Nobel Laureate discusses key stem cell work

By Josh Grossberg

Cells can be stubborn things. A skin cell resists changing into a liver cell, and a heart cell wants to remain a heart cell.

But with the right kind of manipulation, they can be changed—a skin cell can turn into a liver cell or even a pulsing heart cell, Nobel Laureate Sir John Gurdon told a crowd of students, faculty and staff at a talk on May 16 in the Aresty Auditorium.

“The process of cell differentiation is remarkably stable,” Gurdon said. “Very rarely do cells of one kind switch into another kind. We don’t have skin in our brain or liver in our muscles. Nevertheless, it can happen.”

Making it happen is what earned Gurdon the 2012 Nobel Prize in Physiology or Medicine. In the early 1960s, he was able to replace the immature nucleus in a frog egg cell with the nucleus from a mature intestinal cell. The modified egg developed into a normal frog with the DNA of the mature cells.

In his talk, “Nuclear Transplantation to Prospects of Cell Replacement,” Gurdon talked about the advances made in the areas of cloning and nuclear transplantation since his discovery that mature cells can be reprogrammed to develop into different kinds of tissue.

His pioneering work continues to reverberate in the world of science. Although he did not mention it, Gurdon’s talk came to know the family over the course of the boy’s treatment. The initial news was not good, and the family was offered the boy from his respirator. But they refused, deciding instead to hope for the best. Ross lost touch with the family, but seven years later received a telephone call. On the other end was the young boy, who was then 9.

“I was talking to a miracle,” Ross told the audience. And then Ross held up a photo. It was the boy at his high school graduation.

“Ross said the boy then went on to graduate from college. Ross

See GURDON, page 3

HSC celebrates as graduates step up to make their mark

Program offers real-world training for aspiring health care workers

By Josh Grossberg

Ariel Bodden always wanted to be a nurse, but there were hurdles to overcome: She didn’t graduate from high school until she was nearly 20 because she was pushed back a grade when she emigrated from Belize. And, of course, advanced educations do not come cheap.

But thanks to her own determination and a new program that offers students real-life hospital training, Bodden is well on her way to a fulfilling career in health care.

The program is called the USC Family of Schools Concurrent Enrollment Initiative, and it is an offshoot of the Neighborhood Academic Initiative. Targeted to low-income, disadvantaged, first-generation students, the program gives high-achieving students the chance to learn valuable skills in a real-world setting at Keck Medical Center of USC.

Bodden was in the first class of students to participate. While the students at Foshay Learning Center—a member of the university’s Family of Schools—took their regular classes during the week, they also had intensive learning experience.

See TRAINING, page 3

Nobel Laureate Sir John Gurdon lectures on stem cells on May 16 at Aresty Auditorium, the day after scientists announced that for the first time they were able to transform human skin cells into embryonic stem cells—a breakthrough that links directly back to Gurdon’s original experiments.
Harlyne J. Norris receives Elaine Stevely Hoffman Award

By Josh Grossberg

For her and her family’s decades-long commitment to health care at USC, Harlyne J. Norris received the Elaine Stevely Hoffman Award during commencement ceremonies for the Keck School of Medicine of USC, held on May 18 at the Shrine Auditorium.

Before she accepted the honor, Keck School Dean Carmen A. Puliafito thanked her for her “longstanding contribution and unwavering dedication to the Keck School of Medicine and its people.”

“She serves as a trusted adviser to the president of the university on health care matters,” he said.

The honor comes as the USC Norris Comprehensive Cancer Center celebrates its 40th anniversary. The cancer center is part of the Keck School.

“The Norris relationship with the USC Norris Comprehensive Cancer Center goes back to a lead gift that her husband, Kenneth Norris Jr., made to the center,” Puliafito said. A trustee and past chairman of the Kenneth T. and Eileen L. Norris Foundation, Harlyne Norris is a renowned medical benefactor.

Through the Norris Foundation, the Norris family has donated nearly $200 million to USC. The family’s legacy can be seen across both the Health Sciences and University Park campuses—from the USC Norris Cancer Hospital and Norris Medical Library to the Norris Cinema Theater and Norris Dental Science Center.

In 2012, the foundation made a $15 million gift to support construction of the Norris Healthcare Consultation Center, which broke ground on the Health Sciences campus earlier in the month. The building will house multidisciplinary clinics focused on cancer care.

She was awarded an honorary Doctor of Humane Letters from USC in 2008. She has served on the Board of Trustees since 2000.

Norris is also known for her many charitable activities dedicated to children and the arts.

