Zumberge grant awards

**MARCO BORTOLATO**
**INDIVIDUAL AWARD**  
*p.10*

**BANGYAN STILES**
**INTERDISCIPLINARY AWARD**  
*p.10*

**In the following pages**

NIH U01 grant award for Wolf

Walter Wolf will be participating in an interdisciplinary, multi-institutional program in “Translational Development of Replication-Competent Retrovirus Vectors,” directed by Nori Kasahara of UCLA, where he will be responsible for implementing the Specific Aim of “Evaluation, optimization, and validation of NMR spectroscopy imaging to monitor CD suicide gene activity.” Thomas Chen is the other USC co-investigator on this grant. *(more on p.10)*

Campbell Foundation grant award

Nouri Neamati’s lab has recently been awarded a grant for $44,000 from the Campbell Foundation, for a project entitled “Identification of Novel Cofactors of HIV -1 Integrase.” *(more on p.10)*

Faculty Travels in China, *p.6*

School Honors Ting-Kai Li, pictured above with Dean Pete Vanderveen, *p.9*
Dear colleagues:

It is always a pleasure to update you after the spring term since we have so many successful graduates entering the workplace. This year is however a particularly challenging one for our graduates given the relatively conservative job forecast. I'd like to ask you to contact us if you feel that you could serve as part of our PPSI Trojan network and help us work to place our outstanding MS and Ph.D. graduates. Any help or insights our PPSI family can provide will be invaluable to us as we try to navigate the current employment market.

I hope you will enjoy reading about recent faculty successes in internal and external grant submissions, student activities, and faculty travels around the world as we continue to try to extend our collaborative, research and educational activities around the globe.

Also stay tuned for a report in the next issue on a new faculty member, Dr. Bogdan Olenyuk, who joins our faculty on July 1, 2010, from the University of Arizona. Dr. Olenyuk joins our growing group of chemical biologists within the department.

May I wish you a happy and productive summer and please keep in touch!
James D. Adams
- Presented “Nature’s healing plants” at All Saint’s Church, Pasadena, California, April 11.
- Ran his 19th marathon, 14 of which were for his sponsor, ChildSHARE, an organization benefiting abused and abandoned children, last March 31.

Marco Bortolato
- Invited speaker during the Italian Society of Pharmacology International Meeting with the theme of “Focus on Schizophrenia: from Neurobiology to Medicine” in Rome, February 12, 2010, and presented the talk entitled “Steroids and schizophrenia: novel therapeutic strategies?” The talk was about Marco’s preclinical and clinical discoveries on novel putative antipsychotic strategies based on neurosteroids.

Enrique Cadenas
- Gave a plenary lecture on Redox-sensitive protein modifications in the regulation of energy metabolism at the International Symposium on the Pathophysiology of Reactive Oxygen and Nitrogen Species in Salamanca, Spain, May 19-21.
- Co-organized the OCC 2010 World Congress held on March 17-20 in Santa Barbara, California; co-organizer with Lester Packer of the Session IV-Translational Science by Micronutrients.
- Chair of the External Advisory Committee that evaluates on an annual basis the performance of the Center for Neurosciences, University of Coimbra, Portugal, on March 1-4. Other members of the External Advisory Committee are Dr. Roberta Diaz-Brinton and Dr. Helmut Sies. Dr. Sies is an adjunct professor in the department of Pharmacology & Pharmaceutical Sciences.

Nouri Neamati
- Presented to the staff of the School of Pharmacy about “Cancer, Back to the Basics,” on March 4.

Raj Sohal
- Speaker at the Gordon Research Conference on “Oxygen Radicals”, held in Ventura CA, on February 7-14. Title of talk: “Testing the Oxidative Stress Hypothesis: Structural Damage, Redox State and Aging.”

Robertta Brinton
- Named the 14th recipient of the Trojan Leagues Outstanding Service Award at their annual meeting held in Carlsbad, California on May 27.
- Presented “Diseases of Aging” of the What's Hot in Aging Research at USC: Interdisciplinary Perspectives, April 20, Davis Auditorium, Andrus Gerontology Center.
- Presented to the staff of the School of Pharmacy about “Your Brain for Life, New Facts and Information about Alzheimer’s Disease” from her lab’s basic science research, April 8.
- Cited in Alzheimer Research Forum for her study showing that allopregnanolone, a neurosteroid, revitalizes weak neurogenesis in young triple-transgenic mice and protects them against deficits in hippocampal-based learning and memory, March 19. Click for more of this article; click for more of Brinton and allopregnanolone.

