Keck School of Medicine students finally meet their match

By Amy E. Hamaker

The weather was gloomy, but the atmosphere was electric for Match Day 2012 at the Harry and Gelaenta Pappas Quad, as 167 Keck School of Medicine of USC seniors learned exactly where their journeys into the wide world of medicine would begin.

At 9 a.m. on March 16, students rushed to grab their letters from the National Resident Matching Program, a private, not-for-profit corporation that provides a uniform date to learn of appointments to graduate medical education positions.

MARCH 23 • 2012

PUBLISHED FOR THE USC HEALTH SCIENCES CAMPUS COMMUNITY

VOLUME 18 • NUMBER 9

Sonia M. Mauro

By Leslie Ridgeway

Keck School of Medicine and USC School of Pharmacy scientists have revealed a new clue about the structure of proteins involved in type 2 diabetes that could eventually lead to the design of a drug to treat neurodegenerative diseases.

Using a new approach to view structures generated in disease-called fibrils, the researchers were able to explain the overall rope-like structure of the fibrils formed by proteins in type 2 diabetes, as well as the mechanism by which the structures form. This is important information for researchers working to develop therapies to attack type 2 diabetes and other neurodegenerative diseases including Alzheimer’s disease, Parkinson’s disease, and Huntington’s disease.

“If we can understand what makes these proteins go bad and what they look like, we can develop drugs to treat type 2 diabetes and other related diseases,” said Ralf Langen, professor of biochemistry and molecular biology at the Keck School.

The study was led by Ian Haworth (left), associate professor in the USC School of Pharmacy, and Reif Carper, professor of biochemistry and molecular biology at the Keck School.

See FIBRILS, page 3

Study reveals clues in neurodegenerative diseases

USC orthopaedics resident Alixson Estes (center) and other volunteers assist a runner out of the medical tent.

Keck physicians staff LA Marathon medical team

By Alison Trinidad

With sunshine, cool breezes and clear skies, March 18 was a beautiful day to run a marathon in Los Angeles. And volunteers from the Keck Medical Center of USC, the official medical team for the 2012 Honda LA Marathon, were on hand to oversee the care and treatment of the race’s 21,500 runners from start to finish.

Physicians and nurses from the Keck Medical Center, supported by students and faculty from the Keck School of Medicine of USC and other medical volunteers, provided on-the-spot care at mobile medical tents along the 26.2-mile course, at the finish line, post-finish area and family reunion area.

In addition to the 10 medical stations along the course, which began at Dodger Stadium and ended near the Santa Monica Pier, the medical team had access to a mobile hospital equipped to perform emergency surgery. Although surgery was not necessary, runners suffering from dehydration, hypothermia and muscle cramping were treated to liquids, blankets and massages. More than 175 runners were treated by the medical team, the core of which was led by Sean Henderson, chairman of the Keck School Department of Emergency Medicine, and emergency medical tent.

Above, Jackie Eastman (right) is thrilled to find out she’s going to the University of North Carolina for a residency in ophthalmology matches, as are, for the first time ever, two students in the Canadian match.

“This is a very special day for all of us, but especially for me,” Carmen A. Puliafito, Keck School dean, told the students. “Yours is the first class for which I was dean for all four years, and the match results for this class are the best ever.”

Puliafito gave much credit to Elliott and to the faculty advisors, “who mentored and coached you through this very challenging and ever more competitive matching process.”

Henri Ford, vice dean for student affairs. According to Elliott, the 167 Keck School matches included 13 in the early military, urology and ophthalmology matches, as well as, for the first time ever, two students in the Canadian match.

Matches for class of 2012 Keck School students were outstanding, said Donna D. Elliott, associate dean of student affairs.

Elliott, the 167 Keck School student affairs. According to Elliott, the 167 Keck School matches included 13 in the early military, urology and ophthalmology matches, as well as, for the first time ever, two students in the Canadian match.

