USC continues leading the charge in the 40-year ‘war on cancer’

By Leslie Ridgeway
On Dec. 23, 1971, the National Cancer Act was signed into law, strengthening the National Cancer Institute (NCI) and signaling the start of what has come to be known as the “war on cancer.” The USC Norris Comprehensive Cancer Center, among the more than 40 comprehensive cancer centers built throughout the United States as a result of the act, has logged many victories in that war. The center, named as one of the first eight comprehensive cancer centers, was formally dedicated in February 1983, and since then has been the home of many discoveries that have saved hundreds of lives.

“The fact that we’re still in this war after 40 years indicates how difficult the battle is,” said Stephen Gruber, director of the USC Norris Comprehensive Cancer Center. “But by looking at what has been accomplished by our faculty alone, and talking to the patients who have been personally affected by their discoveries, you see why no one is giving up. Looking back on the successes encourages us to renew our commitment to ‘Fight On.’”

Following are examples of the many fronts on which the battle has been waged by Keck School of Medicine of USC faculty.

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The USC Norris Comprehensive Cancer Center

—Stephen Gruber, director of the USC Norris Comprehensive Cancer Center

Evaluation and Treatment Clinic sees success, growth in its second year

By Amy E. Hamaker
Visitors to Keck Hospital of USC might not immediately notice the Evaluation and Treatment Clinic, tucked away on the first floor of the Norris Inpatient Tower. Yet its importance to USC physicians and patients can’t be overstated.

Opened on Aug. 14, 2009, the ETC serves as a 24-hour ambulatory care center where established, private patients of USC providers go for after-hours care. Its infrastructure was developed from the ground up by a dedicated committee of hospital administrators and physicians, led by Fred Weaver, chief of vascular surgery at the Keck School of Medicine of USC.

Prior to the ETC, there was no place for a patient to be seen by his or her physician for an unscheduled clinic visit, for an unanticipated problem following discharge from the hospital or after hours,” said Weaver, who also serves as the ETC’s medical director.

“Patients who come to the ETC get personalized attention by their physician and nursing staff, and 30 to 40 percent of ETC patients end up being admitted for additional evaluation and care. The whole system allows us to remain the primary deliverers of care to our patients.”

Currently, the ETC includes two patient exam rooms, a waiting area, a consultation area, a nursing area and an adjacent admitting space. All nurses work in pairs of one or two registered nurses and one licensed vocational nurse to closely screen each patient.

Although the ETC is technically a clinic, its function over the past two years is somewhat different from most clinics. “Patients seen in the clinic are all cared for by one of the physicians of USC. They often have complicated and extensive medical histories that require 24/7 availability. The ETC allows us to deliver timely and personalized care,” said Yolene Casagrande, clinical and research manager for Norris Cancer

The Evaluation and Treatment Clinic—staffed by those pictured above—serves established, private patients of USC providers. The clinic helps provide continuity of care for patients and offers a clinic site for physicians to evaluate their patients after hours.

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Keck Hospital of USC party for lung transplant patients inspires

By Tania Chatila

Before Dec. 6, the only other patients Bridgette Pozo had met were patients like herself—people waiting for lung transplants. But after a night celebrating the holiday season with the CT Transplant Support Group, Pozo gained a room full of friends with some very inspiring stories.

“I’ve seen so many people who need new lungs, but I’ve never been around so many people who have actually received them,” said Pozo, 27. “It makes me think if it happened for them, it will happen for me.”

Pozo was one of about 75 patients, relatives and Keck Hospital of USC staff members who attended the annual party recognizing patients of the lung transplant program and offering support for transplant recipients and those still on waiting lists.

“It’s like a second family,” said 31-year-old Miranda Lopez, who just celebrated the two-year anniversary of her double lung transplant. “When I walk into this place, it’s like I’m walking into my second home.”

Lopez—who was married in July after her husband proposed to her inside her Keck Hospital of USC 5 North room—is still fighting some scarring on her new set of lungs. But her outlook on life is much different today than pre-transplant.

“Before a transplant, you are making your will and thinking about all the things you are not going to get to see your kids do,” she said. “You’re coming to terms with that and at the same time, praying for a miracle. Now, I look at my life so much differently. I have a house, my husband and my kids. And I know I have some of the best doctors on my side.”