Wei-Chiang Shen
- Member of USC School of Pharmacy faculty delegation (with Michael Wincor and Sarah Hamm-Alvarez) to visit China Pharmaceutical University, Nanjing, China, May 20-21.
- Keynote speaker of the PepCon2010 Conference, Beijing, China, March 23. Title of talk: “Recombinant Granulocyte Colony-Stimulating Factor and Transferrin Fusion Proteins as Myelopoietic Agents.”
- Seminar speaker at the following sites:
  - Peking University School of Pharmaceutical Sciences, Beijing, China March 22.
  - National Defense Medical Center, Taipei, Taiwan, March 19.
  - China Pharmaceutical University, Nanjing, China, May 17.
- Title of seminar talks: “Effect of spacer insertion on the biological activity, production, and pharmacokinetics of recombinant bifunctional fusion proteins.” (next page please)
**Julio Camarero**

- Assisted in organizing the BIT 3rd Annual Protein and Peptide Conference (PepCon) held in Beijing, China on March 21-23, 2010, and gave an oral presentation on the development of novel technologies for the rapid creation of protein microarrays (also called protein chips).

- Assisted in organizing the Natural Peptides to Drugs (NP2D) 4th International Congress held in Zermatt, Switzerland on April 11-14, 2010, and presented their lab’s results on the use of cyclotides as molecular scaffolds for drug discovery. The conference was located in a beautiful town of Zermatt, which is located at the heart of the Swiss Alps.

During free time, most of the participants took the sky ride and enjoyed the beautiful landscape surrounding the town and impressive Matterhorn, a 12,000 feet peak that can be reached through the highest cable car in service in Europe. At this altitude even climbing a few steps takes a lot of effort. The day Julio and company reached the top of the mountain, the temperature was a balmy 5°C.

**Walter Wolf**

- Presented at the Weizmann Institute of Sciences in Rehovot, Israel last March 7. Title of presentation: “Noninvasive imaging of drugs.”

With Morry Blumenfeld, a retired head of GE-MRI, now living in Jerusalem. Dr. Blumenfeld pioneered the commercial development of MRI, and continues developing new ventures. “I guess we both failed retirement,” he commented to Prof. Wolf.

Prof. Wolf with son, David, and Tuvia Schlesinger, a world specialist in Radiation Safety at the Sheba Medical Center. Dr. Schlesinger spent some time at USC, and is a collaborator of Prof. Wolf for over 30 years.

Prof. Wolf with his sister, Karin, and many of their direct families.

With a few members of Prof. Wolf’s immediate family at a winery near Zichron Yaakov. Many of these wineries were established in the 1880’s by Baron Rothschild, and the family of one of Prof. Wolf’s niece (Ana) were part of the original families that helped convert swamplands into highly productive agricultural enterprises.

(more on Israel visit next page)
While our trip to Israel had been planned as a personal vacation – the first in many years – it rapidly begun to include professional activities for both David and myself. The personal goals were three fold – to celebrate the 75th birthday of my sister Karin, to fulfill a promise Gladys had made for a trip to Israel as a present to my daughter and son-in-law, and to see and meet some of my family and friends, including colleagues from many years back. All those goals were achieved fully. We also met several members of my extended family that we had never met before, representing many aspects of a diverse and highly dynamic Israeli society.

On the professional side I started with a visit to the Rambam Medical Center, which also houses the Medical School of the Technion. The former head of Nuclear Medicine, Prof. Dov Front, MD, z.l., had been one of our School of the Technion. The former head of Nuclear Medicine, Prof. Ora Israel, had invited me to visit and as it turned out, I participated in the ceremonies inaugurating the first SPECT-CT unit ever built, which was developed at the GE research center in Haifa. That led to a contact of an old friend, Dr. Morry Bumenfeld, who although formally “retired” as world-wide director for MR research at GE, continues a highly active program in scientific development. Morry’s comment to me was: “Walter, I guess we both have failed retirement.” We had a wonderful luncheon in Jerusalem a few days later, and Morry was very encouraging to our plans in the development and use of PET-MRI for pharmacokinetic and pharmacodynamic studies, a program which we are pursuing actively with some of the leading medical instrument manufacturers.

