USC University Hospital lab fills a need for speed

By Tania Chatila

Wait times at the USC University Hospital laboratory just aren’t what they used to be.

Thanks to the collaborative efforts of lab and nursing staff and a team of GE Healthcare consultants, processing speeds at the lab have dramatically increased, allowing employees to address patient care needs more immediately.

“We have seen measurable improvements in our turnaround times,” said Jay Santa Ana, director of the lab. “Our star orders are being processed much faster, and I am confident that we will achieve even more efficient processing times as we continue to refine our model.”

Work toward these improvements began last fall when consultants from GE Healthcare, a division of the General Electric Company, began working with the lab staff to refine processes.

After an initial assessment, the consultants and lab staff discovered outpatients were waiting an average of 30 minutes to get their lab work drawn, and impatient urgent orders were taking as long as two hours to process from the time lab work was ordered. “We found that the bottleneck was on the front end of the process, delays in phlebotomists drawing the patients and delays in receiving the specimens,” said Bree Theobald, a GE consultant. “Staff members had competing priorities, were being interrupted with phone calls, and that was making it difficult for them to prioritize draws and transport specimens for processing.”

Armed with these findings, the consultants created a working group that brought
Two USC researchers win support for promising stem cell research

By Meghan Lewit
Keck School of Medicine researchers Qi-Long Ying and Gregor Adams each recently received a prestigious award that will enhance their individual work in stem cell research and therapy development.

Ying, assistant professor of cell and neurobiology at the Keck School and a researcher at the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC, received a five-year grant totaling $2 million from the National Institutes of Health to further his groundbreaking research utilizing rat embryonic stem (ES) cells. In 2008, researchers at the Keck School led by Ying described for the first time in history. The investigators found that stem cells from rats, which previously have failed to propagate at all, could be grown indefinitely in the laboratory in the primitive embryonic state.

The finding was heralded as a major breakthrough in stem cell research that would enable scientists to create far more effective models for the study of human diseases.

Rats have a heart rate similar to that of humans, as compared to mice, which have a heart rate five to 10 times as fast. Genetically engineered rat models more closely mimic human disease than mouse models.

“Regulation of Stem Cell Fate,” to a standing-room only crowd. Blau, an internationally recognized scientist, appears with —Helen Blau (right), professor of molecular pharmacology and director

The ASH Junior Faculty Scholar Award program is designed to support hematologists who have shown a career in research by providing partial salary or other support during the critical period required for completion of training and achievement of status as an independent investigator. ASH is the world’s largest professional society concerned with the causes and treatments of blood disorders. These awards to Dr. Ying and Dr. Adams reflect both the achievements of our junior faculty and the promise of their future work,” said Martin Perza, director of the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC.

He added, “This basic research in stem cell biology provides the platform for future development of cell-based therapies and new medicines for treatment of medical conditions. I am delighted at the recognition of our center faculty are receiving at the national level, and I congratulate the researchers on these new grants.”

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LAB: Sample processing speed jumps

Continued from page 1 together nurses from 4-ICU and lab staff to design solutions that worked for everyone. The common goal was to reduce the total processing time and provide better care to the patients.

“We knew there was a problem, but we didn’t know how big a problem it was until we got a chance to meet with the lab staff and other disciplines,” said Maria Vizarra, a nurse in 4-ICU. “We really collaborated together to find a uniform system that could work for everyone.”

Solutions included the designation of a specific “traffic control” person to more effectively prioritize incoming orders for the phlebotomists, implementing lab label printers on the nursing floor, and the distribution of text pages to phlebotomists for faster response time to urgent orders.

These solutions have been piloted on one inpatient floor. The results have been promising and hospital-wide implementation is in progress. “I’ve really seen tremendous improvement,” said Ronald Magbuhos, a medical lab technician. “By the time I start in the mornings, half of the lab samples from the floor are already processed.” At the beginning of last month, Santa Ana said inpatient urgent processing times were reduced by 30 percent—from 120 minutes to 85 minutes.

The goal is to report results within 60 minutes for urgent orders hospital-wide. For outpatients, the goal is to get patient waiting times down to 10 minutes.

Santa Ana commended his entire staff for coming together and working diligently to improve lab processes.