For Pozo, who had never attended a support group meeting before, the experience of meeting with and hearing from other survivors was uplifting. “Twenty to 30 years ago, they weren’t doing the things they are doing now in medicine,” she said. “It’s really nice to hear these success stories.”

JONES: ‘I’m stepping aside, not stepping down’

Continued from page 1

Sentiment about Jones, and cited his years of dedication to the cancer center.

Peter Laird, associate professor of surgery, biochemistry and molecular biology at the Keck School and director of the Epigenome Center, thanked Jones for his many years of “leadership, guidance, collegiality and friendship,” and talked about Jones’ role as a mentor and role model.

He added, “From the beginning it was clear to me that Peter was not only a really terrific scientist, but also a person with a tremendous integrity,” he said. “He’s both incredibly supportive and always demanding of the highest standards of excellence in science.”

Yves DeClerck, professor of pediatrics, biochemistry, and molecular biology at the Keck School, spoke for the community at Keck-affiliated Children’s Hospital Los Angeles, noting that the CHLA community had always felt welcome at the cancer center under Jones’ direction.

Donald Skinner, emeritus professor of urology at the Keck School, cited Jones’ collaboration with the Urologic Cancer Research Laboratory as “the start of what we now recognize as translational research. His productivity since becoming head of the cancer center and his recruitment of basic scientists has really led to its prominence.”

In addition, Los Angeles Councilman Tom LaBonge was on hand to present a commendation from the city to Jones, noting that his wife had been cared for at the Norris Cancer Center. Jones’ family was introduced, and he was presented with an inscribed Paul Revere silver bowl by Pulaifito.

“It’s important to emphasize that I’m stepping aside, not stepping down,” said Jones. “I feel very blessed that I was able to serve as your leader for so long, and I think it’s important that we have a terrific new leader in Stephen Gruber.”

Jones reported feeling ambivalent about his move from director back to the research lab. “I have enjoyed being the cancer center director very much, it’s been the most fulfilling thing that you can imagine,” he said. “However, when I look in the mirror in the morning, I see a scientist, and I’m very excited about that.”

The weekly

Next Issue: Jan. 13

The weekly is published for the faculty, staff, students, volunteers and visitors in the University of Southern California’s Health Sciences Campus by the Health Sciences Public Relations and Marketing office. Comments, suggestions and story ideas are welcome. Permission to reprint articles with attribution is freely given.

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Keck School luncheon underscores importance of scholarships

By Imelda Valenzuela

The day he received his acceptance letter from the Keck School of Medicine of USC, Michael Leatherwood, from left, Nancy Alba Mullanen, senior program officer at UniHealth Foundation, and Keck School student Cianna Leatherwood, a UniHealth Foundation Scholar who served as the scholarship luncheon speaker.

The Keck School luncheon underscores the importance of scholarships.

Clinical and lab-based advances help transform cancer treatments

• Over the past 20 years, a team led by Debu Tripathy, a professor of medicine and prostate cancer, identified novel pathways associated with tumor development and tumor progression. This discovery has influenced drug design and clinical trial development and enabled a shift in the paradigm for personalized therapy.

• Important changes in surgical techniques for bladder cancer patients were developed by USC faculty research that dramatically enhanced the patients’ survival. Improving on the Kock pouch, a form of continent urinary diversion following removal of a cancerous bladder (surgery), a team led by Emeritus professor Donald Skinner, former chair of the Catherine and Joseph Aresty Department of Urology, developed the orthotopic form of continence diverted in 1990. This enabled men and women to void naturally through their urethras. In the 1990s, Skinner and colleagues developed the T-pouch modification that prevents the backup of stored urine to the kidneys (reflux). This surgical technique eliminates the need for an external ostomy bag.

• In 2008, a team led by Michael Lieber, professor of pathology, biochemistry and molecular biology, molecular microbiology and biological sciences, defined the key mechanisms for DNA changes in lymphoma. This discovery provided insight into a 25-year-old mystery about how chromosomal translocations occur, opening the door for future research on human lymphoma. Chromosomal translocations are cancers that occur when two chromosomes break and the fragments are reassembled in an exchange that sometimes goes awry, resulting in cancer.