That same topic was the subject of a lecture I gave at the Weizmann Institute of Sciences in Rehovoth, at the invitation of Prof. Hadassa Degani, one of the world specialists in the application of MRI to breast cancer studies. Prof. Degani has also visited us several times at USC and has now active collaborations with some of our colleagues. A few days later I met with Prof. Tuvia Schlesinger, who had spent a sabbatical with us in the 1970’s and who, as specialist in radiation dosimetry, had helped estimate the radiation doses that were allowable when using 195Pt-cisplatin and 18F-5-fluorouracil in cancer patients. Tuvia, also “retired” from his teaching and research at Tel Aviv University and the Nahal Soreq Nuclear Reactor, is now actively involved in the development of a new Technical University in Israel. We met at the Chaim Sheba Medical Center at Tel Hashomer.

At the same time, my son David started meeting with specialists in disability issues at these same locations, and developed insights in comparing research advances services and resources for persons with disabilities, as well as establishing personal friendships and collaborations. In addition to ongoing collaborations with Israeli scientists from David’s participation in USC’s Rehabilitation Engineering Research Center, David expanded such collaborations with scientists at the Weizmann, at Rambam, at Sheba Medical Center, and special rehabilitation units in Jerusalem.

So much for a “vacation”!

But being able to visit with my immediate family, as well as with relatives about whom I had only heard occasionally during my youth, was much more than we all expected. I found my sister doing very well, and it was fantastic to meet again several of her children, some of whom had spent months at a time with us in Los Angeles many years ago. The family picture, in addition to my children (David, Jenny and her husband Ray) has her 3 daughters, their husbands and 8 of their children – a vibrant, wonderful family that epitomizes the best of the Israeli Sabra. Having a real extended and extensive family was cathartic.

That was only the beginning. I was aware of many other relatives, especially on my mother’s side, and we met several of them in person, and many more by e-mail since. What is emerging from all these interactions is knowledge about the family, its history and evolution since we found records going back to the late 16th century. Our ancestors include rabbis, bankers and assorted livelihood, depending much on what was allowable for Jews in Europe in those years. And more recently, how the history of my family reflects the broader pattern of persecution, survival and recovery.

It is fascinating that as I have begun discussing the idea of finally heeding the call to write about my life and my experiences – which, in line with my traditional approach, I place within a much wider context – I have been hearing from friends and colleagues how they also have begun writing their stories.

The pictures accompanying this story illustrate personal and professional dimensions of this trip, and I have tried to illustrate what may be of interest to as many of you as possible. Thank you all – colleagues and former students - for your support and friendship over these many years.
Faculty Travels in China

Sarah Hamm-Alvarez, Michael Wincor and Wei-Chiang Shen visited China Pharmaceutical University (CPU) in Nanjing as members of the official USC School of Pharmacy delegation.

The purpose of the visit, on May 20-21, was to renew the formal alliance between the two universities. China Pharmaceutical University is the only university with a primary pharmaceutical focus in China. As shown in the photographs, the visit was a great success at the academic and cultural levels, culminating in the renewal of a three-year alliance agreement signed officially by Dr. Michael Wincor and Dean Qidong You of the CPU School of Pharmacy.

Highlights of the agreement included plans to foster undergraduate and graduate research student exchange, interests in the development of clinical educational programs, submission of joint grants sourcing/funding for US-China initiatives and faculty exchange.

After spending the weekend in Shanghai, the delegation met up with Bangyan Stiles, and went seeing some more of the sights in addition to attending the World Expo.

Then, Drs. Hamm-Alvarez and Stiles traveled to Shenzhen and Hong Kong to pursue research alliances with Shenzhen University and Chinese University of Hong Kong. Highlights of this visit included meeting up with former USC friends, including Vincent Lee, and the beginning of discussions about a formal research alliance with the Department of Pharmacology at Shenzhen University.
More Nanjing images

2010 World Expo in Shanghai

Look, we need baskets as we shop at the Expo!

Shenzhen University

Hosts at the Shenzhen University are Guangyi Jin (standing, 2nd from left) and staff. Adjoining picture: Background is a man-made lake within the university campus, a common feature in many Chinese universities - greens and lakes provide the quiet and tranquil environment for academic studies.

Shanghai by night.

With Vincent Lee at The Chinese University of Hong Kong. Also in the picture are Keary Zhou (right most) and Vivian Lee, who are both USC Pharm.D. alumni and faculty of CUHK.

