Brinton honored as Woman of the Year by Los Angeles magazine

*When your vision is to do what no one else has done, you need to develop creative and innovative strategies and teams to achieve the goal.*

— Roberta Diaz Brinton, R. Pete Vanderveen Chair, Therapeutic Discovery and Development, USC School of Pharmacy

Roberta Diaz Brinton has been named Los Angeles magazine's Woman of the Year.

By Kukla Vera

Los Angeles Magazine has named Roberta Diaz Brinton, PhD, its Woman of the Year for her revelatory research to combat Alzheimer's disease. Brinton, holder of the R. Pete Vanderveen Chair in Therapeutic Discovery and Development at the USC School of Pharmacy, has developed two compounds currently in clinical trials that have the potential to address the progressive condition currently afflicting more than 5 million people in the United States.

Brinton has dedicated decades to finding answers to Alzheimer's disease and its impact on individuals, families and society. Every 67 seconds, another American can develop the disease, which costs the nation more than $200 billion each year. Since women — who comprise two-thirds of those with Alzheimer's — are disproportionately affected, Brinton has focused extensive research on discovering why women are at greater risk for the disease and in developing safe and effective natural formulations that provide the brain-saving benefits of estrogen without negative effects on breast and uterine health.

Women's unique biology provided the basis for a major discovery: a molecule they make during pregnancy can generate neural stem cells to regenerate the brain and restore memory function in females and males. This discovery is the basis of a clinical trial of the compound allopregnanolone, which is slated to begin this fall in persons with early stage Alzheimer’s. Allopregnanolone is the first regenerative therapy ever tested for the disease. Brinton's work is unique in many ways. It is rare for a single lab to lead the discovery, therapeutic development and clinical trial stages of a project, but Brinton's lab has done so for both of the current clinical trials she is spearheading.

Her lab also serves as an incubator for the next generation of scientists and experienced researchers who hold PhD, MD and PharmD degrees.

USC stem cell PhD students suggest ways to rebuild the body

By Cristy Lytal

The students in the new PhD program in Development, Stem Cells, and Regenerative Medicine recently presented some ideas that would give Dr. Frankenstein a run for his money.

For the summer course DSR 542 Principles of Developmental and Stem Cell Biology, eight teams of students presented elevator pitches and scientific posters outlining strategies for rebuilding the body's organ systems.

"We really try and do an intensive experience for the new students coming into our program," said Gage Crump, PhD, director of the Development, Stem Cells, and Regenerative Medicine program, one of the PhD Programs in Biomedical and Biological Sciences (PBIBS). "Rather than having a didactic class where the professor gets up there and just lectures everyone for the whole time, we wanted to have it be more interactive."

During the course, students discussed the primary scientific literature, gained hands-on experience with stem cell culture, embryology and imaging, and unleashed their imaginations on the challenges of organ regeneration.

Many of the students described the techniques proposed in their posters as "shooting the moon."

One team suggested a potential treatment for retinal degeneration, which causes blindness. Their approach involved reprogramming patients’ skin cells into 3-D retinal "organoids" on a biodegradable scaffold.

During the semester, this team had the opportunity to discuss their idea with USC Eye Institute scientist David Hinton, MD, who is collaborating with colleague Mark Humayun, MD, PhD, to deliver retinal-support cells into the eyes of patients with macular degeneration in a clinical trial.

Another team did a project about regenerating the cells of the inner ear to treat hearing loss. These cells don’t regenerate in mammals, but do enable this regeneration in birds and might induce similar regeneration in humans.

"Overall, it was a really good learning experience," said student Louise Menendez.
USC offers a summer of stem cells for local high school students

By Cristy Lytal

Twenty-three local high school students spent their summer vacations in a very unusual place: the Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research at USC.

This August, these students celebrated their graduations from the USC Early Investigator High School (EiHS) and the USC CIRM Science, Technology and Research (STAR) programs. These are the only programs that offer comprehensive training in stem cell research to high school students.

“The goal of these unique programs is to educate bright young minds at the stage where they’re still formulating ideas and still open and receptive to new discoveries, and introduce them to the wonder and inspirational power of stem cell biology,” said Andy McMahon, Ph.D., FRS, director of USC’s stem cell research center.