The award is named in memory of Elaine Stevely Hoffman, a Los Angeles philanthropist who contributed to building a research center on the USC Health Sciences campus.

Training: Program targets high-achieving students seeking careers in health professions

Continued from Page 1

sessions every Saturday and Sunday at Los Angeles City College.

In March, five of the students moved on to get some hands-on training at Keck Medical Center of USC, with Bodden working in oncology. “They work 20 hours a week for three months and are also enrolled at college.

And it’s all 100 percent free. Not bad when similar courses can cost thousands of dollars. While it was anything but easy, the allure of a free education made it all worthwhile.

“I didn’t have to pay for anything—shoes, books,” Bodden said. “They even provide transportation.”

The program became a reality last year when Theda Douglas, cancer outreach initiatives, said Community Benefit and Outreach Administrative Director Sevanne Sarks.

“We have certain priorities we’re trying to meet in the community,” she said. “We’re trying to give them as much experience as possible.”

Bodden’s class was something of a test. If the students didn’t do well, the program would face an uncertain future. But Bodden is now tutoring the second group of kids starting their studies.

The program makes the students more attractive when it comes time to enroll in college, said Alicia Syres, director of volunteer services at USC Norris Cancer Hospital.

“Grades are wonderful, but (colleagues) are looking at the whole person now,” she said. “Have they gone out of their way to help someone else? They want more than numbers on paper. They want the whole package.”

In fact, she already puts her skills to use. To make extra money, she spends weekends tending to an elderly woman with dementia.

“Sometimes, we’re trying to meet in the middle. We have certain priorities so they can go to a career,” Pullaﬁtology said. “It’s a way to give students the experience they need to succeed.”

The USC Neighborhood Outreach, which is funded by the annual Good Neighbors Campaign.

“We took high school students who are very serious about their career and wanted to be in the profession,” Douglas said. “We took them 16 weeks, every Saturday and Sunday. Their parents had to have them here at 6 a.m. We are thrilled to see the dedication of both parents and students in this endeavor. It is programs like this that provide a meaningful career path and give students a glimpse of what they can become.”

The Community Benefit and Outreach Department at Keck Medical Center of USC was instrumental in bringing the program to the Health Sciences campus. Providing medical education to minority students is one of the department’s focused outreach initiatives, said Community Benefit and Outreach Administrative Director Sevanne Sarks.

“We have certain priorities we’re trying to meet in the community,” she said. “We’re trying to give them as much experience as possible.”

Bodden’s class was something of a test. If the students didn’t do well, the program would face an uncertain future. But Bodden is now tutoring the second group of kids starting their studies.

The program makes the students more attractive when it comes time to enroll in college, said Alicia Syres, director of volunteer services at USC Norris Cancer Hospital. “Grades are wonderful, but (colleagues) are looking at the whole person now,” she said. “Have they gone out of their way to help someone else? They want more than numbers on paper. They want the whole package.”

Although she still has a way to go before reaching her ultimate goal of becoming a nurse practitioner, Bodden has already received vocational certification as a nurse practitioner and a home health aide.

Next Issue: June 7

The USC Norris study validates way to improve breast cancer survival

A new study from the USC Norris Comprehensive Cancer Center shows targeting both hormone receptors (HRs) and human epidermal growth factor receptor 2 (HER2) in first-line treatment of metastatic breast cancer patients significantly increased overall survival times.

A team of researchers led by Deb Tchipany, professor of medicine at the Keck School of Medicine of USC, looked at data provided by RegistHER, a prospective, observational study of 1,023 newly diagnosed HER2-positive metastatic breast cancer patients.

They found that hormonal therapy given with the anti-HER2 antibody trastuzumab (Herceptin) chemotherapy is associated with improved survival and progression-free survival outcomes, compared to no hormonal therapy.

The study, titled “First-Line Treatment Patterns and Clinical Outcomes in Patients with HER2-Positive and Hormone Receptor-Positive Metastatic Breast Cancer from RegistHER,” appears in The Oncologist, the peer-reviewed journal of the Society for Translational Oncology.

“This study can aid in significantly improving treatment planning and shared decision-making with patients,” Tchipany said. “It provides a platform for considering hormonal therapy as a standard component of treatment regimens for patients with HER2-positive and hormone receptor-positive metastatic breast cancer.”