At a calligraphy store. Dr. Stiles with sister, Banyuan, who lives in Shenzhen and works at the University.
American Chemical Society

Postdoctoral research associates Luis Berrade and Getachew Woldemariam represented the lab of Julio Camarero during the 2010 American Chemical Society Spring Meeting in San Francisco, on March 22-25. The following are their poster presentations:


OCC 2010 World Congress

The theme of the Oxygen Club of California World Congress is “Oxidants and Antioxidants in Biology, Translational Redox Science”, held in Santa Barbara, California on March 17-20. Enrique Cadenas is a co-organizer. The following posters were presented:

- Chen Li, Bangyan Stiles and Enrique Cadenas. “P13K regulation of cellular bioenergetics.”
- Harsh Sancheti, Jerome Garcia, Li Peng Yap, Derick Han, and Enrique Cadenas. “Modulation of the redox status of isolated brain mitochondria by energy-linked substrates: Quantification by High Performance Liquid Chromatography.”
- Jia Yao, Ronald Irwin, Shuhua Chen, Eric Hernandez, Roberta Diaz-Brinton. “2-Deoxyglucose Diet Induces Ketogenesis, Enhances Mitochondrial Function and Reduces Alzheimer’s Like Pathology in the Triple Transgenic Alzheimer’s Mouse Model.”

Symposium on Biomedical Polymers for Drug Delivery

Andrew MacKay (left on the picture) with Ph.D. students (l-r) Siti Janib, Martha Pastuszka and Ara Moses attended the symposium on March 26-27, hosted by the University of Utah Center of Nanomedicine to celebrate the 70th birthday of Jindrich Kopecek. The MacKay lab presented well-received posters as follows:

- Siti Janib, Maria Pastuszka, Guoyong Sun, Pang-Yu Hsueh, Andrew MacKay. “Genetically engineered stimuli responsive micelles.”
- Ara Moses, Vinod Valluripalli, Guoyong Sun, Martha Pastuszka, Siti Janib and J. Andrew MacKay. “Genetically Engineered Polymersomes – A”.

Interdisciplinary Program in Drug Discovery (iPDD) 4th Annual Retreat

June 24, 2010
Pickwick Gardens

Department of Chemistry,
College of Letters, Arts & Sciences
Department of Pharmacology and Pharmaceutical Sciences,
School of Pharmacy

For more info:
http://www-rcf.usc.edu/~mattherp/TCBI/TCBI_and_iPIDD_Events.html
ACS Relay-for-Life

Andrew MacKay was the guest speaker at the 9th Annual American Cancer Society (ACS) Relay for Life of Alhambra event held on Saturday, June 5th.

Relay for Life is a fun and unique 24 hour event designed to increase cancer awareness, while raising much needed funds for the American Cancer Society’s patient service programs, cancer research, advocacy and community education. It is also a time to celebrate the lives of those who have battled cancer and remember loved ones lost.

The USC Norris Comprehensive Cancer Center hosted an information booth at this event and recipients of the ACS Institutional Research Grant (IRG) displayed their research project posters and answered questions from attendees. Dr. MacKay is an ACS IRG Pilot Project Grant Awardee.

“We received many compliments regarding Dr. MacKay’s opening remarks,” stated Isabel Lora of the USC Norris Comprehensive Cancer Center.

School honors Ting-Kai Li

Ting-Kai Li, A USC honorary degree recipient this year, was honored by the School of Pharmacy with Dean Pete Vanderveen hosting a dinner that was attended by Department faculty, Ronald L. Alkana, Marco Bortolato, Kevin Chen, Daryl Davies, Curtis Okamoto and Jean C. Shih.

The dinner was held in Sai Sai Restaurant at the Millennium Biltmore Hotel on May 13, 2010.

Professor Li, a physician and pioneering scientist, is an influential scholar and national health adviser who transformed societal attitudes about alcoholism as the first researcher to demonstrate its genetic roots. He is a retired Director of the National Institute on Alcohol Abuse and Alcoholism of the National Institutes of Health.

With Dr. MacKay at the event were his wife, Adrienne, and graduate student, Ara Moses.
Zumberge Grant Awards

Marco Bortolato has been granted the Zumberge individual award for his project entitled, “Role of Monoamine Oxidase in the Outcomes of Early Maternal Separation,” which will focus on the biological mechanisms by which psychosocial stress in early life stages result in aggressiveness in adulthood. The amount awarded is $26,858 for one year (July 2010 to June 2011).

Development of the Translational Research Laboratory

Lab Usage Report:
- During the period 01-01-2010 through 03-31-2010, 12 research groups used the lab generating 605 usage hours.