“This is a very special day for all of us, but especially for me,” Carmen A. Puliafito, Keck School dean, told the students. “Yours is the first class for which I was dean for all four years, and the match results for this class are the best ever.”

Puliafito gave much credit to Elliott and to the faculty advisors, “who mentored and coached you through this very challenging and ever more competitive matching process.”

Henri Ford, vice dean for student affairs. According to Elliott, the 167 Keck School matches included 13 in the early military, urology and ophthalmology matches, as well as, for the first time ever, two students in the Canadian match.

“This is a very special day for all of us, but especially for me,” Carmen A. Puliafito, Keck School dean, told the students. “Yours is the first class for which I was dean for all four years, and the match results for this class are the best ever.”

Puliafito gave much credit to Elliott and to the faculty advisors, “who mentored and coached you through this very challenging and ever more competitive matching process.”

Henri Ford, vice dean of

See MATCH DAY, page 2
Rubicon protein key regulator of immune system, study shows

By Allison Trinidad

A global team of microbiologists led by the Keck School of Medicine of USC has identified a critical protein in the fight against bacterial and fungal infections like tuberculosis and ringworm, laying the groundwork for scientists to develop target-specific drugs that have fewer side effects.

“Rubicon is known to regulate autophagy, the process in which a cell breaks down unwanted or damaged products. Perhaps the most well-known mechanism of autophagy involves the formation of a membrane around a target in the cell, separating it from the rest of the cell before the contents of the vesicle are degraded. In the current study, Jung and colleagues observed that the protein acts in the opposite way in fungal infections by acting like a "cell wall breaker." It appears that in the presence of bacteria, Rubicon binds to specific enzymes that alert the phagocytes to jump into action. The researchers found that the protein acts in the opposite way in fungal infections by acting like a target-specific drug that has fewer side effects.

Students who are exceptionally think we have a group of

Continued from Page 1

The fibrils are contained in proteins the USC School of Pharmacy and the lead researcher in the computational work, added “It’s a great example of using basic science methodology to address health-related problems and provide translational research.”

The research, “Fibril Structure of Human Islet Amyloid Polypeptide,” was published online ahead of print as a Paper of the Week in the Journal of Biological Chemistry.

Continued from Page 1

MATCH DAY: Medical students savour ‘outstanding’ matches that mark next phase of training

Continued from Page 1

By Brenda Maceo

Senior Vice President, University Relations: Geoffrey Baum

Executive Director of Communications: Ina Fried

Assistant Director of Publications: Sara Reeve

Editor: Jon Nalick

Contributors: Ryan Ball, Eva Biawa, Tanja Chatila, Amy E. Hamaker, Carol Matthieu, Mike McNulty, Carol Omoumi, Larissa Puro, Leslie Ridgeway, Nasim M. Thompson, Alison Trinidad and Imelda Valenzuela

Senior Vice President, University Relations: Tom Sayles

Vice President, Public Relations and Marketing: Brenda Maceo

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

Interim Assistant Vice President, Health Sciences Public Relations and Marketing: Geoffrey Baum

Full match lists are avail-

able at the Office of Student Affairs.
STEM cell clinical trial seeks ‘holy grail’ of growing new blood vessels to save limbs

By Ryan Ball

The big toe on Peggy Levin’s right foot is dying. What’s worse though, is the problem could spread and she could lose her entire leg.

Levin suffers from peripheral arterial occlusive disease and has no circulation in the tiny blood vessels in her toe. Having tried a number of other treatments, she has come to the Keck Medical Center of USC to participate in the testing of a new stem cell therapy.

“This is kind of my last-ditch effort to save my toe,” Levin said of the phase III clinical trial supported by Harvest Technologies Corp.

The treatment involves harvesting Levin’s bone marrow from her pelvic bones, spinning them in a centrifuge to concentrate her own stem cells, and then delivering them to the affected area with a series of 40 injections in the leg and foot. “This is the first thing we’ve done at USC with stem cells in vascular diseases,” said Karen Woo, assistant professor of surgical oncology, who is treating Levin. “Growing new blood vessels is like the holy grail.”