“This is about giving our staff the tools they need to get their jobs done quickly and efficiently,” said Santa Ana. “In this case, timely lab results are critical to the management of patient care. Now, we have more tools to ensure that.”

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Call the Emergency Information Phone: 213-740-9233 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.
USC, Israeli physicians reunite after Haiti medical mission

By Leslie Ridgeway
On Jan. 16, medical and surgical professionals from two different nations met in Haiti with a common goal—to help those injured in a devastating earthquake just days before.

Members of the groups—the USC/LA County Haiti Medical Aid Team and the Israeli Defense Force (IDF) medical team—discussed their experiences and international disaster response at a special March 5 reunion luncheon at Edmondson Faculty Center.

The group of 16, including representatives from Mayor Antonio Villaraigosa's office and the Consulate General of Israel, Los Angeles, was hosted by Keck School of Medicine Dean Carmen A. Puliafito, who was instrumental in making arrangements for the USC/LA County team to fly within three days of the earthquake to Port-au-Prince, Haiti. The day that the nine-member team landed in Haiti, they were immediately enlisted by the Israeli Defense Force, which had set up a fully operational field hospital near a soccer field and needed medical personnel to assist in giving care.

“We were able to send a whole trauma team to be plugged in, and you provided us an environment where we could help,” Puliafito said to Ofer Merin, IDF Lieutenant Colonel, Res., who helped organize the Israeli response. “We are interested in global health, and this is why global employment enhancement for local residents; and provide assistance to organizations that offer opportunities for home ownership to long-term, low-income USC employees who live in our neighborhoods. Visit http://tinyurl.com/ ykopa3q for application criteria and service boundary maps. Applicants must attend a mandatory grant writing workshop. Application deadline is March 31, 2010.

STROKE: More study needed on how to mitigate risk factors

Continued from page 1

than men of the same age to report having had a stroke (12.9 percent vs. 1.07 percent). A comparison of vascular risk factors showed that women had better than average blood pressure, homocysteine and triglyceride levels than men, but women were more likely to have abdominal obesity (61.9 percent vs. 50 percent). Abdominal obesity is a known predictor of stroke in women and may be a key factor in the mid-life stroke surge in women, Towfighi said.

Independent stroke risk factors for women also included: elevated homocysteine (amino acid in the blood) levels, history of heart attack and diabetes mellitus.

“Further investigation is needed to understand this apparently evolving sex disparity in mid-life stroke prevalence,” Towfighi said. “Better management of stroke risk factors such as coronary artery disease, diabetes and abdominal obesity may help mitigate this worsening trend in women’s health.”

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—Carmen A. Puliafito, dean of the Keck School of Medicine, to Ofer Merin, Israeli Defense Force Lieutenant Colonel, Res.

The Weekly NEWSMAKERS

On March 8, KPCC-FM interviewed associate professor of ophthalmology James Weiland about an eye trauma program based at the Keck School of Medicine that will be supported by $800,000 in funding from the U.S. Department of Defense.

A March 7 Desert Sun article reported on a partnership between the Keck School of Medicine and Eisenhower Medical Center in Rancho Mirage that will send medical school students to the hospital for four-week clerkships starting in July.

A March 6 L.A. Weekly cover story cited multiple USC studies, including professors of preventive medicine Rob McConnell and W. James Gauderman’s Children’s Health Study from 2004 which showed that children in polluted areas had underdeveloped lungs, and a 2007 study that used a more detailed analysis to show children living within roughly a block of a freeway also suffer reduced lung development. The story also quoted associate professor of clinical preventive medicine Andrea Hricko.

On March 5, KSCI-TV covered the reunion of members of the USC/LA County Haiti Medical Aid Team and the Israeli Defense Force Medical Team. Over lunch, the teams discussed their experiences providing surgical and medical care to earthquake victims in Haiti. Jewish Life TV also covered the event.

A March 3 Forbes article quoted professor of psychiatry, neurology and gerontology Lon Schneider about the drug Dimebon, which has been touted as being able to slow the course of Alzheimer’s disease.

A widely carried March 1 Associated Press article reported that Flora L. Thornton Chair of the Department of Preventive Medicine Jonathan Samet was named chair of the Food and Drug Administration’s new tobacco advisory panel, which will meet for the first time this month to focus on the health impact of menthol cigarettes. HealthDay News also covered the story.