Lab Resource Additions:
- Prospect Edge 200 Separation System. Edge technology, Enhanced density gradient extraction, is a newly developed non-denaturing front end sample fractionation technology. It is a step-wise extraction of a particle mixture using extracting media of increasing densities.
- A 384-well microplate heat block is added to the ABI 7900HT Fast Real-Time PCR System. In addition, the System supports 96-well fast microplate and 384-well microfluidic card (Taqman Low-Density Array). This addition increases the high-throughput capacity for gene expression studies.
- Two nitrogen gas tanks are installed and connected to the Wyatt DynaPro Plate Reader for temperature control.

Lab Seminar Series:
- Real-Time Quantitative PCR: From Theory to Practice and Optimization Tuesday, May 11, 2010, 11am-1pm, PSC104
- Metabolism in a Microplate: Kinetic Analysis of Cellular Bioenergetics Tuesday, May 25, 2010, 10am-12pm, PSC100
- Multiplex ELISAs, Phosphoproteins, and Oligos: Expanding xMAP® Technology Tuesday, June 8, 2010, 10am-12pm, PSC100

Lab Additional Information:
- Translational Research Laboratory Online Scheduler: http://www.uburst.com/cgi-bin/ureserve/hosted/usc.pl
- Translational Research Laboratory Web Page: http://www.usc.edu/schools/pharmacy/research/translational_lab.html
- Inquires about the Lab can be addressed to Dr. Liqin Zhao (liqinz@usc.edu).

Bangyan Stiles is awarded an interdisciplinary Zumberge grant that is bestowed to joint efforts from faculty across two different schools. Co-principal investigator is Debbie Johnson from the Department of Biochemistry and Molecular Biology of the Keck School of Medicine. Their project will explore the role of Maf-1 (a molecule that Dr. Johnson works on) in the PTEN regulated liver steatosis phenotype (Dr. Stiles’ main focus). Complete grant title is "PTEN and Maf-1, defining a novel molecular link between obesity and cancer."

NEAMATI (continued from page 1)

In order for integrase to contribute to viral latency, it must hijack certain human proteins and exploit them toward this goal. The most important of these so-called cofactors to date, LEDGF, was discovered by Dr. Zeger Debyser’s lab and the interaction between LEDGF and integrase has already become a legitimate drug target. With the funding from the Campbell Foundation, Neamati Lab will be in close collaboration with the Debyser lab in working to validate certain human proteins as novel cofactors of HIV-1 integrase. Debyser Lab is part of the Department of Molecular Medicine, Katholieke Universiteit Leuven in Belgium. Eric Serrao, a third year Ph.D. student in the Neamati Lab who is spending six months in Belgium, is spear heading this project.

Only 5-10 grants are awarded by the Campbell Foundation per year.

For Erik Serrao in Belgium, please read on to p.11.

WOLF (continued from page 1)

This is another application of Prof. Wolf’s interests in the development of 19F-Magnetic Resonance Spectroscopy to monitor, non invasively, the pharmacokinetics and the pharmacodynamics of drugs at their target sites.

In this specific study, rodents (mice, rats) bearing a malignant brain tumor will be transfected with a gene capable of producing cytosine deaminase, an enzyme absent in humans, allowing the conversion, at the tumor site only, of the antifungal agent 5-fluorocytosine (non toxic to humans) to the active anticancer agent 5-fluorouracil. The 19F-MRS measurements will document whether that gene-induced activation has indeed been successful in the animals whose tumors will be studied using noninvasive imaging.
Erik Serrao in Belgium

For the past six months, Erik has been on studying as an exchange student at the Katholieke Universiteit Leuven, Department of Molecular Medicine, in Leuven, Belgium. Under supervision of world-renowned virologist Zeger Debyser, he has been receiving training in virological research techniques, leading to the completion of one of Erik’s dissertation projects. Specifically, he is working toward the elucidation of the structure of the dimeric interface of HIV-1 integrase. Integrase is the HIV protein mainly responsible for establishing viral latency, or the ability for the virus to remain dormant in human immune cells for years, evading antiretroviral treatment. Integrase accomplishes this feat by integrating the HIV-1 DNA into human chromosomes, and multimerization of the protein is essential for this integration to take place. Hence, drugs targeting the critical sites involved in integrase multimerization may be an exciting and novel treatment option. The Debyser and Neamati laboratories believe that they have located a region at the integrase dimeric interface that is essential for multimerization to occur and, hence, essential for viral replication to proceed normally. The high level of diverse expertise at Dr. Debyser’s laboratory in Leuven is contributing to the swift completion of various experiments aimed at proving the importance of this structural region.

