medicine held its first student "Spirit Day" on Dec. 6, complete with In-N-Out burgers for students (above) hosted by Dean Carmen Puliafito and a quiz competition (far right) on topics of Trojan history and trivia. Puliafito (right) was on hand to answer questions from the audience.

Keck School plastic surgeons join international humanitarian effort

By Meghan Lewit

Eleven residents from the division of plastic and reconstructive surgery put their training into action last month when they traveled to sites around the world to treat children with facial deformities through the World Journey of Smiles initiative.

In November, 1,700 volunteers in 25 countries operated on nearly 4,200 children with cleft lips, palates and other facial deformities. The program was organized to commemorate the 25th anniversary of Operation Smile, a humanitarian organization that provides reconstructive surgery to children and young adults.

All the residents in the plastic surgery division participated in the initiative, making it the largest group of doctors from USC to ever participate in a this type of humanitarian mission, said Randy Sherman, professor and chief of plastic and reconstructive surgery at the

Keck School and chief medical officer for Operation Smile.

"It was a transformative experience for all them," he said. "It really awakened the residents to the possibility of doing this type of work throughout their careers."

The worldwide initiative involved volunteers from 43 different countries providing care at 40 different sites simultaneously.

Keck School residents assisted surgeons at a number of sites throughout Southeast Asia and Africa.

"As they are young, enthusiastic and idealistic, it is a great time to charge their imagination with this," Sherman said. "They can see how their skills help a population that would never receive care otherwise."

Keck School Residents who participated: Vijay Bindingnavale, Jegit Inciong, Anita Patel, Edward Ray, James Arteaga, Sharon Clancy, Mytien



Above, plastic surgery resident Mytien Goldberg interacts with a patient in Vietnam as part of the World Journey of Smiles initiative organized by Operation Smile.

Goldberg, Joe Carey, Morad Askari, Alex Campbell, Dung Nguyen
For more information on Operation

Smile and World Journey of Smiles, visit the organization's Web site at www.worldjourneyofsmiles.org.

INFERTILITY: Epigenetic sperm DNA changes may be a key factor

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DNA from normal sperm samples showed no abnormalities of methylation.

DNA methylation results from well known biochemical alterations that occur during epigenetic reprogramming, which is a normal physiologic process that occurs during embryonic development.

"Disturbance of epigenetic programming can result in abnormal gene activity or function, even if there is no change in DNA sequence," continues Sokol.

The epigenetic irregularity found in

these abnormal sperm samples was present in a high proportion of genes that were studied.

The results suggest that the underlying mechanism for these epigenetic changes may be improper erasure of DNA methylation during epigenetic reprogramming of the male germ line.

"If we can identify what causes these changes to the sperm DNA, then we might be able to prevent certain types of male infertility," Sokol said.

"This is particularly important because recent animal studies have suggested that epigenetics may have broader implications. Exposures to chemicals

as a fetus may lead to adult diseases. Perhaps such exposures may be causing the changes in the sperm DNA that we have identified. Studies to uncover a relationship between chemical exposures and alterations in sperm DNA should shed light on this," Sokol concluded.

"Widespread Epigenetic Abnormalities Suggest a Broad DNA Methylation Erasure Defect in Abnormal Human Sperm," Sabar Houshdaran, Victoria K. Cortessis, Kimberly Siegmund, Allen Yang, Peter W. Laird, Rebecca Z. Sokol. PLoS ONE. Dec. 12, 2007.

AN EYE TOWARD THE FUTURE—A French delegation met with Doheny Eye Institute (DEI) representatives on Dec. 7 to discuss how technology can help compensate for disabilities. Left, Stephen Ryan, DEI president and Grace and Emery Beardsley Chair in Ophthalmology, briefed the delegation, which included member of Parliament Bérengère Poletti (second from right), Daniel Constans (center), administrator counselor at the Parliamentary Office for the Evaluation of Scientific and Technological Choices and Mireille Guyader (center right), French consulate Science attaché in Los Angeles.



ETCETERA

Song Guo Zheng, assistant professor of rheumatology and immunology at the Keck School of Medicine, received the 2007 James R. Klinenberg M.D. Award at the annual conference of the Arthritis Foundation Southern California Chapter held on Dec. 5 in Beverly Hills.

The award recognizes the most outstanding scientist in arthritis research in Southern California. Zheng's work focuses on the potential of regulatory/suppressor cells in the treatment of autoimmune diseases and in the prevention of organ transplant rejection.