Woo said that if the therapy is successful, it could be applied to a variety of other disciplines such as trauma in which blood vessels are damaged and plastic surgery involving tissue grafts that require blood supply.

The traditional treatment for someone like Levin is to do a bypass. A very long incision would be made along the entire length of the leg, and one of her veins would be removed and used to create a bypass around the diseased portion of the artery.

More recently, surgeons have been employing an endovascular method where they go in with catheters, wires, balloons and stents to try to open up narrow or blocked areas. For some patients, like Levin, these treatments are either not an option or are ineffective.

Levin is the first patient to enroll in the stem cell trial at USC. Enrollment began in December 2011 and Woo said they plan to have a total of 10 patients participating. “Two-thirds of the patients, chosen at random, will receive the stem cell therapy, and one-third will receive a placebo. Harvest hopes to have 200 people enrolled across the country. There are six other participating sites, but USC is the only one in the western United States.

“We are getting a lot of requests from people all over because nobody wants to lose their leg,” said Woo. “This study is targeted to people who have no other surgical or endovascular options.”

At the time of this reporting, Levin has had a one-week check up, meaning it’s too soon to tell if the treatment has been beneficial. It may take anywhere from six to eight weeks before any improvement becomes apparent.

Levin and the other patients enrolled will be followed for two years.

Levin has mixed feelings about being a guinea pig, but has been impressed with the quality of care she has received at USC and is hopeful of a good outcome. “I think it’s exciting that anyone thinks about doing things like this to help people, and I believe it’s going to work,” she said.

Through new website, CTSI offers research funding, support to USC faculty

By Nasim H. Thompson

The Southern California Clinical and Translational Science Institute (CTSI), a USC-based research institute that offers faculty members across the university funding, education and resources to help advance their research from discovery to practical health applications, has launched a new website to bolster support for researchers.

The site, at www.sc-ctsi.org, is designed to offer easy access to the resources and advice that investigators need most and to a news section to help and a calendar of events and deadlines.

Carmen A. Puliafito, dean of the Keck School of Medicine of USC, called the CTSI “a critical force helping accelerate USC discoveries through the research pipeline and into the community.

To help fill funding gaps, CTSI offers faculty over $1 million per year in funding opportunities for career development, academic community-partnered research, development of novel methods or technologies, team-building activities and pilot clinical/translational research.

For investigators seeking additional training, the institute offers two mentored training programs—one for clinically trained faculty and one for pre-doctoral students. The institute also helps investigators obtain crucial regulatory approvals and guides them as they anticipate and respond to ethical issues.

CTSI provides biostatistics and bioinformatics consultations to investigators during study design and helps them analyze their data. In addition, the institute supports data capture and data management for research studies through a secure Web application called REDCap.

Tom Buchanan, director of CTSI, said, “We know that research is a complex arena to navigate, so we aim to equip investigators with practical resources that can help them take their projects to the next level.”

Some of these practical resources include helping pre-clinical researchers assess the feasibility of their study concept and working with them to develop and manage customized project plans.

When pre-clinical discoveries move to human application, CTSI helps clinical researchers with feasibility and design consultations and preclinical project development, as well as providing resources such as space and experienced research staff at the Clinical Trials Units on the USC Health Sciences Campus and at Children’s Hospital Los Angeles.

CTSI also assists with the last stage of translational research—translation into clinical and community settings. It offers community-engaged research trainings and individualized consultations, and helps USC faculty connect with community partners through program evaluation and dissemination of best practices.

In addition to matching investigators to community partners, CTSI fosters research team-building efforts through topic-focused networking sessions and theme-focused “speed dating” to match investigators with specific clinical challenges to those with technological solutions.

The institute also plans to host symposia and programs to help investigators build effective and sustainable research teams.