Erik has been at Katholieke Universiteit Leuven since January 10th, and his training will be completed on June 23rd.

Kavya Ramkumar

Kavya Ramkumar, graduate student at the lab of Nouri Neamati, has been elected for membership to Phi Kappa Phi, USC’s oldest all-University honor society. The honor reflects Kavya’s excellence of scholarship. The Spring Initiation Ceremony on May 12, 2010 was held in the Queen’s Court of the Bing Theatre. This year’s ceremony was grace by the attendance of President Steven Sample.

Ryan T. Hamilton

Ryan T. Hamilton received a Linus Pauling Institute Award during the Oxygen Club of California 2010 World Congress last March 17, 2010 at the Fess Parker’s Double Tree Resort in Santa Barbara, California. The award was for best poster presentation entitled, "Age-Dependent Increases in 5’- Adenosine Monophosphate-Activated Protein Kinase, C-Jun-N-Terminal Kinase, and Glycogen Synthase Kinase - 3 Beta and Role for Caloric Restriction: Implication for Mitochondrial Energy Substrate Control". Ryan is a postdoctoral fellow in the laboratories of Enrique Cadenas and Roberta Diaz-Brinton.
Daniel Segura Canas

Daniel describes himself as always on the go – studying, working and training. He is a 1st degree black belter in Ashihara karate and is the current president of the Uppsala Ashihara Karate Club. As a pharmacy student in Uppsala University, he is a volunteer worker of the Pharmaceutical Students Association, where he is responsible for registering new pharmaceutical students and in issuing out the association’s student magazine, The Reptile, to all subscribers that include pharmacy companies. He complemented his pharmacy studies with courses like Chemistry, Economy, Accounting & Analysis, and also Marketing & Organization. Aside from school, Daniel is gainfully employed since 2004 at the Hilton Stockholm Slussen as a bartender. He speaks fluent English, Swedish and Spanish.

His research objective in lab of Curtis Okamoto is to participate in the research of gastric HCl secretion. His part of the project is aimed at characterizing the role of the retromer protein sorting complex in the regulation of the gastric proton pump by using the techniques of SDS-polyacrylamide gel electrophoresis and western blotting.

Patrik Carlsson

He describes himself as a secure and easy going kind of person who finishes everything that he started. Patrik Carlsson has always worked during summer times since his high school years, and had attended and finished a military service, where he learned to maneuver delivery vans. At Uppsala University where he is a pharmacy student, Patrik has taken an active interest in the student union of Pharmacy and was part of arranging the Pharmaceutical Day of 2009, being responsible for the public relations. He also attended the 55th International Pharmacy Student Federation World Congress in Bali, Indonesia in 2009. Just like Daniel, Patrik complemented his pharmacy studies with courses in Market and Organizations and Economy, Accounting and Analysis, both he finished in 2009.

At the lab of Julio Camarero from January to May, Patrik’s project is entitled, “Biosynthesis of cyclic peptides: Confirmation of momordica cochinchinensis trypsin inhibitor I (MCoTI-I) and novel application on rhesus theta defensin 1 (RTD-1)”.

Pauline Fontaine

Pauline is in her fifth year of pharmaceutical studies, specializing in Pharmaceutical Industry courses at the University of Lille II, France. During her fourth year she went to the Medway School of Pharmacy, University of Kent in England as an Erasmus student, an exchange student program among universities in Europe. Pauline is one of 10 students who qualified for the program in her class of 200.
Pauline will be under the mentorship of James D. Adams from May 1 to August 31. During this period, she will be studying Chumash healing, and will be exposed to Chumash culture as well. Chumash healing uses medicinal plants of the west, and is an expertise of Dr. Adams. Pauline’s hobbies of mountain biking and jogging surely come handy as she goes tracking mountain trails of California.

Daniel Kim

Daniel is a student of pharmacy and business administration at the Uppsala University in Sweden. He is an involved student of pharmacy having been a member of the Pharmada Committee 2009, Sweden’s biggest pharmaceutical labour market day, and a participant in the 55th International Pharmaceutical Student Federation World Congress in Bali, Indonesia. He is also the webmaster for the Swedish Pharmaceutical’s Student Union and student representative for Web Steering Committee and Virtual IT-faculty for Uppsala University. He is fluent in Swedish and English and can speak and read Korean as well; conversational in French. For sports, Daniel does extreme skiing and surfing.

