**CIRM Town Forum focuses on stem cells**

By Meghan Lewit

Three prominent Southern California scientists, including USC’s Martin Pera, met at the Davidson Conference Center April 22 to share progress in research and stem cell-based treatments with members of the public.

The Town Forum meeting was hosted by the California Institute for Regenerative Medicine (CIRM). The event featured CIRM-funded researchers—Pera, professor and founding director of the E. and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC, UCL macrobiologist Donald Kohn and UCI neuroscientist Leslie Michels— who made short presentations about their research and fielded questions from the audience.

In an overview of stem cell research and regenerative medicine, Pera noted the potential to provide tissues that can treat a wide range of serious illnesses.

Much of his remarks focused on the promise of pluripotent embryonic stem (ES) cells. Because these cells have the ability to reproduce and form any cell in the human body, researchers believe that they can one day be used to replace dead or damaged cells in diseased tissues and to develop new treatment therapies.

“Embryonic stem cells provide an indefinite renewable source of human cells,” Pera said. “For the first time we have in the lab a source of normal human cells to study.”

He also noted that emerging research into reprogramming adult cells to an embryonic-like state could provide a new method to create large blocks of patient-specific stem cell lines.

“This opens up a very exciting avenue,” Pera said.

Michels highlighted how embryonic stem cells may be used in the treatment of Huntington’s disease, a neurological disorder characterized by uncontrolled movements.

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**USC study suggests stem cell therapy as effective treatment for lupus**

By Beth Dunham

Stem cell research from the USC School of Dentistry’s Center for Craniofacial Molecular Biology—and a resulting human clinical trial from China’s Nanjing University—hold great promise for lupus patients, said Songtao Shi, associate professor at the USC School of Dentistry.

The joint study, appearing in the journal *Stem Cells* is now online.

Systemic lupus erythematosus, or lupus, is a serious disease that literally turns the body’s immune system against itself and affects the entire body, especially the skin, kidneys, nervous system and joints.

The common treatments used to slow the disease’s assault on patients’ bodies involve immunosuppressive drugs, which alleviate lupus symptoms for many patients but leave them vulnerable to potentially devastating infections and organ dysfunction.

According to Shi, lupus isn’t just the result of malfunctioning immune system cells. Those cells appear to have a close relationship with mesenchymal stem cells (MSC) in bone marrow, which differentiate into several types of cells that can affect the immune system.

“These stem cells live in the bone marrow along with the immunos,” he said. “There’s a lot of interplay going on; if the immune cells have problems, the MSC of the interplay between the two types of cells may have problems as well.”

While observing mice whose mesenchymal stem cells’ function had been impaired, researchers noticed that the stem cells’ deficiencies appeared to be partially responsible for the development of a lupus-like disease in the animals. After the infusion of healthy mesenchymal stem cells into the experimental group of mice, their symptoms abated and organ function improved. These improvements were much more dramatic than those seen in the mice undergoing the traditional treatment of immune system suppression.

Fueled by the dentistry center’s promising laboratory results, researchers investigating lupus at Nanjing University Medical School used mesenchymal stem cells infusion to treat four young adult patients whose lupus symptoms no longer responded well to immunosuppression therapy. The three women and one man—nearly 90 percent of SLE patients are women—made marked improvements.

**USC University Hospital honors volunteers**

By Meghan Lewit

About 40 USC University Hospital volunteers were honored April 25 at the hospital’s annual volunteer recognition brunch.

The event celebrated volunteers from a number of hospital departments and the three recipients of the Volunteer of the Year Awards.

The award recipients—representing high school, college and adult categories—each received a certificate and a pair of Los Angeles Dodgers tickets.

“The hospital has approximately 257 active volunteers, many of whom are students at USC and area high schools, said Kai Tramiel, manager of volunteer services and patient/guest relations. “Our volunteers can be seen in virtually every department of the hospital with interests as diverse as wanting to enter the medical field to simply wanting to lend a hand to a patient and guest in need,” she said.

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— Martin Pera, professor and founding director of the Eli and Edythe Broad Center for Regenerative Medicine and Stem Cell Research at USC
USC Trustee Stanley Gold awarded Presidential Medallion

USC trustee and past board chair Stanley Gold was awarded the university’s highest honor, the Presidential Medallion, at the Academic Honors Convocation on April 14. Gold received his award at a Town & Gown dinner at which 14 students and 14 faculty members also were recognized for their accomplishments.

In remarks prepared for the medal citation, USC President Steven B. Sample wrote that Gold “has played an instrumental role in the dramatic ascent of his alma mater into the top ranks of research universities. Under his guidance as a trustee since 1993 and as board chairman from 2002 to 2008, USC has greatly advanced in its goals of globalization, learner-centered education and meeting societal needs.”

In addition, Sample wrote, “Gold is a genius at analyzing budgets and spreadsheets.”