Over the course of the summer, the high school students participated in either a 10-day training course or eight-week research internship, working hands-on with human stem cells in USC’s world-class laboratories under the mentorship of faculty and graduate students.

Victoria Fox, PhD, director of the EiHS program, extended her thanks to everyone who contributed to the experience. “The EiHS program made possible by a team of very incredible people that starts with my laboratory staff and includes donors, the students, the administrators of the stem cell research center and the mentors who take the students in their laboratories,” she said.

This year’s participants were selected from Harvard-Westlake School, Lifeline Education Charter School, Chadwick School and Bravo Medical Magnet High School, and many received scholarships. On graduation day, the students shared their transformative summer experiences with their mentors, friends, parents and teachers by presenting scientific posters and by contributing articles to the program’s new EiHS Journal, which will publish its inaugural issue in October.

“Being able to contribute to a scientific project that can play an important role in someone’s life is an amazing opportunity,” said Marialuisa Flores, student, Lifeline Education Charter School, USC EiHS.

Native American ancestry a risk factor for diabetic eye disease in Latinos

By Alison Trinidad

New research led by the USC Eye Institute, part of Keck Medicine of USC, shows for the first time that Native American ancestry is a significant risk factor for vision-threatening diabetic retinopathy among Latinos with Type 2 diabetes.

Diabetic retinopathy is the leading cause of blindness in working-age adults in the United States, affecting more than 4 million Americans age 40 and older. The research was published online in Investigative Ophthalmology & Visual Science, the peer-reviewed academic journal of The Association for Research in Vision and Ophthalmology, the largest and most respected eye and vision research organization in the world. Diabetic retinopathy occurs when blood vessels in the eye’s retina are damaged. The retina is the light-sensitive tissue at the back of the eye that acts like a film inside a camera; like damaged film, a damaged retina will produce a bad picture. Symptoms may not be noticeable at first, but the disease can get worse over time and lead to vision loss.

“This is the first study, to our knowledge, that shows for the first time that Native American ancestry is a significant risk factor for vision-threatening diabetic retinopathy among Latinos,” said Victoria Fox, PhD, director of the EiHS program. “It was a very enjoyable program. It was a great impact on my life and future career.”

ALBERS: Delivers key stroke lecture

Continued from page 1

His work in the development and application of perfusion imaging to acute stroke has revolutionized our approach to patient selection.”

Albers delivered his lecture, “Controversies in Penumbral Imaging,” at Neurology Grand Rounds on July 29 at the Zilkha Neurogenetic Institute to a standing-room-only crowd.

BRINTON: ‘Envision the impossible’

Continued from page 1

degrees working shoulder-to-shoulder with graduate, undergraduate and even high school students. In addition, the lab, the Brinton lab is the antithesis of the academic silo, as she collaborates with colleagues throughout the university as well as experts outside USC. “My motto is envision the impossible and make it possible,” Brantson said. “When your vision is to do what no one else has done, you need to develop creative and innovative strategies and teams to achieve the goal.”

She added, “USC creates an environment where creativity and innovation thrive and are connected to the human spirit. It is this combination that drives my collaborations from the School of Pharmacy to the Keck School of Medicine [of USC] to the Andrus School of Genontology to the Viterbi School of Engineering.”
A new mini-documentary series highlighting immigrant families’ experiences and health challenges puts faces and stories to underrepresented health issues.

Produced by the USC Immigrant Health Initiative (iHi) and the USC School of Cinematic Arts, the three short films illustrate the interplay between immigration, culture and health, exposing health challenges among racially and ethnically diverse immigrants in America. The films aim to raise awareness and discuss health issues, needs and intervention strategies among communities.

“We hope these films serve to start the conversation about immigrant health and take advantage of the population resources in Southern California to build unique academic programs at USC,” said Lihua Liu, assistant professor of clinical preventive medicine, who initiated and led the iHi for the past three years.

In “Home Away From Home,” USC alum Mimi Bitew’s mother, Yitaish Ayalneh, recalls growing up on a farm in Ethiopia eating natural foods and getting regular physical exercise.