Tam Lam is a pharmacy student at the Uppsala University in Sweden, expecting to finish his studies in the spring of 2011. He is also schooled in Marketing and Organization in the spring-fall of 2009 at the same university. For high school studies, Tam went to Pedersöre High School in Finland. He speaks and writes fluent English, Swedish and Vietnamese, and moderate knowledge in Finnish and French.

At the lab of Roger F. Duncan, Tam is studying on how the cells respond and adapt to heat shock (which is a principal stress system where cell temperature is raised above their normal growth temperature). The study aims to determine whether GADD34 and phosphorylation of eIF2α plays a role during HS which is required for cell recovery during ER stress. (Terminologies: GADD34, a stress-induced proteins implicated in the control of protein synthesis and apoptosis, a subunit of protein phosphatase; eIF2α, a protein involved in the initiation phase of translation; HS, heat shock; ER, endoplasmic reticulum, an interconnected network within the cell).

At the lab of Roberta Diaz-Brinton (above picture with Daniel), Daniel Kim’s project is entitled, “Allopregnanolone as a Regenerative Neurogenic Therapeutic Agent for Alzheimer’s Disease”. Essentially, he developed a new formulation for intranasal administration of Allopregnanolone.
Au revoir, Rona!

Rona Ramsay’s three-month (February-April) sabbatical stint in the lab of Jean C. Shih came too fast for her. The above picture was taken during Rona’s farewell lunch. Standing (l-r): Bin Qian, Kevin Chen, Fei Yin, Marco Bortolato, Harsh Sanchetti, Jason Wu. Seated (l-r): Jean C. Shih, Rona Ramsay, Chen Li and Rona’s son, Peter.

SEMINAR SERIES

David J. Craik, University of Queensland, Brisbane, Australia
January 13, 2010
Faculty Host: Julio A. Camarero
Title: Discovery and Applications of Cyclic Proteins

Shu Chien, University of California at San Diego, La Jolla, California
February 26, 2010
Faculty Host: Wei-Chiang Shen
Title: Mechanotransduction in Endothelial Cells: Interplays between Physical and Chemical Factors in Homeostasis

Rona Ramsay, University of St. Andrews, Fife, Scotland
March 26, 2010
Faculty Host: Jean C. Shih
Title: Monoamine Oxidase and Factors in the Assessment of Drug Potency

Roberto Weigert, National Institute of Dental and Craniofacial Research, NIH, April 9, 2010
Faculty Host: Sarah Hamm-Alvarez
Title: Membrane Trafficking in Live Animals: Novel Approaches Based on Intravital Microscopy

Julius Rebek, The Scripps Research Institute, The Skaggs Institute, La Jolla, California, May 7, 2010
Faculty Host: Nouri Neamati
Title: Molecular Behavior in Small Spaces

Graduate Student Seminar (continued)

Letisha Wyatt, April 28, 2010
Advisor: Daryl Davies, Ronald Alkana
Student Host: Tino Sanchez
Title: Ethanol Modulation of Neuronal P2X4 Receptors

Fan Ding, May 12, 2010
Advisor: Roberta Diaz-Brinton
Student Host: Natasha Sharma
Title: Loss of ovarian hormones induces hypometabolism in brain: Implications for Alzheimer’s disease risk

Chen Li, May 21, 2010
Advisor: Enrique Cadenas
Student Host: Fan Ding
Title: PI3K/Akt Signaling and the Regulation of the Mitochondrial Energy-Redox Axis
Where is he now?

RANI GEHA

I graduated from the USC School of Pharmacy in 2000 with a PhD in Molecular Pharmacology and Toxicology. My advisor was Professor Jean Shih and my dissertation was about mapping the active site of the enzyme Monoamine Oxidase using site-directed mutagenesis and enzyme kinetics.

As I was nearing graduation I began contemplating what to do next. Should I go the academic route or into industry or some other option? I really enjoyed science but I was more attracted to its business side. So I enrolled in a quick MBA program at UC Irvine, for which I was awarded a fellowship, and during the program I worked for a few months as a marketing analyst at St Jude Medical, a company that makes heart pacemakers. It was not exactly within my field, but it introduced me to how things work in the business world. After completing my MBA, I worked for HealthIQ in Orange County. My job required a lot of travel and involved gathering data and writing reports to clients in the pharmaceutical industry about how their products stand up--from the scientific and marketing perspectives--to that of their competitors.

