School of Pharmacy shares $5 million NIH grant to seek novel compounds

By Kukla Vera

Clay C. C. Wang, assistant professor in the Department of Pharmacology and Pharmaceutical Sciences, is leading the USC effort on research that seeks natural compounds with the potential to be used as new chemotherapies and antimicrobials.

The effort to find a compound that may serve as the basis of the next new wonder drug has kicked off an extensive search.

“This is tough work and takes an army to accomplish it,” said Wang.

Wang and his colleagues have found support for their search at the National Institutes of Health, which has awarded them a $4.9 million grant to fund a three-site project to mine the Aspergillus nidulans secondary metabolome in search of promising new therapeutics.

The metabolome is the complete set of small-molecule metabolites found within a biological sample, such as a single organism. The secondary metabolome is a subset consisting of beneficial molecules produced naturally by the organism.

Wang’s collaborators are principal investigators Berl Oakley, Ohio State University, and Nancy Keller, University of Wisconsin-Madison.

The project will delve into the metabolite pathways of A. nidulans—a form of fungi related to the fungus from which the cholesterol-lowering drug lovastatin (marketed as Mevacor) is derived, Wang said.

The project hypothesizes that the next frontier of natural product discovery is not unknown to us but instead undiscovered in the genomes of organisms that have been looked at in laboratories for decades. Looking at other pathways, or secondary pathways, of these organisms requires a collaborative approach using the latest molecular genetic tools.

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USC launches stem cell research site

By Veronica Jauriqui

A new Web site for USC’s stem cell initiative offers information for both scientists working in this evolving field of study, as well as lay people interested in learning more about the promise of stem cells in research and therapy.

The site for the Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research at USC is located at stemcell.usc.edu.

It was designed to complement the center’s objectives, said Julie Kelly, center program manager.

“We wanted to design a site that would be a hub for information, connecting researchers from across the state and potentially fostering scientific collaborations,” she said. “But we also wanted to provide a resource for the general public, providing information on how stem cells are changing medicine and how USC fits in.”

The site includes a page of answers to frequently asked questions and a “Stem Cell Basics” section with fundamental information on the biology of stem cells and their potential for treatments. A weblog written by center Director Martin Pera, will comment on breaking

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$5 million Whittier Foundation gift to fund new cancer therapies

By Meghan Lewit

Continuing its support of medical innovation, the L.K. Whittier Foundation announced it is expanding upon the cutting-edge research initiatives at the USC/Norris Comprehensive Cancer Center.

A $5 million gift will extend funding of the L.K. Whittier Foundation Innovative Tailored Therapies Initiative at USC/Norris and the Keck School of Medicine. The foundation previously supported the establishment of this initiative back in 2002.

Created in 1955 by Leland K. Whittier and his wife, the Los Angeles-based foundation supports innovative endeavors in education, the sciences, and health and medicine.

The L.K. Whittier Foundation Innovative Tailored Therapies Initiative at USC/Norris is a multi-year program to assist scientists in developing successful new therapies to treat cancer patients. This latest gift will support the program for five years.

Obtaining funding for the early stages of a research idea—no matter how exciting—can be extremely difficult. Among other things, it requires writing extensive proposals to committees that rule on scientific merit—a process that takes time and effort that would otherwise be spent in the laboratory. This gift will help alleviate some of those pressures.

“The Whittier Initiative has been instrumental in enabling more than 40 faculty physicians to conduct pilot research studies,” said Peter Jones, director of USC/Norris. “These studies have led to additional federal funding, clinical trials and publications, and continue to push the cancer research frontier in our quest to deliver more effective therapies.”

Funding from the Whittier Foundation has led directly to patients receiving access to new non-toxic therapies, the development of new detectors and monitors the project all the way through, said Jones.

Tailoring therapies for individuals and predicting a patient’s cancer risk is a hallmark of USC/Norris, said Jones. And that is the sort of science the Whittier initiative was designed to fund—science that could make a difference in the lives of USC/Norris cancer patients and, ultimately, cancer patients everywhere.

“A researcher’s success is usually measured by how much grant funding he or she receives,” said Jones. “Here, we want to measure them by the fact that they actually did something to help patients. The foundation’s gift allows us to do that.”

See WANG, Page 2
Public Health faculty among most productive in U.S.

USC’s Public Health faculty placed fourth on the “Top Research Universities Faculty Scholarly Productivity Index” as ranked by Academic Analytics for 2007 and reported in the Chronicle of Higher Education.

The program in the Institute for Health Promotion and Disease Prevention Research (IPR) at the Keck School of Medicine of USC follows only Yale University, University of Washington and Johns Hopkins University.

“One factor that distinguishes IPR from most doctoral programs is that we started first and functioned for many years solely as a research institute,” said C. Anderson Johnson, who was director during the ranking period. “Quality scientific research is at the core of our self-identity. Our training programs have been built on our research excellence, and in essence, we are a niche program, providing training almost exclusively in those areas of population health in which we excel. Hence, our productivity rate is high, and students appreciate that. They are drawn to USC because of that.”