Those comments were pivotal as Gold served as the university’s chief negotiator in its recent purchase of USC University Hospital and USC Norris Cancer Hospital, as well as in USC securing a 47-year lease with the Los Angeles Memorial Coliseum Commission.

“Peoples Bank and the Bank of America have been his clients for many years,” Michels said. “He has been a wonderful client, and he is a wonderful person.”

Kohn discussed his work in hematopoietic (blood forming) stem cell therapy and gene therapy. His group participated in the first clinical trial of gene therapy for severe combined immunodeficiency (“bubble baby disease”) in newborns using their umbilical cord blood as the source for stem cells, and is developing a new trial for clinical stem cell therapy “to provide life-saving benefits to children,” Kohn said.

Clinical stem cell therapy may provide life-saving benefits to thousands of people each year,” Kohn said.

The USC event was the last of three CIRM Town Forums that have been held throughout the state, offering attendees an opportunity to learn how CIRM is investing to improve human health and advance stem cell science.

CIRM was established when voters passed Proposition 71 in 2004 to borrow and spend $3 billion over 10 years to support stem cell research. To date, CIRM has awarded nearly 300 grants to institutions statewide.

The following lists the satellite commencement ceremonies for the Health Sciences Campus. The locations and times are listed, as well as the announced speakers. Please note that the Keck School of Medicine does not participate in the main commencement ceremony at the University Park Campus.

Wednesday, May 13
Keck School of Medicine—M.S., Ph.D., & M.P.H.
4 p.m. at the Harry and Galosta Pappas Quad on the Health Sciences Campus. Paul Zachary Myers, associate professor of biology, University of Minnesota Morris. Reception will follow.

Friday, May 15
Biokinesiology & Physical Therapy
11 a.m. on the Intramural Field at the University Park Campus. Arthur A. Dugoni, Dean Emeritus of the Arthur A. Dugoni School of Dentistry, University of the Pacific.

Occupational Science and Occupational Therapy
10:30 a.m. on the lawn west of Leavey Library at University Park Campus. Shawn Phipps, distinguished USC alumnus, president of the Occupational Therapy Association of California. Reception will follow.

Physician Assistant Program
10:30 a.m. on the southwest lawn of the Hancock Building (ARF) at University Park Campus. Robert Miller and Robert Sachs of the Keck School of Medicine will speak. Reception will follow at the same location.

School of Pharmacy
3 p.m. at the Harry and Galosta Pappas Quad on the Health Sciences Campus. Paul Gregerson, chief medical officer of the JWCH Institute. Reception to follow in the Upper Quad.

Sunday, May 17
Keck School of Medicine—M.D., Ph.D., & M.D.
3 p.m. at the Shrine Auditorium. Peter J. Katzung, vice president for assessment programs of the National Board of Medical Examiners. Reception will follow at Founders Park at the University Park Campus.
Campus embraces ‘reduce, reuse, recycle’ philosophy on Earth Day

By Ina Fried

Green was USC’s color April 23 as more than 600 people attended the Earth Day Fair in the Harry and Celesta Pappas Quad on the Health Sciences Campus. Reusable green bags were a big hit to those who vowed to use a sustainable practice, such as recycling.

“We use 3 billion plastic bags a year in the United States,” said Jane Singleton, assistant director of purchasing services for the Health Sciences Campus, who was distributing the green bags. “It’s not just about getting a green bag. It’s about taking that bag to the market and the mall and not bringing a plastic bag home. We can’t eliminate plastic bags, but we can definitely cut down on the number we use.”

At the fair, Environmental Health and Safety collected two boxes of batteries and nearly three large boxes of electronic waste, reported

and facilities with LEED certification (an internationally recognized system that measures stewardship of resources).

For more information about sustainability programs and services at USC, visit sustainability.usc.edu and capsnet.usc.edu/EHS.

STEM CELL: Results of single stem cell treatment called ‘very promising’

Continued from page 1 female—were each suffering from kidney complications as a result of the disease and received healthy stem cells from bone marrow donated by immediate family members.

In all of the patients, organ function improved greatly, with two patients stopping their immunosuppressive drugs to low maintenance levels, and the other two stopping their immunosuppression regimen entirely. Short-term follow-up at 18 months post-mesenchymal stem cells infusion indicated no problems with either organ function or reactions to the transplanted cells, Shi said.

While five- to 10-year follow-up still needs to be completed, the results of the single stem cell treatment are very promising. “Time will tell, but we feel very good about this work,” he said. Being among the first scientists to target immunodisease with a mesenchymal stem cell approach is exciting, Shi added.

In addition, the close partnership between the basic stem cell scientists at USC and the clinical researchers investigating lupus at Nanjing University is one that Shi hopes will be recreated with investigations into other diseases in order to more quickly get promising treatments to the patients that need them. “In the future, this type of research will help us to understand diseases and find cures faster,” Shi said.