Then I got a big break in late 2003 when a recruiter got me to take a scientific writing test for a medical communications agency in New Jersey (Parexel) which then immediately hired me. After living in California, New Jersey was a big change. On the same day I landed on the East Coast, we got hit by a snow storm which I was told was bigger than anything they’ve seen in years! At my new job, I had the opportunity to work with the biggest names in the pharmaceutical industry and I immersed myself in the science produced by their research departments and how best to communicate it through various media and to different types of audiences, from scientists to laypeople.

In 2008, I decided to leave the company and do the same work independently. Although I faced some competition in the USA, I realized I had an advantage if I try to get clients from my native Lebanon. In addition to being almost an untapped market (relative to the USA), Lebanon’s scientific community was mostly French educated and relatively few people could do scientific communications in English, where the real demand was. With this distinct advantage, and after a couple of visits to the country, I was able to secure enough work to hire another person to help me with the routine work, as I now spend more time trying to grow my business.

With regards to my personal life, which of course I cannot leave unmentioned, I wish I could report having a wife and kids, but as luck would have it, I am running a little behind the clock in that department--as my dear mother is so kind to keep reminding me! However I can say there will be news this year!!!

My PhD experience at USC was very intellectually stimulating and I enjoyed the lab work but there were also the days I worried whether my research would produce publishable results, or whether I was even on the right track altogether. I was so immersed in the science that I kept a special notebook at my bedside to write the ideas that used to come to me during my sleep at night.

I also remember the fun time I had with friends and the Karaoke parties at Professor Shih’s house.

My PhD training taught me discipline, patience, attention to details, critical thinking... skills that were essential to furthering my career and that helped me in other aspects of life.

I would like to send my greetings and best wishes to my advisor Professor Shih as well as to all the faculty, staff, and friends I met at USC!!!
Baby shower for the MacKays

Andrew MacKay and wife, Adrienne, are expecting their first baby on August. She will be named “Lucy”. Sarah Hamm-Alvarez hosted the baby shower in PSC 104 on June 3. Organizers were Janette Contreras, Maria Edman and Liz Gongora.

Jean Shih’s 3rd grandchild

Baby Agnes Golden Lotus Shih was born on May 29, 2010 at the Ronald Reagan Hospital, UCLA Westwood, weighing 6 pounds, 7 ounces and 20 inches long to proud parents, Jack and Megan Shih. Note closely the bonnet and booties worn by the Golden Lotus; they were lovingly knitted by Daddy Jack!

Winners of the baby clip hangers no crossing game: Maria Pastuszka (r) & Roger Duncan (below)
**Publications**

**Ronald Alkana**

**Marco Bortolato**


**Sarah Hamm-Alvarez**

**Ian Haworth**

**J. Andrew MacKay**
McDaniel JR, Mackay JA, Quiroz FG, Chilkoti A. Recursive directional ligation by plasmid reconstruction allows rapid and seamless cloning of oligomeric genes. Biomacromolecules. 2010 Apr 12;11(4):944-52. PMID: 20184309

**Bangyan Stiles**

**Roberta Diaz Brinton**

**Enrique Cadenas**


**Julio A. Camarero**

**Wei-Chiang Shen**


**Clay C. Wang**
Congratulations Graduates!!!

A trimester publication for the faculty, staff, students, alumni and friends of the Department

Champagne was poured and the Trojan Band was playing.

School staff volunteers: (l-r) Fereshta Saraj, Juana Prieto, Rocío Pinal, Ruth Ballard, Josie Morales. Not in the picture are Rita Bownds and Barbara Knipe.

Champagne pouring in action: Jennifer Watson (left picture); Liz Gongora, Ruth Ballard and champagne man.
Congratulations Graduates!!!

DOCTOR OF PHILOSOPHY DEGREE

Xiao Ying Chen
Lilian Chiang
Sean Godar, Boyang Wu
Anna Scott
Jia Yao

Lilian with mentor, Sarah Hamm-Alvarez
Xiao Ying with mentor, Wei-Chiang Shen

Lilian with lab friends (l-r) Eun Evans, Maria Edman and Francie Yarber.

Jia with mentor, Roberta Diaz-Brinton; picture below, with mother, Jianhua Yao and father, Zhengping Zhu

Kathi Horgan, graduation ceremony coordinator, and Sheryl Stanovich.

Anna and Sean with Wade Harper, Graduate Affairs coordinator.