The index examines faculty members who are listed on the Web site for Ph.D. programs —25 at USC. The productivity of each faculty member is measured on as many as five factors, depending on the most important variables in the discipline: books published, journal publications, citations of journal articles, federal grant dollars awarded, and honors and awards. For each discipline, Academic Analytics assigns a weight to each variable and aggregates the scores for all the faculty members in a particular institution.

USC ophthalmologist receives $1.2 million NIH grant

Doheny Eye Institute researcher and ophthalmologist David Huang has received a $1.2 million grant from the National Institutes of Health to study the treatment of anterior eye diseases with optical coherence tomography (OCT).

The goal of this project is to utilize newly available high-speed OCT technology to guide surgical treatments of anterior eye diseases. Measuring aberrations in the optical surfaces of the cornea requires great precision.

OCT is well known for its exquisite spatial resolution, but until recently it has not had sufficient speed to overcome the inherent biological motion of the eye and capture the shape of the cornea. The development of Fourier-domain OCT technology has made the requisite speed possible.

Co-invented by Huang, Keck School Dean Carmen A. Puliafito and others, OCT technology is considered by Ocular Surgery News as one of the top 10 ophthalmic innovations of the past 25 years. He is the medical director of the Doheny Laser Vision Center and the Charles C. Manger III, MD Chair of Corneal Laser Surgery at USC.

WANG: Grant funds search for antimicrobials

Continued from Page 1

Wang’s part of the project utilizes his expertise in natural product chemistry to analyze Aspergillus strains that will be provided by his collaborators. Wang will purify and elucidate the structure by sequencing the genome and, he hopes, ultimately identifying the various new compounds.

The five-year grant of $4.9 million will be divided among the three institutions. According to Wang, “This collaborative approach realizes the best of three disciplines and takes us closer to finding the next best compound.”

Wang’s research is also supported by another NIH grant, an American Cancer Society award and a grant from the State of California.

CIRM: Stem cell site will provide research updates

Continued from Page 1

news in the field, as well as provide updates on USC’s research projects.

The center was founded in 2006 with a $25 million gift from philanthropists Eli and Edythe Broad and the Broad Foundation. On May 7, 2008, the center was one of 12 California institutions to receive additional funding from the California Institute for Regenerative Medicine (CIRM). The CIRM grant of nearly $27 million will help fund construction of a new five-story stem cell research building on USC’s Health Sciences campus.
Charles Meyer Goldstein, a champion of efforts to bring dental care to poor and underserved communities throughout Southern California and beyond, died May 11. He was 87.

His death came one day after he was honored with the first California Dental Association Foundation Humanitarian Award.

“Charlie,” as he preferred to be called, devoted his career to providing access to care for underserved populations, especially the children of California. He spearheaded the creation of the USC School of Dentistry Mobile Clinic, a program that brought dental care to communities throughout the state.

In 1970, he was appointed faculty director of the mobile clinic. One of the first tasks of Goldstein and the dental students he supervised was to provide comprehensive care for the children of migrant farm workers in Central and Southern California.

With just one trailer, portable dental chairs made of cardboard and “The Octopus,” a makeshift dental device created by the students, Goldstein and his team provided 30 weekend clinics in one year. The group treated approximately 250 children each weekend during the early days. Since its inception, the clinic has treated more than 93,000 children.

In an interview with USC Dentistry Magazine shortly before his death, Goldstein said, “When I was in dental school, I thought it would be just wonderful to practice dentistry and not only be able to make a living, but also take care of people that really needed it and couldn’t afford it.”

In 2000, Goldstein also helped create the USC Dental Clinic at the Union Rescue Mission Downtown on 5th and San Pedro streets to provide care for the homeless.

Harold Slavkin, dean of the School of Dentistry, said Goldstein’s life was dedicated to championing the cause of the poor and working poor of California.

“Through ‘service-learning,’ our residents, dental students and dental hygiene students learned clinical dentistry and experienced the needs of the underserved,” Slavkin said.

“Our community outreach programs have become one of the signature features of the USC School of Dentistry.”

Goldstein led the students tirelessly during his 12-year tenure as mobile clinic director. Even after he left the position in 1982, he continued to participate in the mobile clinics until spring 2006. His failing health kept him from physically going on the road, but he stayed up-to-date on daily activities and acted as an adviser.

Jane Caballero, a 2008 School of Dentistry graduate, said she grew close to Goldstein after volunteering in the mobile clinic and participating in health fairs: “I was privileged to get to know him not only as an academic, but also as a beautiful human being. During these times, I experienced his humble and caring manner of treating people. It was very clear to all of us that he had a beautiful soul. The USC dental community will surely miss him. Again, not just as a faculty member but as a kind human being.”

