USC opens groundbreaking epigenomics center

By Veronica Jauriqui

One of the first of its kind in the nation, the USC Epigenome Center officially opened its doors on April 11 with an inaugural symposium featuring national leaders in the burgeoning field of epigenetic research.

Approximately 100 students and scientists from USC and other research institutions attended the half-day conference hosted by USC Epigenome Center Director Peter Laird. The roster of speakers included leading researchers from the Salk Institute for Biological Studies, Harvard University the California Institute of Technology and UCLA, among others.

"Of all the rewards that come from being a part of a vibrant academic community," said Elizabeth Garrett, USC vice president for Academic Planning and Budget, "nothing is more rewarding than to see the diverse intellectual community work as an interdisciplinary team to extend the frontiers of human knowledge in a way that touches the lives of millions of people.

"Such is the possibility of the USC Epigenome Center," she said.

Housed in the ground floor of the Harlyne J. Norris Cancer Research Tower on USC’s Health Sciences Campus, the USC Epigenome Center is the first large-scale academic center dedicated to epigenomic research.

Epigenomics is the study of how DNA is packaged and modified in the cell without changing the sequences of the genes but in changing their availabilities to be turned on or off. In the field of cancer research, epigenomics holds tremendous promise in understanding how and why healthy cells can turn into cancerous ones. Such study could lead to new treatments for cancer as well as other diseases.

A $10 million gift from the Kenneth T. and Eileen L. Norris Foundation in October 2007 provided both the infrastructure and technology to enable USC researchers to join an international effort to map the human genome.
USC researchers associate risk of Hodgkin’s lymphoma with immune protein

By Jon Weiner

A long-term study of twins has led USC researchers to find potential links between Hodgkin’s lymphoma and levels of an immune response protein (interleukin-12). “We found that lower levels of the protein interleukin-12, involved in fighting intracellular infections, increases susceptibility to young adult Hodgkin’s lymphoma,” said Wendy Cozen, associate professor of preventive medicine at the Keck School of Medicine. Cozen is lead author on the study, “Interleukin-2, interleukin-12, and interferon-gamma levels and risk of young adult Hodgkin’s lymphoma,” published in the April 1 issue of the journal, Blood.

The work is based on patient populations in the International Twin Study and California Twin Program, unique registries of twin pairs developed and maintained in the Keck School of Medicine’s Department of Preventive Medicine. Hodgkin’s lymphoma is the most common type of cancer among young women and the second most common type among young men. But while the five-year survival rate is high compared to that of other cancers, the treatment may cause complications later in life.

According to Cozen, this study, along with a previous one her group published in 2007, provides the first clear evidence that individual differences in immune response (via cytokine secretion) may lead to the development of Hodgkin’s lymphoma. “We previously showed that there is a substantial genetic risk for adolescent and young adult Hodgkin’s lymphoma, and another immune response protein (interleukin-6) was related to risk,” she said. “We are pursuing the hypothesis that variations in genes control the secretion of these immune response proteins (cytokines) predicting Hodgkin’s lymphoma risk.”

The study is accompanied by an editorial, “Hodgkin’s twins: double good, double trouble,” by Richard F. Ambinder of the Johns Hopkins School of Medicine. Eventually, based on the group’s current work, researchers may be able to develop novel treatments to correct the abnormal immune response, offering alternatives to current therapy.

Cozen and her group are conducting an expanded study among adolescent and young adult Hodgkin’s lymphoma patients and their parents in Los Angeles. The group is studying these genes and others that control the immune response in hopes of confirming their previous results and to further define the inherited patterns that explain the genetic part of the risk. Cozen adds that colleagues from the National Cancer Institute and Washington University in St. Louis also will be studying early exposures to infectious agents such as bacteria and viruses, which may interact with the immune system leading to Hodgkin’s lymphoma.

Funding for this research came from the National Cancer Institute.


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STEIN: Widely respected USC urologist remembered as gifted surgeon, leader

Continued from page 1

Stein’s work has included research that identified a molecular marker that predicts which bladder cancer patients would likely face remission and which would have relapses.

He served on the editorial boards of four major urologic journals including *Urology* and the *Journal of Urology*. Stein was co-director of the Genitourinary Program at the USC/Norris Comprehensive Cancer Center and was known for his compassion with patients.