Now living in Los Angeles with her husband and children, Ayalneh notes marked lifestyle differences, including eating fast food and having to make time to stay active. Living with high blood pressure, she strives to be a good role model for her children, teaching them family values, maintaining tradition and cooking healthy meals in her household.

“A Son’s Survival” explores the ripple effect that illness had for one Korean-American family. Jae Kim, the father of USC student Joan Kim, is living with liver cirrhosis, diabetes, high blood pressure and stomach ulcers. In the film, the father shares the challenges he faces with doctor-patient communication, health insurance and working to establish a new life in America, while taking care of his parents and his own family.

The third film, “A Family’s Spirit,” follows Carmen Lopez, a Mexican-American salon-owner and mother concerned about the health of herself and her children. After her father’s death due to diabetes, her own experience with the disease during pregnancy and her son’s obesity diagnosis, she said she had an “awakening.”

Despite the challenges of making time to cook and finding healthful food in her neighborhood markets, she’s confident about the lifestyle changes her family is making. “It’s going to take a while,” she says. “But together as a family — slowly, but surely — we’ll get there.”

**USC Immigrant Health Initiative produces three films on health, culture and immigration**

by Larissa Puro

A new mini-documentary series highlighting immigrant families’ experiences and health challenges puts faces and stories to underrepresented health issues.

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**Calendar of Events**

**Wednesday, Sept. 10**

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**Thursday, Sept. 11**

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<td>2 p.m. - 4 p.m.</td>
<td>Southern California Clinical and Translational Science Institute Workshop. “Mentoring Workshop,” Emil Bogosman, USC. Aresty LG503. Info and RSVP: Ray De Mesa, (323) 442-8281, <a href="mailto:ecde@usc-centers.org">ecde@usc-centers.org</a>, ow.ly/zygS2</td>
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**Friday, Sept. 12**

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<td>11 a.m.</td>
<td>Hematology Grand Rounds. “Challenges in the Diagnosis of MDS,” Noam Drazin, Cedars Sinai Medical Center. LAG+USC Inpatient Tower Conference Room D. Info: Carolyn Castellanos, (323) 865-3913, <a href="mailto:carolyn.castellanos@med.usc.edu">carolyn.castellanos@med.usc.edu</a></td>
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**Saturday, Sept. 13**

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**Monday, Sept. 15**

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**Thursday, Sept. 18**

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**Welcome to (and welcome back to) USC — The Keck School of Medicine hosted parties at Dean Carmen A. Puliafito’s home in Pasadena for returning and new students on Aug. 11 and 12. Above, returning student, Janice Rivelle and her peers take turns on a swing. Left, first-year Keck School students cheer on Traveler and his Trojan warrior rider, Hector Aguilar.**

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**Notice:** Calendar submissions must be received at least 10 days before an issue’s publication date to be considered. Please note that timely submission does not guarantee an item will be printed. Entries must include day, date, time, title of talk, first and last name of speaker, affiliation of speaker, location and a phone number or email address for information.

**Submit calendar items at tinyurl.com/calendar-hsc.**

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**Just a few (okay, a few thousand) simple steps can help the YMCA**

Keck Medicine of USC is the title sponsor of the Stair Climb supporting the Ketchum-Downtown YMCA on Sept. 19. A team from Keck Medicine of USC is also participating in the event. Join the Keck team and climb the tallest building on the west coast while supporting a great cause. This event is a great opportunity for department collaboration and team building. Registration for the first 200 Keck Medicine of USC team participants is free. Visit www.YMCAStepClimb.org to sign up and select the Keck Medicine of USC team. Enter discount code Keck2014 (with the code no fundraising required). Free training sessions and training tips are listed on the website.

Keck Medicine of USC participants will receive T-shirts to wear on event day. T-shirt pick-up dates are Sept. 15 – Sept. 18, 9 a.m. to 4 p.m. at three locations: Community Benefit, Soto II second floor, office 2433; Keck Hospital of USC Administration, first floor; or USC Norris Cancer Hospital Administration, Ezralow Tower eighth floor.

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**In case of an emergency...**

Call the Emergency Information Phone: (213) 740-3123 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.