Santos Cortez Jr., a 1976 graduate of the School of Dentistry, attended the Humanitarian Award presentation at Goldstein’s home May 10.

“Dr. Goldstein has been my close friend and mentor for many years. He has been a constant source of encouragement and inspiration to me and all who had the privilege of knowing him,” Cortez said. “He made an impact in so many personal and professional lives. He will be deeply missed.”

Goldstein is survived by his brother Mort and sister Clara; children Jeffrey, Jonathan, Judith and Joel; eight grandchildren; and five great grandchildren.

In lieu of flowers, friends and colleagues may make a gift in Goldstein’s memory to the USC Mobile Clinic Fund.

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.

Call the Emergency Information Phone:
213-740-9233

The emergency telephone system can handle 1,400 simultaneous calls. It also has a back up system on the East Coast.
Calendar of Events

The HSC Calendar is online at www.usc.edu/hsccalendar

Monday, May 19
8 A.M. “Radiation Therapy – Non-Invasive Surgery for Rectal Cancer,” Stanley Goldberg, Univ. of Minnesota. NOR 7409. Info: (323) 865-3873

Finding Your Orientation Conference. “Late Medical and Surgical Complications Post Transplant.” Misrolad J. Smororowicz, USC. GNH Drs. Dining Rm. A & B. Info: (323) 226-7307

Monday, May 20

Tuesday, May 20
11 A.M. “Multiple Myeloma: Translating the Evidence into Clinical Practice,” Rafael Fonseca, Mayo Clinic. GNH 14-441. Info: (323) 865-3914

Tuesday, May 21

Wednesday, May 21


On May 19, the American Association of Cancer Research featured researcher Wendy Cozen’s study on Hodgkin Lymphoma in a newsletter to congressional members across 31 districts throughout the country.

A May 9 Los Angeles Times article noted that USC received nearly $27 million grant from the California Institute for Regenerative Medicine to build a stem cell research facility.


A May 9 Orange County Register article reported that many top medical centers, including hospitals at USC, have adopted minimally invasive brain surgery procedures.

On May 8, KABC-TV Channel 7 interviewed cardiologist Ray Matthews about carotid bruits and their link to heart attack risk.

A May 7 Science article quoted diabetes expert Richard Bergman on a study finding that extra subcutaneous fat improved the glucose and insulin levels in mice.

On May 6, Insider Medicine Online ran a video of cardiologist Howard Hodgins discussing prevention of heart disease.

SAVE THE DATE—The Department of Preventive Medicine at the Keck School of Medicine will host a population genetics, National Geographic Explorer-in-Residence, Spencer Wells on May 21 to discuss his current research work leading the Geographical Project. The project is a global, anthropological research study to map human kin’s ancient migratory routes. The Geographical Project aims to provide the first true ‘snapshot’ picture of how people moved out of Africa and around the globe 50,000 years ago and illustrates through DNA the similarities between different populations. The lecture will be held in the Healthcare Assembly Room, GMI/SCS 250 on May 21 from noon to 2 p.m.

HSC NEWSMAKERS Complete listing at: www.usc.edu/uscsnews/uscs_in_the_news/

On May 12, the American Association of Cancer Research featured researcher Wendy Cozen’s study on Hodgkin Lymphoma in a newsletter to congressional members across 31 districts throughout the country.

Heritage Lunch celebrates planned giving

By Katie Neith
The USC/ Norris Comprehensive Cancer Center and the Keck School of Medicine hosted a Heritage Lunch on May 7 to celebrate the tradition of planned giving at the Keck School.

Guests gathered at the Edmonson Faculty Center were treated to an inspirational speech by Art Ulene, advisory board member at the Cancer Center and medical expert known for his nationwide health campaigns.

Ulene, who is a board-certified obstetrician gynecologist, prepared two speeches for the event, starting off with a “lifestyle prescription,” which he handed out to the crowd.

“This is the most powerful prescription I could write,” said Ulene. “Every item has been proven scientifically to reduce morbidity or mortality.”

The prescription included nutritional points such as to eat 25 to 35 grams of fiber every day, and psychosocial tips, like “volunteer to serve others.” One of the most important points, said Ulene, was the last item on the list:

“Constantly reevaluate your priorities.”

With that idea in mind, Ulene continued on to his second speech titled, “My Next Life: A Work in Progress.” He said he believes he has lived eight lives, as a child, student, husband, father, teacher, television commentator, businessman and retiree. His next, and ninth, life will consist of the legacy that he leaves behind.

Ulene highlighted the charity work that he and his wife have done around the world. He hopes the work will have meaning beyond his physical life. He pointed to the generosity of those who support the Keck School in building a legacy of extraordinary students, doctors and research scientists.

His remarks followed a talk by Geselle Petzinger, assistant professor in the Department of Neurology at the Keck School, whom Ulene called a “genius at work.” She spoke about her current research looking at how exercise may be able to make chemical changes in the brain, particularly in regards to Parkinson’s disease.

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