This year he also received the Dona Immunology Award from the Federation of Clinical Immunology Societies and the Freda Newton Memorial Fellow Award from Arthritis National Research Foundation.

Zheng was the only immunologist and rheumatologist who received the prestigious 2007 Outstanding Youth Scientist Award of Overseas Scientists given by the National Nature Science Foundation of China.

Keck School Dean Carmen Puliafito will host the Keck School's annual holiday breakfast for staff and faculty on Dec. 20, from 7:30-9 a.m. at the Plaza Café and Seaver Patio.

GIFT: Largest ever to a hematology division

Continued from page 1

very specific instructions that she wanted it to go to hematology for research.”

Feinstein is a professor of medicine in the division of hematology at the Keck School of Medicine. He received his medical degree from Stanford and served his residency at LAC+USC Medical Center and a fellowship at New York University. He is a pioneer in the area of blood-related cancer who has been at USC for more than 40 years.

A standing ovation for Feinstein interrupted Sample's remarks about three people—"a USC physician, his grateful patient and a visionary benefactor"—who made the announcement possible.

The gift will endow three chairs: one in honor of Larry Kelly and his wife, Janice; another in honor of Leslie Weiner, professor of neurology at the Keck School, who led Kelly to Feinstein; and the third in honor of professional nurse Maria Gonzales, who cared for Mrs. Nohl in her home for 13 years.

Also, the gift will re-establish the hematology division as "The Jane Anne Nohl Division of Hematology and Center for the Study of Blood Diseases" and provide for:

- The recruitment of three or four new "junior" faculty.
- The establishment of two Jane Anne Nohl post-doctoral two-year research fellowships.
- Programmatic and research support.
- Non-endowed funds to be used for immediate recruitment of faculty.

Feinstein lauded Kelly for his role in arranging for USC to benefit from Nohl's generosity.

"There's no way I can ever be able to thank Larry for directing this very generous gift from Jane Anne Nohl to the USC/Norris Comprehensive Cancer Center," he said. "This gift gives us a great opportunity to catapult our hematology division into national and international prominence by providing the resources for attracting new outstanding faculty and for the education and training of new clinical scientists. The result of all of this will be cutting-edge research, excellent teaching and superb patient care."

Referring to Feinstein, Keck School Dean Carmen Puliafito said, "One of the elements of greatness in a medical school is clinical excellence—at the heart of everything is still the clinician, the compassionate clinician."

Puliafito called the gift transformational "because it will truly change the

work that we do here by enhancing it, strengthening it, focusing it in new and meaningful ways as we continue our conquest of cancer."

USC's 50-year-old division of hematology is responsible for multiple clinical services at the Los Angeles County+USC Medical Center, the USC/Norris Comprehensive Cancer Center and USC University Hospital. USC faculty provide day-to-day care of severely ill patients with hematologic malignancies. The division is also responsible for consultation clinics as

well as the bone marrow/progenitor cell transplantation service at the USC/Norris Comprehensive Cancer Center and Hospital.

"This gift provides us with tremendous opportunities to significantly increase our faculty in hematology," Feinstein said. "Because of the resources we now have, we can potentially recruit the best people in the country and dramatically increase the breadth and depth of our clinical research."

In addition to supporting the division of hematology, the gift will establish an endowed research fund to be directed by Leslie Weiner, professor of neurology at the Keck School, for research of multiple sclerosis.

Jane Anne Nohl and her husband Louis were instrumental in land purchases in Southern California, including the Nohl Ranch near Irvine, where a freeway exit now

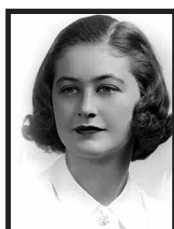
helps mark their legacy.

After her husband passed away, Mrs. Nohl continued her philanthropy by donating to many charities around the region. Prior to her passing away this past July, Nohl made the arrangements for the \$60 million gift with the help of Kelly.

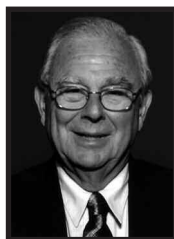
"The thing about Jane was that she was very caring," said Kelly. "The first thing she'd say is, 'How is your family?' She's probably the most humorous person I've ever met."

Since 1985, Kelly has run Lawrence Kelly & Associates, a money management firm based in Pasadena, Calif. A 1964 business school graduate of USC, he also spent many years in New York, where he was chair of Webster Management.