“Receiving my diagnosis was the hardest moment of my life,” said Paul Scott, a former patient of Stein’s. “He not only saved my life but gave me full assurance that I would live a long and healthy life. It’s now been more than six years.”

Stein’s reputation led to his inclusion in the list of “America’s Top Doctors” for every year since 2005. In 2003, he was the recipient of the Young Investigator Award given by the Society of Urology Oncology.

“Dr. Stein was a brilliant surgeon and dedicated leader in the Norris Comprehensive Cancer Center,” said Stein’s wife, Randi Goress Stein. “He was one of the most compassionate and skilled physicians I have ever met.”

Born in San Francisco in 1962, Stein grew up in Walnut Creek, Calif., and was a graduate of the University of Notre Dame and the Loyola University Stritch School of Medicine. He completed his urology residency under the direction of Donald Skinner at USC and spent his entire clinical career at the Keck School of Medicine where he rose to the rank of professor of urology.

“I consider John Stein one of the best surgeons I have ever trained, an extension of my own hands, someone very special, a son and member of my family,” said Skinner.

A nationally known urologic oncologist, Stein was appointed to committees of the American Urological Association, the Bladder Cancer Advocacy Network and was secretary-elect of the American Urologic Association, Western Section.

A prominent researcher, he also received several grants from the National Institutes of Health and National Cancer Institute for his bladder cancer research and contributed more than 150 publications to prominent urologic journals.

He was a passionate basketball player and despite working at USC, continued as a Notre Dame fan.

“Dr. Stein was a brilliant surgeon and dedicated leader in the Norris Comprehensive Cancer Center. He was one of the most compassionate and skilled physicians I have ever met.”

— Peter Jones, director, USC/Norris Cancer Center

But first and foremost in his mind was always his family.

“He was our rock, the foundation of our family, our devoted and loyal support for all of our endeavors and each of our own biggest fan. His presence lifted any situation, from ordinary to extraordinary or from special to extra special,” said Randi Stein, his wife of 18 years.

“He brought us peace and contentment knowing he was always with us, regardless of where he happened to physically be on any given day. We knew he was always thinking of us first and foremost.”

A Pasadena resident, Stein was a dedicated husband and father. He leaves behind his wife, Randi Goress Stein, and their four children, John, Joseph, Eleanor and Louisa May. He is survived by his parents, Robert and Helen Mary Stein of Walnut Creek, Calif., by his two brothers, Rob Stein of London, England, and Tom Stein and family of Riverside, Conn., as well as many members of the Goress family.

The Keck School will hold a memorial service in the near future.

Donations can be made to the “John Stein Children’s Trust Fund” c/o UBS Financial Services Inc., Operations Dept., 2000 Avenue of the Stars, 7th Floor North, Los Angeles, 90067, or the “John P. Stein Chair in Urology” c/o USC Department of Urology, 1441 Eastlake Ave., Los Angeles, 90033.

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

As Trojans, we share a common goal and work together to make USC the best it can be. The USC Credit Union shares that family pride and always goes out of their way to assist you. When I decided to refinance my home loan, I appreciated their competitive rates and helpful service.
An April 15 *Los Angeles Times* article reported that Tenet Healthcare Corp. and USC have signed a non-binding letter of intent for USC to acquire USCh University Hospital and USC Norris Cancer Hospital. Forbes Online, CNN Money, *Los Angeles Business Journal* and the Associated Press also covered the story.

On April 14, the *Wall Street Journal* ran an op-ed by author and pediatric psychiatrist Jonathan Kellerman on health insurance.

An April 14 *Los Angeles Times* article quoted liver transplant expert Andrew Stolz in an article about state funded liver transplants for illegal immigrants. KTLA-TV Channel 5 also covered the story.

On April 10, KABC-TV Channel 7 interviewed environmental health expert Joel Hay on how cholesterol-targeting drug makers handled their clinical trials.

An April 10 *Investor's Business Daily* article quoted pharmacoeconomics expert Joel Hay on how cholesterol-targeting drug makers handled their clinical trials.

An April 8 *Los Angeles Times* article quoted obesity expert Richard Bergman about a study looking at the association between abdominal fat and mortality.