On Feb. 25, Nature ran an op-ed by Flora L. Thornton Chair of the Department of Preventive Medicine Jonathan Samet and assistant professor in the Department of Preventive Medicine and associate director for the USC Institute for Global Health Heather Wipfli about the need to curb smoking in the developing world.
Keck School research program energizes young physician-scientists

By Jon Nalick

Fourth-year medical student Ashanti Franklin is not just absorbing medical knowledge this year—she’s adding to it.

As part of a program designed to immerse interested Keck School medical students in basic and clinical research, Franklin and six of her peers are adding an entire year to their studies, in which they are paired with faculty mentors and focus exclusively on biomedical research. For example, Franklin is spending her year working with Henri Ford, vice dean of medical education for the Keck School and surgeon-in-chief of Children’s Hospital Los Angeles, to study possible ways to mitigate the effects of necrotizing enterocolitis—death of intestinal tissue—in infants with the disease.

Franklin said the Dean’s Research Fifth Year Scholars Program, created by Keck School Dean Carmen A. Puliafito in 2008, provides “a great opportunity for medical students to participate in translational research and play a role in building a foundation in the careers of future physician-scientists.”

Robert Decker, research professor of cell and neurobiology and director of the program, said its chief aim is to develop a “medical research mind-set” in those students who choose to join the program.

“The fifth year program is developed to provide Keck School students an opportunity to take a complete year to hone their research skills—and it really takes a year for them to become proficient in whatever field of biomedical research they decide to explore,” he said.

Decker noted that summer research experiences and the second-year required medical research project provide an important introduction for medical students to gain some familiarity with the biomedical research process, but the fifth year-long immersion in research provides a much deeper perspective into how biomedical research leads to new clinical treatments.

He added, “I think it opens their eyes into how biomedical research is conducted and provides them the necessary experience to decide whether their future will include medical research, rather than if they had four straight years of medical school before they decide, ‘Do I want to do research or not?’”

Decker also noted that the Keck School “is transforming itself from a medical school originally noted for its outstanding clinical medicine into a medical school that also promotes basic and clinical biomedical science and translational medicine.”

That change benefits the school because it helps attract more highly qualified students and benefits Keck School graduates by equipping them to understand—and explain to patients—the science underlying the complex treatments they prescribe.

In addition to student Lloyd Cuzzo, who is researching Alzheimer’s disease opti neurology in the lab of Alfredo Sadun, professor of ophthalmology at Doheny Eye Institute, said he agreed, adding that he appreciated the experience the program provides and is “extremely excited to devote an entire year to it.”

“…”This [is] an opportunity for me to learn new laboratory techniques, to make a contribution to our knowledge and to develop the skills necessary to combine research and clinical ophthalmology as a physician-scientist,” he said.

Students in the program are involved in a wide range of research topics, including biomechanics, pediatrics, cancer and ophthalmology. They meet regularly with mentors and每月 with their peers in the program to share experiences and tips.

Decker said they also go to scientific and clinical meetings in their respective disciplines to report their research results and prepare publications and papers. The program culminates in the spring when they present their findings to the Keck faculty and students.

In addition to Cuzzo and Franklin, the 2009–2010 Dean’s Research Scholars are: Jackie Westwood, Robert Decker, Akash Gupta, Shahnam Khashabi and Lily Tung.

Continued from page 1

Disorder and their treatment. “We are excited to support the Keck School and the University of Southern California, whose cutting-edge research in multidisciplinary clinical programs are so important as we continue to try and find better ways to diagnose autism and implement more effective treatment programs,” said Mary Partin, CEO of the Dan Marino Foundation.

“The success of the research program will help us create more precise programs and open doors towards helping children, adolescents and young adults with autism,” said Levitt. He played a key role in establishing MARI while he was director of the Vanderbilt Kennedy Center for Research on Human Development at Vanderbilt University. He joined USC in July 2009 to lead the implementation of a strategic plan to understand the genetic and environmental basis for brain diseases.

“The Dan Marino Foundation recognizes the unique nature of our interdisciplinary efforts, and we are committed to using this initial investment to foster highly novel research projects that will make a difference in the lives of individuals with autism and their families,” Levitt said.