ETC: Visits to the clinic jump by 82 percent in its second year

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By Beth Dunham

A new study in Nature Medicine describes how different types of immune system T-cells alternately discourage and encourage stem cells to regrow bone and tissue, bringing into sharp focus the importance of the transplant recipient’s immune system in stem cell-based regeneration. The study, conducted at the Center for Craniofacial Molecular Biology at the Ostrow School of Dentistry of USC, examined how mice with bone defects responded to bone marrow mesenchymal stem cell (BM-MSC)-mediated bone regeneration. Under normal conditions, the mice’s T-cells produced an inflammatory response and triggered the creation of cytokines interferon (INF)-gamma and tumor necrosis factor (TNF)-alpha. These attacked and killed the stem cells, preventing the production of new bone. “Normally, T-cells protect us from infection,” said Songtao Shi, associate professor of dentistry and corresponding author for the study. “but they can also block healthy regeneration from happening.” However, when the mice were given infusions of regulatory T-cells (Tregs), the levels of the interfering INF-gamma and TNF-alpha decreased, increasing the rate of bone regrowth and defect repair. Administering the anti-inflammatory drug aspirin at the site of the bone defect also increased the rate at which the BM-MSCs were able to regrow bone.

Postdoctoral research associate and lead author Yi Liu said the findings illustrate the previously unrecognized role of T-cells in tissue regeneration. They also highlight the need for scientists exploring the possibilities of stem cell-based regeneration to shift their focus to the immune system, she added. “Based on what we’ve found, this should be the direction of more research in the future,” Liu said.

Terry Kelly

Of the transplant recipient’s sharp focus the importance of stem cells to regrow bone and encourage different types of immune cells into a drawing for a $25 USC Bookstore gift card.

By Sara Reeve

For young researchers embarking on an academic career, securing that first major grant can be a daunting challenge. For postdoctoral student Terry Kelly, that is one challenge she has already met. Kelly was awarded a Pathway to Independence Award (K99/R00) from the National Cancer Institute to support her transition to an independent research career.

The award provides Kelly with five years of funding support—two years of limited mentorship, and three years of support to be taken to her first academic position. “This award helps ease the transition from post doc to faculty positions,” said Kelly. “It can be an abrupt change with no transitional period, otherwise. It allows you a touch of independence before you are immersed into the administrative task of running a lab in addition to conducting research. The most difficult bottleneck is getting that first faculty position—this helps get that first position.”

Peter Jones, former director of the USC Norris Comprehensive Cancer Center and distinguished professor of urology and biochemistry and molecular biology at the Keck School of Medicine, will provide limited mentorship for the first two years of Kelly’s grant.

“These awards are very competitive and it’s quite an honor to receive one,” said Jones. “But what it does is give her two more years here in a reduced mentorship arrangement with me—I help her, but she has much more freedom to do her own work—thus allowing her to establish her own credentials in the field. And then of course it gives her a tremendously strong competitive advantage for other positions because, if she were to be offered a job somewhere else, they would see that she already had three years of funding. So it’s really an incredible announcement.”

Kelly, who received her doctorate in neuroscience at UCLA and has pursued postdoctoral training in epigenetics in Jones’s lab, will focus her research on the epigenetics of brain tumors, which she hopes may point the way toward new treatments.

“It is very rewarding to know that I am asking interesting questions about epigenetic changes evident in brain tumors,” said Kelly. “Someone agrees that what I want to do with my life is interesting and worth it.”

Calendar of Events

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

Friday, Dec. 23


Tuesday, Jan. 10, and Wednesday, Jan. 11

4 p.m. USC Office of Federal Relations Workshops on Navigating Federal Grant Landscapes. “What’s With Washington? Your Roadmap to Federal Funding in a Challenging Fiscal Environment” on Tuesday, Jan. 10 and Wednesday, Jan. 11, on the Health Sciences and University Park Campuses, respectively. Presenters from Washington will discuss the outlook for a wide spectrum of federal funding agencies in 2012.

Tuesday, January 24

Noon. Cancer Center Grand Rounds. “State of the Cancer Center.” Stephen Graham, USC. NB1 Anesly Auditorium. Info: (323) 365-0861

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) 442-9382, or email to eblauwe@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.

Take The Weekly readership survey

To make The Weekly more responsive, useful and informative, we are conducting an online readership survey through mid-January. We will compile the survey results and report back in the new year with a story on your feedback, as well as on any changes to this publication that we feel are appropriate based on survey responses. Please take five minutes to complete the survey at: https://www.surveymonkey.com/eh/theweekly. Respondents will be entered into a drawing for a $25 USC Bookstore gift card.