The Weekly NEWSMAKERS

A March 20 article in the Los Angeles Times quoted Michael Goran, who holds the Dr. Robert C. and Veronica Atkins Endowed Chair in Childhood Obesity and Diabetes and is professor of preventive medicine, physiology & biophysics, and pediatrics at the Keck School, about health risks associated with the consumption of high-fructose corn syrup.

Goran also was quoted by the Los Angeles Times, Patch.com and Runners Web.

A March 19 story in The Washington Post quoted Katherine Sullivan, associate professor of clinical physical therapy at the Ostrow School, and Angela Toffel, assistant professor of clinical psychology at the Keck School, about strategies to promote stroke recovery.

A March 18 broadcast on Fox News affiliate KTTV-TV interviewed David Agus, professor of medicine at the Keck School, about his book The End of Illness.

A March 16 report in the Los Angeles Times quoted Glenn Ault, associate dean for clinical administration at the Keck School, about how marathon runners can physically prepare for a race. Ault, medical commissioner for the 2012 Honda LA Marathon, also was quoted by the Santa Monica Daily Press, Patch.com and Runners Web.

A March 16 article in the Visalia Times-Delta quoted Inderbir Gill, professor and chair of the Catherine and Joseph Aresty Department of Urology at the Keck School, about robotic surgery.

A March 14 episode of “All Things Considered” on NPR featured an interview with Juan Felix, associate professor of clinical pathology, obstetrics and gynecology at the Keck School, about new guidelines for the Pap smear test. Felix chairs the medical advisory panel of the National Cervical Cancer Coalition.
Calendar of Events
This Calendar of Events is also online at www.usc.edu/hsscalendar for the Health Sciences Campus community

Saturday, Mar. 24

Tuesday, Mar. 27
8:30 a.m. Women in Management Seminar. “Women and Hormones: Managing the Effects in the Workplace,” Kathryn Randel, USC. Attendees are welcome to bring their own breakfast. CEIP 102. Info: (323) 442-1865

Wednesday, Mar. 28
8:30 a.m. Women in Management Seminar. “Women and Hormones: Managing the Effects in the Workplace,” Kathryn Randel, USC. Attendees are welcome to bring their own breakfast. CEIP 102. Info: (323) 442-4065

Thursday, Mar. 29
11:30 a.m. Women in Management Seminar. “Women and Hormones: Managing the Effects in the Workplace,” Kathryn Randel, USC. Attendees are welcome to bring their own breakfast. CEIP 102. Info: (323) 442-4065

Friday, Mar. 30
11:30 a.m. Women in Management Seminar. “Women and Hormones: Managing the Effects in the Workplace,” Kathryn Randel, USC. Attendees are welcome to bring their own breakfast. CEIP 102. Info: (323) 442-4065

April

Monday, Apr. 2

Tuesday, Apr. 3
8:30 a.m. Women in Management Seminar. “Women and Hormones: Managing the Effects in the Workplace,” Kathryn Randel, USC. Attendees are welcome to bring their own breakfast. CEIP 102. Info: (323) 442-4065

Wednesday, Apr. 4
8:30 a.m. Women in Management Seminar. “Women and Hormones: Managing the Effects in the Workplace,” Kathryn Randel, USC. Attendees are welcome to bring their own breakfast. CEIP 102. Info: (323) 442-4065

Friday, Apr. 13
8:30 a.m. Women in Management Seminar. “Women and Hormones: Managing the Effects in the Workplace,” Kathryn Randel, USC. Attendees are welcome to bring their own breakfast. CEIP 102. Info: (323) 442-4065

Sunday, Apr. 29
3 p.m. Orange County Reception: Keck School Dean Pulfis hosts the USC Trojan Family and introduces the newly appointed director of the USC Norris Comprehensive Cancer Center, Dr. Stephen Graber. Balboa Bay Club, 1221 West Coast Highway, Newport Beach, CA. To RSVP: kscp.usc.edu/balbaysbchklub Info: (323) 442-1767

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) 442-2812, or email to eblaauw@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.