An April 20 Reuters article featured a study by Florence Hofman, whose research led by pathologist Mark Humayun about the retinal eye implant.

An April 21 NCI Cancer Bulletin article highlighted research led by pathologist Florence Hofman that was presented at the American Association for Cancer Research annual meeting. Hofman’s team targeted brain cancer with an inhibitor called dimethyl-β-catenin-ib. Medical News Today online also featured the study.

An April 20 Los Angeles Times article quoted clinical pharmacy expert Jeffrey Goodf about anti-viral drugs used to treat swine flu. He was also quoted in the San Francisco Chronicle.

On April 27, Fox News interviewed infectious disease expert Paul Holtom about the swine flu outbreak. He was also interviewed by KPCC-FM, Wall Street Journal Radio and the San Gabriel Valley Tribune.

An April 24 San Diego Union Tribune article quoted stem cell expert Martin Per about a stem cell technique that doesn’t involve destroying embryos.

On April 23, the TV show “The Doctors” featured a segment and interview with radiation oncologist Paul Pagnini that highlighted Cyberknife radiosurgery for the treatment of brain tumors.

On April 22, National Italian Television interviewed ophthalmologist Mark Humayun about the retinal eye implant.

On April 21, CBS News, in a widely carried WebMD story, quoted fertility expert Richard Paulson about hysterectomies.

The Weekly NEWSMAKERS

Complete listing at: www.usc.edu/uscnnews/usc_in_the_news

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An April 20 Reuters article featured a study by Alzheimer’s disease expert Lon Schneider and colleagues warning that elderly patients with Alzheimer’s disease who are treated with second-generation antipsychotics should be monitored closely for weight gain and lipid abnormalities.
Calendar of Events
This Calendar of events is also online at www.usc.edu/hsccalendar for the Health Sciences Campus community

Monday, May 4
Noon. Medical Student Research Forum & Poster Day. KAM Mayer Aud. Info: (323) 442-1763


4 p.m. “Research in Progress,” Sheila Cherian, USC. GNH 4420. Info: (323) 226-7337

Wednesday, May 6
8 a.m. The HRSA Patient Safety & Clinical Pharmacy Collaborative (PSPC) Live Satellite Broadcast of Learning Session #3, various speakers. Info: (323) 442-1393

Thursday, May 7
Noon. “Clostridium Difficile Colitis: From Basic Research to Bedside,” Harry Pothoulakis, UCLA. HMR 100. Info: (323) 442-1283

Noon. “HIV and Women – Current Topics,” Various speakers. NOR 1315. Info: (323) 865-0343

Friday, May 8
8:30 a.m. “Urokinase, Plasminogen Activator Inhibitor-1 and Vimentin – Novel Roles at the Intersection of Coagulation and Inflammation,” Edward Abraham, Univ. of Michigan. GNH 11-321. Info: (323) 226-7923

9 a.m. CORC Team Seminar. “Non-Alcoholic Fatty Liver Disease,” Frank Sinatra, USC. CSC 250. Info: (323) 442-2637

Monday, May 11
Noon. “Case Discussion: Acid/Base Disorders,” Elaine Kaptein, USC. GNH 4420. Info: (323) 226-7337

Wednesday, May 13

Thursday, May 14
Noon. “Epigenetic Regulation of Hepatic Wound-healing and Fibrosis,” Jelena Mann, Univ. of Washington School of Medicine. MCH 156. Info: (323) 442-3121

Friday, May 15

9 a.m. USC ChildHealth Obesity Research Center. “The Neurobiology of Self-Control,” Antonio Rangel, Caltech. CSC 250. Info: (323) 442-2637

Monday, May 18
Noon. “Late Medical and Surgical Complications Post-Transplant,” Miroslaw Smogorzewski, USC. GNH 4420. Info: (323) 226-7337

4 p.m. “Research in Progress,” Jacob Ahdoot, USC. GNH 4420. Info: (323) 226-7337

Tuesday, May 19
Noon. Cancer Center Grand Rounds and Poster Session. NOR 7409. Info: (323) 865-0801

Wednesday, May 20

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 HSC Weekly, KAM 400 or fax to (323) 442-2832, or e-mail 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.

STUDENTS SHOW OFF SCIENCE SKILLS—Students from schools surrounding USC’s Health Sciences Campus participated in the ninth annual USC-HSC Science Fair, held April 24, on Harry and Celesta Pappas Quad. Classes from Griffin Avenue Elementary, Murchison Street Elementary and Sheridan Street Elementary (left) displayed science exhibits they created following weekly tutoring sessions on the scientific method from Keck School of Medicine students. Above, Keck School student Lindsey Wakeham-Miller discusses the results of a science project on heart health her students completed. She said later that the event “really showed how much they love science—and that’s really rewarding.”

In Case of An Emergency...
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.