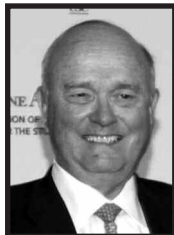
"The big thing that Jane wanted and I certainly wanted was obviously to make the Cancer Center one of the most renowned centers in the country," said Kelly. "I think by having this endowment, we will really give them the ability to hire the talent. We need a lot more Dr. Feinsteins around."



Jane Nohl



Don Feinstein



Larry Kelly



Melissa Durham, School of Pharmacy resident, helps Vahid Hadjian identify the best Medicare Part D benefit plan to meet his needs at an information session in Venice.

USC pharmacy students help navigate Medicare maze

By Kukla Vera

USC School of Pharmacy students and residents are participating in events for retirees from the University and from the community at large to help them choose the right prescription drug plan as the Dec. 31 Medicare Part D deadline to make choices draws near.

Enrollment in Medicare Part D, the prescription drug benefit for Medicare recipients, was first made available last year during this time period. Last year, the launch of the new plan was met by some chaos as pharmacists tried to help seniors pick plans and fill prescriptions.

"I was working last year as a pharmacy technician, prior to coming to pharmacy school, so I saw the confusion first hand," said Debrina Johnson, a first year Pharm.D. student. "Since many seniors are not Web-savvy, we're trying to fill the gap by reaching out to the community, doing individual, on-site Web sessions to help people enroll."

During a recent session at the Simms/Mann Health and Wellness Center at the Venice Family Clinic, Johnson spent more than 90 minutes with one senior, helping her find the plan that best meets her needs. With nearly 60 plans available in Los Angeles County, students are able to customize plans for individuals, making sure to select a plan that's best for each person's medications while minimizing deductibles and co-pays.

"Many people I have helped are confused by basic insurance terms so the drug benefit options make it even more complicated for them," said Melissa Durham, community pharmacy resident at the School of Pharmacy. "The Web enrollment option on the Medicare website provides a great comparison tool but many seniors still need someone to guide them through the process."

Charis Stiles of the Los Angeles Access to Benefits Coalition, who sponsored the Venice event on Dec. 6, said, "The USC students have so much knowledge on medications that it really helps facilitate the program. They also help us out with translating since so many of the students speak a second language."

The customized sessions provide seniors with a thorough analysis of their individual plans, giving each person a variety of choices and a look at how a plan will work for them. This allows seniors an accurate view of their monthly costs. Also, since plans and individual health needs change, it is important for seniors to evaluate their plans each year.

On Dec. 17 (1-3 p.m.), 18 (9 a.m.-3 p.m.) and 19 (9 a.m.-3 p.m.), an information and personalized plan finder assistance session will be held for USC retirees. Retired faculty and staff are welcome to this free, walk-in event. USC School of Pharmacy faculty, residents and students will be on hand to personally guide individuals through the Medicare Part D enrollment.

Interested retirees are encouraged to bring all medications, in actual bottles, to the session. Program location is the USC Davis School of Gerontology on UPC in GER 224. Appointments are not necessary, but Brad Williams, professor of clinical pharmacy at the School of Pharmacy, suggests making an appointment to avoid long waits. Sessions are one hour.

In addition to Williams, School of Pharmacy faculty involved in the project include Jeff Goad, associate professor and director of the project, and Edith Mirzaian, clinical instructor. For more information or to make an appointment, contact Williams at (323) 442-1559 or bradwill@usc.edu.

Geneticist Francis Collins discusses effects of 'astounding' results in genomics

By Ina Fried

A standing-room-only crowd heard physician-geneticist Francis S. Collins call for genetic literacy among the general public and even more so among healthcare providers.

At a Dec. 7 Health Sciences Campus lecture describing an acceleration of major advances in genomics, Collins, director of the National Human Genome Research Institute, said that such rapid progress carries with it the potential for misunderstanding.

"We're at an interesting juncture—part of me is delighted and part of me is horrified," he said, at developments such as a private company offering to sequence an individual's genome for a fee. He added that physicians are often not prepared to deal with questions that such services may generate among patients and Congress is not prepared to safeguard the applications of results from genetic testing.

"We're kind of jumping the gun," said Collins, who oversaw the Human Genome Project, the multidisciplinary, international effort to map and

sequence the 3 billion letters in the human DNA instruction book.