Using data from RegistHER, a multicenter, prospective cohort registry study, the research team determined that the targeting of both hormone and HER2 receptors is associated with better outcomes compared to HER2-based therapy alone. HER2-positive breast cancer, which accounts for about 25 percent of breast cancers diagnosed, tends to be more aggressive than other types of breast cancer because it promotes the growth of cancer cells. About half of HER2-positive breast cancer cases are also estrogen receptor-positive. Trastuzumab specifically targets HER2 cells and is the standard of care for patients with HER2-positive breast cancer, while HR-positive breast cancer is treated with hormonal therapy designed to interfere with HR signaling.
Nobel Laureate Sir John Gurdon visited the USC Health Science Campus on May 16. After presenting a public lecture, he was interviewed by Madeline Andrews, a Ph.D. student who conducts stem cell research.

For the full interview, visit usc.edu/13t.

Q: What are your hopes for the next generation of scientists? What are the big questions that you anticipate will be answered?

A: In the field where I work, I think cell replacement is surely going to work in some cases. Perhaps it’ll work in many others too, as we find ways of doing things better. In the talk I gave this morning, I mentioned that when you have beating cardiomyocytes [heart muscle cells], they don’t integrate properly into the heart. I’m sure that will be solvable, and that will make a big difference. So, when you have cells or tissues working well in the laboratory, you can then transplant them into a host and even the brain. That would be fantastic if one could do that.

A May 13 article in The Huffington Post cited a report by Victoria Cortessis, associate professor of preventive medicine at the Keck School of Medicine, and former associate dean of admissions and educational affairs at the Keck School. “I’m so proud of him. He’s going to be one terrific doctor.” The column also appeared in the Los Angeles Times.

A May 10 article in The Weekly Newsmakers featured research led by Cheng-Ming Choung, professor of pathology at the Keck School of Medicine, and colleagues from the Sark Institute of Biological Studies and University of California, Irvine, finding that hair loss from radiation therapy may be reduced based on a study by Qi-Long Ying, professor of cell and neurobiology at the Keck School, looking into the potential of using embryonic stem cells for future medical breakthroughs.

A May 16 column in Los Angeles Daily News features the story of Jaime Gonzalez, a recent M.D./MPH graduate of the Keck School of Medicine whose parents were told he’d never see his first birthday. "He has a resilience and inner strength I’ve rarely seen," said Erin Quam, professor of family medicine and Stem Cell Research at USC, and Qi-Long Ying, associate professor of cell and neurobiology at the Keck School, looking into the potential of using embryonic stem cells for future medical breakthroughs.

A May 18 article in the Los Angeles Times featured the Laboratory of Neuro Imaging, which will move to the Keck School of Medicine next fall. The lab includes professors Arthur Toga, Paul Thompson and more than 100 faculty, researchers and staff, including graduate students, postdoctoral fellows and others. Los Angeles Magazine also covered the story.

A May 13 article in The Weekly Newsmakers featured research led by Andrew McMahon, Provost Professor and director of the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC, and Qiang-Ling Ying, associate professor of cell and neurobiology at the Keck School, looking into the potential of using embryonic stem cells for future medical breakthroughs.

A May 18 article in the Los Angeles Times featured the Laboratory of Neuro Imaging, which will move to the Keck School of Medicine next fall. The lab includes professors Arthur Toga, Paul Thompson and more than 100 faculty, researchers and staff, including graduate students, postdoctoral fellows and others. Los Angeles Magazine also covered the story.

A May 18 article in the Los Angeles Times featured the Laboratory of Neuro Imaging, which will move to the Keck School of Medicine next fall. The lab includes professors Arthur Toga, Paul Thompson and more than 100 faculty, researchers and staff, including graduate students, postdoctoral fellows and others. Los Angeles Magazine also covered the story.
COMMENCEMENT: Newest graduates celebrate with friends and family

Continued from page 1

used the story to ask the graduates to imagine things beyond science: “This craft that you’ve chosen, never forget that it’s about healing and there is an element of that craft of healing that has to do with faith—faith in the power of unseen evidence,” he said. “It’s a reminder about those things that you just can’t measure. You can’t measure faith, attitude and courage.”

In his address, Keck School Dean Carmen A. Puliafito recalled how the Boston Marathon bombing occurred just weeks after faculty, staff and students from the Keck School and Keck Medical Center of USC volunteered at the Los Angeles Marathon. And while the event was a national tragedy, it was a time physicians could feel proud for rushing to the scene and putting themselves in danger to help the injured. “Just a few seconds after the blast, we saw true heroism everywhere,” he said. “And physicians led the way. It was a great moment in the history of American medicine and something every one of us in the medical profession can be proud of.”