Rodney Peete headlines occupational science autism symposium

By Mike McNulty

Former USC and National Football League quarterback Rodney Peete described what he called his family’s “never day” in 2000, the day when his son, Rodney Jackson “R.J.” Peete officially was diagnosed with autism.

Their physician listed the ‘never’ that are erroneously assumed to accompany the autism diagnosis: never going to college, never getting married and never saying, ‘I love you.’

Peete was guest speaker when more than 300 faculty members, students, alumni and community partners gathered at the Ronald Tutor Campus Center on March 9 for the 23rd Occupational Science Symposium.

Hosted by the Division of Occupational Science and Occupational Therapy at the Keck School of Dentistry of USC, the “Autism in Everyday Life: Interdisciplinary Research Perspectives at USC” symposium featured speakers focused on innovative research, clinical practices or personal perspectives on autism and its impact on everyday life experiences.

Since retiring from playing football, Peete has become an ardent advocate for autism awareness, education and family support largely through the work of his nonprofit HollyRod Foundation, which he co-founded with his wife, actress Holly Robinson Peete.

In 2010 he released his first book, “Not My Boy! A Father, a Son, and One Family’s Journey with Autism,” which chronicles his family’s experience raising a child with autism.

Peete described how R.J.’s developmental skills began to stall at age two and a half. While wife Robinson Peete grew concerned, Peete “recalled his own denial and stubbornness to seek professional help, driven in part by his own competitive personality and athletics background.

Peete also recounted the day when he put aside his own pride and decided to pursue as much professional assistance and education as possible to help his son.

“From that moment on, I started to see the world through R.J’s eyes, not mine,” he said. With years of direct clinical intervention—including occupational therapy—Peete reported that R.J., now 14 years old, has made significant progress in his social, communicative and functional skills. R.J. now attends a mainstream school, plays the piano, and most important to his parents, says, “I love you.”

For more information about the symposium and the 2012 event speakers, visit http://ot.usc.edu/research/symposium.

USC joins World Health Day on April 7 at Los Angeles Expo Center

World Health Day LA is kicking off “Walk to London 2012,” the United States Olympians Association’s ceremonial walk to raise awareness of the London Olympics Games and to draw attention to physical fitness, on April 7 in Los Angeles.

This year, World Health Day LA is teaming up with Olympians, volunteers, community members and local businesses to highlight fitness and health in L.A.

In addition to free health screenings, entertainment and Olympics-themed sports activities, locals will get to join Olympians for a ceremonial walk around the L.A. Memorial Coliseum.

“This event is a chance to bring neighborhoods together in the name of health,” said Ivette Flores Guintu, program manager for the USC Institute for Global Health. “In this economy, free events like World Health Day LA are the perfect way to spend a Saturday with family and friends. You get to learn something and have fun doing it.”

World Health Day LA is a student-run joint event of USC, UCLA and Western University of Health Sciences.

Activities on April 7 at the Los Angeles Expo Center’s Socroft Sports Field will run from 9 a.m. to 1 p.m. and include:

• Olympics-style games for kids, hosted by local sports businesses and USC athletes;
• Free health education and screenings for cholesterol, blood pressure, blood sugar, bone and dental care;
• Internationally themed local entertainment groups; and
• Healthy food trucks

At 12:15 p.m., the “Walk to London 2012” walk around the Coliseum with Olympians will begin with a show by the USC Trojan Marching Band. Afterwards, Olympians will present participating kids with medals at an awards ceremony.

For more information, to register or to volunteer, visit www.worldhealthdayla.org.

In case of an emergency...

Call the Emergency Information Phone: (213) 740-9323 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.

Rodney Peete

©Steve Cohn

USC Health Sciences
Public Relations and Marketing
725 7th Avenue, KAM 400
Los Angeles, CA 90089
Non-Profit Organization
U.S. POSTAGE PAID
University of Southern California

©Steve Cohn

Rodney Peete