Human Genome Project scientists finished the sequence in April 2003, coinciding with the 50th anniversary of James Watson and Francis Crick's seminal publication describing the double helix structure of DNA.

Revolutionary technical advances and large-scale cooperative scientific efforts have led to rapid discoveries of genetic factors in such common diseases as diabetes, heart disease, cancer, asthma and even restless leg syndrome. Work that would have cost \$10 million just five years ago can now be done for less than \$1 million, and "the quality has actually gotten better," Collins said.

"The results have been nothing short of astounding," he said. "Most of these results were not expected. They provide whole new targets for treatment. Over the longer term, the major contribution of genomics will be drug development that is more effective."

Collins was hosted by Edward D. Crandall, chair of the Department of Medicine and chief of the division of



Jon Nailick

Francis S. Collins discusses the medical implications and practical uses of recent advances in genomics during his Dec. 7 lecture at the Health Sciences Campus.

pulmonary and critical care medicine at the Keck School of Medicine and holder of the Kenneth T. Norris Chair in Medicine. Collins delivered his lecture in conjunction with his acceptance of the 2007 Will Rogers Institute Prize for

Lung Research. The Toluca Lake-based philanthropic institute named him the inaugural recipient of the prize in honor of his career achievements, most notably his identification in 1989 of the gene that causes cystic fibrosis.

Calendar of Events

The HSC Calendar is online at www.usc.edu/hscalendar

Monday, Dec. 17

NOON. Fellows' Didactic Teaching Conference. "Mid-year Evaluation," Miroslaw J. Smogorzewski, USC. GNH Drs. Dining Rm. A & B. Info: (323) 226-7307

4 P.M. "Research in Progress," Roopinder Poonia, USC. GNH 10-340. Info: (323) 226-7307

Tuesday, Dec. 18

9 A.M. Neurology Grand Rounds. "Music in the Brain," Nicholas Tarlov, UCLA. ZNI 112. Info: (323) 442-7686

11:30 A.M. Psychiatry Grand Rounds. "Alcohol, Pharmacology and Medical Complications: Treatment of Alcohol Withdrawal and Maintenance," Akikur R. Mohammad and Graham Mitchell, USC. ZNI 112. Info: (323) 226-5572

Wednesday, Dec. 19

7 A.M. Medicine Grand Rounds. "Clostridium Difficile Colitis," Anna Anglim, USC. GNH 1645. Info: (323) 226-7591

NOON. Renal Grand Rounds Conference. "Renal Ultrasound, Emphasis on Doppler," Philip W.

Ralls, USC. GNH 6441. Info: (323) 226-7307

Wednesday, Dec. 26

7 A.M. Medicine Grand Rounds. "Prolactinoma," Jonathan LoPresti, USC. GNH 1645. Info: (323) 226-7591

Monday, Dec. 31

NOON. Fellows' Didactic Teaching Conference. "Epidemiology of Kidney Disease," Jeanie Park, USC. GNH Drs. Dining Rm A & B. 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. 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/

A Dec. 10 *Los Angeles Times* article quoted urologist **Yuichi Iwaki** about a proposal to eliminate about 750,000 green cards issued without expiration dates.

A Dec. 9 *Los Angeles Times* article quoted environmental health expert **James Guaderman** and featured a USC study showing that children living in areas with higher pollution had stunted lung development.

A Dec. 9 *Los Angeles Times* article quoted psychiatrist **H. Richard Lamb** about the rising number of mentally ill people who end up in jail.

A Dec. 7 *Chemistry World* article featured research led by pathologist **John Zhong** and colleagues who developed a new microfluidic processor that is designed to study mRNAs.

A Dec. 4 *Whittier Daily News* article featured the newly formed Southern California Stem Cell Scientific Collaboration, which includes researchers from USC and five other institutions.

SAVE THE DATE

Women's conference slated for April 19

USC will open its doors April 19 for an interactive and informative half-day conference presented by women for women. The program will include USC experts from various schools discussing issues related to women's health.

Attendees will choose from among 10 breakout sessions for interactive discussion on topics of interest.

The USC Health for Women conference will be held at USC's Davidson Conference Center. Registration fees will include continental breakfast, conference materials, lunch at Town and Gown and parking.

Online registration and event details will be available online January 20, 2008.

For more information, call the USC Health Sciences Public Relations and Marketing office at 323-442-2830.

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