He then urged the class to take on the mantle of leadership in their careers. “In moments of crises large and small, both communities and individuals look to physicians to lead the way toward healing,” he said. “It may be on the battlefield. It may be on the sidewalk. You know you’ll be ready for the difficult times ahead with both courage and compassion.”

Elizabeth Garret, USC provost and senior vice president for academic affairs told the graduates that they possess knowledge that took previous doctors an entire career to master. And she urged them to put their expertise to good use. “Your passion to help and comfort others is not just a passion anymore—it is also your responsibility,” she said. “And then it was time for some fun. Student speaker Nima Taheri seamlessly mixed pop-culture references with experiences from school for a comedy routine that had the audience laughing.

“I’d like to take this time to welcome our friends, our family and our loan officers for coming out to support us at this very special time,” he said. “This is to you, Wells Fargo.”

Taheri, who transferred to the Keck School from UCLA, had some advice for his colleagues. “Don’t be shy to tell everyone you want to USC,” he said. “But if you get caught not washing your hands and spreading drug-resistant bacteria to unsuspecting patients, that’s a good time to tell everyone you want to UCLA.”

Other ceremonies were also held throughout the week.

The Keck School’s Master of Science, Master of Public Health and Ph.D. students walked on May 15 in Pappas Quad.

On May 17, the Ostrow School of Dentistry of USC awarded 173 D.D.S. degrees, 32 bachelor's degrees in dental hygiene, 46 advanced specialty certificates and one master's degree in craniofacial biology. The USC School of Pharmacy awarded 181 Pharm.D. degrees, 20 Ph.D. degrees and one Doctor of Regulatory Science degree. Additionally, 31 graduates were awarded master's degrees, and 38 pharmacists completed their residency training.

On May 17, the Division of Biokinesiology and Physical Therapy awarded 91 D.P.T. degrees, one master's in biokinesiology and five Ph.D. degrees in biokinesiology, while the Division of Occupational Science and Occupational Therapy honored four graduates with Ph.D. degrees in occupational science, 54 Doctor of Occupational Therapy degrees, 131 master's degrees and 21 bachelor's degrees.

At one ceremony, Pam Colley of the Norris Medical Library received the divi- sion’s tribute for her more than 30 years of service. Her retirement came on the same day as the ceremony.

Calendar of Events

Wednesday, May 29

8:30 a.m. “Photophoresis After Lung Transplant.” Mark Barr, USC. IRD 732-734. Info: (323) 226-7923

6:30 p.m. Keck Medical Center of USC Health Matters Free Community Information Session. “Breast Cancer Care: What Do You Need To Know?” Christie Russell and Stephen Sener, USC. University Club of Pasadena, 175 S. Oakland Ave., Pasadena. Info: (323) 442-2630

7 p.m. USC Alumni Distinguished Speaker Series. “The How, What and Why of Regenerative Medicine,” Andrew McMahon, USC. USC Orange County Center, 2300 Michelson Drive, Irvine, CA. Info: (626) 457-4265

Friday, May 31

8 a.m. Pathology and Laboratory Medicine Grand Rounds. “NeaGen Pathology: Diagnostics and Therapeutics,” Pamela Ward, USC. 808 7409. Info: (323) 442-1180

8:30 a.m. KISOM Surgical Department Educational Lecture. “Teaching Psychosomatic Skills: Best Practices and Rules of Engagement.” Graig Baker and Maura Sullivan, USC. DOH 100. Info: (323) 442-9864

8:30 a.m. “Structural and Functional Characterization of ARB23 in Health and Disease.” Starshel Jhugdubs, University of Pittsburg/Pitt. IRD 732-734. Info: (323) 226-7923

11 a.m. Hematology Grand Rounds, Eddie Thara, USC. IFT Conference Room D. Info: (323) 665-3950

Saturday, June 1

8 a.m. - 1 p.m. LAG + USC Neurosurgery and Trauma Symposium. “Neurotrauma L.A. 2013: Outcome Optimization,” Various speakers. LAG + USC IFT Conference Rooms A & B. Info: (213) 409-6899

Monday, June 3

 Noon. KISOM Research Seminar. “Adipocytes are Active Participants in Leukemia Progression and Drug Resistance,” Steven Mittleman, USC. NRT Anney Auditorium. Info: (323) 442-7732

Tuesday, June 11


Notice: Deadline for calendar submission is a 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 (213) 442-3893, or email to eblauoe@usc.edu. Entries must include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, and a phone number for information.

In case of an emergency...

Call the Emergency Information Phone: (213) 740-3103 The emergency telephone system can handle 1,400 simultaneous calls. It also has a backup system on the East Coast.

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.